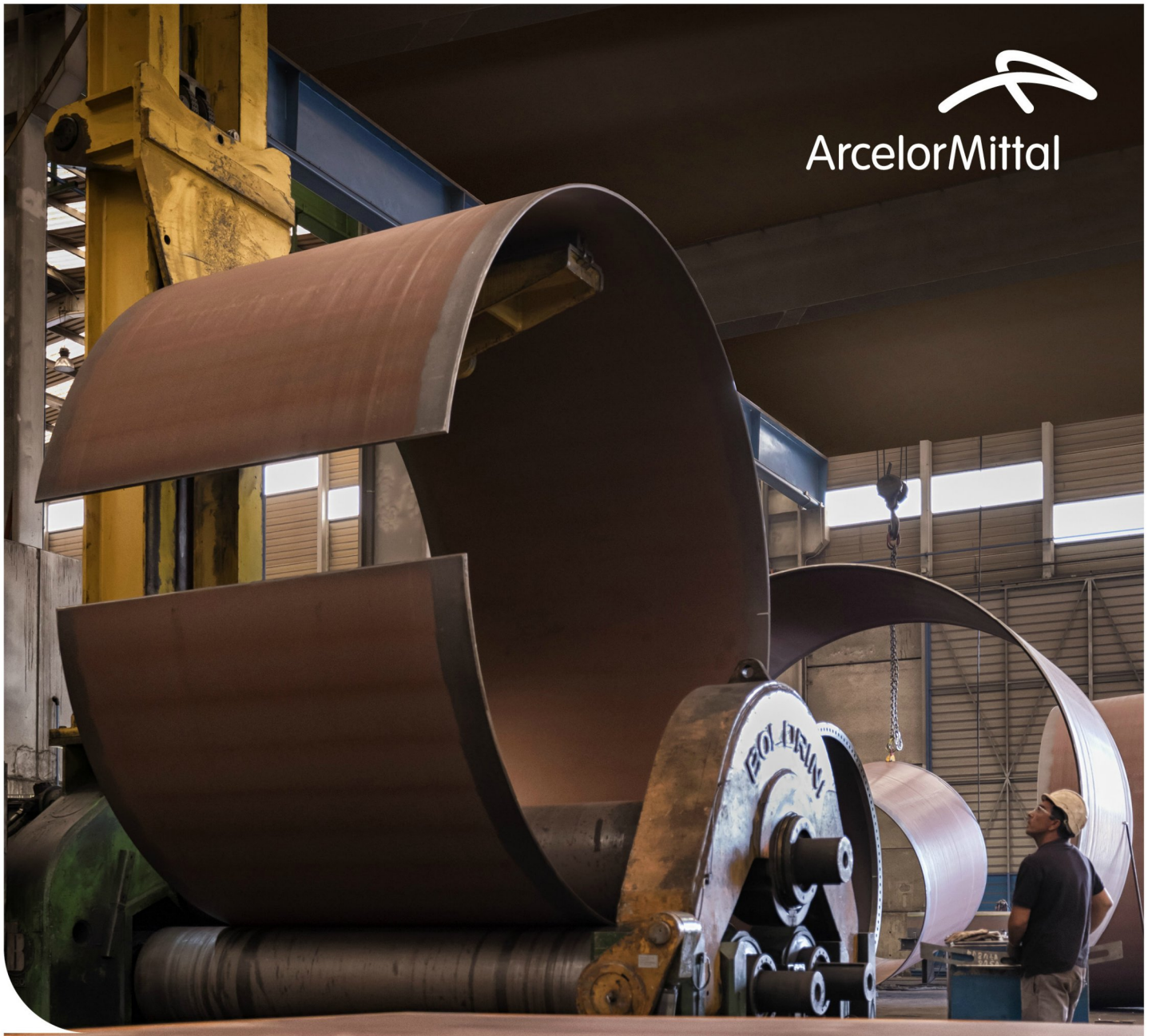


ArcelorMittal

Annual Report 2019

Table of Contents

Company overview

History and development of the Company

ArcelorMittal is the world's leading integrated steel and mining company. It results from the merger in 2007 of its predecessor companies Mittal Steel Company N.V. and Arcelor, each of which had grown through acquisitions over many years. Since its creation ArcelorMittal has experienced periods of external growth as well consolidation and deleveraging (including through divestments), the latter in particular during the years following the global financial and economic crises of 2008-2010. In recent years ArcelorMittal has punctuated its overall deleveraging focus with targeted acquisitions. These have included the acquisition through a joint venture of the Calvert plant in the United States in 2014 and, in 2018 the acquisition of AMSF in Brazil and ArcelorMittal Italia in Italy, Europe's largest single steel site. In 2019, the Company completed its acquisition of AMNS India through a joint venture with NSC. For more information on the key transactions carried out in 2019, see "—Key transactions and events in 2019" below.

ArcelorMittal's success is built on its core values of sustainability, quality and leadership and the entrepreneurial boldness that has empowered its emergence as the first truly global steel and mining company. Acknowledging that a combination of structural issues and macroeconomic conditions will continue to challenge returns in its sector, the Company has adapted its footprint to the new demand realities, redoubled its efforts to control costs and repositioned its operations with a view toward outperforming its competitors. ArcelorMittal's research and development capability is strong and includes several major research centers as well as strong academic partnerships with universities and other scientific bodies.

Against this backdrop, ArcelorMittal's strategy is to leverage four distinctive attributes that will enable it to capture leading positions in the most attractive areas of the steel industry's value chain, from mining at one end to distribution and first-stage processing at the other: global scale and scope; superior technical capabilities; a diverse portfolio of steel and related businesses, one of which is mining; and financial capabilities.

Geography: ArcelorMittal is the largest steel producer in the Americas, Africa and Europe and is the fifth largest steel producer in the CIS region. ArcelorMittal has steel-making operations in 18 countries on four continents, including 46 integrated and mini-mill steel-making facilities. As of December 31, 2019, ArcelorMittal had approximately 191,000 employees.

ArcelorMittal's steel-making operations have a high degree of geographic diversification. Approximately 37% of its crude steel is produced in the Americas, approximately 49% is produced in Europe and approximately 14% is produced in other countries, such as Kazakhstan, South Africa and Ukraine. In addition, ArcelorMittal's sales of steel products are spread over both developed and developing markets, which have different consumption characteristics. ArcelorMittal's mining operations, present in North and South America, Africa, Europe and the CIS region, are integrated with its global steel-making facilities and are important producers of iron ore and coal in their own right.

Products: ArcelorMittal produces a broad range of high-quality finished and semi-finished steel products ("semis"). Specifically, ArcelorMittal produces flat steel products, including sheet and plate, and long steel products, including bars, rods and structural shapes. In addition, ArcelorMittal produces pipes and tubes for various applications. ArcelorMittal sells its steel products primarily in local markets and through its centralized marketing organization to a diverse range of customers in approximately 160 countries including the automotive, appliance, engineering, construction and machinery industries. The Company also produces various types of mining products including iron ore lump, fines, concentrate and sinter feed, as well as coking, PCI and thermal coal.

As a global steel producer, the Company is able to meet the needs of different markets. Steel consumption and product requirements clearly differ between developed markets and developing markets. Steel consumption in developed economies is weighted towards flat products and a higher value-added mix, while developing markets utilize a higher proportion of long products and commodity grades. To meet these diverse needs, the Company maintains a high degree of product diversification and seeks opportunities to increase the proportion of higher value-added products in its product mix.

Automotive focus: ArcelorMittal has a leading market share in its core markets in the automotive steel business and is a leader in the fast-growing advanced high strength steels segment. ArcelorMittal is the first steel company in the world to embed its own engineers within an automotive customer to provide engineering support. The Company begins working with original equipment manufacturers ("OEMs") as early as five years before a vehicle reaches the showroom, to provide generic steel solutions, co-engineering and help with the industrialization of the project. In November 2016, ArcelorMittal introduced a new generation of advanced high strength steels, including new press hardenable steels and martensitic steels. Together, these new steel grades aim to help automakers further reduce body-in-white weight to improve fuel economy without compromising vehicle safety or performance. In November 2017, ArcelorMittal launched the second generation of its iCARe® electrical steels. iCARe® steel grades play a central role in the construction of electric motors.

Mining Value Chain: ArcelorMittal has a significant portfolio of raw material and mining assets. In 2019, approximately

52% of ArcelorMittal's iron-ore requirements and approximately 12% of its PCI and coal requirements were supplied from its own mines. The Company currently has iron ore mining activities in Brazil, Bosnia, Canada, Kazakhstan, Liberia, Mexico, Ukraine and the United States. The Company currently has coal mining activities in Kazakhstan and the United States.

In addition, ArcelorMittal produces substantial amounts of direct reduced iron, or DRI, which is a scrap substitute used in its mini-mill facilities to supplement external metallics purchases. ArcelorMittal is also a significant producer of coke, which is produced from metallurgical coal and is a critical raw material for steel-making, satisfying 95% of its coke needs through its own production facilities. ArcelorMittal's facilities have good access to shipping facilities, including through ArcelorMittal's own, or partially owned, 15 deep-water port facilities and linked railway sidings.

ArcelorMittal has its own downstream steel distribution business, primarily run through its Europe segment. It also provides value-added and customized steel solutions through additional processing activities to meet specific customer requirements.

Cautionary statement regarding forward-looking statements

This annual report and the documents incorporated by reference in this annual report contain forward-looking statements based on estimates and assumptions. This annual report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, among other things, statements concerning the business, future financial condition, results of operations and prospects of ArcelorMittal, including its subsidiaries. These statements usually contain the words "believes", "plans", "expects", "anticipates", "intends", "estimates" or other similar expressions. For each of these statements, you should be aware that forward-looking statements involve known and unknown risks and uncertainties. Although it is believed that the expectations reflected in these forward-looking statements are reasonable, there is no assurance that the actual results or developments anticipated will be realized or, even if realized, that they will have the expected effects on the business, financial condition, results of operations or prospects of ArcelorMittal.

These forward-looking statements speak only as of the date on which the statements were made, and no obligation has been undertaken to publicly update or revise any forward-looking statements made in this annual report or elsewhere as a result of new information, future events or otherwise, except as required by applicable laws and regulations. A detailed discussion of principal risks and uncertainties which may cause actual results and events to differ materially from such forward-looking statements is included in the section titled "Risk related to the global economy and the mining and steel industry". The Company undertakes no obligation to update or revise publicly any forward-looking statements whether because of new information, future events, or otherwise, except as required by securities and other applicable laws.

Corporate and other information

ArcelorMittal is a public limited liability company (*société anonyme*) that was incorporated for an unlimited period under the laws of the Grand Duchy of Luxembourg on June 8, 2001. ArcelorMittal is registered at the R.C.S. Luxembourg under number B 82.454.

The mailing address and telephone number of ArcelorMittal's registered office are:

ArcelorMittal
24-26, Boulevard d'Avranches
L-1160 Luxembourg
Grand Duchy of Luxembourg
Telephone: +352 4792-1

ArcelorMittal's agent for U.S. federal securities law purposes is:

ArcelorMittal USA LLC
1 South Dearborn Street, 19th floor
Chicago, Illinois 60603
United States of America
Telephone: + 1 312 899-3985

Internet site

ArcelorMittal maintains an Internet site at www.arcelormittal.com. Information contained on or otherwise accessible through this Internet site is not a part of this annual report. All references in this annual report to this Internet site are inactive textual references to this URL and are for information only.

Business overview

The following discussion and analysis should be read in conjunction with ArcelorMittal's consolidated financial statements and related notes for the year ended December 31, 2019 included in this annual report.

Key factors affecting results of operations

The steel industry, and the iron ore and coal mining industries, which provide its principal raw materials, have historically been highly cyclical. They are significantly affected by general economic conditions, consumption trends as well as by worldwide production capacity and fluctuations in international steel trade and tariffs. This is due to the cyclical nature of the automotive, construction, machinery and equipment and transportation industries that are the principal consumers of steel. A telling example of the industry cyclicality was the sharp downturn in 2008/2009 after several strong years, which was a result of the global economic crisis. Such cyclicality, though to a lesser degree than in 2008/2009, was seen again in the downturns experienced in 2015 and 2019.

Weakness in North American and European markets have a significant impact on ArcelorMittal's results, with these markets together accounting for over 60% of ArcelorMittal's deliveries in 2019, despite demand declining in both markets. In the European Union ("EU"), 2019 was the first year to show a decline in demand since 2012, when the onset of the eurozone crisis caused European apparent steel demand to decline over 10%. Since then, EU steel demand rebounded by 18% until 2018, returning to the average demand levels seen during the period between 2000 to 2005 but remaining almost 20% below 2007 peak levels. During this same period, import competition also increased, with imports more than doubling since 2012 to over 31 million tonnes in 2018, meaning domestic European deliveries have lost market share, impacting the ability of ArcelorMittal to serve its largest market. Steel demand fell by around 4% in the EU in 2019 as underlying real demand declined by approximately 2.5%, driven by macroeconomic headwinds including declining automobile production, coupled with significant destocking, which negatively impacted apparent steel demand by a further 2%. Underlying steel demand in the United States increased strongly following the 2008/2009 financial crisis, but apparent demand has been affected by inventory movements, since demand peaked in 2014. Although the decline in apparent demand for flat products in 2019 at around -4.7% was less severe than the decline in 2015 (-8.6%) and both of these declines were exacerbated by significant destocking. This was due to underlying real steel demand weakening more than was anticipated at the start of the year, coupled by steel prices falling from high levels, resulting in stockists and later end-users, reducing inventory levels, which negatively impacted the Company's deliveries and profitability. Although the Company does not anticipate an economic recession in the United States over the next twelve months, as the country is in the longest economic expansion on record and given the frailty of the current global economic outlook, any new economic downturn could significantly impact ArcelorMittal's deliveries and profitability.

See "Risks related to the global economy and the mining and steel industry."

Demand dynamics in China have also substantially affected the global steel business. Historically, after growing strongly since 2000, Chinese steel demand started to decline in 2015 because of weaker real estate sector construction and machinery production. This decline in domestic demand led to a surge in Chinese steel exports, which more than doubled between 2012 and 2015, increasing by over 56 million tonnes to 112 million tonnes in 2015. This increase in Chinese exports was greater than the growth in world ex-China steel demand over the same period, and had the effect of curtailing domestic production in countries outside of China. A rebound in domestic demand and the beginning of a capacity reduction plan in China in the second half of 2016 led to a decline in exports, by 14% year-on-year in the second half of 2016 and by 3% for the year as whole. While most exports were directed to Asia, and exports to the U.S. were limited due to the impact of anti-dumping trade cases, a declining but still significant proportion were directed toward ArcelorMittal's core European markets in 2016. Indeed, Chinese exports in 2015 were being sold at prices below cost (China Iron and Steel Association (CISA) reported CISA mills losing an accumulated RMB 65 billion ($10 billion) in 2015), negatively impacting prices and therefore margins in many regions. Chinese producers continued to accumulate losses until April 2016 when domestic and export prices rose sharply as domestic demand surprised producers on the upside, increasing capacity utilization. Between mid 2016 and early 2018, significant capacity had been closed, consisting of over 150 million tonnes of legal blast furnace capacity and an estimated 120 million tonnes of illegal induction furnaces. This led to a significantly higher capacity utilization rate, despite a 40 million tonnes reduction in exports over the past few years, translating into an improved domestic spread of steel prices over raw material costs, and therefore higher export prices. Starting in October 2017, this situation, combined with environmental policies which led to temporary capacity restrictions over the winter period, caused even higher utilization rates in China and an even higher spread of steel prices over raw materials. Prices have since fallen back as these temporary capacity restrictions have been less strictly enforced and the risk of continued capacity increases remains. The Company expects Chinese steel demand to grow in 2020 within a range of +0.0% to +1.0% (versus estimated growth of +3.2% in 2019) driven by robust real estate activity and given the Company's current view on the Coronavirus. This may be revised downward due to the impact of the Coronavirus on Chinese demand and the knock-on impact elsewhere. However, demand is eventually expected to decline as infrastructure spending has been front-loaded and real estate demand structurally weakens due to lower levels of rural-urban migration. If this does not coincide with renewed capacity closures, this is expected to have a

negative impact on steel prices and spreads. See "—Risks related to the global economy and the mining and steel industry—Excess capacity and oversupply in the steel industry and in the iron ore mining industry have in the past and may continue in the future to weigh on the profitability of steel producers, including ArcelorMittal."

Unlike many commodities, steel is not completely fungible due to wide differences in its shape, chemical composition, quality, specifications and application, all of which affect sales prices. Accordingly, there is still limited exchange trading and uniform pricing of steel, whereas there is increasing trading of steel raw materials, particularly iron ore. Commodity spot prices can vary, which causes sale prices from exports to fluctuate as a function of the worldwide balance of supply and demand at the time sales are made.

ArcelorMittal's sales are made based on shorter-term purchase orders as well as some longer-term contracts to certain industrial customers, particularly in the automotive industry. Steel price surcharges are often implemented on steel sold pursuant to long-term contracts to recover increases in input costs; however longer term contracts with low steel prices will not reflect increases in spot steel prices that occur after contract negotiation. Spot market steel, iron ore and coal prices and short-term contracts are more driven by market conditions.

One of the principal factors affecting the Company's operating profitability is the relationship between raw material prices and steel selling prices. Profitability depends in part on the extent to which steel selling prices exceed raw material prices, and specifically the extent to which changes in raw material prices are passed through to customers in steel selling prices. Complicating factors include the extent of the time lag between (a) the raw material price change and the steel selling price change and (b) the date of the raw material purchase and of the actual sale of the steel product in which the raw material was used (average cost basis). In recent periods, steel selling prices have not always been correlated with changes in raw material prices, although steel selling prices may also be impacted quickly due in part to the tendency of distributors to increase purchases of steel products early in a rising cycle of raw material prices and to hold back from purchasing as raw material prices decline. With respect to (b), as average cost basis is used to determine the cost of the raw materials incorporated, inventories must first be worked through before a decrease in raw material prices translates into decreased operating costs. In some of ArcelorMittal's segments, in particular Europe and NAFTA, there are several months between raw material purchases and sales of steel products incorporating those materials. Although this lag has been reduced recently by changes to the timing of pricing adjustments in iron ore contracts, it cannot be eliminated and exposes these segments' margins to changes in steel selling prices in the interim (known as a "price-cost squeeze"). This lag can result in inventory write-downs, as occurred in 2015 and 2019 due to sharp declines in steel prices. In addition, decreases in steel prices may outstrip decreases in raw material costs in absolute terms, as has occurred numerous times over the past few years, for example throughout 2019 as well as the fourth quarters of 2015, 2016 and 2018.

The Company's operating profitability has been particularly sensitive to fluctuations in raw material prices, which have become more volatile since the iron ore industry moved away from annual benchmark pricing to quarterly pricing in 2010. Volatility on steel margins aside, the results of the Company's mining segment (which sells externally as well as internally) are also directly impacted by iron ore prices, which decreased significantly in 2015, ending the year at $40 per tonne ("/t") and averaging only $56/t. Iron ore (62% Fe) prices rebounded from $40/t during December 2015 to an average of $58/t during 2016, and the upward trend continued into the first quarter of 2017 with an average of $86/t, and then fluctuated between $60-75/t during most of the following two years, leading to an annual average of $71/t in 2017 and $69/t in 2018. Vale's Brumadinho dam disaster at the end of January 2019, coupled with strong steel production in China during the first half of 2019, pushed the price up to highs above $120/t in July. Vale managed to bring back 35 million tonnes of supply by the end of 2019, allowing the price to decline to an average of $92/t during December 2019 as supply better matched levels of demand. Iron ore prices have so far remained slightly above these levels during January 2020 but should iron ore prices decline significantly from these levels as further supply is brought online and especially if Chinese demand weakens, this would negatively impact ArcelorMittal's revenues and profitability. See Risks related to the global economy and the mining and steel industry—Protracted low steel and iron ore prices would likely have an adverse effect on ArcelorMittal's results of operations.

Economic environment

Global growth in 2019 is estimated to have been 2.6% - its lowest level since the global financial crisis ("GFC") in 2008/09. This subdued growth is a consequence of rising trade barriers, elevated uncertainty surrounding trade and geopolitical issues and the impact of prior U.S. interest rate increases which had a tightening effect on financing conditions in emerging economies ("EM"s). A notable feature of the sluggish growth in 2019 was the sharp and geographically broad-based slowdown in manufacturing and global trade. A few factors drove this slowdown, including higher tariffs and prolonged uncertainty surrounding trade policy which dented investment and demand for capital goods that are heavily traded. The automobile industry is continuing to contract due to distinct reasons, including lower demand and disruptions from new emission standards in Europe and China. Consequently, global import volume growth in 2019 declined to less than 1%, the weakest level

since 2015. In contrast to weak manufacturing and trade, the services sector across much of the globe continues to hold up, which has kept labor markets buoyant and wage growth healthy in advanced economies.

U.S. GDP growth decelerated to 2.4% in 2019 from 2.9% in 2018, amid slowing investment and exports as the heightened uncertainty due to trade policy and increasing perceived risk of recession caused businesses to scale back investment. Escalation of the U.S.-China trade conflict led to increased U.S. tariffs of 25% (from 10%) on $250 billion of Chinese imports, and imposed 15% tariffs on an additional $160 billion. While the recent “Phase-One” trade deal with China rolled back some of the tariffs (15% tariff halved to 7.5%), rising tariffs increased trade costs in 2019, while policy uncertainty weighed on investment and confidence. As in many other advanced economies, the U.S. manufacturing sector has been weak, while support from tax cuts and changes in government spending faded and became a drag on growth. Despite these headwinds, the labor market has remained robust and benefited from a rising participation rate. The unemployment rate of 3.5% which was reached at certain points of 2019 was near a decade low and wage growth has been solid, fueling resilient private consumption. However, concerns about the global outlook and persistent below-target inflation have resulted in the Federal Reserve cutting its policy rates by 75 basis points since mid-2019. See "Risks related to the global economy and the mining and steel industry". Unfair trade practices in ArcelorMittal’s home markets could negatively affect steel prices and reduce ArcelorMittal’s profitability, while trade sanctions and barriers may have an adverse effect on ArcelorMittal’s operations in various markets.

After reaching a cyclical peak of 2.7% in 2017, EU GDP growth slowed notably to 2.0% in 2018 and 1.4% in 2019. The main source of the slowdown has been weaker external demand, including from Turkey and Asia, especially China. External trade drove most of the volatility in eurozone growth in recent years, with exports contracting during 2019. While the U.S.-China trade war was partly responsible, exports to Asia have fallen, other impacts include Brexit-related uncertainty and especially Turkey’s recession reducing external demand from the automotive sector, which was exacerbated by the disruption caused by emission standards. Several economies were on the verge of recession at some point during 2019, particularly Germany as its industrial sector was exposed to weakness in external trade and disruptions to car production. By contrast, domestic fundamentals in Europe remain strong, with unemployment having fallen to 6.3% in 2019 the lowest level since the GFC and increasing real wages supporting household consumption. As a result, the European economy remains dominated by the wide divergence between resilient activity in services and a struggling manufacturing sector.

Growth in China slowed from 6.6% in 2018 to a still robust 6.2% in 2019, supported by resilient consumption. Growth has decelerated amid cooling domestic demand and heightened trade tensions, with trade policy uncertainty weighing on sentiment for most of 2019. Industrial production growth has reached multi-year lows (5.5% in 2019) and trade flows have weakened substantially. Imports, especially those of intermediate goods, have declined, falling more than exports, partly reflecting a deceleration in domestic demand. The contraction in exports to the U.S. deepened due to the escalation in trade tensions resulting in new tariffs imposed on Chinese exports to the U.S. (although some tariffs have been reduced since the "Phase-One" trade deal discussed above was reached), though shipments to the rest of the world were somewhat more resilient. In response to the deceleration in activity, monetary policy has become more accommodative, but regulatory tightening to reduce non-bank lending has continued. The government has also stepped up some fiscal measures, including tax cuts and increased bond issuances by the central government to support local governments’ public infrastructure investment spending. As a result, total debt has surpassed 260% of GDP, but the share of non-bank lending has continued to decline.

GDP growth in Brazil slowed slightly to 1.2% in 2019 (compared to 1.3% in 2018), largely due to weak growth in the first half of 2019, reflecting the impact of the iron ore dam disaster (Brumadinho) which caused a contraction in mining output and the recession in Argentina - Brazil’s largest trading partner - leading to weaker export growth. In Russia, growth weakened to 1.3% (compared to 2.3% in 2018) due to slower investment growth as high funding costs due to the risk of further sanctions dampened private investment, while slow implementation of the infrastructure-related national projects impacted public investment. Exports have also fallen, due to lower oil prices, while an increase in VAT negatively impacted private consumption. Following the sharp lira depreciation and associated recession in late-2018, Turkey’s economy recovered during the second half of 2019, with 2019 growth averaging 0.3%, supported by expansionary fiscal policy and rapid credit expansion by state-owned banks. In South Africa, growth remained subdued at 0.3% in 2019 (down from 0.8% in 2018) due to infrastructure bottlenecks - especially in electricity supply - and weakening external demand, particularly from the eurozone and China. Slowing global trade, a weakness in global automotive sales and destocking, have negatively impacted global manufacturing, with output growth slowing in 2019 to an estimated 1.9% (down from 3.8% in 2018). While growth in manufacturing output in China weakened to 5.7% (down from 6.3% in 2018), world-ex China manufacturing output declined by approximately 0.4%. The main impacts came from developed markets, where manufacturing output is estimated to have contracted by approximately 0.9% in 2019, offsetting an estimated 0.8% growth in output from

developing markets ex-China. European manufacturing has been impacted by weakness in automotive production which has impacted Europe more than the U.S., with output estimated to have declined by 0.8% while output in the U.S. was broadly stable in 2019.

Global apparent steel consumption (“ASC”) is estimated to have grown by 1.1% in 2019 following strong growth of 2.4% in 2018. ASC growth in China remained resilient at 3%, primarily driven by construction, supporting robust machinery output, offsetting declining automotive output and slower growth in infrastructure. World-ex China ASC is down by around 0.8% year-on-year. Demand in developing ex-China is estimated to have declined by an estimated 1.2% year-on-year, due to domestic crises in some large emerging markets causing steel demand to decline sharply in Turkey (-10% year-on-year), Iran (-7% year-on-year) and Argentina (-14% year-on-year). This more than offset growth in India (+4% year-on-year), ASEAN (+3% year-on-year) and Russia (+4% year-on-year). In EU28, underlying demand for steel was impacted by weak manufacturing, particularly automotive and machinery, due to weaker external demand and heightened uncertainty related to both the U.S.-China trade conflict and Brexit. Weakness in real demand led to inventory destocking, causing ASC to decline by over 4% in 2019. While underlying demand for steel in the US performed better than EU28, U.S. ASC is estimated to have declined by around 2% year-on-year, with construction performing better than manufacturing. Indeed, due to weaker than expected manufacturing output, and prices declining from elevated levels, stockists reduced inventory levels causing demand for flat products to decline over 4% year-on-year, more than offsetting continued growth in longs.

Sources: GDP and industrial production data and estimates sourced from Oxford Economics January 17, 2020.

Steel production

After growing strongly in 2017 (+6.3%) and 2018 (+4.7%), reaching 1.79 billion tonnes in 2018, world crude steel production in 2019 is estimated to have increased 3.5% year-on-year to 1.85 billion tonnes, primarily driven by increased production in China. In 2019, China accounted for 52% of global steel production, East Asia 12%, EU28 9%, NAFTA 7%, India 6%, CIS 6% and the rest of the world 8%. World ex-China production declined by 1.6% (down 14 million tonnes) as the higher output in the U.S. (+1.5%), India (+1.8%) and Middle East (+20%) was not enough to offset lower output in other developed markets, particularly in the EU (-4.9%) and Developed Asia (-3.6%), and in some emerging markets, including Turkey (-9.6%) and South America (-8.4%).

Chinese steel production data over the past few years has been subject to increased uncertainty due to under-reporting, particularly at illegal induction furnaces ("IF"s) after most were closed during 2017. Since IF production was mostly unrecorded in the official figures previously, and this production has moved to mills whose production is recorded officially, it led to official estimates of production growing more strongly than actual production output as estimated by ArcelorMittal. Although the Company believes that the most recent production data is broadly accurate, it estimates that production was under-recorded until mid-2018, meaning that the World Steel Association's growth rate of 8.3% in 2019 is overstated (as are growth rates in 2017 and 2018). ArcelorMittal's crude steel production estimates are consistent with its belief that Chinese steel demand grew just over 3%, supported by the Company's proprietary bottom-up steel demand modeling, as well as China’s production and trade in raw materials and metallics.

World ex-China steel production declined in 2019 as production in all major regions either fell or stagnated, except for the Middle East, where output rose by 7.3 million tonnes, largely due to Iran, where output grew more than 30% year-on-year. In 2018, production in the EU28 (168 million tonnes) was curtailed by increased import penetration despite continued demand growth and due to weakness in German steel production. In 2019, while a sharp fall in domestic European steel prices led to lower import penetration, steel production in EU28 declined by approximately 9 million tonnes to 159 million tonnes as the weakness in industrial output, particularly automotive production, led to much weaker steel demand. In North America, strong production growth in 2018 (4.4% year-on-year) was driven by U.S. fiscal stimulus and supported by Section 232 applied tariffs and quotas on steel imports. As the impact of the U.S. fiscal stimulus faded and North America steel demand fell, steel production in 2019 declined slightly (-0.8% year-on-year) due to weaker manufacturing with lower production in Mexico (-8.0%) and Canada (-4.9%) more than offsetting growth in the U.S. (+1.5%). The decline in steel output in South America was mainly caused by a 9% decline in Brazil production (down 3.2 million tonnes). Production in Developed Asia fell by 3.6% year-on-year (down 7 million tonnes), particularly Japan (-4.8%) and South Korea (-1.5%). Weakness in CIS steel production is due to persistent weakness in Ukrainian steel production (2019 production of 21 million tonnes is one third below the 2011 peak of 35 million tonnes), while Russian production declined slightly to 71.2 million tonnes from its historically high production in 2018 (approximately 72 million tonnes). After increasing 13.1% year-on-year to a record 37.5 million tonnes in 2017, Turkish steel production fell significantly to 33.4 million tonnes in 2019 as the economy suffered from a domestic recession triggered by a lira crisis in late 2018 which led to a collapse in domestic demand, especially in the construction sector.

Annual Global production data above is estimated using the 63 countries for which monthly production data is published by the World Steel Association.

Steel prices

Flat products

Steel prices for flat products in Europe were stable in Southern Europe and on a slight upward trend in Northern Europe during the first quarter of 2017 compared to December 2016. Prices of hot rolled coil ("HRC") increased in Northern Europe by €69/t quarter-on-quarter and in Southern Europe by €63/t quarter-on-quarter. Prices weakened in the second quarter of 2017 with an average price decline of €47/t in Europe. The average HRC prices for the first half of 2017 were at €545/t in Northern Europe and €513/t in Southern Europe compared to the first half of 2016. Prices bottomed out in July 2017, thus the downtrend reversed during August and September 2017. In the third quarter of 2017, spot HRC prices in Northern Europe remained €5/t below the second quarter 2017 average, and in Southern Europe there was an average increase of €9/t quarter-on-quarter.

There was little fluctuation in prices in the fourth quarter of 2017, with a quarter-on-quarter improvement of €22/t in Northern Europe and €11/t in Southern Europe. HRC prices during the second half of 2017 increased €65/t in Northern Europe and €67/t in Southern Europe compared to the second half of 2016.

In the first quarter of 2018, steel prices for flat products in Europe continued their steady upward trend which started in November 2017. HRC prices peaked towards the end of March at €574/t in Northern Europe. In Southern Europe, HRC prices increased from €519/t in January to €558/t at the beginning of March. In the second quarter of 2018, prices decreased sharply in USD terms following the international market trend. However, the depreciation of the euro against the USD helped sustain domestic HRC prices in euro terms, with a low of €561/t in Northern Europe at the beginning of June 2018, €13 below its peak in April 2018. In Southern Europe, HRC prices bottomed out at €514/t by mid-June 2018 from a peak of €544/t in April 2018. Average HRC prices were €564/t in Northern Europe and €538/t in Southern Europe for the first half of 2018, compared to €545/t in Northern Europe and €513/t in Southern Europe for the first half of 2017. The provisional safeguard measures and tariff rate quotas implemented in July 2018 did not create a tangible effect on market protection in Europe and there was very limited improvement in flat products prices during the third quarter of 2018. In Northern Europe HRC prices increased slightly in euro terms compared to the June level but only to reach a quarterly average of €566/t representing a €1/t decrease quarter-on-quarter, while in Southern Europe the price improvement averaged at €537/t representing a €7/t increase over the second quarter level. In USD terms, however, prices declined across the regions due to further euro depreciation against USD. Market seasonality, high inventory levels and imports pressured prices during the fourth quarter of 2018 and HRC prices declined in euro and USD terms both in Northern Europe by €18/t to €548/t and in Southern Europe by €38/t to €499/t compared to the third quarter of 2018 average levels. Overall, the second half 2018 HRC prices averaged at €557/t in Northern Europe and at €518/t in Southern Europe, corresponding to a €30/t and €13/t year-on-year increase, respectively.

In the first quarter of 2019, steel prices for flat products in Europe continued their steady downward trend which started in September 2018. The prices of HRC in Northern Europe reached €517/t in January 2019, finishing the quarter €8/t lower, at €509/t. The decrease was attributable to weak domestic demand in the beginning of the year, high levels of inventories and the influence of declining international steel prices. In Southern Europe, HRC prices followed an inversed trend starting at €470/t in January and closing the quarter at €486/t, €16/t higher. This inversed trend was partially driven by a stronger demand in Southern Europe and partially by the Turkish imports that were entering the Italian market with higher price ranges between €495/t-€500/t Cost, Insurance and Freight Free Out ("CIFFO") effective. Domestic mills followed the Turkish import prices.

In the second quarter of 2019, prices in Northern Europe continued to decrease and ended the quarter at €487/t, which was €11/t lower compared to April 2019. HRC prices in the Southern regions followed the same trend from the previous quarter peaking in June at €472/t, from €469/t in April. Turkish suppliers continued with their export offers of €470/t-€480/t CIFFO effective into Italy and Iberia, providing room for further increases in Southern European domestic prices, given there was no import price pressure. The average HRC prices for the first half of 2019 were €499/t in Northern Europe and €472/t in Southern Europe, which were accordingly €65 and €66/t lower than in the first half of 2018.

Flat products prices continued to slide down in the third quarter of 2019, impacted by soft demand and weakening international raw material prices. HRC in Northern Europe had several trenches of price drops, ending the quarter at €469/t, which was €18/t lower versus the previous quarter. In Southern Europe the price of HRC averaged €453/t, which was €19/t lower compared to the second quarter of 2019. Market seasonality, high inventory levels and import pressure during the fourth quarter of 2019 pushed the HRC prices on a downward spiral. Several attempts of price increases were rejected by the market, as real demand in Europe was weak. In Northern Europe, HRC prices ended the fourth quarter at €431/t, which was €38 lower quarter-on-quarter and in Southern Europe, HRC averaged €413/t in the fourth quarter of 2019, €40/t lower than the previous quarter. In the second half of 2019, HRC prices averaged €450/t in Northern Europe and €433/t in Southern Europe respectively €107/t and €85/t lower than the second half of 2018.

In the United States, HRC spot prices increased during the first quarter of 2017 by an average of $106/t quarter-on-quarter. Price levels improved sharply during January, had stability during February and peaked at $725/t by end of March 2017, to reach their highest average level since September 2014. During the second quarter of 2017, HRC spot prices decreased $11/t quarter-on-quarter, with progressive declines until the first week of June 2017, but were followed by a price pickup, sustained by declining inventories and improved international market sentiment. The average HRC price in the United States during the first half of 2017 was $688/t compared to the first half of 2016 at $547/t. The HRC spot price slightly improved in July and August, and stabilized towards the end of the third quarter of 2017, increasing $4/t quarter-on-quarter. Slight declines were recorded during October, but prices picked up during November and December to reach $704/t by the end of 2017. The average prices during the fourth quarter of 2017 decreased $2/t quarter-on-quarter. Overall, in the second half of 2017 prices averaged at $686/t, representing a $68/t increase compared to the second half of 2016.

In the United States, as a consequence of the then-ongoing Section 232 national security investigation which started in April 2017 and the expectation of the imminent implementation of import tariffs on steel, spot HRC prices increased sharply during the first quarter of 2018. Before the release of the investigation report by the Department of Commerce on February 16, 2018, HRC prices reached $830/t from $723/t at the beginning of January 2018. After the release of the report that recommended tariffs in the range of 24 to 53%, prices spiked further to $936/t at the beginning of March 2018. The increase slowed down as 25% tariffs and exceptions went into effect during March 2018, closing the month at a high of $960/t. In the second quarter of 2018, HRC prices surpassed the $1,000/t level in the United States, peaking at $1,012/t by the end of June. The average HRC prices were $907/t for the first half of 2018 in the United States, as compared to $688/t for the first half of 2017, corresponding to a $219/t increase year-on-year. HRC prices hit a 10 year high of $1,014/t at the beginning of July 2018 in the United States. However, market seasonality and weakening of the international prices in the second part of the year coupled with an increase in the domestic capacity utilization rate (thus an increase in domestic supply), resulted in consistent price deterioration, with HRC prices falling to $799/t by the end of the year. Third quarter HRC prices averaged $982/t, still $2/t above the second quarter level, while average prices declined in the fourth quarter by $99/t quarter-on-quarter to $883/t. Overall, average HRC prices for the second half of 2018 were $932/t as compared to $686/t for the second half of 2017 corresponding to a $246/t increase year-on-year.

In the United States, domestic HRC prices in the first half of 2019 continued the downward trend that began in July 2018. The first quarter of 2019 started with prices at $776/t in January and in March reached $767/t ($9/t lower). Prices in the second quarter of 2019 plunged even deeper - from $749/t in April to $598/t in June (a drop of $151/t), well below import parity levels. This descent represents the market's search for an equilibrium point after additional local capacity came on-stream in the second half of 2018. This additional supply availability added pressure on domestic prices at the same time as domestic mills were fighting imports. U.S. suppliers' short lead time combined with comfortable inventory levels at customers contributed to the downward trend in domestic prices.

The average HRC price for the first half of 2019 in the United States was $723/t, as compared to $907/t for the first half of 2018 (a drop of $184/t). The anticipated decline in imports, as an outcome of the implementation of the Section 232 import tariffs was not as strong as expected. Therefore, import prices continued to add pressure on the domestic pricing. The HRC import Houston DDP index continued to decline over the first half of 2019, from $746/t in the first quarter to $685/t in the second quarter.

In the second half of 2019, the average HRC price in the United States was $603/t, $330/t below the second half of 2018. The dramatic decrease is due to 2018 having been a record year in which prices were inflated by Section 232 import tariffs on steel. In 2019, prices fell due to weak real demand and decreasing scrap prices. The average HRC price for the third quarter was $627/t, a drop of $52/t versus the previous quarter which was mainly due to the scrap USA #1 Busheling price dropping by $33/t, to $290/t and pressure from destocking at both Steel Service Centers ("SSCs") and Original Equipment Manufacturers ("OEMs").

Prices in the fourth quarter of 2019 averaged at $579/t, which is $48/t lower versus the third quarter. The situation further deteriorated in October due to the strike at General Motors that added to the market's negative sentiment. From November onwards, some relief came as scrap started an upward trend and international prices began to show signs of recovery. As a result, the fourth quarter ended in December at $623/t from the yearly low of $545/t, recorded in October.

In China, spot HRC prices increased during the first quarter of 2017, compared to the average levels of the fourth quarter of 2016, fluctuating on an upward trend until the first part of February 2017, but deteriorated afterwards, in line with raw material basket cost decline. Domestic HRC prices increased during the first quarter of 2017 by an average of $35/t quarter-on-quarter. Prices then continued to slide, hitting a bottom level of $374/t, VAT excluded by mid-May, followed however by a rapid recovery to a $439/t, VAT excluded average in June, supported by a new upward trend in raw materials cost, positive market sentiment and local mill interest to ramp up production and maximize profits. HRC spot prices decreased in the second quarter of 2017 on average by $62/t quarter-on-quarter. In the first half

of 2017, HRC domestic prices in China averaged $427/t, VAT excluded, compared to $317/t, VAT excluded, during the first half of 2016. HRC spot prices in China continued their steady increase in the beginning of September and increased for the third quarter of 2017 by $113/t quarter-on-quarter. The price increases slowed down during the fourth quarter of 2017 with an increase of $29/t quarter-on-quarter. HRC spot prices in China averaged $523/t, VAT excluded in the second half of 2017, an increase of $138/t, VAT excluded from the second half of 2016.

In China, spot HRC prices fluctuated during the first quarter of 2018, peaking at $562/t VAT excluded at the end of February, followed by a sharp decline due to weak demand and high inventories. HRC prices bottomed out at the end of March at $507/t VAT excluded. Production cuts in several regions and mill inspections to ensure compliance with pollution emission standards impacted supply during the second quarter of 2018. These measures supported HRC prices in China, which increased from $524/t VAT excluded at the beginning of April to a high of $581/t VAT excluded by mid-June. However, due to improvements in production levels and seasonal weak demand, HRC prices declined at the end of the month. In China, HRC domestic prices averaged $555/t VAT excluded for the first half of 2018, as compared to $427/t VAT excluded for the first half of 2017.

Despite the implementation of tough environmental controls and positive fiscal policies to expand domestic demand, production continued to increase, sustained by attractive margins, while consumption remained flat during the second half of 2018. This resulted in further pressure on HRC prices in China, which declined by $15/t (during the third quarter of 2018) as compared to the second quarter average level to $546/t VAT excluded and by an additional $58/t to $488/t VAT excluded during the fourth quarter of 2018.

HRC domestic prices averaged $517/t VAT excluded for the second half of 2018, representing a $7/t decline as compared to $524/t VAT excluded for the second half of 2017.

In China, spot HRC prices averaged at $482/t VAT excluded in the first quarter of 2019. The year started in January with prices at $467/t, strengthening to $494/t by March, as a result of the market's resumed activity following the Chinese New Year.

In the second quarter of 2019, due to Brazil's major accident at one of its largest iron ore mining facilities, as well as due to the market seasonality, the peak prices were reached in April at $523/t VAT excluded. The second quarter of 2019 closed in at an average of $512/t VAT excluded. Despite the governmental measures targeting production cuts due to overcapacity and environmental issues, domestic mills have reacted slowly to the indications, driving the domestic price by end of June 2019 to $493/t VAT excluded, i.e. on a downward trajectory. The HRC domestic price in China averaged $497/t VAT excluded for the first half of 2019, compared to $557/t VAT excluded for the first half of 2018.

The downward spiral of the Chinese HRC price continued in the third quarter of 2019 reaching $474/t, which was $38/t lower versus the previous quarter, with increased inventory levels of both raw materials and finished products. Domestic demand was impacted by seasonality. The fourth quarter of 2019 began with further weakening of Chinese HRC prices, with October being the weakest month at an average of $441/t. The Purchasing Managers' Index ("PMI") dropped to its lowest point in four years, with the rate of new order intake dropping by over 5% for both domestic and exports. However, the market started to improve from November onwards when the 7-month downward spiral reversed. Better domestic demand and a decrease in finished product inventory (-10% month-on-month) helped improve the prices in November. In December, international steel prices started to improve, which also supported a positive price environment in China. The fourth quarter of 2019 ended at $462/t, $12/t lower than in the third quarter. HRC spot prices in China averaged $468/t, VAT excluded in the second half of 2019, a decrease of $50/t, VAT excluded from the second half of 2018.

The following table presents the spot HRC average price range per tonne in Northern and Southern Europe, the United States and China on a quarterly basis from 2017 to 2019.

Flat products				
	Northern Europe	Southern Europe	United States	China
Source: Steel Business Briefing (SBB)	Spot HRC average price per tonne	Spot HRC average price per tonne	Spot HRC average price per tonne	Spot HRC average price per tonne, VAT excluded
Q1 2017	€569	€537	$694	$458
Q2 2017	€521	€491	$682	$396
Q3 2017	€517	€500	$687	$509
Q4 2017	€538	€510	$685	$538
Q1 2018	€561	€545	$834	$549
Q2 2018	€567	€530	$980	$565
Q3 2018	€566	€537	$982	$546
Q4 2018	€548	€499	$883	$489
Q1 2019	€510	€477	$766	$482
Q2 2019	€487	€467	$679	$512
Q3 2019	€469	€453	$627	$474
Q4 2019	€431	€413	$579	$462

Long products

Long steel product prices increased in Europe in the beginning of the first quarter of 2017, followed by a decline in mid-February, but with a recovery by the end of March. Prices then weakened during the second quarter of 2017 for

both medium sections and rebars, but seemed to bottom out by the end of June with a quarter on quarter decline of €15/t and €22/t, respectively. The average price for medium sections in Europe during the first half of 2017 was €508/t compared to €481/t in the first half of 2016. The average rebar price in Europe during the first half of 2017 was €452/t compared to €404/t in the first half of 2016. Prices for long steel products were on a steady upward trend toward the end of the year. Medium sections prices increased €29/t quarter-on-quarter, while rebar prices increased €28/t quarter-on-quarter. During the fourth quarter of 2017, medium sections prices further increased €58/t quarter-on-quarter, while rebar prices increased €84/t quarter-on-quarter. The average medium sections price in Europe for the second half of 2017 was €557/t as compared to €499/t for the second half of 2016. The average rebar price in Europe for the second half of 2017 was €517/t as compared to €432/t for the second half of 2016.

Long steel product prices remained relatively stable in Europe in euro terms at the beginning of 2018 compared to the peak level in December 2017, but continued their upward trend in USD terms as the euro strengthened. Prices weakened from mid-February and towards the end of the first quarter of 2018 with inventories reaching comfortable levels and a cautious market following the volatility in raw material costs. Medium sections prices declined from €625/t in January to €600/t by the end of March. Similarly, rebar prices declined from €568/t in January to €553/t in March. Prices remained stable again during April 2018 but followed a downward trend until mid-June when medium sections bottomed out at €585/t and rebar at €528/t. Average medium sections prices were €603/t in Europe for the first half of 2018 as compared to an average of €508/t for the first half of 2017. Average rebar prices were €552/t in Europe for the first half of 2018 as compared to €452/t for the first half of 2017. Good market sentiment and strong demand supported an improvement of long product prices during the third quarter of 2018, with medium sections reaching €620/t and rebars €560/t by September corresponding to a €35/t and €32/t increase, respectively, as compared to the bottom level in June, and representing a quarter-on-quarter average improvement of €20/t for medium sections and €6 for rebars. Prices remained relatively stable during the fourth quarter of 2018 as compared to the levels at the end of September despite some weakening in rebars with a quarterly average of €538/t representing a €13/t decrease quarter-on-quarter. The average medium sections prices were €618/t in Europe for the second half of 2018 as compared to €557/t for the second half of 2017. The average rebar prices were €545/t in Europe for the second half of 2018 as compared to €517/t for the second half of 2017.

Prices of long steel products in Europe continued their steady downward trend in 2019. In January 2019, rebar price and medium sections price reached €528/t and €624/t, respectively. The rebar price decline started in August 2018, while the medium sections price decline started in January 2019. By the end of March 2019, the rebar price and the medium section price dropped to €526/t and €588/t, respectively, reaching a quarterly average of €526/t and €605/t, respectively. In June 2019, prices bottomed further to €501/t for rebar and €579/t for medium sections. The falling domestic pricing environment followed the trend of weakening world scrap prices on international markets.

In Europe, the average medium sections price for the first half of 2019 was €595/t as compared to an average of €603/t for the first half of 2018. The average rebar price for the first half of 2019 was €521/t as compared to €552/t for the first half of 2018.

Prices for long steel products in Europe continued their steady downward trend in the second half of 2019. The prices reached a floor in November 2019 at €452/t for rebar and €521/t for medium sections, the lowest over the last two years. The average medium sections price in Europe for the second half of 2019 was €548/t as compared to €619/t for the second half of 2018, representing a drop of €71/t year-on-year. The average rebar price in Europe for the second half of 2019 was €476/t as compared to €545/t for the second half of 2018, a decrease of €69/t year-on-year.

In the first quarter of 2017, imported scrap HMS 1&2 in Turkey improved by $18/t compared to the fourth quarter of 2016 average of $275/t CFR. Rebar export prices closely followed the evolution of Turkey imported Scrap HMS 1&2, declining in the beginning of 2017 from $430/t FOB in December 2016 to close to an average of $390/t FOB by the end of January 2017, and continued fluctuating towards the end of March 2017. However, Turkish rebar export prices increased during the first quarter of 2017 by $14/t quarter-on quarter. The price fluctuation continued during the second quarter of 2017, but with an uptick towards the end of June with an overall increase of $4/t over the previous quarter. The average price in the first half of 2017 for rebar exported from Turkey was $425/t FOB compared to $388/t FOB in the first half of 2016. From July through the end of 2017, the Turkey rebar FOB price has been fluctuating on an upward trend, closely following HMS 1&2 Turkey CFR price evolution. After hitting a three-year high of $550/t FOB in the beginning of September 2017, rebar prices declined to $508/t FOB by October. This drove an increase in the average price range during the third quarter of 2017 by $80/t quarter-on-quarter. Toward the end of 2017, the Turkey rebar FOB export price reached $570/t, and further improved the quarterly average price by $20/t for the fourth quarter of 2017. The average Turkey rebar export price was $517/t FOB in the second half of 2017, an increase of $123/t compared to $394/t FOB for the second half of 2016.

In the first quarter of 2018, the price of imported scrap HMS 1&2 in Turkey improved by $40/t to an average level of

$363/t CFR as compared to the fourth quarter of 2017. Rebar export prices closely followed the evolution of Turkey imported scrap HMS 1&2, declining from $573/t FOB at the beginning of January to $555/t FOB by the end of the month. Rebar export prices then increased to a peak of $590/t FOB by the end of February followed by a downward trend reaching $568/t FOB at the end of March. During the second quarter of 2018, the Turkish export rebar price continued to follow a downward trend alongside the scrap HMS 1&2 index, ranging between $565/t FOB at the beginning of April to $540/t FOB at the end of May. The average Turkish export rebar price for the first half of 2018 was $562/t FOB, as compared to $425/t FOB for the first half of 2017. With US and European markets blocked for Turkish exporters due to EU safeguard measures and doubling of the Section 232 import tariffs into the U.S., Turkish producers faced increased competition on alternative markets resulting in further pressure on export rebar prices during the first part of the third quarter. Prices seemed to bottom out mid-August at $523/t; however they continued to deteriorate during October to a $500/t level. After a small uptick in November supported by an improvement in scrap prices as well as a strengthening of the Turkish Lira, Turkish export rebar prices dropped by the end of the fourth quarter of 2018 to $455/t, the lowest level since July 2017.

The average Turkish export rebar price for the second half of 2018 was $507/t FOB, as compared to $518/t FOB for the second half of 2017.

In Turkey, rebar export prices continue to align closely with the evolution of world scrap prices. The first quarter of 2019 started for Turkish rebar at one of the lowest points compared to the previous six quarters, being at $466/t FOB, which is in line with the bottomed HMS 1&2 index at $310/t CFR. However, the March 2019 rebar export price was $482/t FOB, higher by $36/t compared to January at $446/t. During the second quarter of 2019, the Turkish export rebar price followed a month over month downward trend alongside scrap HMS 1&2 index, from a high of $480/t FOB at beginning of April down to $468/t FOB at the end of June. Nevertheless, the average for the second quarter, at $473/t, was higher than the average for the previous quarter at $466/t. In the first half of 2019, the Turkish export rebar price averaged $470/t FOB compared to $562/t FOB average during the first half of 2018.

In the third quarter of 2019, the price of Turkish rebar continued the downward trend from the previous quarter, reaching $441/t FOB, which is a $32/t decrease quarter-on-quarter. July opened the quarter at $461/t, while September closed at $413/t, representing a drop of $48/t driven by the seasonally limited demand. In October, prices reached a floor for the year at $405/t, which was also the lowest point over the last three years. The prices subsequently increased with the overall fourth quarter of 2019 averaging at $421/t. The year closed in December with a price of $442/t, $37/t higher versus the low reached in October. The increase in prices was driven by the U.S. scrap price improvement from early November, which recovered the $40/t lost in September/October and ended the year in December at $290/t, although not enough to surpass the level from the first half of the year at $348/t. The average Turkish rebar export price for the second half of 2019 was $431/t FOB as compared to $508/t FOB for the second half of 2018.

Long products			
	Europe medium sections	Europe rebar	Turkish rebar
Source: Steel Business Briefing (SBB)	Spot average price per tonne	Spot average price per tonne	Spot FOB average price per tonne
Q1 2017	€515	€463	$424
Q2 2017	€501	€441	$427
Q3 2017	€530	€469	$507
Q4 2017	€587	€553	$527
Q1 2018	€614	€558	$572
Q2 2018	€592	€545	$552
Q3 2018	€611	€551	$525
Q4 2018	€626	€538	$490
Q1 2019	€605	€526	$466
Q2 2019	€583	€515	$473
Q3 2019	€567	€490	$441
Q4 2019	€529	€461	$421

Current and anticipated trends in steel production and prices

The global economy clearly slowed in 2019, particularly in Europe, and the lower global automotive production weighed on steel demand. This impact was exacerbated by supply chain destocking in all the major markets, particularly in the Company's core markets of NAFTA, Europe and Brazil.

In China, in 2019, ArcelorMittal believes steel production grew almost 3% (despite the 8.3% increase in official figures - see discussion in "-Steel production" above) as demand grew over 3%, while net exports declined by 6 million tonnes. Before the onset of the coronavirus, the Company expected production to grow in 2019 as domestic demand increased by around 1 to 2%, coupled by marginally higher exports as world ex-China demand grows. This may be revised downward due to the impact of the Coronavirus on Chinese demand and the knock-on impact elsewhere, particularly the rest of Asia. The Chinese HRC spread (difference between raw material costs and finished steel prices) in 2017 increased from approximately $150/t in the first half of 2017 to $250/t in the second half supported by an elevated crude steel utilization rate mainly due to a structural steel capacity cut and the winter heating season policy, which temporarily restricted steel supply. Since then,

Chinese spreads have seen a sharp correction, declining from $280/t in the third quarter of 2018 to approximately $160/t in the third quarter of 2019. This was largely impacted by the Chinese government lowering the focus on reducing emissions and deleveraging and increasing the focus on sustaining the economy. This led to both stronger demand in 2019 (largely due to the stimulus plan targeting infrastructure), and to more capacity (due to less effective winter capacity constraints and some capacity creep). The U.S.-China “phase one” trade deal led to improved market sentiment, which resulted in industrial restocking. The Chinese government also continued to ease liquidity conditions moderately, as a tool to simulate the economy supporting an improved HRC spread, reaching $190-200 by the end of 2019 and sustained into January 2020. The precise impact of the Coronavirus is unknown but has had a negative impact on Chinese prices and spreads, and could continue to have a negative impact if inventories continue to rise at mills in China, putting downward pressure on pricing. While the Company expects a significant negative impact on industrial output and steel demand during the first quarter of 2020, assuming the disruption fades soon, employment and incomes are expected to be relatively unaffected, with most of the lost output expected to be recouped during the remainder of 2020, supported by fiscal and monetary easing. However, in 2020 both GDP and steel demand growth are still likely to be weaker than what was expected prior to the outbreak (Steel demand now expected to grow only 0 to 1% in 2020, down from 1 to 2% previously expected).

U.S. ASC decreased by almost -2% in 2019, as significant destocking and declining auto output led flat products to decline -4.7%, coupled with reduced pipe and tube deliveries, this more than offset growth in long products. Imports, however, continued to decline in 2019 (-18% year-on-year) due to Section 232 25% tariffs on most non-NAFTA countries, which allowed domestic production to increase (+1.5% year-on-year). The Company anticipates a small (0 to 1%) further increase in steel demand in 2020, but with imports expected to be broadly stable, steel production is expected to grow at a similar rate to demand. In the EU, steel demand declined by over 4%, driven by weaker real demand and exacerbated by destocking, which accounted for almost half the decline in apparent steel consumption. Brazilian flat products demand was also negatively impacted by destocking in 2019 and alongside continuing growth in real demand, the Company expects growth in apparent steel consumption of almost 5% in 2020. Despite imports declining too, steel production in the EU still declined by 4.9% in 2019. While real steel demand is expected to remain weak in 2020, an end to destocking is expected to support mild growth (around +1.5%) in ASC. In 2020, the Company expects continued pressure from imports, which is why appropriate safeguard measures on steel trade are important to enable European mills to benefit from any improvement in demand.

Overall, ArcelorMittal expects world ex-China ASC to grow again in 2020 due to relatively strong demand growth in developing Asian markets and a rebound from significant declines in Turkish steel demand, coupled by slow growth in developed markets. Continued capacity restraint and relatively stable production in China, together with continued growth in demand in world ex-China is expected to lead to a gradual improvement in utilization and support the spread of steel prices over raw material costs.However, the Coronavirus is having a significant impact on Chinese demand during the first quarter of 2020 and is likely to have a negative impact elsewhere, mainly Asia, through reduced goods exports to China, fewer tourists from China and supply-chain disruptions due to shortages of Chinese produced intermediate goods. Although the impact on the Company's core markets is expected to be smaller, until the virus is under control, these cannot be quantified and our current forecasts for steel demand assume that the situation in China does not deteriorate materially. However, the recent increase in cases outside China is worrying and increases the risk of a global pandemic and a much larger negative impact on global GDP. The Company is monitoring the situation closely and in particular in Italy, as should the virus spread more widely through Europe this will likely have a material impact on the Company’s sales and profitability in 2020

Raw materials

The primary raw material inputs for a steelmaker are iron ore, coking coal, solid fuels, metallics (e.g., scrap), alloys, electricity, natural gas and base metals. ArcelorMittal is exposed to price volatility in each of these raw materials with respect to its purchases in the spot market and under its long-term supply contracts. In the longer term, demand for raw materials is expected to continue to correlate closely with the steel market, with prices fluctuating according to supply and demand dynamics. Since most of the minerals used in the steel-making process are finite resources, their prices may also rise in response to any perceived scarcity of remaining accessible supplies, combined with the evolution of the pipeline of new exploration projects to replace depleted resources.

In 2017, the increase in the average reference iron ore and hard coking coal price that occurred in 2016 continued due to the impact of closures of induction furnaces capacity since 2016. In 2017, iron ore and coking coal prices increased by 22.3% and 31.5% year-on-year respectively (Metal Bulletin 2017 vs. 2016). In the first quarter of 2018, iron ore market reference prices increased following a decrease in the fourth quarter of 2017, averaging $74.39/t, up 13.6% compared to the fourth quarter of 2017 (Metal Bulletin 2018 vs. 2017), supported by robust crude steel production in China. For the full year 2018, the strong steel production in China amid its fight against air pollution and overcapacity kept iron ore and coking coal prices at elevated levels and boosted prices for high-grade qualities

as steel mills chased productivity. Though prices for the most common qualities of iron ore decreased 2.2% year-on-year in 2018, the high-grade qualities of iron ore posted a price increase on an annual basis. Coking coal prices increased 10.3% compared to 2017 (Metal Bulletin 2018 vs. 2017).

In 2019, iron ore market reference prices increased following a supply disruption caused by the collapse of the Brumadinho dam owned by Vale in Brazil on January 25, 2019 and the cyclone in Australia mining region (end of March 2019), averaging $93.63/t, up 34% compared to 2018 (Metal Bulletin 2019 vs. 2018).

Coking coal prices in 2018 averaged $206.58/t (compared to $187.31/t in 2017) and were supported by robust crude steel production in China as well as bullish market sentiment from risk of lower Australian supply due to the announcement of changes in the maintenance schedule by the main local rail network operator. Coking coal prices in 2019 averaged $177.36/t (compared to $206.58/t in 2018) and were initially supported by incidents in Australia (heavy rains, accident at Anglo's Moranbah mine) and the local Australian rail network operator trade union's industrial action and maintenance works, however, in the second half of 2019, the prices decreased, driven by coking coal import restrictions at key Chinese ports and a weak demand from India amid domestic slowdown.

As for pricing mechanisms, since 2012, quarterly and monthly pricing systems have been the main type of contract pricing mechanisms, but spot purchases also appear to have gained a greater share as steelmakers have developed strategies to benefit from increasing spot market liquidity and volatility. In 2017, 2018 and 2019, the trend for using shorter-term pricing cycles continued. Pricing is generally linked to market price indexes and uses a variety of mechanisms, including current spot prices and average prices over specified periods. Therefore, there may not be a direct correlation between market reference prices and actual selling prices in various regions at a given time.

Iron ore

Iron ore prices recovered to $85.60/t in the first quarter of 2017 following strong demand for steel after the Chinese New Year. The average price for the second quarter of 2017 decreased to $62.90/t; this downward trend was influenced by increased inventory levels at Chinese ports. In the third quarter of 2017, the average price increased to $71.20/t driven by bullish sentiment in the steel market reflected in strong steel PMIs (Purchasing Manager Index) for China. During the fourth quarter of 2017, the price varied from a minimum of $58.52/t on October 31, 2017 and a maximum of $76.36/t on December 22, 2017, with the average for the fourth quarter at $65.50/t. The quarter was marked by high volatility driven by environmental regulation announcements by the Chinese authorities to constrain emissions and steel production during the 2017-2018 winter period.

In the first quarter of 2018 iron ore prices recovered at $74.39/t, up 13.6% compared to the fourth quarter of 2017. However, great price disparities were observed. Seaborne iron ore demand was hit by a persistent weakness in downstream steel demand, the trade war developing between China and the U.S. and the extension of winter restrictions in China beyond March 15, 2018 all of which had a significant impact. In March, prices plummeted from the highest quarter price of $79.39/t in the beginning of the month to $64.99/t at the end of the month (Metal Bulletin 2017 & 2018). In the second quarter of 2018, prices decreased and remained stable at an average $65.30/t despite strong steel demand over the period. China iron ore port stocks remained high and concentrate production sharply decreased year-over-year as a result of mine inspections. However, steel PMI remained in expansion at 51.6 points in June. In the third quarter, prices were fairly stable, averaging $66.8/t. Low prices on the seaborne market found support in the fear of an intensification of the trade war between China and the U.S., depreciation of the Chinese currency, low future prices and environmental restriction in China. The last quarter of 2018 saw the iron ore price jumping and averaging $71.6/t. It reached $76.75/t on November 12, 2018 amid strong steel margins depleting stocks at Chinese ports and restocking demand in China before the start of the winter period. Also, the derailment of a BHP train carrying iron ore in Australia in the beginning of November provided some short-term support to the iron ore price that boosted the November average. However, prices dropped at the end of November, and in the beginning of December, mills corrected for weak off-season demand and reduced steel margins due to less stringent winter restrictions, which led to prices at the end of 2018 at $72.70/t.

In the first quarter of 2019, following the Vale owned Brumadinho dam disaster in Brazil, the seaborne iron ore market surged to $82.41/t on average, up 15% compared to the last quarter of 2018. The supply shock was aggravated by the cyclone season in Australia with some Australian iron ore producers lowering their output guidance for the year, which contributed to reaching $100.92/t on average in the second quarter of 2019 with a peak of $125.77/t observed on July 2 (Metal Bulletin) also supported by lower inventories at Chinese ports. Prices remained elevated in July at $119.93/t in average and sharply decreased in August to $90.69/t following expectations of weaker demand as well as the impact of currency risks which were exacerbated by the decision of China's central bank to depreciate the yuan in response to decision of the U.S. government to extend punitive tariffs, both of which cast uncertainty on the iron ore future market, along with supply recovery. In September 2019, iron ore prices rose again on the back of a supportive paper market and expectations of

increased end-user restocking activity. The average price for the third quarter of 2019 was $102.03/t. October 2019 was bearish with continued lack of end-user demand for iron ore fines ahead of announcements for winter production cuts. However, prices recovered sharply in November amid higher end-user demand for high-grade materials and supportive futures market for steel. The fourth quarter of 2019 average price was $88.97/t and the average price for 2019 was $93.63/t (Metal Bulletin).

Coking coal

In the first quarter of 2017, the spot prices (Metal Bulletin Premium Hard Coking Coal FOB Australia index "HCC FOB") sharply dropped from $266.50/t in December 2016 (monthly average) to $155.20/t in March 2017 (monthly average) with the average spot price for the first quarter at $166.80/t. The temporary relief of the Chinese working days restriction and fully recovered supply from Australia, as well as expected additional seaborne supply from North America allowed such a sharp drop in prices by the end of the first quarter of 2017. At the beginning of the second quarter of 2017, the cyclone Debbie that unexpectedly hit Australia caused supply disruptions and spot prices spiked. The upward trend of April up to $300/t on April 18, 2017 and a monthly average of $257.80/t was followed by the downward trend in May and June as the Australia mining-rail-port system recovered earlier than expected from the cyclone disruption. The spot price decreased through the second quarter to $175/t in May (monthly average) and $145/t in June 2017 (monthly average), leading to an average spot price for the second quarter of 2017 of $190.60/t.

For the second quarter of 2017, a new index-based methodology was adopted for the premium HCC FOB Australia quarterly contract price between some Japanese steel makers and Australian HCC suppliers. In the third quarter of 2017, the average spot price (Metal Bulletin Premium HCC FOB Australia index) increased to $188.30/t driven by bullish sentiment in the steel market and strong steel PMIs for China. In the fourth quarter, supported by the port congestion in Australia, the price further increased to $203.50/t.

Coking coal prices entered 2018 as a bullish market with record high vessel queues at a key port in Queensland, Australia and Chinese restocking demand high ahead of the Chinese New Year holiday. The spot prices (Metal Bulletin Premium HCC FOB Australia index) averaged $228.48/t in the first quarter of 2018 increasing 36.8% year-on-year and 12.2% as compared to the fourth quarter of 2017. The elevated prices were then corrected in the second quarter and reached $188.89/t (quarterly average) due to the extension of Chinese winter restrictions until April and delayed increase of steel demand in China. However, the downward movement was limited by a continued threat of supply disruptions due to Aurizon’s announced change in the maintenance plan at its rail system in Australia, and safety check at Chinese mines. The price also found support from Chinese coke prices as domestic coke producers faced environmental crackdowns. In the third quarter, coking coal prices averaged $184/t and $183/t in July and August respectively with no major supply disruption and less demand during Indian monsoon season. The prices rose again in September to $198/t with demand from strong steel production in China amid healthy margins and tight supply of low-Sulphur coking coal in the Chinese domestic market. Prices kept on increasing in the last quarter on the back of strong steel production and threat of supply issues from scheduled maintenance at key Australian ports which increased port queues again to the record levels seen at the end of 2017. The bullish sentiment found support from the breakout of a fire at one Australian mine, rendering it idle for at least six months. The coking coal spot prices increased to a quarterly average of $220.79/t in the fourth quarter of 2018.

In the first quarter of 2019, coking coal prices were volatile ranging from $190/t to $217/t. The volatility was supported by incidents in Australia, including heavy rains, an accident at Anglo’s Moranbah mine and a trade union's industrial action at a local rail network operator. The average spot price in the first quarter of 2019 was $206.33/t (Metal Bulletin Premium HCC FOB Australia index). In the second quarter of 2019, prices first increased to the quarter’s high of $213.16/t on May 13, 2019 fueled by the increased sentiment of potential less availability of metallurgical coal railroad capacity in Australia due to maintenance at a local rail network operator in April. Prices then decreased to $191.61/t on June 28, 2019 due to reduced steel margins putting pressure on coke prices. The average spot price in the second quarter of 2019 was $202.85/t. In the third quarter of 2019, tightening of coking coal import restrictions at key Chinese ports and weak demand from India during the monsoon season led to a decrease in prices with the average spot price at $161.03/t (Metal Bulletin Premium HCC FOB Australia index). In the fourth quarter of 2019, the bearish trend in the coking coal market continued driven by a slowdown in Chinese imports including a ban on imports at China’s largest coking coal handling port in Jingtang effective from October 1, 2019. Weak demand from India post the monsoon season amid domestic slowdown contributed to this bearish trend. The average coking coal spot price decreased to $139.27/t in the fourth quarter of 2019.

ArcelorMittal has continued to leverage its iron ore and coking coal supply chain and diversified supply portfolio as well as the flexibility provided by contractual terms to mitigate regional supply disruptions and also mitigate part of the market price volatility.

	Iron ore	Coking coal
Source: Metal Bulletin	average price per tonne (Delivered to China, Metal Bulletin index, 62% Fe)	average price per tonne (Premium Hard Coking Coal FOB Australia index)
Q1 2017	85.63	166.82
Q2 2017	62.90	190.58
Q3 2017	71.24	188.34
Q4 2017	65.50	203.50
Q1 2018	74.39	228.48
Q2 2018	65.97	188.89
Q3 2018	66.86	188.17
Q4 2018	71.56	220.79
Q1 2019	82.41	206.33
Q2 2019	100.92	202.85
Q3 2019	102.03	161.03
Q4 2019	88.97	139.27

Scrap

The Company considers the German suppliers' index ("BDSV") Delivered at Place ("DAP") as market reference.

During 2019, the BDSV for reference grade E3 started in January at €262/t and reached a maximum for the period of €278/t in March. From April on it decreased month by month until reaching the bottom in October at €196/t € followed by two consecutive increases in November and December to €244/t. The average index for 2019 was €252/t as compared to €285/t for 2018 and €259/t for 2017, a decrease of €33 or 12% less than 2018.

Turkey's scrap imports declined by 11% in the first nine months of 2019 compared to the same period of 2018, nevertheless it remains by far the main scrap buying country in the international market. Turkish Electric Arc Furnace steel production share dropped from 69% in 2018 to 68% in the first 9 months of 2019 and total crude steel production was down by 10.1% in the same period. The Scrap Index HMS 1&2 CFR Turkey, North Europe origin, started January 2019 at $280/t reaching a maximum for the year in March at $317/t and then dropped during the second quarter to $286/t in June. It then reached a peak in July at $288/t followed by a continuous decrease until October to $233/t and then increasing again to reach $290/t in December. The average yearly prices were $294/t in 2017, $334/t in 2018 and $281/t in 2019. The average European scrap prices were consistent with the exports HMS 1&2 CFR Turkey, North Europe reference for 2019.

In the domestic U.S. market, HMS 1 delivered Midwest index was $75/t lower in 2019 than 2018. The Midwest Index for HMS 1 decreased from an average of $322/t for 2018 to $247/t for 2019. On the export market, HMS export FOB New York average prices of 2019 were at $266/t, a decrease by $54/t compared to 2018 ($280/t in 2017).

Ferro alloys and base metals

Ferro alloys

The underlying price driver for manganese alloys is the price of manganese ore which was at the level of $5.63 per dry metric tonne unit ("dmt") (for 44% lump ore) on Cost, Insurance and Freight ("CIF") China for 2019, representing a 21% decrease from $7.16/dmt in 2018 ($5.97/dmt in 2017) mainly due to overstocking of material at Chinese ports reflecting low appetite from manganese alloy producers as a result of low steel demand.

Manganese alloys prices also followed a downward trend where high carbon ferro manganese decreased by 10% from $1,330/t in 2018 to $1,203/t in 2019 ($1,428/t in 2017), silicon manganese decreased by 7% from $1,325/t in 2018 to $1,234/t in 2019 ($1,343/t in 2017) and medium carbon ferro manganese decreased by 8% from $1,930/t in 2018 to $1,780/t in 2019 ($1,910/t in 2017).

Base metals

Base metals used by ArcelorMittal are zinc, tin and aluminum for coating, aluminum for deoxidization of liquid steel and nickel for producing stainless or special steels. ArcelorMittal partially hedges its exposure to its base metal inputs in accordance with its risk management policies.

The average price of zinc for 2019 was $2,549/t, representing a 13% decrease as compared to the 2018 average of $2,926/t (the 2017 average was $2,896/t). Stocks registered at the London Metal Exchange ("LME") warehouses stood at 51,225 tonnes as of December 31, 2019, representing a 60% decrease compared to December 31, 2018 when registered stocks stood at 129,325 tonnes (182,050 tonnes in 2017).

The average price of tin for 2019 was $18,671/t, 7% lower than the 2018 average of $20,167/t (2017 average was $20,098/t).

The average price of aluminum for 2019 was $1,792/t, representing a 15% decrease compared to the 2018 average of $2,110/t (the 2017 average was $1,968/t).

The average price of nickel for 2019 was $13,936/t, representing a 6% increase compared to the 2018 average of $13,118/t (the 2017 average was $10,407/t).

Energy market

Solid fuels, electricity and natural gas are some of the primary raw material inputs for a steelmaker. ArcelorMittal is exposed to price volatility in each of these raw materials with respect to its purchases in the spot market and under its long-term supply contracts.

Oil

In the first quarter of 2016, after decreasing for six quarters in a row, the Brent crude oil price leveled at just below $30/barrel (“bbl”). To boost prices, a group of producers led by OPEC (the "Organization of the Petroleum Exporting Countries") and Russia agreed at the end of 2016 to cut production by 1.8 million barrels per day (“bpd”). Initially, the cuts were expected to last for only six months. However, an extension in May 2017 and again in November the same year launched an era in which production cuts became a popular tool among producers to support global oil prices. As a consequence, prices increased starting in the summer of 2017 when prices gained 75% year-on-year from $45/bbl in May 2017 to $80/bbl in May 2018, with prices continuing to steadily increase throughout the first three quarters of 2018. The Brent crude oil front month contract started 2018 at $66/bbl and peaked at $86/bbl (a 4-year high) in October 2018. During the same period, the U.S. pulled out of the Iran nuclear deal, and was threatening sanctions against any country which further imported Iranian oil. In the following months, Brent crude oil fell more than 30% and finished the year at $53.80/bbl, a 15-month low. The drop was backed by growing concerns of a global economic slowdown as a tariff war between the world's biggest economies (namely, the U.S. and China) intensified. To stop plummeting prices, a final effort from OPEC and its allies was made in early December 2018, when they jointly decided to cut output by 1.2 million bpd throughout the first half of 2019. Immediately, the oil market started tightening throughout the first quarter of 2019, finishing the first half of the year just higher than $65/bbl. The driving forces of 2019 proved to be the same as in 2018. While tensions grew in the Middle East fueled by renewed sanctions on Iran, the U.S. continued to pump oil at record high levels. The U.S. and China continued its trade war and the UK continued to postpone Brexit. At the start of the third quarter of 2019, OPEC and Russia confirmed that they would continue their efforts to balance the global market by extending the 1.2 million bpd cut by another nine months and into the first quarter of 2020. In December 2019, a decision was made to increase the level of cuts in the first quarter of 2020 but not to extend these cuts beyond March 2020. In the meantime, Iran's retaliation threats kept the oil markets on alert. Throughout 2019, Brent crude oil moved between $55/bbl and $75/bbl, not exposing a clear trend, not even after supply shocks like the bombing of a Saudi facility in September. Brent crude oil finished the year in the middle of the range at $66/bbl.

The following table shows certain quarterly average prices of oil, thermal coal and CO2 for the past three years:

Commodities

Source: Thomson Reuters	Brent crude oil spot average price $ per barrel	West Texas intermediate spot average price $ per barrel	European thermal coal import (API2) spot average price $ per ton	European Union allowance spot average price € per ton of CO2 equivalent
Q1 2017	54.57	51.78	77.86	5.17
Q2 2017	50.79	48.15	75.71	4.81
Q3 2017	52.17	48.20	86.11	5.91
Q4 2017	61.46	55.30	92.68	7.47
Q1 2018	67.23	62.89	86.09	9.80
Q2 2018	74.97	67.91	89.97	14.49
Q3 2018	75.84	69.43	98.66	18.85
Q4 2018	68.60	59.34	92.45	20.47
Q1 2019	63.83	54.90	75.38	22.24
Q2 2019	68.47	59.91	57.13	25.55
Q3 2019	62.03	56.44	58.75	26.93
Q4 2019	62.42	56.87	58.24	24.88

CO2

The integrated steel process involves carbon and CO_2, which distinguishes integrated steel producers from mini-mills and many other industries where CO_2 generation is primarily linked to energy use. Launched in 2005, the European Union Emission Trading System (“EU-ETS”) is currently in its third phase, stretching from 2013 to December 2020 and the trading system for the period after 2020 has been revised in a manner that may require ArcelorMittal to incur additional costs to acquire emissions allowances. The EU-ETS is based on a cap-and-trade principle; it sets a cap on greenhouse gas emissions (“GHG”) from covered installations, which is then reduced year after year. Since 2009, a surplus of emission allowances has built up in the EU-ETS, keeping prices below €10 per ton of CO_2 equivalent (“€/tCO2e”) until 2018. In 2016 and 2017, the price for a European Union Allowance (“EUA”) - which gives the holder the right to emit one ton of carbon dioxide (“CO_2”) - ranged between €4/tCO2e and €6/tCO2e.

To boost the EUA price and to provide an incentive to the industry and the power sector to alter their behavior in terms of CO_2 emissions, in July 2015 the European Commission proposed a reform of the EU-ETS for the period 2021-2030 (phase 4). More than 2 years later, inter-institutional negotiations were concluded presenting solutions to reduce the current surplus. Consequently, in November 2017 the EUA price crossed the €8/tCO2e mark for the first time since January 2016. With the EU Council’s final approval in

February 2018, the ETS reform became law (Directive (EU) 2018/410). As a result, the EUA price surged further and only leveled after surpassing the historical high of €25/ tCO2e in September 2018. This marked a 360% price increase in only nine months. At the end of 2018, the price reached an all-time high of €25.3/tCO2e amid thin trading activity during the holiday period. Throughout the first half of 2019 the EUA price increased by 15% and finished the second quarter of 2019 at €26.5/tCO2e. Not only did the EUA price increase but the market also witnessed great volatility mainly driven by uncertainties around Brexit, the end of the compliance period in April and the market stability reserve ("MSR") which started operating in January 2019, reducing auction supplies since the second week of January. A new historical high was reached in July 2019, when the price for a EUA touched €30/tCO2e. However, more generally, during the first quarter of 2019, prices remained around €22/tCO2e while prices remained around €25/tCO2e for the rest of 2019. See "Risks related to the global economy and the mining and steel industry". Laws and regulations restricting emissions of greenhouse gases could force ArcelorMittal to incur increased capital and operating costs and could have a material adverse effect on ArcelorMittal's results of operations and financial condition.

Thermal coal

The 2017/2018 winter began with a Chinese campaign aimed at switching millions of households from using coal to natural gas for heating purposes. At the same time, the country tightened imports by banning small ports from receiving foreign coal cargoes. The campaign unexpectedly boosted demand from coal-fired power plants as it created a shortage of natural gas. The tightening of the Asian market had some severe spill-overs to the European market and pushed the spot price for all publications index number 2 ("API2") - which reflects the price for imports into ARA (Amsterdam-Rotterdam-Antwerp) - above $90/t, a level not seen since the end of 2012. Throughout the first quarter of 2018, the API2 shed almost 20% as the global supply demand balance softened amid the Chinese New Year holiday. After increasing throughout the second quarter of 2018, the API2 reached a new 6-year high when it surpassed the $100/t mark in the third quarter. This was triggered by utilities replenishing stocks and strong demand from power stations due to a hot and dry summer. In the fourth quarter of 2018, prices remained volatile but decreased almost 20% amid China's imposition of new import restrictions, and Europe benefiting from a mild start to the winter. During the first half of 2019, the downward trend continued and the spot contract for API2 lost more than 40%, finishing the second quarter of 2019 at a 3 year low of just below $50/t. This sharp price decrease was driven by coal-to-gas switching across the European power sector and an abundance of supply, since Australia had to redirect its cargoes due to Chinese import restrictions. During the third quarter of 2019, short term prices rebounded amid higher spot demand and stock replenishing activity ahead of the winter. However, a milder than average winter led to a price decrease of almost 20% during the fourth quarter of 2019, from around $64/t in September to $52/t end of December.

Natural gas - Europe

Year after year, the natural gas market moves toward becoming a global commodity due to the continuous development of liquefied natural gas ("LNG"), driven by the construction of new liquefaction units (called trains) in Russia, Australia and in the U.S. The worldwide LNG exports reached 485 billion cubic meters ("bcm") in 2019, an increase of 11.5% compared to 2017. Consequently, natural gas is increasingly exposed to the same commodity super-cycles that also affect thermal coal and crude oil, for example. Unlike thermal coal and crude oil, the European natural gas market is showing stronger seasonal patterns.

Despite starting 2018 at the same price level as 2017, the 2018 TTF Spot Price (the price for natural gas to be delivered the next day, which is traded on a virtual trading platform located in the Netherlands) averaged €22.85 per Megawatt hour ("€/MWh"), which is more than 30% higher than the 2017 average (€17.32/MWh). The year 2018 started with milder than normal weather but a late cold snap at the end of February brought freezing temperatures from Siberia to Europe. Combined with limited storage flexibility and supply problems across Europe, spot prices at major European hubs skyrocketed to multi-year highs. In the aftermath, northwest European natural gas storage levels dropped well below the 5-year average. Efforts to refill storages, together with strong summer demand from natural gas fired power plants, exceptionally high LNG prices and an overall rising energy complex kept supporting European natural gas prices up until the start of the fourth quarter of 2018 (an increase of 50% throughout the first nine months of the year). During the last quarter of 2018, the TTF spot price tumbled from €29.50/MWh down to €22.00/MWh. This trend continued into 2019, and the TTF spot price plummeted below the €10.00/MWh mark by end of June. This sharp decrease of 55% from the beginning of first quarter to the end of second quarter happened on the back of milder than normal seasonal temperatures, rapidly improving storage levels, historical high LNG arrivals and a continuous strong import of Norwegian and Russian piped gas. Even high levels of coal-to-gas switching across the European power sector could not prevent prices from dropping to historical lows by the end of June. Throughout the third quarter of 2019, TTF spot prices traded in average at €10.2/MWh (year-on-year decrease of 58%), with a low in September close to €7/MWh. In November, TTF spot prices traded up and reached levels of around €16.6/MWh. This price increase was supported by colder temperatures and the fear that Russia and Ukraine would not be able to sign a new multi-year transit contract. It was only in the very last days of December that the two countries agreed on a deal

leading to a price collapse during the second half of December, and the front month delivery finished the year at €11.7/MWh.

Natural gas - United States

In 2019, natural gas production in the U.S. reached another record. Total production grew by 8.3 billion cubic feet per day ("bcf/d") in 2019 year-over-year, with associated gas contributing to more than half (4.5 bcf/d) of the increase. Gas markets across the U.S. remain oversupplied and continuously pressured Henry Hub gas prices lower in search of a new floor. Consequently, low gas prices in 2019 led to another record year for gas-for-power demand at 31 bcf/d, growing 2 bcf/d from the previous year. Furthermore, 2019 was also a record year for LNG development in the number of final investment decisions reached ("FIDs") and LNG train start-ups. More than 30 Million Metric Tonnes per Annum ("mmpta") of capacity became available following the FIDs reached in 2019, the single largest year in U.S. LNG history. In 2019, the U.S. exported a total of 37.6 mmpta of LNG, which marks an increase of 66% year-on-year.

In North America, natural gas prices trade independently of oil prices and are set by spot and future contracts, traded on the NYMEX exchange or over-the-counter. In the first nine months of 2018, the Henry Hub front month price (the price for gas traded on a U.S. virtual trading platform, for delivery in the next calendar month) averaged $2.85 per million British Thermal Units ("/MMBtu"), a 6.5% decrease compared to the first nine months of 2017. The recession in natural gas prices that held from the beginning of 2015 until September 2018 changed in the first two weeks of November 2018, as weather-related natural gas demand increased sharply, and the relatively low levels of natural gas in storage could not provide the needed flexibility leading to a 60% price increase in only 10 days. In mid-November 2018, the front-month Henry Hub natural gas futures hit a price of $4.8/MMBtu, the highest price since the second quarter of 2014. Consequently, at the end of November, natural gas inventories stood 19% lower than the previous five-year average forcing the Henry Hub Month Ahead price to average $4.0/MMBtu throughout November and December 2018. Henry Hub natural gas futures lost more than 20% throughout the first half of 2019 and at the end of June stood more than 50% lower than the winter peak in the fourth quarter of 2018. U.S. dry gas production during the first quarter of 2019 was almost 13% higher than in the same period a year earlier. This led to a faster than normal rise of working stocks in underground storage, resulting in downward pressure of the natural gas market. This downward pressure persisted throughout the second half of 2019, with only occasional spikes up to $2.7/MMBtu in September and $2.9/MMBtu in November. Nevertheless, the fourth quarter of 2019 averaged $2.4/MMBtu (down 35% from the fourth quarter of 2018).

Natural gas - Asia

Throughout the first quarter of 2018, the Platts Japan Korea Marker ("JKM") - the LNG benchmark price assessment for spot physical cargoes delivered ex-ship into Japan, South Korea, China and Taiwan - front month contract prices dropped 35% (equivalent to $4/MMBtu) and bottomed at $7.2/MMBtu before entering a period of increasing prices. While prices normally would have relaxed on the back of muted demand from Asian consumers at the end of June 2018, the front month contract price again surpassed the $11/MMBtu level ($6/MMBtu higher year-on-year). However, in 2018 strong Asian restocking demand ahead of the winter met strong cooling needs. At the end of the first quarter of 2018, the price spread between the Pacific and the Atlantic basin dropped below $1/MMBtu erasing the arbitrage window and allowing LNG cargoes to sail to Europe. This spread quickly increased to $3.7/MMBtu dragging cargoes away from Europe. After a period of high volatility, the spread stabilized around $2.0/MMBtu by the end of the third quarter and into the fourth quarter of 2018, fueled by lackluster Asian demand. At the same time, charter rates for LNG vessels exploded and moved north of $160,000/day (a long way from the lows of 2016 and 2017 when spot rates were hovering at $25,000/day). This led to trapped LNG supply in the Atlantic basin leading to sharply dropping European natural gas prices. During the first half of 2019, European importers saw record high levels of LNG arrivals, reflecting the abundant supply across Asia amid healthy storage levels in key importing countries as a result of a mild winter. Furthermore, a significant ramp-up of new liquefaction capacity across Australia, the U.S. and Russia meant more supply to an already oversupplied market. Consequently, the JKM front month contract lost 47% from the start of the year until the end of June 2019. With muted demand and more global supply, the low prices persisted until the end of the second quarter of 2019. In the fourth quarter of 2019, amid the start of the winter, the JKM rose and averaged $5.9/MMBtu (42% lower than 2018).

The following table shows quarterly average spot prices of natural gas for the past three years:

Natural gas			
Source: Thomson Reuters	TTF Spot average price € per MWh	Henry Hub Spot average price $ per MMBtu	JKM Spot average price $ per MMBtu
Q1 2017	18.42	3.06	7.35
Q2 2017	15.61	3.14	5.85
Q3 2017	16.13	2.95	6.19
Q4 2017	19.13	2.92	9.45
Q1 2018	21.25	2.85	9.35
Q2 2018	21.06	2.83	8.71
Q3 2018	24.56	2.86	10.71
Q4 2018	24.65	3.72	10.24
Q1 2019	18.47	2.87	6.86
Q2 2019	13.02	2.51	4.94
Q3 2019	10.20	2.33	4.74
Q4 2019	12.66	2.41	5.91

Electricity			
Source: Thomson Reuters	Germany Baseload spot average price € per MWh	France Baseload spot average price € per MWh	Belgium Baseload spot average price € per MWh
Q1 2017	41.32	54.77	51.58
Q2 2017	29.76	33.90	35.74
Q3 2017	32.73	34.56	34.17
Q4 2017	32.49	56.19	56.47
Q1 2018	36.05	44.09	45.17
Q2 2018	36.03	36.78	44.10
Q3 2018	53.86	57.58	61.08
Q4 2018	51.89	62.47	71.01
Q1 2019	41.35	47.18	48.34
Q2 2019	35.74	34.81	34.44
Q3 2019	37.55	35.64	35.11
Q4 2019	36.51	40.23	39.37

Electricity - Europe

Due to the regional nature of electricity markets, prices follow mainly local drivers (i.e. energy mix of the respective country, power generation from renewables, country specific energy policies, etc.). However, unlike previous years, 2018 marked a structural change with the emergence of the CO2 price as one of the major price drivers. The forward baseload power contract for the front calendar year (delivery 2019) strongly increased in all European market places throughout the year (e.g. from €40.5 to €59.1/MWh in Belgium (an increase of 46% year-to-date), from €41.75 to €58.45/MWh in France (an increase of 40% year-to-date) and from €36.7 to €52.7/MWh in Germany (an increase of 44% year-to-date)). The 2018 price increase was mainly due to the overall fuel price increases, the unreliability of an aging French and Belgian nuclear fleet and a weak year in terms of renewable output, a trend which reversed in the first half of 2019. Tumbling fuel prices, combined with healthy renewable power generation and strong nuclear output helped to pressure spot prices across North West Europe in the first half of 2019. The lack of a severe summer heatwave helped to pressure the third quarter of 2019 prices. Wet early winter months, mild temperatures and good renewable power output contributed to a significant reduction in France and Belgium the fourth quarter of 2019 compared to 2018. This decrease occurred despite the fact that French nuclear availability was at a multi-year low for that time of the year, which is normally a strong support for prices.

The following table shows quarterly average spot prices of electricity in Germany, France and Belgium for the past three years:

Ocean freight

Ocean freight prices (average for all sizes) remained at the same level in 2019 compared to 2018 due to the increase on cape size offset by the decrease on Panamax, Supramax and Handymax segments. The Baltic Dry Index (“BDI”) maintained the same average at 1,352 points in 2019 compared to 2018 (1,145 points in 2017). The Capesize index increased by 9% year-on-year to average $18,025/day against $16,529/day in 2018 ($15,129/day in 2017). Meanwhile the Panamax index increased by 9% to an average of $11,112/day as compared to $11,654/day in 2018 ($9,766/day in 2017). In 2019, on the cape size a total of 79 vessels or 18.8 million deadweight was delivered, the most since 2016 and up from 52 vessels or 14.4 million deadweight in 2018. Panamax in 2019 was heavy in terms of deliveries with 134 vessels or 11.1 million deadweight delivered, the most since 2014 and up from 67 units or 5.5 million deadweight in 2018.

Fleet growth remained moderate but picked up slightly by 4.1% in deadweight terms in 2019 (2.6% increase compared to 2018) following increased deliveries and limited demolition activity. Deliveries up 22% y-o-y to 98.4 million deadweight, scrapping down 45% year-over-year to 17.0 million deadweight. Part of the impact of this fleet growth was offset by scrubber retrofitting activity (at year end, 35 million deadweight was in repair yards undergoing a retrofit) and slower speeds. The high fleet growth in 2019 (4.1%) is expected to continue in 2020 when the fleet is also expected to grow more than demand. The cumulative impact of these growth rates means that the gap between demand for shipping and the supply of ships is expected to continue to put downward pressure on freight rates throughout the year.

Sources: Baltic Index, Fearnleys, Clarksons Platou, BIMCO, CTM

Impact of exchange rate movements

Because a substantial portion of ArcelorMittal's assets, liabilities, sales and earnings are denominated in currencies other than the U.S. dollar (its reporting currency), ArcelorMittal has exposure to fluctuations in the values of these currencies relative to the U.S. dollar. These currency fluctuations, especially the fluctuation of the U.S. dollar relative to the euro, as well as fluctuations in the currencies of the other countries in which ArcelorMittal has significant operations and sales, can have a material impact on its results of operations. For example, ArcelorMittal's non-U.S. subsidiaries may purchase raw materials, including iron ore and coking coal, in U.S. dollars, but may sell finished steel products in other currencies. Consequently, an appreciation of the U.S. dollar will increase the cost of raw materials; thereby having a negative impact on the Company's operating margins, unless the Company is able to pass along the higher cost in the form of higher selling prices. In order to minimize its currency exposure, ArcelorMittal enters into hedging transactions to lock-in a set exchange rate, as per its risk management policies.

In 2017, the fluctuations on the foreign exchange markets were broadly driven by the activity of central banks that started to reduce their accommodative monetary policies, including the U.S. Federal Reserve (the "Federal Reserve"), which increased rates three times during the year. The less accommodative policies adopted by the European Central Bank ("ECB"), Bank of Canada ("BoC") and Bank of England ("BoE") were already anticipated by the markets and their respective currencies strengthened even before the banks' monetary decisions. The euro strengthened significantly against the U.S. dollar, from 1.0541 at the beginning of 2017 to 1.1993 at the end of the year.

Since April 1, 2018, the Company has designated a portfolio of euro denominated debt (€6.9 billion as of December 31, 2019) as a hedge of certain euro denominated investments (€8.1 billion as of December 31, 2019) in order to mitigate the foreign currency risk arising from certain euro denominated subsidiaries net assets. The risk arises from the fluctuation in spot exchange rates between EUR/USD, which causes the amount of the net investments to vary. See also note 6.3 to the consolidated financial statements. As a result of the hedge designation, foreign exchange gains and losses related to the portfolio of euro denominated debt are recognized in other comprehensive income.

As of December 31, 2019, the Company is mainly subject to foreign exchange exposure relating to the euro, Brazilian real, Canadian dollar, Indian rupee, Kazakhstani tenge, South African rand, Mexican peso, Polish zloty, Argentine peso and Ukrainian hryvnia against the U.S. dollar resulting from its trade payables and receivables.

In 2019, the euro decreased from 1.1450 at December 31, 2018 to 1.0889 at end of the third quarter, before gradually increasing back to 1.1234 on December 31, 2019 against the U.S. dollar as a result of a global context driven by the U.S. administration's protectionism on trade policies and progressive narrowing of U.S. dollar and euro rate differentials as the U.S. Federal Reserve ("FED") delivered three rates cuts in the second half of 2019 thus lowering FED Funds target rate to 1.55%.

The Polish zloty marginally decreased against the U.S. dollar throughout 2019 from 3.7567 on December 31, 2018 to 3.7892 on December 31, 2019 after reaching 4.0208 at the end of the third quarter. Although Polish economic performance remained strong for the period, the zloty's behavior for the period mainly resulted from the persistently accommodative stance from the Polish Central Bank even with local inflation finally beating the 2.5% official target on the second semester.

The Ukrainian hryvinia increased gradually against the U.S. dollar in 2019 starting from 27.6886 on December 31, 2018 to 23.6860 on December 31, 2019 reflecting the positive news around the local economic potential following the election of the new president Volodymyr Zelensky and benefiting from improvements in the country's relations with Russia as well as optimistic view on key structural reforms.

The Kazakh tenge was stable at 384.17 against the U.S. dollar at the beginning of the year, depreciated to 390.39 on October 9, 2019 and then appreciated to 381.24 as of December 31, 2019. This fluctuation was due to the National Bank raising its base rate in order to contain rising inflationary pressures from the ongoing recovery of consumer demand and a 4.2% stronger than expected economic growth.

The Indian rupee decreased against the U.S. dollar in 2019 from 69.6330 at the beginning of the year to 71.3776 on December 31, 2019 resulting mainly from extremely accommodative monetary measures taken by the National Bank of India in its attempt to support India's slowing economy notably affected by the deteriorating trade context globally as well as through weak household demand locally, slower credit disbursements by banks and non-bank financial companies, policy disruptions, a sluggish investment cycle and structural issues. In October 2018, the Company entered into hedging programs including non-deliverable forwards and non-deliverable options for a total nominal amount of $5.9 billion in order to hedge the volatility between the Indian Rupee and U.S. dollar in relation to the proposed acquisition of AMNS India. In 2019, $5.1 billion of the hedging program settled generating a gain of $360 million. As of December 31, 2019, the total amount of the hedging program remained at $0.8 billion. See note 6.3 to the consolidated financial statements for further information.

The South African rand concluded 2019 slightly appreciating against the U.S. dollar after having decreased from 14.4306 on December 31, 2018 to 15.4190 in August 2019 and finally appreciating to 14.1183 on December 31, 2019 and thus not reflecting significantly the fact that signs of improvement from the South African economy remain quite weak.

The Canadian dollar appreciated against the U.S. dollar in 2019 from 1.3629 to 1.3248 between the beginning of the year and the end of the third quarter, before finishing the year stronger at 1.2994, due to commodity prices weighing on the currency followed by a solid increase in domestic demand, government spending and a strong job market supporting the Canadian dollar.

The Mexican peso decreased in 2019 from 19.6437 on December 31, 2018 to 20.0767 at the beginning of September 2019 before finishing the year stronger at 18.8893 against the U.S. dollar, as 2019 growth was lower than expected, followed by low interest rates in U.S. dollar supporting the improvement.

The Brazilian real decreased in 2019 from 3.8748 on December 31, 2018 to 4.2304 at the end of November 2019 before finishing the year stronger at 4.0307 against the U.S. dollar, as a social security reform was approved.

The Argentine peso decreased in 2019 from 37.7003 on December 31, 2018 to 59.8910 on December 31, 2019 against the U.S. dollar, as poor economy and debt issues weighed on the local economy.

Trade and import competition

Europe

There has been a trend of imports growing more strongly than domestic demand in Europe since 2012. ASC increased approximately 14% between 2012 and 2019, while finished steel imports increased by approximately 80%, taking market share from domestic producers. Over this period total finished imports have risen from just over 15 million tonnes in 2012 to around 28 million tonnes in 2019, causing import penetration to rise to 18% in 2019 from 11% in 2012. A slowdown in global steel consumption coupled with excess capacity in China led to increased finished steel shipments into Europe in 2015, with import penetration increasing to over 16%. Since then, Chinese imports into Europe have fallen back from a peak of 7 million tonnes in 2015 to around 2.5 million tonnes in 2019. However, this has been more than offset by an increase in imports from Turkey (up from 2 million tonnes in 2015 to 7 million tonnes in 2019) and developed Asia (2 million tonnes in 2014 to 4 million tonnes in 2019). Meanwhile, CIS imports have remained the largest share (approximately 25%) remaining relatively stable at an average of 7 million tonnes annually between 2014 and 2019. While there has been a trend of imports growing more strongly than domestic demand since 2012, in 2019, due to weakness in industrial output, particularly European automotive production, ASC decreased by 4%. As domestic European steel prices fell sharply, imports followed suit decreasing approximately 10% year-on-year, particularly from CIS (down 12%), developed Asia (down 14%), China (down 14%) and India (down 20%). As a result, import penetration declined to 18% in 2019 from 19.5% in 2018, with flat product imports declining to 20% (from 22% in 2018) and long product imports declining to 11% (from 13% in 2018). See —Risk factors—Risks related to the global economy and the mining and steel industry—Unfair trade practices, import tariffs and/or barriers to free trade could negatively affect steel prices and ArcelorMittal's results of operations in various markets.

Source: Eurostat trade data to November 2019, Company estimates for December 2019.

United States

Finished steel imports peaked in 2014 at almost 30 million tonnes, declining to approximately 25.7 million tonnes in 2017 (or an import penetration of over 26%). In 2019, with section 232 (implemented in 2018) adding a 25% tariff on most imports outside NAFTA, finished steel imports decreased by approximately 7 million tonnes from the levels of 2017, despite the level of apparent steel consumption in 2019 being similar to 2017 levels. As a result, import penetration has continued to fall, from 23% in 2018 to 19% 2019, as imports declined (-18% year-on-year) more sharply than apparent steel consumption (-2% year-on-year). Import penetration in 2019 was at 19%, close to the average level between 2007 and 2013, but much lower than the 27% average import penetration between 2014 and 2017.

Relative to other regions, imports from NAFTA decreased by only approximately 15% year-on-year as section 232 tariffs only applied until May 2019. As a result, over a third of imports came from the NAFTA region, of which 27% came from Canada and 9% from Mexico, up slightly from the two countries' 34% combined share in 2018. Other countries such as Brazil, Ukraine, Australia and South Korea, though not subject to 25% tariffs, are subject to quotas. Imports decreased further from Turkey (down approximately 70% year-on-year), where its share of imports declined from 5% in 2018 to approximately 1% in 2019. Though declining year-on-year, the breakdown of imports from the rest of the world remained stable, with 20% of U.S. steel imports coming from both Developed Asia (with the total down 14% year-on-year) and from EU28 (total down 16% year-on-year), with a 6% share from ASEAN (total down 19% year-on-year), 3% from CIS (total down 13% year-on-year) and approximately 2% from China (total down 21% year-on-year). See —Risk factors—Risks related to the global economy and the mining and steel industry—Unfair trade practices, import tariffs and/or barriers to free trade could

negatively affect steel prices and ArcelorMittal's results of operations in various markets.

Sources: American Iron and Steel Association data to November 2019, Company estimates for December 2019.

Consolidation in the steel and mining industries

Prior to 2017, consolidation transactions had decreased significantly in terms of number and value in the context of economic uncertainties in developed economies combined with a slowdown in emerging markets.

However, in an effort to reduce the worldwide structural overcapacity, some key consolidation steps were undertaken in 2019 and 2018, specifically in China and in Europe.

Steel industry consolidation in China aims at enhancing international competitiveness, reducing overcapacity, rationalizing steel production based on obsolete technology, improving energy efficiency, achieving environmental targets and strengthening the bargaining position of Chinese steel companies in price negotiations for iron ore. The Chinese government set a target that 60 to 70 percent of steel should be produced by the top ten steel groups by 2025. China will soon release guidelines to foster mergers and restructuring plans for the steel industry to facilitate the creation of larger and stronger groups that can compete in the global market. The guidelines, aiming to clear obstacles in steel consolidation, will encourage cross-region and cross-ownership mergers and restructuring by qualified enterprises. Examples of recent merger activity in China include the Baosteel Group and Wuhan Iron and Steel Group merger that was completed in late 2016, creating Baowu Steel Group ("Baowu") with an annual production capacity of around 60 million tonnes. Further, in September 2019, Baowu and Magang (Group) Holding Co., Ltd ("Magang") signed a partnership agreement where Baowu secured a 51% stake in Magang, increasing Baowu's steel production capacity to approximately 90 million tonnes and representing a big step in the ongoing consolidation of the Chinese steel industry.

In Europe, the proposed joint venture between Thyssenkrupp and Tata Steel, which would have created Europe's second-largest steel company after ArcelorMittal, was canceled in May 2019 as the joint venture partners considered that the concessions required by the European Commission to overcome its concerns over higher prices for electrical steel, automotive steel and packaging, among others, in the event of the merger, would adversely affect the intended synergies of the merger. On October 29, 2019, Liberty House Group announced a merger with GFG Alliance's steel businesses to create Liberty Steel Group with a capacity of 18 million tonnes and a plan to be carbon neutral by 2030. According to the announcement, Liberty Steel Group will be the eighth largest steel producer outside China, with operations stretching from Australia to continental Europe, the United Kingdom and the United States.

In another step towards consolidation in the U.S., United States Steel Corp announced on October 1, 2019 that it reached an agreement to purchase a minority stake in Big River Steel with an option to take complete control of the company over the next four years. On December 3, 2019, AK Steel and Cleveland Cliffs announced an all stock merger which is expected to close in the first half of 2020.

In November 2018, ArcelorMittal completed the acquisition (via a long-term lease) of ArcelorMittal Italia, Europe's largest single steel site and only integrated steelmaker in Italy with its main production facility based in Taranto. ArcelorMittal Italia also has significant steel finishing capacity in Taranto, Novi Ligure and Genova. The transaction was approved by the European Commission on May 7, 2018 subject to the disposal of certain assets in Italy, Romania, North Macedonia, the Czech Republic, Luxembourg and Belgium, which were completed in June 2019. ArcelorMittal is engaged in ongoing negotiations with the Italian government regarding ArcelorMittal Italia. See Key transactions and events in 2019.

In the first quarter of 2018, ArcelorMittal signed a joint venture formation agreement with NSC and submitted its Resolution Plan for the acquisition of AMNS India, setting out a positive future for the bankrupt company, an integrated flat steel producer and the largest steel company in western India. The acquisition was completed in December 2019, and ArcelorMittal announced the creation of its joint venture with NSC. The Company's Resolution Plan for AMNS India should enable it to participate in anticipated steel demand growth in India. See Key transactions and events in 2019.

Further future consolidation should allow the steel industry to perform more consistently through industry cycles by achieving greater efficiencies and economies of scale.

Critical accounting policies and use of judgments and estimates

Management's discussion and analysis of ArcelorMittal's operational results and financial condition is based on ArcelorMittal's consolidated financial statements, which have been prepared in accordance with IFRS. The preparation of financial statements in conformity with IFRS recognition and measurement principles and, in particular, making the critical accounting judgments highlighted below require the use of estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Management reviews its estimates on an ongoing basis using currently available information. Changes in facts and circumstances or obtaining new information or more experience may result in revised estimates, and actual results could differ from those estimates.

An overview of ArcelorMittal's critical accounting policies under which significant judgments, estimates and assumptions are made may be found in note 1.2 to the consolidated financial statements.

Key indicators

The following discussion and analysis should be read in conjunction with ArcelorMittal's consolidated financial statements included in this annual report.

ArcelorMittal reports its operations in five reportable segments: NAFTA, Brazil, Europe, ACIS and Mining. The key performance indicators that ArcelorMittal's management uses to analyze operations are sales, average steel selling prices, crude steel production, steel shipments, iron ore and coal production and operating income. Management's analysis of liquidity and capital resources is driven by net cash provided by operating activities less capital expenditures.

This annual report includes net debt and operating working capital, which are alternative performance measures. ArcelorMittal believes net debt and operating working capital to be relevant to enhance the understanding of its financial position and provides additional information to investors and management with respect to the Company's operating cash flows, capital structure and credit assessment. Alternative performance measures should be read in conjunction with and not as an alternative for, ArcelorMittal's financial information prepared in accordance with IFRS. Such alternative performance measures may not be comparable to similarly titled measures applied by other companies.

Years ended December 31, 2019, 2018 and 2017

Sales, operating income, crude steel production, steel shipments, average steel selling prices and mining production

The following tables provide a summary of ArcelorMittal's performance by reportable segment for the year ended December 31, 2019, 2018 and 2017:

	Sales for the year ended December 31,[1]			Operating (loss) income for the year ended December 31,[2]		
Segment	2019 (in $ millions)	2018 (in $ millions)	2017 (in $ millions)	2019 (in $ millions)	2018 (in $ millions)	2017 (in $ millions)
NAFTA	18,555	20,332	17,997	(1,259)	1,889	1,185
Brazil	8,113	8,711	7,755	846	1,356	697
Europe	37,721	40,488	36,208	(1,107)	1,632	2,359
ACIS	6,837	7,961	7,621	(25)	1,094	508
Mining	4,837	4,211	4,033	1,215	860	991
Others and eliminations	(5,448)	(5,670)	(4,935)	(297)	(292)	(306)
Total	70,615	76,033	68,679	(627)	6,539	5,434

1. Amounts are prior to inter-segment eliminations (except for total) and sales include non-steel sales.
2. Others and eliminations to segment operating income reflects certain adjustments made to operating income of the segments to reflect corporate costs, income from non-steel operations (e.g. energy, logistics and shipping services) and the elimination of stock margins between segments. See table below.

	Year ended December 31,		
Others and eliminations operating (loss) income	2019 (in $ millions)	2018 (in $ millions)	2017 (in $ millions)
Corporate and shared services [1]	(144)	(170)	(199)
Financial activities	8	(23)	(23)
Shipping and logistics	(19)	1	(16)
Intragroup stock margin eliminations	13	(45)	(41)
Depreciation and impairment [2]	(155)	(55)	(27)
Total adjustments to segment operating income and other	(297)	(292)	(306)

1. Includes primarily staff and other holding costs and results from shared service activities.
2. Depreciation charges for 2019 include 94 of depreciation of right-of-use assets recognized in property, plant and equipment following the adoption of IFRS 16 "Leases" as of January 1, 2019 with respect to the Company's shipping business Global Chartering, of which ArcelorMittal sold a 50% controlling interest on December 31, 2019.

Sales

ArcelorMittal had sales of $70.6 billion for the year ended December 31, 2019, representing a 7.1% decrease from sales of $76.0 billion for the year ended December 31, 2018, primarily due to a 9.6% decrease in average steel selling prices, partially offset by a 0.8% increase in steel shipments and higher marketable iron ore selling prices. In the first half of 2019, sales were $38.5 billion decreasing 1.8% from sales of $39.2 billion in the first half of 2018, primarily due to 6.1% lower average steel selling prices, partially offset by 3.5% higher steel shipments. In the second half of 2019, sales of $32.1 billion represented a 12.8% decrease as compared to sales of $36.8 billion in the second half of 2018, primarily driven by a 13.7% decrease in average steel selling prices and a 2.1% decrease in steel shipments.

ArcelorMittal had sales of $76.0 billion for the year ended December 31, 2018, representing a 10.7% increase from sales of $68.7 billion for the year ended December 31, 2017, primarily due to a 13.5% increase in the average steel selling prices, partially offset by a 1.6% decrease in steel shipments. In the first half of 2018, sales were $39.2 billion increasing from sales of $33.3 billion in the first half of 2017, primarily due to 16.7% higher average steel selling prices. In the second half of 2018, sales of $36.8 billion represented a 4.2% increase as compared to sales of $35.3 billion in the second half of 2017, primarily driven by a 10.6% increase in average steel selling prices, partially offset by a 4.5% decrease in steel shipments.

Cost of sales

Cost of sales consists primarily of purchases of raw materials necessary for steel-making (iron ore, coke and coking coal, scrap and alloys), electricity, repair and maintenance costs, as well as direct labor costs, depreciation and impairment. Cost of sales for the year ended December 31, 2019 was $68.9 billion as compared to $67.0 billion for the year ended December 31, 2018, due to an increase in shipments (primarily due to the inclusion of ArcelorMittal Italia from November 1, 2018, partially offset by the sale of remedy asset as of June 30, 2019), an increase in raw material costs, impairment charges of $1.9 billion related to impairment of the fixed assets of ArcelorMittal USA ($1.3 billion - see NAFTA below), remedy asset sales in connection with the ArcelorMittal Italia acquisition ($0.5 billion) and impairment charges in South Africa ($0.1 billion) as well as $0.8 billion primarily for inventory related charges in NAFTA and Europe following a period of exceptionally weak steel pricing. Selling, general and administrative expenses (“SG&A”) were $2.4 billion for the year ended December 31, 2019 compared to $2.5 billion for the year ended December 31, 2018. SG&A as a percentage of sales increased marginally for the year ended December 31, 2019 (3.3%) as compared to 2018 (3.2%).

Cost of sales for the year ended December 31, 2018 was $67.0 billion as compared to $60.9 billion for the year ended December 31, 2017, primarily due to a 9.4% increase in raw material costs (consistent with the increase in sales) and impairment charges of $1.0 billion primarily related to the remedy asset sales in connection with the ArcelorMittal Italia acquisition and the agreed remedy package required for the approval of the AMSF acquisition, partially offset by the $0.2 billion in gain from a bargain purchase recognized with respect to the acquisition of ArcelorMittal Italia. Selling, general and administrative expenses (“SG&A”) were $2.5 billion for the year ended December 31, 2018 compared to $2.4 billion for the year ended December 31, 2017. SG&A as a percentage of sales decreased for the year ended December 31, 2018 (3.2%) as compared to 2017 (3.4%).

Operating (loss) income

ArcelorMittal’s operating loss for the year ended December 31, 2019 was $0.6 billion as compared with an operating income of $6.5 billion for the year ended December 31, 2018 and was primarily impacted by weaker operating conditions (negative price-cost effect in steel segments) reflecting both the decline in steel prices and higher raw material costs (due in particular to supply-side developments in Brazil), impairments and inventory related charges described above, offset in part by improved mining segment performance driven by higher seaborne iron ore reference prices (which were up 34.3%). The raw material prices increased during 2019 and for most of the year remained disconnected from steel fundamentals, compressing steel spreads to unsustainably low levels.

ArcelorMittal's operating income for the year ended December 31, 2018 was $6.5 billion as compared with an operating income of $5.4 billion for the year ended December 31, 2017 and was primarily driven by improved operating conditions (positive price-cost effect in the steel segments), offset in part by the impact of lower iron ore reference prices and impairment charges of $1.0 billion primarily related to the remedy asset sales in connection with the ArcelorMittal Italia acquisition and the agreed remedy package required for the approval of the AMSF acquisition, partially offset by a $0.2 billion bargain purchase gain relating to the acquisition of ArcelorMittal Italia. Operating income for the year ended December 31, 2018 was also impacted by $113 million in charges related to a blast furnace dismantling in Florange (France), $60 million in charges related to the new collective labor agreement in the United States (including a signing bonus), a $146 million provision taken in the first quarter of 2018 in respect of a litigation case that was paid in the third quarter of 2018, offset in part by the recognition in Brazil of $202 million in PIS/Cofins tax credits related to prior periods.

Shipments and average steel selling price

ArcelorMittal had steel shipments of 84.5 million tonnes for the year ended December 31, 2019 as compared to steel shipments of 83.9 million tonnes for the year ended December 31, 2018, representing an increase of 0.8%, primarily due to higher steel shipments in Europe by 3.2% due to the impact of the consolidation of ArcelorMittal Italia as from November 1, 2018, offset in part by the remedy asset sales related to the ArcelorMittal Italia acquisition (completed on June 30, 2019) and ongoing weak demand driven by macro headwinds including declines in automobile production. Weaker domestic apparent demand conditions led to lower shipments in NAFTA (5.1%), while weaker export markets led to lower shipments in ACIS (1.7%) and Brazil (2.4%).

Steel shipments increased 3.5% to 44.6 million tonnes in the first half of 2019 compared to 43.1 million tonnes for the first half of 2018 while steel shipments decreased 2.1% to 39.9 million tonnes in the second half of 2019 compared to 40.8 million tonnes in the second half of 2018.

ArcelorMittal had steel shipments of 83.9 million tonnes for the year ended December 31, 2018 as compared to steel shipments of 85.2 million tonnes for the year ended December 31, 2017, representing a decrease of 1.6%, primarily due to a 10.3% decline in shipments in ACIS (including unplanned maintenance in Ukraine and operational issues in Kazakhstan/Ukraine) offset in part by increases in Brazil (5.8%, including the impact of the Votorantim acquisition), NAFTA (1.0%, including the impact of a slower restart post blast furnace maintenance in Mexico) and Europe (0.2%, including the impact from the Ilva acquisition offset by the effect of a flood in Asturias (Spain), power outage in Fos (France) and slower ramp-up after the blast furnace reline in Poland). Steel shipments increased 1.3% to 43.1 million tonnes in the first half of 2018 compared to 42.5 million tonnes for the first half of 2017 while steel shipments decreased 4.5% to 40.8 million tonnes in the second half of 2018 compared to 42.7 million tonnes in the second half of 2017.

Average steel selling price decreased by 9.6% for the year ended December 31, 2019 as compared to the year ended December 31, 2018. Average steel selling price in the first half of 2019 decreased by 6.1% as compared to the first half of 2018 and decreased by 13.7% in the second half of 2019 as compared to the second half of 2018.

Average steel selling price increased by 13.5% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Average steel selling price in the first half of 2018 increased by 16.7% as compared to the first half of 2017 and increased by 10.5% in the second half of 2018 as compared to the second half of 2017.

NAFTA

	Performance for the year ended December 31,		
(in millions of USD unless otherwise shown)	2019	2018	2017
Sales	18,555	20,332	17,997
Depreciation	570	522	518
Impairments	(1,300)	—	—
Operating (loss) income	(1,259)	1,889	1,185
Crude steel production (thousand tonnes)	21,897	22,559	23,480
Steel shipments (thousand tonnes)	20,921	22,047	21,834
Average steel selling price (USD/tonne)	810	852	742

Sales

Sales in the NAFTA segment were $18.6 billion for the year ended December 31, 2019, representing a 8.7% decrease as compared to the year ended December 31, 2018. Sales decreased primarily as a result of a decrease in average steel selling prices by 4.9% and a decrease in steel shipments by 5.1%.

Sales in the NAFTA segment were $20.3 billion for the year ended December 31, 2018, representing a 13.0% increase as compared to the year ended December 31, 2017. Sales increased primarily as a result of the increase in average steel selling prices by 14.8% and a 1.0% increase in steel shipments.

Operating (loss) income

Operating loss for the NAFTA segment was $1.3 billion for the year ended December 31, 2019 as compared to operating income of $1.9 billion for the year ended December 31, 2018, primarily driven by a 5.1% decline in steel shipments and a negative price cost effect due to a 4.9% decrease in average steel selling prices, reflecting weaker demand exacerbated by prolonged customer destocking and increased domestic supply with prices well

below import parity, and an increase in raw material prices. Operating income for the year ended December 31, 2019 was negatively impacted by an impairment in the second quarter of 2019 of property, plant and equipment of ArcelorMittal USA for $0.6 billion and a further impairment in the fourth quarter of 2019 of the property, plant and equipment of ArcelorMittal USA for $0.7 billion following downward revisions of future cash flow projections reflecting lower near term average steel selling price assumptions. Operating loss for the year ended December 31, 2019 also included $0.2 billion in charges related to inventory following a period of exceptionally weak steel pricing.

Operating income for the NAFTA segment was $1.9 billion for the year ended December 31, 2018 as compared to operating income of $1.2 billion for the year ended December 31, 2017, primarily driven by a 14.8% increase in average steel selling prices. Operating income for the year ended December 31, 2018 included $60 million in charges related to the new collective labor agreement in the United States (which included a signing bonus).

Crude steel production, steel shipments and average steel selling price

Crude steel production decreased 2.9% to 21.9 million tonnes for the year ended December 31, 2019 as compared to 22.6 million tonnes for the year ended December 31, 2018. Crude steel production declined in the first half of 2019 primarily due to the restart of a blast furnace in Mexico which was only fully operational in the second quarter of 2019 after scheduled maintenance in the third quarter of 2018, loss due to power outage in Burns Harbour in the first quarter of 2019 and a slowdown following weaker market demand in the first half while production in the second half of 2019 was 1.6% higher than the second half of 2018 mainly due to the impact of the scheduled maintenance of a blast furnace in Mexico from third quarter of 2018, partly offset by planned outages both in flat and long product operations in the fourth quarter of 2019.

Crude steel production decreased 3.9% to 22.6 million tonnes for the year ended December 31, 2018 as compared to 23.5 million tonnes for the year ended December 31, 2017. Crude steel production declined in particular in the second half of 2018, primarily due to market slowdown and blast furnace reline delay in Mexico.

Steel shipments decreased 5.1% for the year ended December 31, 2019 as compared to the year ended December 31, 2018 reflecting the decreased production and market demand during the year (including pronounced supply chain destocking).

Steel shipments increased 1.0% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 reflecting improved demand in the first half and a slowdown and the impact of the blast furnace delay in the second half. Shipments were 11.4 million tonnes for the first half of 2018, an increase of 3% from 11 million tonnes in the first half of 2017, in line with available inventory. Shipments decreased 1.1% to 10.7 million tonnes in the second half of 2018 as compared to 10.8 million tonnes in the second half of 2017.

Average steel selling prices decreased 4.9% for the year ended December 31, 2019 as compared to the year ended December 31, 2018. Average steel selling prices increased 4.7% to $855/t in the first half of 2019 from $817/t in the first half of 2018. In the first quarter of 2019, average steel selling prices were 12.1% higher than the first quarter of 2018 while in the second quarter of 2019, average steel selling prices were 1.9% and 4.3% lower than the second quarter of 2018 and first quarter of 2019, respectively. This decline continued in the second half of 2019 with average steel selling prices decreasing by 14.3% compared to the second half of 2018, reflecting the ongoing supply chain destock. The average steel selling prices in the second half of 2018 were higher following the imposition of import tariffs on steel in the second quarter of 2018.

Average steel selling prices increased 14.8% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 in particular as a result of import tariffs on steel implemented in the United States. Average steel selling prices increased 10.5% for the first half of 2018 as compared to the first half of 2017 and 19.4% for the second half of 2018 as compared to the second half of 2017.

Brazil	Performance for the year ended December 31,		
(in millions of USD unless otherwise shown)	2019	2018	2017
Sales	8,113	8,711	7,755
Depreciation	274	298	293
Impairments	—	86	—
Operating income	846	1,356	697
Crude steel production (thousand tonnes)	11,001	12,264	11,210
Steel shipments (thousand tonnes)	11,192	11,464	10,840
Average steel selling price (USD/tonne)	679	719	667

Sales

In the Brazil segment, sales decreased 6.9% to $8.1 billion for the year ended December 31, 2019 as compared to the year ended December 31, 2018, primarily due to a 5.5% decrease in average steel selling prices and a 2.4% decrease in shipments. In the first half of 2019, sales increased 2.5% to 4.3 billion as compared to $4.2 billion for the first half of 2018 primarily due to 6.6% higher steel shipments partially offset by 4.7% lower average steel selling prices while in the second half of 2019, sales decreased 15.5% compared to the second half of 2018 driven by a 10.1% decrease in shipments and a 7.0% decrease in average steel selling prices.

In the Brazil segment, sales increased 12.3% to $8.7 billion for the year ended December 31, 2018 as compared to the year ended December 31, 2017, primarily due to a 7.7% increase in average steel selling prices and a 5.8% increase in shipments. Sales for the year ended December 31, 2018 were also negatively impacted by hyperinflation accounting in Argentina.

Operating income

Operating income for the Brazil segment was $0.8 billion for the year ended December 31, 2019, representing a decrease of 37.6% as compared to the year ended December 31, 2018, driven primarily by a negative price-cost effect reflecting in part the increasing price of iron ore due to supply-side developments in Brazil, foreign exchange translation impact and lower steel shipments in the second half of 2019.

Operating income for the Brazil segment was $1.4 billion for the year ended December 31, 2018, representing an increase of 94.6% as compared to the year ended December 31, 2017, primarily driven by increased shipments and higher average steel selling prices. Operating income for the year ended December 31, 2018 was negatively affected by foreign exchange translation impact, hyperinflation in Argentina and $86 million impairment related to the agreed remedy package required for the approval of the AMSF acquisition. It was positively affected by the recognition of $202 million additional PIS/Cofins tax credits in the fourth quarter of 2018 relating to favorable judgments obtained in cases filed by ArcelorMittal Brasil concerning the period of 2005 to 2013. See note 9.3 to the consolidated financial statements for further information on pending cases related to the PIS/Cofins topic.

Crude steel production, steel shipments and average steel selling price

Crude steel production decreased 10.3% to 11.0 million tonnes for the year ended December 31, 2019 as compared to 12.3 million tonnes for the year ended December 31, 2018 mainly due to lower flat production following the stoppage of ArcelorMittal Tubarão's blast furnace #2 in response to deteriorating export market conditions and lower long product production.

Crude steel production increased 9.4% to 12.3 million tonnes for the year ended December 31, 2018 as compared to 11.2 million tonnes for the year ended December 31, 2017 mainly due to an increase in long products following the integration of AMSF. Excluding AMSF, crude steel production increased 4.9%.

Steel shipments decreased to 11.2 million tonnes for the year ended December 31, 2019 as compared to 11.5 million tonnes for the year ended December 31, 2018. Steel shipments in the first half of 2019 increased 6.6% to 5.7 million tonnes as compared to 5.3 million tonnes in the first half of 2018 due to higher sales of flat products in both domestic and export markets, while shipments for the second half of 2019 decreased 10.1% to 5.5 million tonnes compared to 6.2 million tonnes for the second half of 2018 due to deteriorating export market conditions.

Steel shipments increased to 11.5 million tonnes for the year ended December 31, 2018 as compared to 10.8 million tonnes for the year ended December 31, 2017, reflecting the contribution from the acquisition of AMSF. Excluding AMSF, steel shipments increased 0.5%. Total steel shipments in the Brazil segment increased 9.6% to 5.3 million tonnes for the first half of 2018 as compared to 4.8 million tonnes for the first half of 2017, driven by improved demand in long products and the integration of AMSF, partially offset by a nationwide truck strike. Total steel shipments in the Brazil segment increased 2.6% to 6.2 million tonnes in the second half of 2018 as compared to 6.0 million tonnes for the second half of 2017.

Average steel selling prices decreased 5.5% for the year ended December 31, 2019 as compared to the year ended December 31, 2018 in line with domestic and export prices. Average steel selling prices declined 4.7% in the first half of 2019 compared to first half of 2018 and 7.0% in the second half of 2019 compared to the second half of 2018.

Average steel selling prices increased 7.7% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 in line with international prices. Average steel selling prices in the Brazil segment increased 11.0% for the six months ended June 30, 2018 as compared to the six months ended June 30, 2017, in line with domestic and export prices, and 4.9% during the second half of 2018 as compared to the second half of 2017.

Europe	Performance for the year ended December 31,		
(in millions of USD unless otherwise shown)	2019	2018	2017
Sales	37,721	40,488	36,208
Depreciation	1,256	1,195	1,201
Impairments	525	908	—
Operating (loss) income	(1,107)	1,632	2,359
Crude steel production (thousand tonnes)	43,913	44,693	43,768
Steel shipments (thousand tonnes)	42,352	41,020	40,941
Average steel selling price (USD/tonne)	696	787	702

Sales

Sales in the Europe segment were $37.7 billion for the year ended December 31, 2019, representing an 6.8% decrease as compared to sales of $40.5 billion for the year ended December 31, 2018, primarily due to a 11.7% decrease in average steel selling prices offset in part by a 3.2% increase in steel shipments. Sales decreased by 1.3% and 12.9% in the first and second half of 2019 as compared to the first and second half of 2018, respectively.

Sales in the Europe segment were $40.5 billion for the year ended December 31, 2018, representing an 11.8% increase as compared to sales of $36.2 billion for the year ended December 31, 2017, primarily due to a 12.2% increase in average steel selling prices, a 0.2% increase in steel shipments and the depreciation of the U.S. dollar against the euro.

Operating (loss) income

Operating loss for the Europe segment for the year ended December 31, 2019 was $1.1 billion as compared to an income of $1.6 billion for the year ended December 31, 2018. The operating loss was impacted by a negative price-cost effect (with lower steel pricing due to weaker economic activity and continued high level of imports, as well as higher raw material costs), continued losses at ArcelorMittal Italia, foreign exchange impact, an impairment of $0.5 billion in the first half of 2019 related to the remedy asset sales for the ArcelorMittal Italia acquisition and inventory related charges of $0.5 billion in the fourth quarter of 2019 following a period of exceptionally weak steel pricing. For the purposes of comparison with the prior year, the operating loss contribution (excluding purchase price allocation impact in 2018 and full year depreciation effect in 2019) of ArcelorMittal Italia for 2019 deteriorated by $0.6 billion compared to 2018 as it was consolidated from November 1, 2018.

Operating income for the Europe segment for the year ended December 31, 2018 decreased to $1.6 billion as compared to $2.4 billion for the year ended December 31, 2017, primarily due to the impairment charges of $908 million mainly related to the remedy asset sales for the acquisition of ArcelorMittal Italia (reflecting the adjustment to the carrying amount of the disposal group to the expected sale proceeds based on the offers received) as well as charges of $113 million related to blast furnace dismantling in Florange (France) and a charge of $146 million taken for the German Cartel case which settled in July 2018. Operating income for the Europe segment for the year ended December 31, 2018 was positively impacted by $209 million of bargain purchase gain recognized with respect to the acquisition of ArcelorMittal Italia.

Crude steel production, steel shipments and average steel selling price

Crude steel production for the Europe segment decreased 1.7% to 43.9 million tonnes for the year ended December 31, 2019 as compared to 44.7 million tonnes for the year ended December 31, 2018. In the first half of 2019, crude steel production increased 9.8% to 24.5 million tonnes from 22.3 million tonnes in the first half of 2018, primarily due to the impact of ArcelorMittal Italia (subsequent to its acquisition on November 1, 2018). The Company announced production cuts in May 2019 for approximately 4.2 million tonnes of annualized production to bring supply in line with addressable demand. The production cuts were implemented in the second half of 2019, with a portion taking effect in the third quarter of 2019 and the remainder completed as scheduled in the fourth quarter of 2019. Crude steel production decreased 13.2% in the second half of 2019 compared to the second half of 2018, including the impact of the remedy asset sales for the ArcelorMittal Italia acquisition with effect from June 30, 2019 and production cuts mentioned above.

Crude steel production for the Europe segment increased 2.1% to 44.7 million tonnes for the year ended December 31, 2018 as compared to 43.8 million tonnes for the year ended December 31, 2017, due primarily to the consolidation of ArcelorMittal Italia as from November 1, 2018, partially offset by production issues including floods in Asturias (Spain) and blast furnace reline in ArcelorMittal Zenica (Bosnia) in the second quarter and a power outage

in ArcelorMittal Méditerranée (Fos-sur-Mer, France) and a slower ramp up following a blast furnace repair in Poland in the third quarter of 2018.

Steel shipments were 42.4 million tonnes for the year ended December 31, 2019, a 3.2% increase from steel shipments of 41.0 million for the year ended December 31, 2018. Steel shipments increased 10.1% to 23.4 million tonnes in the first half of 2019, from 21.2 million tonnes in the first half of 2018, primarily due to the impact of ArcelorMittal Italia as mentioned above, partially offset by lower long product shipments, while shipments in the first half of 2018 were impacted by floods in Asturias, Spain and rail strikes in France. Steel shipments decreased 4.13% in the second half of 2019 compared to the second half of 2018, due to the impact of the remedy asset sales for the ArcelorMittal Italia acquisition and the impact of ongoing weak demand, in particular macroeconomic headwinds including declines in automobile production.

Steel shipments were 41.0 million tonnes for the year ended December 31, 2018, a 0.2% increase from steel shipments of 40.9 million for the year ended December 31, 2017. In the first half of 2018, steel shipments increased 2.6% to 21.2 million tonnes, from 20.7 million tonnes in the first half of 2017, both for flat and long products partially offset by the operational issues described above, while steel shipments in the second half of 2018 decreased 2.3% to 19.8 million tonnes from 20.3 million tonnes in the second half of 2017 due to weak market conditions in the fourth quarter of 2018, particularly in long products, and the operational issues described above, partially offset by the consolidation of Ilva as from November 1, 2018.

Average steel selling prices decreased 11.7% for the year ended December 31, 2019 as compared to the year ended December 31, 2018 in line with market prices and the appreciation of the U.S. dollar against the euro in 2019. Average steel selling prices decreased 10.5% during the first half of 2019 as compared to the first half of 2018 in line with market prices and 13.3% during the second half of 2019 as compared to the second half of 2018.

Average steel selling prices increased 12.2% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 in line with higher international prices. Average steel selling prices increased 18.8% during the first half of 2018 as compared to the first half of 2017 in line with higher international prices and the depreciation of the U.S. dollar against the euro and 6.0% during the second half of 2018 as compared to the second half of 2017.

ACIS	Performance for the year ended December 31,		
(in millions of USD unless otherwise shown)	2019	2018	2017
Sales	6,837	7,961	7,621
Depreciation	364	311	313
Impairments	102	—	206
Operating (loss) income	(25)	1,094	508
Crude steel production (thousand tonnes)	12,998	13,022	14,678
Steel shipments (thousand tonnes)	11,547	11,741	13,094
Average steel selling price (USD/tonne)	517	598	515

Sales

Sales in the ACIS segment were $6.8 billion for the year ended December 31, 2019, representing a decrease of 14.1% as compared to the year ended December 31, 2018, primarily due to a 13.6% decrease in average steel selling prices and a 1.7% decrease in steel shipments.

Sales in the ACIS segment were $8.0 billion for the year ended December 31, 2018, representing an increase of 4.5% as compared to the year ended December 31, 2017, primarily due to a 16.1% increase in average steel selling prices, partially offset by a 10.3% decrease in steel shipments.

Operating (loss) income

Operating loss for the ACIS segment for the year ended December 31, 2019 was $25 million as compared to an income of $1.1 billion for the year ended December 31, 2018, primarily due to a negative price-cost effect, lower shipments, impairments of $0.1 billion related to ArcelorMittal South Africa (of which $75 million related to the fixed assets of the Newcastle facility as a result of lower domestic volume forecasts and $20 million related to the closure of the Saldanha facility) and $0.1 billion of closure and retrenchment costs related to the Saldanha facility in relation to the announced Section 189 process.

Operating income for the ACIS segment for the year ended December 31, 2018 was $1.1 billion as compared to $508 million for the year ended December 31, 2017, increasing primarily due to a positive price-cost effect and partially offset by the decrease in shipments in 2018.

Crude steel production, steel shipments and average steel selling price

Crude steel production for the ACIS segment decreased marginally by 0.2% remaining at 13.0 million tonnes for the year ended December 31, 2019 and 2018.

Crude steel production for the ACIS segment decreased by 11.3% to 13.0 million tonnes for the year ended December 31, 2018, from 14.7 million tonnes for the year ended December 31, 2017, primarily due to planned (blast furnace #9) and unplanned maintenance in Ukraine in the first half of 2018 and an explosion at a gas pipeline at Temirtau (Kazakhstan) in the fourth quarter of 2018.

Steel shipments for the year ended December 31, 2019 decreased by 1.7% to 11.5 million tonnes as compared to 11.7 million tonnes for the year ended December 31, 2018 primarily due to lower shipments in South Africa impacted by weaker demand, offset in part by the normalization of production in the second quarter of 2019 at Temirtau following the explosion described above.

Steel shipments for the year ended December 31, 2018 decreased by 10.3% to 11.7 million tonnes as compared to 13.1 million tonnes for the year ended December 31, 2017 reflecting the operational issues mentioned above. In the first half of 2018, steel shipments decreased 6.1% to 6.1 million tonnes from 6.5 million tonnes in the first half of 2017 due to lower CIS shipments partially offset by higher steel shipments in South Africa, while steel shipments in the second half of 2018 decreased 14.5% to 5.7 million as compared to 6.6 million in the second half of 2017, primarily due to lower steel shipments in CIS following the incidents mentioned above.

Average steel selling prices decreased 13.6% for the year ended December 31, 2019 as compared to the year ended December 31, 2018 in line with market prices. Average steel selling prices decreased 12.6% and 14.7% in the first and second half of 2019, respectively compared to the same periods in 2018.

Average steel selling prices increased 16.1% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 in line with international prices. Average steel selling prices increased 23.1% and 9.4% in the first and second half of 2018, respectively, as compared to the same periods in 2017.

Mining		Performance for the year ended December 31,		
(in millions of USD unless otherwise shown)	Note	2019	2018	2017
Sales		4,837	4,211	4,033
Depreciation		448	418	416
Operating income		1,215	860	991
Own iron ore production (million tonnes)		57.1	58.5	57.4
Iron ore shipped externally and internally at market price (million tonnes)	1,2	37.1	37.6	35.7
Iron ore shipment - cost plus basis (million tonnes)	1	22.2	20.6	22.2
Own coal production (million tonnes)		5.5	5.9	6.3
Coal shipped externally and internally at market price (million tonnes)	1,2	2.8	2.5	2.8
Coal shipment - cost plus basis (million tonnes)	1	2.9	3.3	3.5

1. There are three categories of sales: (1) “External sales”: mined product sold to third parties at market price; (2) “Market-priced tonnes”: internal sales of mined product to ArcelorMittal facilities reported at prevailing market prices; (3) “Cost-plus tonnes”: internal sales of mined product to ArcelorMittal facilities on a cost-plus basis. The determinant of whether internal sales are reported at market price or reported at cost-plus is whether or not the raw material could practically be sold to third parties (i.e., there is a potential market for the product and logistics exist to access that market).
2. Market-priced tonnes represent amounts of iron ore and coal from ArcelorMittal mines that could practically be sold to third parties. Market-priced tonnes that are transferred from the Mining segment to the Company’s steel producing segments are reported at the prevailing market price. Shipments of raw materials that do not constitute market-priced tonnes are transferred internally on a cost-plus basis.

	Note			Year ended December 31,		
Iron ore production (million metric tonnes)	1	Type	Product	2019	2018	2017
Own mines						
North America	2	Open pit	Concentrate, lump, fines and pellets	35.4	36.9	38.1
South America		Open pit	Lump and fines	2.3	2.8	3.2
Europe		Open pit	Concentrate and lump	1.5	1.4	1.6
Africa		Open pit / Underground	Fines	4.4	4.6	2.0
Asia, CIS & Other		Open pit / Underground	Concentrate, lump, fines and sinter feed	13.5	12.8	12.5
Total own iron ore production				57.1	58.5	57.4
Strategic long-term contracts - iron ore						
North America	3	Open pit	Pellets	—	—	0.9
Africa		Open pit	Lump and fines	—	—	—
Total strategic long-term contracts - iron ore				—	—	0.9
Total				57.1	58.5	58.3

1. Total of all finished production of fines, concentrate, pellets and lumps.
2. Includes own mines and share of production from Hibbing (United States, 62.30%) and Peña (Mexico, 50%).
3. Consists of a long-term supply contract with Cleveland-Cliffs Inc. which expired in the first quarter of 2017.

	Note	Year ended December 31,		
Coal production (million metric tonnes)		2019	2018	2017
Own mines				
North America		1.96	2.09	2.06
Asia, CIS & Other		3.53	3.82	4.25
Total coal production		5.49	5.91	6.31

Sales

Sales in the Mining segment were $4.8 billion for the year ended December 31, 2019, representing an increase of 14.9% as compared to the year ended December 31, 2018. Sales were 22.1% higher at $2.6 billion and 7.8% higher at $2.2 billion for the first and second half of 2019, respectively as compared to the same periods in 2018.

Sales in the Mining segment were $4.2 billion for the year ended December 31, 2018, representing an increase of 4.4% as compared to the year ended December 31, 2017. Sales were 2.2% higher at $2.1 billion and 6.7% higher at $2.1 billion for the first and second half of 2018, respectively as compared to the same periods in 2017.

Sales to external customers were $1,165 million for the year ended December 31, 2019, representing an increase of 15.5% as compared to the year ended December 31, 2018 mainly due to the increase in seaborne iron ore reference prices. Iron ore shipments were 59.3 million tonnes for the year ended December 31, 2019, representing a 1.8% increase as compared to 58.3 million tonnes for the year ended December 31, 2018. Iron ore shipments to external parties were 12.0 million tonnes for the year ended December 31, 2019 as compared to 12.7 million tonnes for the year ended December 31, 2018, primarily due to lower production at AMMC described below. Coal shipments were 5.7 million tonnes for the year ended December 31, 2019 as compared with 5.8 million tonnes for the year ended December 31, 2018.

Sales to external customers were $1,009 million for the year ended December 31, 2018, representing an increase of 2.4% as compared to the year ended December 31, 2017, primarily due to the increase in prices. Iron ore shipments were 58.3 million tonnes for the year ended December 31, 2018, representing a marginal 0.7% increase as compared to 57.9 million for the year ended December 31, 2017. Iron ore shipments to external parties were 12.7 million tonnes for the year ended December 31, 2018 as compared to 11.8 million tonnes for the year ended December 31, 2017. Coal shipments were 5.8 million tonnes for the year ended December 31, 2018 as compared with 6.3 million tonnes for the year ended December 31, 2017.

The average reference iron ore price was $93.63 per tonne in 2019, $69.70 per tonne in 2018 and $71.39 per tonne in 2017 (delivered to China, normalized to Qingdao and 62% Fe US $ per tonne, Metal Bulletin) and the average reference price for hard coking coal was $176.71 per tonne in 2019, $206.62 per tonne in 2018 and $187.28 per tonne in 2017 (Premium HCC FOB Aus, Metal Bulletin). However, there may not be a direct correlation between reference prices and actual selling prices in various regions at a given time.

Operating income

Operating income for the Mining segment was $1,215 million for the year ended December 31, 2019 as compared to $860 million for the year ended December 31, 2018, primarily driven by the increase in the iron ore reference

prices offset in part by the reduction in market-priced iron ore shipments and lower coking coal reference prices and lower iron ore quality premia.

Operating income for the Mining segment was $860 million for the year ended December 31, 2018 as compared to $991 million for the year ended December 31, 2017, primarily driven by the decrease in the iron ore reference prices and lower coal volumes.

Production

ArcelorMittal had iron ore production of 57.1 million tonnes for the year ended December 31, 2019, a decrease of 2.3% compared to the year ended December 31, 2018. Iron ore production decreased 1.3% for the first half of 2019 compared to the first half of 2018 primarily due to lower production in Brazil due to the temporary suspension of Serra Azul in Brazil (following evacuation on February 8, 2019) which restarted on March 18, 2019, Liberia, Temirtau and Mexico (Volcan mine reached end of life in May 2019), partially offset by higher production in Canada and Ukraine. Iron ore production decreased 3.4% for the second half of 2019 compared to the second half of 2018 primarily due to lower production in AMMC (following an electrical failure in the third quarter of 2019 which led to a temporary stoppage of the concentrator followed by a slow ramp-up in the fourth quarter of 2019) and the Volcan mine end of life in Mexico, offset in part by higher production in Kazakhstan.

ArcelorMittal had iron ore production of 58.5 million tonnes for the year ended December 31, 2018, an increase of 1.9% compared to the year ended December 31, 2017, primarily due to Liberia (production of 4.6 million tonnes in 2018 which, although above the 2017 level, was slightly below the 5 million tonne full year capacity, due to handling/logistical issues at the new Gangra deposit during the wet season in the second half of 2018), offset in part by lower production in Canada (lower yield from a new mix of ore bodies following a pit wall instability issue which first occurred in the fourth quarter of 2017) and Mexico.

ArcelorMittal had coking coal production of 5.5 million tonnes for the year ended December 31, 2019, a decrease of 7.1% compared to the year ended December 31, 2018 mainly due to lower production in both Kazakhstan and Princeton.

ArcelorMittal had own coking coal production of 5.9 million tonnes for the year ended December 31, 2018, a decrease of 6.3% compared to the year ended December 31, 2017 mainly due to lower production in the Kazakhstan mines following operational and geological issues.

Income or loss from investments in associates, joint ventures and other investments

ArcelorMittal recorded income of $347 million from investments in associates, joint ventures and other investments for the year ended December 31, 2019, as compared to $652 million for the year ended December 31, 2018 driven by lower profitability of Calvert and Chinese investee and includes a dividend income from Erdemir of $93 million as compared to $87 million in 2018.

ArcelorMittal recorded income of $652 million from investments in associates, joint ventures and other investments for the year ended December 31, 2018, as compared to $448 million for the year ended December 31, 2017 and includes a dividend income from Erdemir of $87 million as compared to $45 million in 2017.

Financing costs-net

Financing costs-net include net interest expense, revaluation of financial instruments, net foreign exchange income/expense (i.e., the net effects of transactions in a foreign currency other than the functional currency of a subsidiary) and other net financing costs (which mainly include bank fees, accretion of defined benefit obligations and other long-term liabilities).

Net financing costs were lower at $1.7 billion for the year ended December 31, 2019 as compared to $2.2 billion for the year ended December 31, 2018. Net interest expense (interest expense less interest income) was lower at $607 million for the year ended December 31, 2019 as compared to $615 million for the year ended December 31, 2018.

Foreign exchange gains were $4.0 million as compared to a loss of $235 million for the years ended December 31, 2019 and 2018, respectively. The 2018 loss was primarily due to the first quarter of 2018 as described below.

Other net financing costs (including expenses related to true sale of receivables, bank fees, interest on pensions and fair value adjustments of the call option of the mandatorily convertible bond and derivative instruments) were $1.0 billion for the year ended December 31, 2019 compared to $1.4 billion for the year ended December 31, 2018, and included mark-to-market losses related to the mandatory convertible bond call option totaling $356 million as compared to $501 million for the year ended December 31, 2018.

Net financing costs were higher at $2.2 billion for the year ended December 31, 2018 as compared to $0.9 billion for the year ended December 31, 2017. Net interest expense (interest expense less interest income) was lower at $0.6 billion for the year ended December 31, 2018 as compared to $0.8 billion for the year ended December 31, 2017, driven by debt reduction including early bond repayments and lower cost of debt.

Foreign exchange losses were $235 million as compared to a gain of $546 million for the years ended December 31, 2018 and 2017, respectively. The foreign exchange losses were primarily due to the effect of the depreciation of the

U.S. dollar against the euro on the Company's euro denominated debt in the first quarter of 2018. As of April 1, 2018, the Company designated a portfolio of euro denominated debt (€5,169 million as of December 31, 2018) as a hedge of certain euro denominated investments (€7,804 million as of December 31, 2018) in order to mitigate the foreign currency risk arising from certain euro denominated subsidiaries' net assets. The risk arises from the fluctuation in spot exchange rates between the U.S. dollar and euro, which causes the amount of the net investments to vary. The hedged risk in the hedge of net investments is a risk of a weakening euro against the U.S. dollar that will result in a reduction in the carrying amount of the Company's net investments in the subsidiaries subject to the hedge. The euro denominated debt is designated as a hedging instrument for the change in the value of the net investments that is attributable to changes in the euro/U.S. dollar spot rate. As a result, the Company's statement of operations no longer includes foreign exchange exposure on such euro denominated debt.

Other net financing costs (including expenses related to true sale of receivables, bank fees, interest on pensions and fair value adjustments of the call option of the mandatorily convertible bond and derivative instruments) were $1.4 billion for the year ended December 31, 2018 compared to $0.6 billion for the year ended December 31, 2017, and included mark-to-market losses related to the mandatory convertible bond call option totaling $0.5 billion as compared to gains of $0.8 billion for the year ended December 31, 2017. Other net financing costs for the year ended December 31, 2018 also included $0.1 billion premium expense on the early redemption of bonds as compared to $0.4 billion for the year ended December 31, 2017. Other net financing costs in 2017 were negatively affected by mark-to-market losses relating to a derivative embedded in a pellet supply agreement in the United States (due to a payment based on the evolution of the price of steel in the United States domestic steel market) of $0.3 billion.

Income tax expense (benefit)

ArcelorMittal recorded an income tax expense of $0.5 billion for the year ended December 31, 2019 as compared to income tax benefit of $0.3 billion for the year ended December 31, 2018. The current income tax expense of $786 million for the year ended December 31, 2019 as compared to $928 million for the year ended December 31, 2018 was primarily driven by lower results in a number of countries. The deferred tax benefit of $327 million for the year ended December 31, 2019 includes a $0.3 billion reduction of deferred tax assets following tax rate decrease in Luxembourg and a $0.6 billion deferred tax benefit recorded in Luxembourg, due to the expectation of higher future profits.

ArcelorMittal recorded an income tax benefit of $0.3 billion for the year ended December 31, 2018 as compared to income tax expense of $0.4 billion for the year ended December 31, 2017. The current income tax expense of $928 million for the year ended December 31, 2018 as compared to $583 million for the year ended December 31, 2017 was primarily driven by improved results in a number of countries. The deferred tax benefit of $1,277 million for the year ended December 31, 2018 as compared with a deferred tax benefit of $151 million for the year ended December 31, 2017 included a $1.4 billion deferred tax benefit recorded mainly in Luxembourg, due to the expectation of higher future profits. This benefit included a $0.6 billion deferred tax income in the context of the change in the currency denomination of the Company's tax losses in Luxembourg as the revised taxable income projections in U.S. dollar terms reflect a change in the foreign currency exposure of the different income streams. Following the May 16, 2018 approval of the extraordinary general meeting ("EGM") to change the share capital of the ArcelorMittal parent company from euro to U.S. dollar, the parent company will file consolidated tax returns in U.S. dollar for the main Luxembourg tax integration going forward. The euro denominated tax losses and the related deferred tax asset held by the ArcelorMittal parent company in Luxembourg were translated into U.S. dollar effective as of January 1, 2018.

ArcelorMittal’s consolidated income tax expense (benefit) is affected by the income tax laws and regulations in effect in the various countries in which it operates and the pre-tax results of its subsidiaries in each of these countries, which can change from year to year. ArcelorMittal operates in jurisdictions, mainly in Eastern Europe and Asia, which have a structurally lower corporate income tax rate than the statutory tax rate as enacted in Luxembourg (24.94%), as well as in jurisdictions, mainly in Brazil and Mexico, which have a structurally higher corporate income tax rate.

The statutory income tax expense (benefit) and the statutory income tax rates of the countries that most significantly resulted in the tax expense (benefit) at statutory rate for each of the years ended December 31, 2019, 2018 and 2017 are as set forth below:

	2019		2018		2017	
	Statutory income tax	Statutory income tax rate	Statutory income tax	Statutory income tax rate	Statutory income tax	Statutory income tax rate
United States	(382)	21.00%	44	21.00%	(98)	21.00%
Argentina	3	25.00%	6	25.00%	15	25.00%
France	(164)	25.82%	48	25.82%	112	25.82%
Brazil	84	34.00%	271	34.00%	69	34.00%
Belgium	(37)	25.00%	55	25.00%	105	25.00%
Germany	(124)	30.30%	(22)	30.30%	7	30.30%
Spain	(73)	25.00%	18	25.00%	(4)	25.00%
Italy	(254)	24.00%	2	24.00%	(6)	24.00%
Luxembourg	407	24.94%	123	26.01%	1,139	26.01%
Mexico	(105)	30.00%	73	30.00%	(18)	30.00%
South Africa	(92)	28.00%	19	28.00%	(115)	28.00%
Canada	234	25.90%	359	25.90%	190	25.90%
Kazakhstan	52	20.00%	65	20.00%	77	20.00%
Czech Republic	(2)	19.00%	(51)	19.00%	(21)	19.00%
Poland	(27)	19.00%	45	19.00%	30	19.00%
Romania	(14)	16.00%	(44)	16.00%	(7)	16.00%
Ukraine	(21)	18.00%	69	18.00%	47	18.00%
Liberia	31	25.00%	(3)	25.00%	(18)	25.00%
United Kingdom	4	17.00%	8	17.00%	(1)	17.00%
Switzerland	22	7.83%	17	7.83%	(67)	7.83%
Others	(10)		(59)		(29)	
Total	(468)		1,043		1,407	

Note: The statutory tax rates are the (future) rates enacted or substantively enacted by the end of the respective period.

Non-controlling interests

Net income attributable to non-controlling interests was $63 million for the year ended December 31, 2019 as compared to $181 million for the year ended December 31, 2018. Net income attributable to non-controlling interests decreased in 2019 primarily as a result of the operating performance of ArcelorMittal South Africa.

Net income attributable to non-controlling interests was $181 million for the year ended December 31, 2018 as compared to $7 million for the year ended December 31, 2017. Net income attributable to non-controlling interests increased in 2018 primarily as a result of the improved operating performance of ArcelorMittal South Africa.

Net income attributable to equity holders of the parent

ArcelorMittal's net loss attributable to equity holders of the parent was $2.5 billion for the year ended December 31, 2019, compared to net income attributable to equity holders of the parent of $5.1 billion and $4.6 billion for the years ended December 31, 2018 and 2017, respectively.

Liquidity and capital resources

ArcelorMittal's principal sources of liquidity are cash generated from its operations and its credit facilities at the corporate level.

Because ArcelorMittal is a holding company, it is dependent upon the earnings and cash flows of, as well as dividends and distributions from, its operating subsidiaries to pay expenses and meet its debt service obligations. Significant cash or cash equivalent balances may be held from time to time at the Company's international subsidiaries, in particular those in France and in the United States, where the Company maintains cash management systems under which most of its cash and cash equivalents are centralized, and in Brazil, Canada, Kazakhstan, South Africa and Ukraine. Some of these operating subsidiaries have debt outstanding or are subject to acquisition agreements that impose restrictions on such operating subsidiaries' ability to pay dividends, but such restrictions are not significant in the context of ArcelorMittal's overall liquidity. Repatriation of funds from operating subsidiaries may also be affected by tax and foreign exchange policies in place from time to time in the various countries where the Company operates, though none of these policies is currently significant in the context of ArcelorMittal's overall liquidity.

In management's opinion, ArcelorMittal's credit facilities are adequate for its present requirements.

As of December 31, 2019, ArcelorMittal's cash and cash equivalents, including restricted cash of $128 million, amounted to $5.0 billion as compared to $2.4 billion as of December 31, 2018. In addition, ArcelorMittal had available borrowing capacity of $5.5 billion under its $5.5 billion revolving credit facility as of December 31, 2019 and 2018.

As of December 31, 2019, ArcelorMittal's total debt, which includes long-term debt and short-term debt was $14.3 billion, compared to $12.6 billion as of December 31, 2018.

Net debt (defined as long-term debt ($11.5 billion) plus short-term debt ($2.9 billion) including debt classified as held for sale (nil), less cash and cash equivalents and restricted cash ($5.0 billion)) was $9.3 billion as of December 31, 2019, down from $10.2 billion at December 31, 2018, comprised of long-term debt ($9.3 billion) plus short-term debt ($3.2 billion) including debt classified as held for sale ($0.1 billion), less cash and cash equivalents and restricted cash ($2.4 billion). Most of the external debt is borrowed by the parent company on an unsecured basis and bears interest at varying levels based on a combination of fixed and variable interest rates. Gearing (defined as net debt divided by total equity) at December 31, 2019 and 2018 was 23%.

The margin applicable to ArcelorMittal's principal credit facilities ($5.5 billion revolving credit facility and certain other credit facilities) and the coupons on certain of its outstanding bonds are subject to adjustment in the event of a change in its long-term credit ratings. In 2019, ArcelorMittal's credit ratings remained unchanged although outlooks were revised as described in the Risk Factors above. ArcelorMittal has a substantial amount of indebtedness, which could make it more difficult or expensive to refinance its maturing debt, incur new debt and/or flexibly manage its business and the market's perception of ArcelorMittal's leverage may affect its share price.

ArcelorMittal's $5.5 billion revolving credit facility signed on December 19, 2018 with a maturity of December 19, 2023. During the fourth quarter of 2019, ArcelorMittal executed the option to extend the facility to December 19, 2024. The extension was completed for $5.4 billion of the available amount, with the remaining $0.1 billion remaining with a maturity of December 19, 2023 as of December 31, 2019. The facility may be further extended for an additional year in December 2020. The facility contains restrictive covenants, which among other things, limit encumbrances on the assets of ArcelorMittal and its subsidiaries, the ability of ArcelorMittal's subsidiaries to incur debt and the ability of ArcelorMittal and its subsidiaries to dispose of assets in certain circumstances. The agreement also requires compliance with a financial covenant, as summarized below.

The Company must ensure that the ratio of "Consolidated Total Net Borrowings" (consolidated total borrowings less consolidated cash and cash equivalents) to "Consolidated EBITDA" (the consolidated net pre-taxation profits of the ArcelorMittal group for a Measurement Period, subject to certain adjustments as set out in the facility) does not, at the end of each "Measurement Period" (each period of 12 months ending on the last day of a financial half-year or a financial year of the Company), exceed a certain ratio, referred to by the Company as the "Leverage ratio". ArcelorMittal's principal credit facilities set this ratio to 4.25 to 1. As of December 31, 2019, the Company was in compliance with the ratio.

Non-compliance with the covenants in the Company's borrowing agreements would entitle the lenders under such facilities to accelerate the Company's repayment obligations. The Company was in compliance with the financial covenants in the agreements related to all of its borrowings as of December 31, 2019 and December 31, 2018.

As of December 31, 2019, ArcelorMittal had guaranteed $236 million of debt of its operating subsidiaries, including $23 million following the adoption of IFRS 16 for which the Company recognized additional liabilities, compared to $99 million as of December 31, 2018. See also note 9.4 to the consolidated financial statements for a description of ArcelorMittal guarantees for associates and joint ventures of $3.8 billion as of December 31, 2019. ArcelorMittal's debt facilities have provisions whereby the acceleration of the debt of another borrower within the ArcelorMittal group could, under certain circumstances, lead to acceleration under such facilities.

The following table summarizes the repayment schedule of ArcelorMittal's outstanding indebtedness, which includes short-term and long-term debt, as of December 31, 2019.

	Repayment amounts per year (in billions of $)						
Type of indebtedness as of December 31, 2019	2020	2021	2022	2023	2024	>2024	Total
Bonds	0.5	0.3	1.5	1.4	1.9	3.7	9.3
Commercial paper	1.2						1.2
Lease liabilities and other loans	1.1	0.7	0.4	0.8	0.2	0.6	3.8
Total gross debt	2.8	1.0	1.9	2.2	2.1	4.3	14.3

As of December 31, 2019, the $5.5 billion revolving credit facility was fully available.

The average debt maturity of the Company was 5.3 years as of December 31, 2019, as compared to 4.0 years as of December 31, 2018.

Further information regarding ArcelorMittal's outstanding short-term and long-term indebtedness as of December 31, 2019, including the breakdown between fixed rate and variable rate debt, is set forth in note 6 to the consolidated financial statements. Further information regarding ArcelorMittal's use of financial instruments for hedging purposes is set forth in note 6 to the consolidated financial statements.

Financings

ArcelorMittal's principal credit facilities are described below, for further information on its existing credit facilities and several debt financing and repayment transactions completed during 2019, please refer to note 6 to the consolidated financial statements.

Principal credit facilities

On December 19, 2018, ArcelorMittal signed an agreement for a $5.5 billion revolving credit facility (the "Facility"). This Facility replaced the $5.5 billion revolving credit facility dated April 30, 2015, which was amended and extended on December 21, 2016. The agreement incorporates a single tranche of $5.5 billion and on November 27, 2019 ArcelorMittal exercised the option to extend the facility's maturity by one year to December 19, 2024. The commitments are $5.5 billion until December 19, 2023 and $5.4 billion until December 19, 2024, subject to ArcelorMittal's option to extend the term by an additional year exercisable in the end of 2020. The Facility may be used for general corporate purposes. As of December 31, 2019, the $5.5 billion revolving credit facility was fully available. The Company makes drawdowns from and repayments on this Facility in the framework of its cash management.

On September 30, 2010, ArcelorMittal entered into the $500 million revolving multi-currency letter of credit facility (the "Letter of Credit Facility"). The Letter of Credit Facility is used by the Company and its subsidiaries for the issuance of letters of credit and other instruments. The terms of the letters of credit and other instruments contain certain restrictions as to duration. The Letter of Credit Facility was amended on October 26, 2012 and September 30, 2014 to reduce its amount to $450 million and to $350 million, respectively. On July 31, 2019, the Company refinanced its Letter of Credit Facility by entering into a $350 million revolving multi-currency letter of credit facility, which matures on July 31, 2022.

Mandatory convertible bond

Please refer to note 6.3 and 11.2 to the consolidated financial statements.

True sale of receivables ("TSR") programs and payment terms with suppliers

The Company has established a number of programs for sales without recourse of trade accounts receivable to various financial institutions (referred to as true sale of receivables ("TSR")). As of December 31, 2019, the total amount of trade accounts receivables sold amounted to $4,436 million. Through the TSR programs, certain operating subsidiaries of ArcelorMittal surrender the control, risks and benefits associated with the accounts receivable sold; therefore, the amount of receivables sold is recorded as a sale of financial assets and the balances are removed from the consolidated statements of financial position at the moment of sale.

As part of the Company's ongoing efforts to improve its working capital position, it continually engages with its customers and suppliers with the aim of improving overall terms, including pricing, quality, just in time delivery, discounts and payment terms. Trade accounts payable have maturities from 15 to 180 days depending on the type of material, the geographic area in which the purchase transaction occurs and the various contractual agreements. The Company's average outstanding number of trade payable days amounted to 78 over the last 5 years. The ability of suppliers to provide payment terms may be dependent on their ability to obtain funding for their own working capital needs and or their ability to early discount their receivables at their own discretion. Given the nature and large diversification of its suppliers base the Company does not expect any material impact to its own liquidity position as a result of suppliers not having access to liquidity. As of December 31, 2019, a 5 day reduction in trade payable days would result in a trade payables decrease by $750 million.

Earnings distribution

ArcelorMittal held 9.8 million shares in treasury as of December 31, 2019, as compared to 8.3 million shares as of December 31, 2018. As of December 31, 2019, the number of shares held by the Company in treasury represented approximately 0.96% of the Company's total issued share capital.

On January 31, 2018, the Company announced that the Board had agreed on a new dividend policy which was approved by the shareholders at the annual general meeting of shareholders in May 2018. Given the current de-leveraging focus, dividends began at $0.10/share in 2018 (paid from 2017 results). The Company intends to progressively increase the base dividend paid to its shareholders, and, on attainment of the net debt target, return a percentage of net cash provided by operating activities annually. The Company paid the base dividend for 2019 (paid from 2018 earnings) of $0.20 per share to the shareholders. On February 4, 2020, given the resilient cash flow and progress towards its net debt target, the Board proposes a base dividend of $0.30 per share for 2020 (in respect of 2019) which will be proposed to the shareholders at the AGM in May 2020.

Pension/OPEB liabilities

The defined benefit liabilities for employee benefits increased by $0.4 billion to $7.3 billion as of December 31, 2019, as compared to $6.9 billion as of December 31, 2018. The increase is mainly due to the increase in the defined benefit obligation due to lower discount rates, offset partly by increase in assets value and other actuarial gains. For additional information with respect to the Company's pension plan and OPEB liabilities, including a breakdown by region and by type of plan, see note 8.2 to the consolidated financial statements.

IFRS 16

The Company adopted IFRS 16 "Leases" as of January 1, 2019, using the modified retrospective transition approach with right-of-use assets measured at an amount equal to the lease liability recognized at January 1, 2019, adjusted by the amount of any prepaid or accrued lease payments relating to those leases. On January 1, 2019, the Company recognized additional lease liabilities (discounted at the incremental borrowing rates at that date) for an amount of $1,136 million (see note 7 to the consolidated financial statements).

Research and development, patents and licenses

For information on the Company's research and development policies, see "Business overview—Research and development" below for further details.

Sources and uses of cash

Years ended December 31, 2019, 2018 and 2017

The following table presents a summary of cash flow of ArcelorMittal:

Summary of cash flow		For the year ended December 31,	
(in $ millions)	2019	2018	2017
Net cash provided by operating activities	6,017	4,196	4,563
Net cash used in investing activities	(3,824)	(3,759)	(2,830)
Net cash provided by (used in) financing activities	514	(689)	(1,731)

Net cash provided by operating activities

For the year ended December 31, 2019, net cash provided by operating activities increased to $6.0 billion, as compared with $4.2 billion for the year ended December 31, 2018. The increase in net cash provided by operating activities was mainly due to an operating working capital release of $2.2 billion as compared to an operating working capital investment of $4.4 billion in 2018, including an inflow for inventories of $2.47 billion , an inflow for trade accounts receivables of $0.96 billion, partially offset by an outflow of trade accounts payables of $1.24 billion. The operating working capital release was driven by lower inventories and receivables, due in part to lower selling prices, particularly in the fourth quarter of 2019, as well as by raw material costs and improved collection of receivables.

For the year ended December 31, 2018, net cash provided by operating activities decreased to $4.2 billion, as compared with $4.6 billion for the year ended December 31, 2017. The decrease in net cash provided by operating activities was mainly due to an investment in operating working capital of $4.38 billion which represented an outflow for trade accounts receivables of $0.65 billion, an outflow for inventories of $4.65 billion and an inflow for trade accounts payables and other of $0.91 billion, partially offset by an increase in operating income driven by the increase in average steel selling prices offset by lower steel shipments. The operating working capital investment for the year ended December 31, 2018 largely reflected the price effect of improved market conditions which impacted operating working capital through higher inventories and higher trade receivables. The investment in operating working capital for the year ended December 31, 2018 reflected a lower than anticipated release of working capital in the fourth quarter of 2018 due to the weaker apparent demand conditions leading to an accumulation of metal stock and raw material volumes.

Net cash used in investing activities

Net cash used in investing activities was $3.8 billion for the year ended December 31, 2019 and 2018. Capital expenditures increased to $3.6 billion for the year ended December 31, 2019 as compared to $3.3 billion for the year ended December 31, 2018. Capital expenditures for the year ended December 31, 2019 were significantly below the initial guidance of $4.3 billion but marginally above the revised $3.5 billion guidance provided after the third quarter of 2019 and below the mid-year guidance of $3.8 billion as the Company adapted its capital expenditure plans to the weaker market conditions. Cash used in investing activities includes i) $0.8 billion net cash outflow for the acquisition of AMNS India and $83 million additional UG payments, ii) lease payments ($200 million) for the ArcelorMittal Italia acquisition and iii) the acquisition of Münker Metallprofile GmbH in Germany ($46 million) . These outflows were offset in part by i) proceeds from remedy asset sales for the ArcelorMittal Italia acquisition of $518 million (cash consideration of $694 million, net of cash disposed of $34 million, an escrow deposit of $125 million which was subsequently drawn and proceeds of $17 million paid to a joint venture of the Company), ii) the final installment of disposal proceeds from ArcelorMittal USA's 21% stake in the Empire Iron Mine Partnership for $44 million and iii) the sale of remaining 2.6% stake in Gerdau for $116 million. See “—Capital expenditure projects”.

Net cash used in investing activities was $3.8 billion for the year ended December 31, 2018 as compared to $2.8 billion for the year ended December 31, 2017. Capital expenditures increased to $3.3 billion for the year ended December 31, 2018 as compared to $2.8 billion for the year ended December 31, 2017. Capital expenditures for the year ended December 31, 2018 were lower than expected due to underspending in certain strategic projects and at ArcelorMittal Italia due to the acquisition only being completed in November 2018. Cash used in investing activities for the year ended December 31, 2018 included the acquisition of the Uttam Galva and KSS Petron debt for $1 billion in the context of the AMNS India bidding process, offset in part by the proceeds from the sale of Go Steel Frýdek Místek ($39 million), the second installment of proceeds of $44 million from the disposal of ArcelorMittal USA’s 21% stake in the Empire Iron Mining Partnership, $220 million of sale proceeds following the disposal of the Company's 50% interest in Macsteel and $55 million relating to the release of restricted cash related to the mandatory convertible bond following contractual renegotiation.

ArcelorMittal's major capital expenditures in the year ended December 31, 2019 included the following projects: the ArcelorMittal Mexico new hot strip mill, the ArcelorMittal Italy environmental investment program, the new LF&CC 2&3 in ArcelorMittal Kryvyi Rih and the new walking beam furnaces at Burns Harbor, along with other ongoing projects.

ArcelorMittal's major capital expenditures in the year ended December 31, 2018 included the following projects: the Mexico hot strip mill, the new LF&CC 2&3 in ArcelorMittal Kryvyi Rih, the modernization of ArcelorMittal Dofasco's hot strip mill, the footprint optimization project at Indiana Harbor and the new walking beam furnaces at Burns Harbor, along with other ongoing projects. ArcelorMittal's major capital expenditures in the year ended December 31, 2017 included the following projects: the AM/NS Calvert slab yard expansion, ArcelorMittal Dofasco's galvalume line, ArcelorMittal Poland's HSM extension and HDG capacity increase along with other ongoing projects.

The Company maintains the ability to adapt its capital expenditures plan to the operating environment and now expects 2020 capital expenditures to be approximately $3.2 billion. See "Capital Expenditure projects" for more detail.

Net cash provided by financing activities

Net cash provided by financing activities was $0.5 billion for the year ended December 31, 2019, as compared to the net cash used in financing activities of $0.7 billion in 2018. In 2019, net cash provided by financing activities included an inflow of $1.3 billion net proceeds (proceeds of $6.4 billion offset by payments of $5.1 billion) for short and long-term debt, partially offset by dividends of $332 million, a $90 million outflow related to the share buyback program and $326 million net outflows from lease payments and other financing activities. The 2019 cash outflows for lease payments and other financing activities increased as a result of the first-time application of IFRS 16 effective from January 1, 2019, as the repayments of the principal portion of the operating leases are presented under financing activities (previously reported under operating activities). For further details related to capital markets, liability management transactions and debt repayments in 2019, see note 6.1.2 to the consolidated financial statements.

Net cash used in financing activities was $0.7 billion for the year ended December 31, 2018, as compared to $1.7 billion in 2017. In 2018, $0.2 billion net payments for short and long-term debt included mainly $0.6 billion of bonds repurchased pursuant to cash tender offers, $0.9 billion repayment at maturity of the euro denominated Floating Rate Notes due April 9, 2018 and the remaining amount of the euro denominated 4.5% Notes due March 29, 2018 partly offset by $1 billion drawing under the $7 billion term facility with respect to the UG and KSS Petron payments. Net cash used in financing activities for the year ended December 31, 2018 also included dividend payments of $220 million and $226 million outflow related to the share buyback program. Net cash used by financing activities for the year ended December 31, 2017 included net payments/ proceeds for short and long-term debt of $1.5 billion. Net cash used by financing activities for the year ended December 31, 2017 included $1.2 billion of bonds repurchased pursuant to cash tender offers, $0.6 billion repayment at maturity of the euro denominated 4.625% Notes, $0.6 billion used to early redeem the 6.125% Notes due June 1, 2018 and $1.0 billion used to early redeem the 9.85% Notes due June 1, 2019, offset in part by a new $0.4 billion Schuldschein loan, a $0.4 billion loan from the European Investment Bank, $0.3 billion drawdown on the 4.5 billion South African rand revolving borrowing base finance facility and $0.6 billion proceeds from the issuance of euro denominated 0.95% Notes due January 17, 2023.

Dividends paid during the year ended December 31, 2019 were $332 million, including $203 million paid to ArcelorMittal shareholders and $129 million paid to non-controlling shareholders in subsidiaries. Dividends paid during the year ended December 31, 2018 were $220 million, including $101 million paid to ArcelorMittal shareholders and $119 million paid to non-controlling shareholders in subsidiaries.

Equity

Equity attributable to the equity holders of the parent decreased to $38.5 billion at December 31, 2019, as compared to $42.1 billion at December 31, 2018, primarily due to the net loss attributable to the equity holders of the parent of $2.5 billion and $0.3 billion actuarial losses. See note 11 to ArcelorMittal's consolidated financial statements for the year ended December 31, 2019.

Equity attributable to the equity holders of the parent increased to $42.1 billion at December 31, 2018, as compared to $38.8 billion at December 31, 2017, primarily due to net income attributable to the equity holders of the parent of $5.1 billion and $0.6 billion actuarial gains partly offset by $2.2 billion foreign exchange losses. See note 10 to ArcelorMittal's consolidated financial statements for the year ended December 31, 2018.

Trend information

All of the statements in this "Trend Information" section are subject to and qualified by the information set forth under the "Cautionary Statement Regarding Forward-Looking Statements". See also "Key factors affecting results of operations".

Outlook

Based on the current economic outlook, ArcelorMittal expects an expansion in global ASC in 2020 by +1% to +2% (versus growth of +1.1% in 2019). Supply chain destocking constrained demand in ArcelorMittal's core markets,

particularly for flat products, and the Company estimates that World-ex China ASC declined by 0.8% in 2019. China had a better than expected year with ASC estimated to have increased by 3%. Whilst acknowledging the risks and uncertainties, ArcelorMittal believes that there are signs that the real demand slowdown is beginning to stabilize, and the supportive inventory environment means that the Company is more optimistic on the apparent demand outlook for 2020. This may be revised downwards due to the impact of the Coronavirus outside China. By region:

- In the U.S., ASC is expected to grow within a range of +0% to +1% in 2020 (versus an estimated -2% contraction in 2019), with stronger ASC in flat products offsetting an anticipated decline in ASC for long products.
- In Europe, ASC is expected to grow within a range of +1% to +2% in 2020 (versus over -4% estimated contraction in 2019); although automotive is expected to remain weak, the end of destocking is expected to support improved ASC for flat products, similarly the end of destocking should offset the impact of the slowdown in construction activity for long products ASC.
- In Brazil, ASC is expected to rebound in 2020 with growth expected in the range of +4% to +5% (versus estimated -2.6% contraction in 2019) following the pronounced destocking of flat products in 2019 and expected growth in construction activity.
- In the CIS, ASC growth in 2020 is expected to slow but remain positive within a range of +0% to +1% (versus +4% estimated growth in 2019).
- As a result, overall World ex-China ASC in 2020 is expected to grow within the range of +2% to +2.5% (versus estimated -0.8% contraction in 2019).
- In China, that in 2020 both GDP and steel demand growth are still likely to be weaker than what was expected prior to the Coronavirus outbreak (Steel demand now expected to grow only 0 to 1% in 2020, down from 1 to 2% previously expected).

The China and global ASC forecast reflects the Company's base case view of the impact of Coronavirus. Absent a degradation of the situation and/or a further extension of the holiday period, the Company believes the effect of the Coronavirus will likely have a short-term negative demand impact in China and to a lesser degree elsewhere. ArcelorMittal's current view is that the vast majority of the impact on the first quarter of 2020 demand is expected to be recovered throughout the remainder of the year and its perspective on the fundamentals of the Chinese steel market remain unchanged. However, the recent increase in cases outside China is worrying and increases the risk of a global pandemic and a much larger negative impact on global GDP. The Company is monitoring the situation closely and in particular in Italy, as should the virus spread more widely through Europe this will likely have a material impact on the Company's sales and profitability in 2020.

The Company expects certain cash needs of the business (consisting of capital expenditures, cash paid for interest, cash paid for taxes, pensions and certain other cash payments but excluding operating working capital movements) to total $4.5 billion in 2020 versus $5.0 billion in 2019. The Company maintains the ability to adapt its capital expenditure plans to the operating environment and now expects 2020 capital expenditures to be $3.2 billion (down from $3.6 billion in 2019). Net interest expense in 2020 is expected to be $0.5 billion (versus $0.6 billion in 2019) while cash payments for taxes, pensions and other cash payments are expected to be stable at $0.8 billion (versus 2019).

The Company released $2.2 billion in operating working capital in 2019 (versus an operating working capital investment of $4.4 billion in 2018). Whilst the Company does not at this stage want to give a firm target or specific guidance for operating working capital needs in 2020 (due to the fact that it is so dependent on operating conditions towards the end of the year), should market conditions remain at current levels then there is the potential to reduce working capital by a further $1 billion.

As previously announced in the first half of 2019, and in line with the Company's ongoing efforts to optimize its asset portfolio, it identified opportunities to unlock $2 billion of value from the portfolio over the next 2 years. The Company has made good progress to date and has achieved ~$0.6 billion, including the sale of its stake in Gerdau ($0.1 billion) and the sale of a 50% stake in Global Chartering Ltd which is expected to reduce net debt in total by $0.5 billion ($0.4 billion in the fourth quarter of 2019 and $0.1 billion early 2020). ArcelorMittal remains engaged in active discussions with interested parties on several additional opportunities.

Given the ongoing focus on delivering the $1 billion of identified cost improvement plans in order to fully achieve the Action 2020 targets, the potential for an approximate $1 billion operating working capital release assuming market

conditions remain at current levels, together with further progress on portfolio optimization efforts, the Company is optimistic that it can achieve its $7.0 billion net debt objectives by year end 2020 which would provide strong foundations for improved shareholder returns going forward.

ArcelorMittal intends to progressively increase the base dividend paid to its shareholders, and, given the resilient cash flow and progress towards its net debt target, the Board proposes a base dividend of $0.30 per share for 2020 (in respect of 2019) which will be proposed to the shareholders at the AGM in May 2020.

Disclosures about market risk

ArcelorMittal is exposed to a number of different market risks arising from its normal business activities. Market risk is the possibility that changes in raw materials prices, foreign currency exchange rates, interest rates, base metal prices (zinc, nickel, aluminum and tin) and energy prices (oil, natural gas and power) will adversely affect the value of ArcelorMittal's financial assets, liabilities or expected future cash flows.

The fair value information presented below is based on the information available to management as of the date of the consolidated statements of financial position. Although ArcelorMittal is not aware of any factors that would significantly affect the estimated fair value amounts, such amounts have not been comprehensively revalued for purposes of this annual report since that date, and therefore, the current estimates of fair value may differ significantly from the amounts presented. The estimated fair values of certain financial instruments have been determined using available market information or other valuation methodologies that require considerable judgment in interpreting market data and developing estimates.

See note 6 to ArcelorMittal's consolidated financial statements for quantitative information about risks relating to financial instruments, including financial instruments entered into pursuant to the Company's risk management policies.

Risk management

ArcelorMittal has implemented strict policies and procedures to manage and monitor financial market risks. Organizationally, supervisory functions are separated from operational functions, with proper segregation of duties. Financial market activities are overseen by the President and CFO, the Corporate Finance and Tax Committee and the CEO Office.

All financial market risks are managed in accordance with the Treasury and Financial Risk Management Policy. These risks are managed centrally through Group Treasury by a group specializing in foreign exchange, interest rate, commodity, internal and external funding and cash and liquidity management.

All financial market hedges are governed by ArcelorMittal's Treasury and Financial Risk Management Policy, which includes a delegated authority and approval framework, sets the boundaries for all hedge activities and dictates the required approvals for all Treasury activities. Hedging activity and limits are monitored on an ongoing basis. ArcelorMittal enters into transactions with numerous counterparties, mainly banks and financial institutions, as well as brokers, major energy producers and consumers.

As part of its financial risk management activities, ArcelorMittal uses derivative instruments to manage its exposure to changes in interest rates, foreign exchange rates and commodities prices. These instruments are principally interest rate, currency and commodity swaps, spots and forwards. ArcelorMittal may also use futures and options contracts.

Counterparty risk

ArcelorMittal has established detailed counterparty limits to mitigate the risk of default by its counterparties. The limits restrict the exposure ArcelorMittal may have to any single counterparty. Counterparty limits are calculated taking into account a range of factors that govern the approval of all counterparties. The factors include an assessment of the counterparty's financial soundness and its ratings by the major rating agencies, which must be of a high quality. Counterparty limits are monitored on a periodic basis.

All counterparties and their respective limits require the prior approval of the Corporate Finance and Tax Committee. Standard agreements, such as those published by the International Swaps and Derivatives Association, Inc. (ISDA) are negotiated with all ArcelorMittal trading counterparties.

Currency exposure

ArcelorMittal seeks to manage each of its entities' exposure to its operating currency. For currency exposure generated by activities, the conversion and hedging of revenues and costs in foreign currencies is typically performed using currency transactions on the spot market and forward market. For some of its business segments, ArcelorMittal hedges future cash flows.

Because a substantial portion of ArcelorMittal's assets, liabilities, sales and earnings are denominated in currencies other than the U.S. dollar (its reporting currency), ArcelorMittal has exposure to fluctuations in the values of these currencies relative to the U.S. dollar. These currency fluctuations, especially the fluctuation of the value of the U.S. dollar relative to the euro, the Canadian dollar, Brazilian real, South African rand, Argentine peso, Kazakh

tenge, Indian rupee, Polish zloty and Ukrainian hryvnia, as well as fluctuations in the currencies of the other countries in which ArcelorMittal has significant operations and/or sales, could have a material impact on its results of operations.

ArcelorMittal faces transaction risk, where its businesses generate sales in one currency but incur costs relating to that revenue in a different currency. For example, ArcelorMittal's non-U.S. subsidiaries may purchase raw materials, including iron ore and coking coal, in U.S. dollars, but may sell finished steel products in other currencies. Consequently, an appreciation of the U.S. dollar will increase the cost of raw materials, thereby negatively impacting the Company's operating margins, unless the Company is able to pass along the higher cost in the form of higher selling prices.

ArcelorMittal faces foreign currency translation risk, which arises when ArcelorMittal translates the financial statements of its subsidiaries, denominated in currencies other than the U.S. dollar for inclusion in ArcelorMittal's consolidated financial statements.

The tables below illustrate the impact of an appreciation and a depreciation of the U.S. dollar of 10% against the euro, on the conversion of the net debt of ArcelorMittal into U.S. dollars as of December 31, 2019 and December 31, 2018. The impact on net debt denominated in a currency different than the euro, is computed based on historical data of how such currency would move against the U.S. dollar when the U.S. dollar appreciates/depreciates 10% against the euro. A positive sign means an increase in the net debt.

Currency	Impact on net debt translation of a 10% appreciation of the U.S. dollar against the euro	Impact on net debt translation of a 10% depreciation of the U.S. dollar against the euro
In 2019	in $ equivalent (in millions)	in $ equivalent (in millions)
Argentine peso	9	(19)
Brazilian real	(3)	6
Euro	(522)	522
Polish Zloty	(21)	27
South African rand	8	(12)
Ukrainian hryvinia	26	(12)
Other	6	(7)

Currency	Impact on net debt translation of a 10% appreciation of the U.S. dollar against the euro	Impact on net debt translation of a 10% depreciation of the U.S. dollar against the euro
In 2018	in $ equivalent (in millions)	in $ equivalent (in millions)
Argentine peso	7	(23)
Canadian dollar	(9)	10
Euro	(564)	564
Indian rupee	33	(42)
South African rand	25	(38)
Swiss franc	(12)	14
Other	10	(8)

Derivative instruments

ArcelorMittal uses derivative instruments to manage its exposure to movements in interest rates, foreign exchange rates and commodity prices. Changes in the fair value of derivative instruments are recognized in the consolidated statements of operations or in equity according to nature and effectiveness of the hedge.

Derivatives used are non-exchange-traded derivatives such as over-the-counter swaps, options and forward contracts.

For the Company's tabular presentation of information related to its market risk sensitive instruments, please see note 6 to the consolidated financial statements.

Interest rate sensitivity

Cash balances, which are primarily composed of euros and U.S. dollars, are managed according to the short term (up to one year) guidelines established by senior management on the basis of a daily interest rate benchmark, primarily through short-term currency swaps, without modifying the currency exposure.

Interest rate risk on debt

ArcelorMittal's policy consists of incurring debt at fixed and floating interest rates, primarily in U.S. dollars and euros according to general corporate needs. Interest rate and

currency swaps are utilized to manage the currency and/or interest rate exposure of the debt.

For the Company’s tabular presentation of the fair values of its short and long term debt, please see note 6 to the consolidated financial statements.

Commodity price risk

ArcelorMittal utilizes a number of exchange-traded commodities in the steel-making process. In certain instances, ArcelorMittal is the leading consumer worldwide of certain commodities. In some businesses and in certain situations, ArcelorMittal is able to pass this exposure on to its customers. The residual exposures are managed as appropriate.

Financial instruments related to commodities (base metals, energy, freight and emission rights) are utilized to manage ArcelorMittal’s exposure to price fluctuations.

Hedges in the form of swaps and options are utilized to manage the exposure to commodity price fluctuations.

For the Company’s tabular presentation of information related to its market risk sensitive instruments, please see note 6 to the consolidated financial statements.

In respect of non-exchange traded commodities, ArcelorMittal is exposed to volatility in the prices of raw materials such as iron ore (which is generally correlated with steel prices with a time lag) and coking coal. This exposure is almost entirely managed through long-term contracts, however some hedging of iron ore exposures is made through derivative contracts. For a more detailed discussion of ArcelorMittal’s iron ore and coking coal purchases, see "Raw materials".

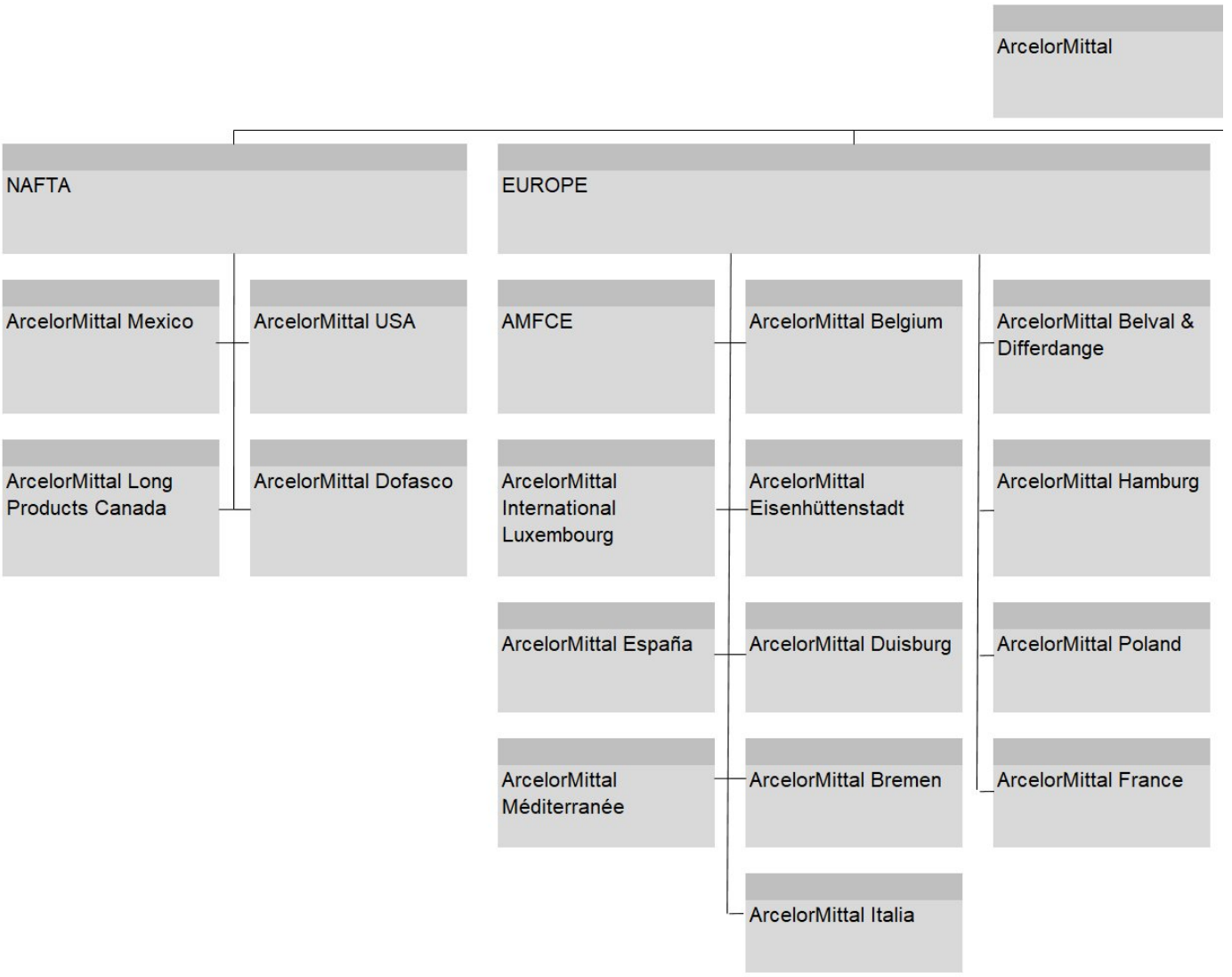
Group organizational structure

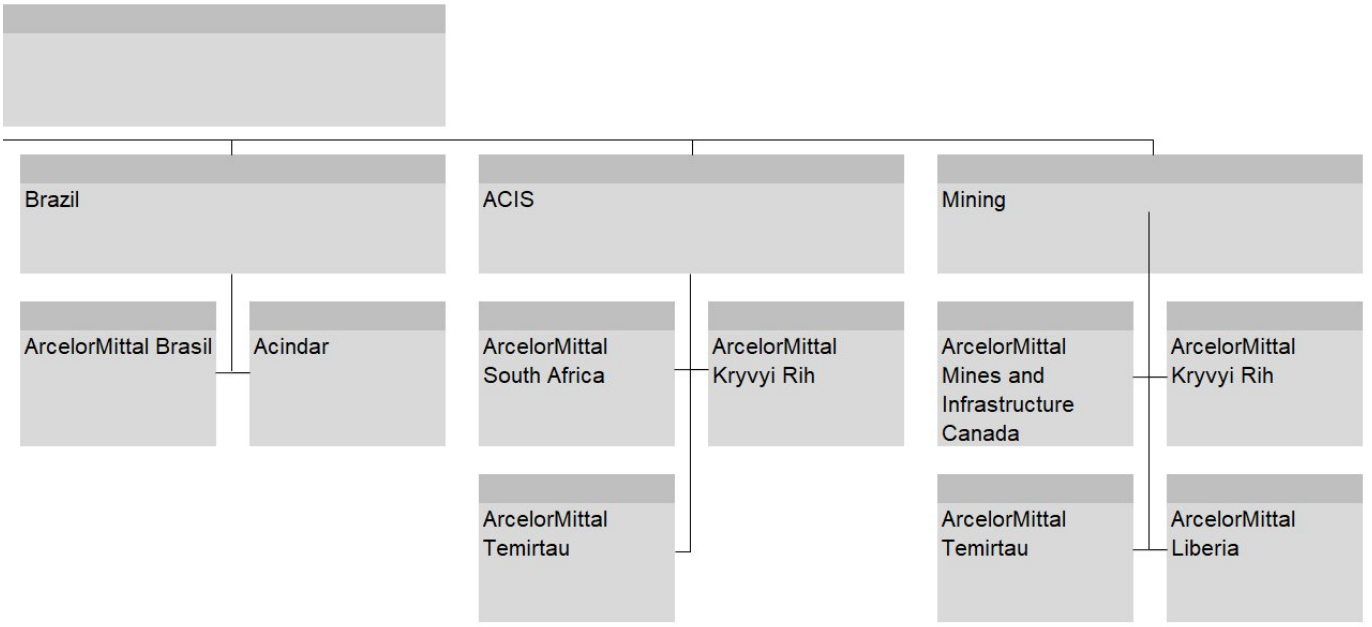
The following table identifies each significant operating subsidiary of ArcelorMittal, including the country of incorporation. Please refer to note 2.2.1 of the consolidated financial statements for the ownership percentages of these subsidiaries. Unless otherwise stated, the subsidiaries as listed have share capital consisting solely of ordinary shares, which are held directly or indirectly by the Company and the proportion of ownership interests held equals to the voting rights held by the Company.

Name of Subsidiary	Abbreviation	Country
NAFTA		
ArcelorMittal Dofasco G.P.	ArcelorMittal Dofasco	Canada
ArcelorMittal México S.A. de C.V.	ArcelorMittal Mexico	Mexico
ArcelorMittal USA LLC	ArcelorMittal USA	USA
ArcelorMittal Long Products Canada G.P.	ArcelorMittal Long Products Canada	Canada
Brazil and neighboring countries ("Brazil")		
ArcelorMittal Brasil S.A.	ArcelorMittal Brasil	Brazil
Acindar Industria Argentina de Aceros S.A.	Acindar	Argentina
Europe		
ArcelorMittal France S.A.S.[1]	ArcelorMittal France	France
ArcelorMittal Belgium N.V.	ArcelorMittal Belgium	Belgium
ArcelorMittal España S.A.	ArcelorMittal España	Spain
ArcelorMittal Flat Carbon Europe S.A.	AMFCE	Luxembourg
ArcelorMittal Poland S.A.	ArcelorMittal Poland	Poland
ArcelorMittal Eisenhüttenstadt GmbH	ArcelorMittal Eisenhüttenstadt	Germany
ArcelorMittal Bremen GmbH	ArcelorMittal Bremen	Germany
ArcelorMittal Méditerranée S.A.S.	ArcelorMittal Méditerranée	France
ArcelorMittal Belval & Differdange S.A.	ArcelorMittal Belval & Differdange	Luxembourg
ArcelorMittal Hamburg GmbH	ArcelorMittal Hamburg	Germany
ArcelorMittal Duisburg GmbH	ArcelorMittal Duisburg	Germany
ArcelorMittal International Luxembourg S.A.	ArcelorMittal International Luxembourg	Luxembourg
ArcelorMittal Italia S.p.A.	ArcelorMittal Italia	Italy
Africa and Commonwealth of Independent States ("ACIS")		
ArcelorMittal South Africa Ltd.	ArcelorMittal South Africa	South Africa
JSC ArcelorMittal Temirtau	ArcelorMittal Temirtau	Kazakhstan
PJSC ArcelorMittal Kryvyi Rih	ArcelorMittal Kryvyi Rih	Ukraine
Mining		
ArcelorMittal Mining Canada G.P. and ArcelorMittal Infrastructure Canada G.P.	ArcelorMittal Mines and Infrastructure Canada ("AMMC")	Canada
ArcelorMittal Liberia Ltd	ArcelorMittal Liberia	Liberia
JSC ArcelorMittal Temirtau	ArcelorMittal Temirtau	Kazakhstan
PJSC ArcelorMittal Kryvyi Rih	ArcelorMittal Kryvyi Rih	Ukraine

1. On July 1, 2019, ArcelorMittal Atlantique et Lorraine S.A.S. was merged into ArcelorMittal France S.A.S.

ArcelorMittal is a holding company with no business operations of its own. All of ArcelorMittal's significant operating subsidiaries are indirectly owned by ArcelorMittal through intermediate holding companies. The following chart represents the operational structure of the Company, including ArcelorMittal's significant operating subsidiaries and not its legal or ownership structure.


ArcelorMittal
NAFTA
EUROPE
ArcelorMittal Mexico
ArcelorMittal USA
ArcelorMittal Long Products Canada
ArcelorMittal Dofasco
AMFCE
ArcelorMittal Belgium
ArcelorMittal Belval & Differdange
ArcelorMittal International Luxembourg
ArcelorMittal Eisenhüttenstadt
ArcelorMittal Hamburg
ArcelorMittal España
ArcelorMittal Duisburg
ArcelorMittal Poland
ArcelorMittal Méditerranée
ArcelorMittal Bremen
ArcelorMittal France
ArcelorMittal Italia


Brazil
ACIS
Mining
ArcelorMittal Brasil
Acindar
ArcelorMittal South Africa
ArcelorMittal Kryvyi Rih
ArcelorMittal Temirtau
ArcelorMittal Mines and Infrastructure Canada
ArcelorMittal Kryvyi Rih
ArcelorMittal Temirtau
ArcelorMittal Liberia

Key transactions and events in 2019

ArcelorMittal's principal investments, acquisitions and disposals, and other key events that occurred during the year ended December 31, 2019 are summarized below.

ArcelorMittal Italia acquisition and subsequent events

On November 1, 2018, ArcelorMittal announced that AM InvestCo completed the first part of the acquisition of ArcelorMittal Italia (formerly Ilva) through a lease and subsequent conditional obligation to purchase agreement after having been granted merger clearance by the European Commission ("EC") on May 7, 2018 on the basis of the Company's committed divestment package (see below) and its fulfillment of all of the conditions precedent in ArcelorMittal's contract with the commissioners in the extraordinary administration insolvency procedures of the business units subject to the lease (the "Commissioners"). ArcelorMittal Italia's Taranto plant is Europe's largest single steel site and only integrated steelmaker in Italy. ArcelorMittal Italia also has significant steel finishing capacity in Taranto, Novi Ligure and Genova. AM InvestCo undertook the acquisition subject to certain conditions precedent to be satisfied by August 2023. The contractual purchase price amounted to €1.8 billion ($2.1 billion) subject to certain adjustments, with annual leasing costs of €180 million ($206 million) due in quarterly installments which qualify as down payments against the purchase price. The lease is for a minimum lease period of four years. The acquisition included industrial capital expenditure commitments of approximately €1.3 billion ($1.4 billion) over a seven-year period focused on blast furnaces including €0.2 billion revamping of blast furnace #5 intending to bring steel production to 8 million tonnes by 2024, steel shops and finishing lines and environmental capital expenditure commitments of approximately €0.8 billion ($0.9 billion) including €0.3 billion for stock pile coverage, €0.2 billion for reduction of emissions at coke ovens and €0.2 billion in waste water treatment. The acquisition also provided for environmental remediation obligations of approximately €0.3 billion ($0.4 billion), the latter of which would be funded with funds seized by the Italian Government from the former shareholder.

According to the legal framework in force at November 1, 2018 (for a period up to August 2023), the Commissioners and AM InvestCo were granted protection from possible criminal liability related to environmental, health and safety and workplace security issues at ArcelorMittal Italia's Taranto plant, pending the timely implementation of the environmental investment program set forth in a Prime Minister's Decree. In September 2017 and then August 2018, the Italian State Solicitor-General issued an opinion confirming that the term of the protection coincided with the term of this environmental plan, namely to August 23, 2023. However, on November 2, 2019, the Italian Parliament ratified a law decree previously enacted by the Italian government, which effective November 3, 2019, removed the legal protection necessary for AM InvestCo to implement its environmental plan without the risk of criminal liability.

On November 4, 2019, after such law decree became effective, AM InvestCo sent to the Commissioners a notice to withdraw from, or terminate the lease. In addition, among other serious occurrences independent of AM InvestCo's will, the decisions issued by the criminal court of Taranto binding the Commissioners to complete certain prescriptions by December 12, 2019, a term the Commissioners themselves deemed impossible to meet, failing which blast furnace #2 would be shut down, also contributed to a situation of legal and operational uncertainty that further significantly impaired the ability to carry out the necessary operations at ArcelorMittal Italia and operate the Taranto plant. While the Taranto court of appeals reversed the criminal court's order on January 7, 2020 therefore allowing blast furnace #2 to remain open, any potential shutdown would make it impossible for AM InvestCo to implement its industrial plan, operate the Taranto plant and, generally, continue to implement the commitments described above. In its November 4, 2019 notice of withdrawal and termination, AM InvestCo asked the Commissioners to take responsibility for ArcelorMittal Italia's operations and employees within 30 days from the receipt of such notice. On November 15, 2019, the Commissioners filed suit in a Civil Court in Milan seeking an injunction to prevent AM InvestCo's withdrawal from, and termination of, the lease and require AM InvestCo to stop the implementation of its plan to suspend the operations and to continue the maintenance and operation of the leased business units. The Commissioners also requested that the court require AM InvestCo to pay €1 billion in the event that it fails to comply with an adverse decision on the Commissioners' application for interim injunctions. Moreover, following a complaint filed by the Commissioners, in mid-November 2019 prosecutors in Milan and Taranto opened investigations into potential violations of numerous criminal laws. The hearing to discuss the Commissioners' application for interim measures was originally set for November 27, 2019, pending which AM InvestCo suspended the implementation of its plan to suspend the operations at ArcelorMittal Italia. Following announcements on November 22, 2019 and November 23, 2019, respectively, by the Italian Prime Minister's office and AM InvestCo that meetings had been held between the parties to discuss potential solutions for the plants and that discussions would continue with the aim of reaching an agreement as soon as possible to support sustainable steel-making in Taranto, at the hearing the court granted the requested by the Commissioners and AM InvestCo for postponement (to December 20, 2019) in order to allow the development of ongoing negotiations, provided that AM InvestCo assure the maintenance of the normal functioning of the plants and guarantee production continuity pending such negotiations. On December 20, 2019, ArcelorMittal

announced that AM InvestCo had signed a non-binding agreement with the Commissioners that forms a basis to continue negotiations on a new industrial plan for ArcelorMittal Italia, including discussions on a substantial equity investment by a government-controlled entity. The new industrial plan would contemplate investments in green technology, including through a new company funded by public and private investors. In light thereof, the Civil Court of Milan granted the parties' request to further postpone the hearing until February 7, 2020, and on such date (given ongoing negotiations) granted a further request to postpone until March 6, 2020. AM InvestCo has incurred losses since its consolidation of ArcelorMittal Italia in November 2018. ArcelorMittal expects to continue to consolidate ArcelorMittal Italia unless and until the control of the assets is transferred to the Commissioners or other changes in its power over the relevant activities or exposure to variable returns occur.

ArcelorMittal Italia acquisition related divestments

On June 30, 2019, ArcelorMittal completed the sale to Liberty House Group ("Liberty") of several steelmaking assets that form the divestment package the Company agreed with the European Commission ("EC") during its merger control investigation into the Company's acquisition of ArcelorMittal Italia. Assets included within the divestment package are: ArcelorMittal Ostrava (Czech Republic), ArcelorMittal Galati (Romania), ArcelorMittal Skopje (Macedonia), ArcelorMittal Piombino (Italy), ArcelorMittal Dudelange (Luxembourg) and several finishing lines at ArcelorMittal Liège (Belgium). The total net consideration (consisting of amounts payable upon closing and subsequently in part contingent upon certain criteria, net of €110 million placed in escrow) for the assets payable to ArcelorMittal was €740 million subject to customary closing adjustments. Of this total amount, €610 million was received on June 28, 2019. At closing, the Company deposited €110 million in escrow that were subsequently withdrawn during the second half of 2019 and used by Liberty for certain capital expenditure projects to satisfy commitments given in the EC approval process. See note 2.3 to the consolidated financial statements for further details.

AMNS India

On December 16, 2019, ArcelorMittal announced the completion of its acquisition of AMNS India through, the Luxembourg based joint venture it established with NSC, which following the acquisition owns and operates AMNS India. ArcelorMittal holds 60% of the joint venture, with NSC holding 40%. The acquisition occurred following the Indian Supreme Court's ruling on November 15, 2019 approving the Company's Resolution Plan and resolving the appeals brought by creditors following the National Company Law Tribunal's initial approval on March 8, 2019 and the National Company Law Appellate Tribunal's further ruling on July 4, 2019.

AMNS India is an integrated flat steel producer, and the largest steel company in western India. It has a crude steel capacity of 9.6 million tonnes per year. AMNS India's main steel manufacturing facility is located at Hazira, Gujarat in Western India. It also has:

- Two iron ore beneficiation plants close to the mines in Kirandul and Dabuna, with slurry pipelines that then transport the beneficiated iron ore slurry to the pellet plants in the Kirandul-Vizag and Dabuna-Paradeep systems;
- a downstream facility in Pune (including a pickling line, a cold rolling mill, a galvanizing mill, a color coating mill and a batch annealing plant); and
- seven service centers in the industrial clusters of Hazira, Bhuj, Indore, Bahadurgarh, Chennai, Kolkata and Pune. It has a complete range of flat rolled steel products, including value added products, and significant iron ore pellet capacity with two main pellet plant systems in Kirandul-Vizag and Dabuna-Paradeep, which have the potential for expansion. Its facilities are located close to ports with deep draft for movement of raw materials and finished goods.

In terms of iron ore pellet capacity, the Kirandul-Vizag system has 8 million tonnes of annual pellet capacity; and the Dabuna-Paradeep system has 6 million tonnes of annual pellet capacity, which is in the process of being expanded to a new capacity level of 12 million tonnes. This expansion would bring pellet capacity above AMNS India's own requirements and provide the opportunity to improve operating income by fully utilizing such pellet capacity. AMNS India's assets do not include certain assets that are ancillary to the steel plant, such as a slurry pipeline, power plants, port facilities and certain mines. The joint venture partners are assessing various options to secure the availability of such assets, including additional acquisitions and participation in ongoing auctions, such as for the Odisha mines, where the joint venture acquired the Thakurani working block in February 2020.

The Resolution Plan which was approved for the acquisition of AMNS India included an upfront payment of 42,785 crore Indian rupees ($6.0 billion) towards AMNS India's debt resolution including working capital payment, with a further 8,000 crore Indian rupees ($1.1 billion) of capital injection into AMNS India to support operational improvement, increase production levels and deliver enhanced levels of profitability. In December 2019, ArcelorMittal and NSC financed the joint venture for the acquisition of AMNS India through a combination of partnership equity of $2,253 million (of which $1,362 million for ArcelorMittal) and debt of $3,679 million, including $2,204 million drawn by AMNS Luxembourg (and guaranteed by the Company) under the bridge financing, which was outstanding on December 31,

2019, and a $1,475 million via a shareholder loan from NSC. On February 10, 2020, in order to complete the $840 million follow-on equity funding of AMNS India, NSC provided a $325 million shareholder loan and an additional $475 million was drawn under the bridge financing by AMNS Luxembourg (and guaranteed by the Company). The outstanding amount under the bridge financing as of such date was $3,046 million. See note 2.4.1 to the consolidated financial statements. In connection with the execution of the Resolution Plan, the Company had provided a $0.6 billion performance guarantee, which was terminated on December 31, 2019.

In connection with the acquisition of AMNS India, the hedging programs that ArcelorMittal had entered into, including non deliverable forwards and non deliverable options for a nominal amount of $5.9 billion in order to hedge the volatility between the Indian rupee and U.S. dollar, resulted in cash proceeds of $360 million which were contributed into the joint venture thus decreasing the acquisition cost of AMNS India (see note 2.4.1 and note 6.3 to the consolidated financial statements).

In 2018, the Company had also been required to pay 7,469 crore Indian rupees (approximately $1 billion) to the financial creditors of Uttam Galva ("the UG payments") and KSS Petron in order that the Resolution Plan would be eligible for consideration by ESIL's Committee of Creditors ("CoC"). ArcelorMittal had previously been a shareholder of Uttam Galva and HSBC Trustee (C. I.) Limited, as trustee of trusts of which Mr. Lakshmi N. Mittal, Mrs. Usha Mittal and their children are the beneficiaries, had previously been a shareholder of KSS Petron. At the time of such payment, neither had any interest in such companies and, in particular, the trusts and their beneficiaries did not have any liability to KSS Petron or its creditors or other stakeholders and hence did not benefit from such payment. In the context of the creation of the AMNS India joint venture, the Company transferred the UG payments to the joint venture. ArcelorMittal and NSC financed such payments through a combination of equity contributions into the joint venture of $288 million and debt of $597 million, including $367 million drawn by the joint venture on the $7 billion term facility agreement and a $230 shareholder loan from NSC. The payments related to KSS Petron have not been transferred.

The Resolution Plan also includes a capital expenditure plan of 18,697 crore Indian rupees (approximately $2.6 billion) to be implemented in two stages over six years. The first stage involves investments to increase the production of finished steel goods sustainably to 6.5 million tonnes per annum and includes completion of ongoing capital expenditure projects with respect to a coke oven, second sinter plant, third line CSP caster, Paradeep pellet plant and Dabuna beneficiation plant. The first stage will also include investment in maintenance to restore current assets, the implementation of an environmental management plan and the implementation of ArcelorMittal's best practices on raw material sourcing, plant operations, sales and product mix (in particular through greater sophistication of the quality and markets of the steel produced with a focus on developing sales to the automotive industry), people management and health & safety. The second stage will involve investments to increase the production of finished steel goods from 6.5 million tonnes per annum to 8.5 million tonnes per annum by the end of 2024, including asset reconfiguration and the addition of a coke oven, blast furnace and basic oven furnace.

There is also a long-term aspiration to increase finished steel shipments to between 12 and 15 million tonnes tonnes through the addition of new iron and steelmaking assets, so that AMNS India can play an active role and fully benefit from the anticipated growth in the Indian steel industry.

AMNS India is expected to reinvest cash flows from operations to finance its turnaraound and growth plans.

The joint venture agreement entered into between the ArcelorMittal and NSC includes detailed provisions regarding AMNS India's governance and the roles and responsibilities of ArcelorMittal and NSC as joint venture partners for the operation of the business and the implementation of the Resolution Plan. Pursuant to this agreement, the AMNS India business shall be managed by a board of directors consisting of six directors, three of which will be appointed by ArcelorMittal and three appointed by NSC. It also provides for provisions related to the selection of the management team by the joint venture partners. Aditya Mittal, President and CFO of ArcelorMittal, has been appointed as the chairman of the board of AMNS India and Dilip Oommen has been appointed its CEO.

AMNS India is accounted for under the equity method as from the acquisition date. See note 2.4.1 to the consolidated financial statements for further details.

Other events in 2019

During 2019, ArcelorMittal completed several debt financing and repayment transactions. See "Liquidity and capital resources—Financings" and note 6.1.2 to the consolidated financial statements for a summary of the transactions.

On May 6, 2019, ArcelorMittal announced its intention to temporarily idle production at its steelmaking facilities in Kraków, Poland, reduce production in Asturias and Spain. In addition, the planned increase of shipments at ArcelorMittal Italia to a six million tonne annual run-rate was slowed down following a decision to optimize cost and quality over volume in this environment. Together, these actions resulted in a temporary annualized production reduction of around three million tonnes. On May 29, 2019, the Company announced its decision to take additional steps to adjust its European production levels to further align its production to the current market demand by a further 1.2 million tonnes to

take total annualized productions cuts to 4.2 million tonnes in the second half of 2019. As a result, it:

- Reduced primary steelmaking production at its facilities in Dunkirk, France and Eisenhüttenstadt, Germany;
- Reduced primary steelmaking production at its facility in Bremen, Germany in the fourth quarter of 2019, where a planned blast furnace stoppage for repair works were extended; and
- Extended the stoppage planned in the fourth quarter of 2019 to repair a blast furnace at its plant in Asturias, Spain.

These actions were taken in light of difficult operating conditions in Europe with a combination of weakening demand, rising imports, high energy costs and rising carbon costs. Such conditions, along with high iron ore prices, have persisted since the Company's announcement of these measures.

On July 16, 2019, the Company sold its 30 million shares, representing a stake of 2.6% of preferred shares, held in its investment Gerdau, an equity instrument at fair value through other comprehensive income, for $116 million. See note 2.5 to the consolidated financial statements.

In recent periods, the performance of ArcelorMittal South Africa has been challenged by increased electricity, port and rail regulated costs, and uncompetitive raw material sourcing as well as the ongoing weak economic backdrop in South Africa. ArcelorMittal South Africa has undertaken an intensive review of its business focused on cash preservation and cost reduction through an expanded Business Transformation Program. At the same time, a strategic asset footprint review was launched to establish an asset base with an enduring competitive advantage to ensure the long-term sustainability of ArcelorMittal South Africa. Following this review, a large-scale employee reorganization (over 1000 employees) has been finalized with an additional repricing and rescoping of sub-contractor services expected by the end of the first quarter of 2020. During the first phase of the asset review, it has been agreed to orderly and commercially wind-down the Saldanha Works. The process is progressing according to plan and is anticipated to be largely completed by the end of the first quarter of 2020. The second phase of the Asset Review commenced in November 2019, focusing on Newcastle Works and certain of the long steel products rolling facilities in Pretoria and Vereeniging. The objective of this phase of the review is to sustainably improve these operations' structural cost position and service offerings. The closure of significant long steel product plants is not anticipated in the near future, and notably, primary steel making operations will continue in the short-term at Newcastle Works, although it will now be focused on primarily serving the domestic and Africa Overland markets. Significant organizational configuration opportunities have been identified to improve both operational effectiveness and controllable cost competitiveness of not only the long steel product business, but that of ArcelorMittal South Africa overall.

On December 23, 2019, ArcelorMittal announced that it signed a share purchase agreement with DryLog Ltd ("DryLog") for the sale of a controlling 50% stake in Global Chartering Limited ("Global Chartering"), its wholly owned shipping business, and subsequently formed a 50:50 shipping joint venture with DryLog. Accordingly, ArcelorMittal's remaining 50% interest is accounted for under the equity method. Global Chartering operates 28 dry cargo vessels, which range from Supramax to Cape Size, 25 of which are on long-term leases and have been transferred into the joint venture, with the remaining 3 being owned outright. The joint venture will benefit from the combination of the two businesses respective knowledge and expertise, and ArcelorMittal's extensive annual cargo commitments, a portion of which will be handled exclusively by this joint venture. It will also benefit from DryLog's ability to optimize transport solutions and its technical and commercial vessel management expertise. These factors are expected to enable the joint venture to grow its operations and become a significant player in the international shipping industry. The transaction decreases ArcelorMittal's net debt by $0.5 billion, with a decrease in debt of $0.4 billion at December 31, 2019 (resulting from a derecognition of lease liabilities in this amount) and a further $0.1 billion decrease in early 2020 (following the completion of a sale-and-lease back of the 3 vessels owned by Global Chartering) and is part of ArcelorMittal's commitment to unlock up to $2 billion of value from its asset portfolio by mid-year 2021. The transaction closed on December 31, 2019. See note 2.3 to the consolidated financial statements for further information.

Recent developments

On February 27, 2020, the Mayor of Taranto adopted an order addressed to ArcelorMittal Italia and Ilva related to certain emissions events that appear to have occurred in August 2019 and February 22 and 23, 2020 and that allegedly concern the Taranto plant. The order requires ArcelorMittal Italia to identify the responsible installations within 30 days, to eliminate any anomalies at such installations causing such emission events within 60 days or, if necessary, to shut down certain installations related to such emissions events. The Mayor of Taranto also alleges that it did not receive adequate responses from the Italian Ministry of the Environment with respect to such emissions events. ArcelorMittal Italia considers the order to be unfounded and will appeal it. Following the order, the Ministry of the Environment requested additional information from the Mayor of Taranto about the events (including the

type of emissions and how the events can be connected to the Taranto plant) and has also requested information from certain other industrial companies in Taranto, as to any anomalies, accidents or events that may have occurred on February 22 and 23, 2020. ArcelorMittal Italia is preparing its responses to the request for information from the Ministry of the Environment, which will also be provided to the Mayor of Taranto.

Research and development. The Company's Global Research and Development ("R&D") division provides the technical foundation for the sustainability and commercial success of the Company by stimulating innovative thinking and the continuous improvement of products and processes.

ArcelorMittal believes it possesses leading R&D capabilities among steel producers and is committed to maintaining and extending this advantage by anticipating and responding to major technological, sustainability and social trends, while also making a significant contribution towards achieving the Company's 10 Sustainable Development Outcomes (see "—*Sustainable Development*" below).

To support this commitment, the Company operates 11 research sites around the world, and in 2019, ArcelorMittal's R&D expense was $301 million.

Among its R&D initiatives, ArcelorMittal has developed expertise in Lifecycle Analysis ("LCA"), which analyzes the environmental impact of products during their production, use and disposal. In 2019, the Company undertook a total of 27 LCA studies related to steel products and the processes used to produce them, all guided by ISO standard 14040-44.

The Company's expertise in LCA is an important asset in all of its global markets. For example, LCA is a requirement of Environmental Product Declarations ("EPD") for construction products in Europe, and contributes to increasing the Company's competitiveness in the construction sector. The Company's EPDs are reviewed by third parties and validated by the "Institut Bauen und Umwelt", the Institute of Construction and Environment, and are made available via ArcelorMittal Europe's Constructalia website. The Company is also leading the development of a methodological framework for EPDs in Brazil, where it published its first EPD in 2019.

ArcelorMittal also participates in the Worldsteel LCA expert group and the SOVAMAT initiative (SOcial VAlue of MATerials), an international network of experts on the social and environmental impacts of materials. It is a member of the CIRAIG International Lifecycle Chair, the international reference center for the lifecycle of products, processes and services, and is active in particular in their circular economy working group. It is also a member of the Roundtable for Product Social Metrics.

The Company has developed a Sustainable Innovation ("SI") tool with the ultimate goal to enable researchers to evaluate the contribution of all new products to sustainable development. In 2019, the SI tool has been reviewed by third parties and an interface for industry products has been developed.

ArcelorMittal's R&D strategy focuses on six main pillars:

Maintaining the competitiveness of the Company's steel among its unique automotive customer base. R&D continually drives innovation that enables the Company's strategic focus on higher-added-value products. A key focus is products designed to meet the complex and changing needs of the automotive industry.

ArcelorMittal has developed its S-in motion® range of solutions, which showcase the benefits of Advanced High Strength Steel ("AHSS") grades and manufacturing processes that help automotive customers meet demanding new targets for fuel economy, and thereby drive improvements in CO_2 emissions.

In 2020, ArcelorMittal will celebrate the 10th year anniversary of S-in Motion®. This concept has proven to adapt to the evolving needs of the automotive market, with its most recent developments in 2019 including a catalog of solutions for the booming electrified vehicles market. The Company's S-in Motion® projects for Hybrid vehicles, Battery Electric Vehicles ("BEVs") and battery packs are now available for roll out to customers.

The results of the ArcelorMittal S-in motion® BEV study completed in 2019 on a Sports Utility Vehicle demonstrate why steel is expected to remain the dominant auto body metal for the growing electrified vehicle market. Steel will allow original equipment manufacturers to achieve the goals of creating more light weight vehicles with increased driving ranges in a more cost-effective manner. More than ever, steel is the material of choice for automotive customers as it combines the ability to meet stringent expectations for passenger safety with the best price on the market.

With total life cycle emissions of BEVs expected to decrease compared to internal combustion engine vehicles, BEVs' embedded carbon from metal production and its end-of-life impacts will become increasingly relevant. A comprehensive LCA study encompassing the vehicle's production and end-of-life phases has been made on the company's S-in motion® BEV. It concludes that while light-weighting still improves BEVs' life cycle performance, gains in powertrain efficiency will have much greater benefits. The most sensitive aspects of BEVs' life cycle are the environmental footprint of battery production and that of the electricity grid. Current battery production impacts are greater than those of steel body production. For BEVs to reach legislated CO2 targets, the electricity grid needs to be decarbonized much more quickly. Between 2000 and 2015,

the grid decarbonized at a rate of 2%. For large cars to meet CO2 targets, progress will need to triple between 2020 and 2035.

Creating a robust and diverse portfolio of niche non-automotive steel products to serve customers across multiple sectors. Customers in many sectors share the automotive industry's demand for innovative products and processes. The Company aims to deliver similar breakthrough advances in these sectors by creating differentiated products and unique engineering solutions, all designed to ensure that steel is the customer's material of choice.

ArcelorMittal is developing innovative solutions for the energy segment, both renewable and conventional. It has innovated steel for wind turbines, and its patented anti-corrosion steel coating Magnelis® is used extensively in framing solutions for photovoltaic modules. The Company's pioneering technology for electrical steels also benefits this market.

Packaging is, in the Company's view, another important opportunity. ArcelorMittal continues to respond to the need to meet evolving health and safety regulations, to achieve lightweight, cost-saving design, and to develop new functionalities. A major opportunity is also presented by the increasing pressure to reduce packaging made of plastics, as society becomes less and less accepting of packaging that is not in line with sustainable development objectives. With its ability to be recycled and to eliminate hazardous elements, steel is well-positioned to extend its applications in packaging and replace an increasing volume of plastic packaging.

In 2019, R&D launched 11 new products and solutions to accelerate sustainable lifestyles, while also progressing further on 16 such product development programs.

The R&D division also launched 31 products and solutions this year to support sustainable construction, infrastructure and energy generation, while also progressing further on 17 such product development programs.

Fully capitalizing on the capacity of Steligence® - a holistic platform for environmentally-friendly, cost-effective construction - to create higher-added-value products and solutions for the construction market. Construction is one of the key sectors for ArcelorMittal. The Company's R&D effort is focused on providing higher-added-value products that meet customer needs, including their sustainable development objectives.

In 2018, ArcelorMittal launched Steligence® to highlight the innovations the Company's steel has to offer in the design and performance of a building, and to support its customers in their use of its products. Steligence® adds value through its holistic approach of helping specialist architectural and engineering disciplines meet the increasing demand for sustainability, flexibility, creativity and cost in high-performance building design by harnessing the credentials of steel through its potential for recyclability and the reduction of materials used.

A key concept within Steligence® is to make buildings easier to assemble and dismantle. As a result, buildings become quicker to construct, leading to significant efficiencies and cost savings while also creating the potential for re-use. This reflects ArcelorMittal's wider interest in modularization and the potential re-use of steel components - a field it is discussing with customers and in its LCA assessments. The approach is demonstrated in the Company's planned new Luxembourg headquarters, which has been designed so that nearly all the steel components can be dismantled and re-used in a new building without the need for recycling.

Developing breakthrough process innovations to deliver cost reduction, sustainability benefits to meet current and emerging environmental challenges, and new product development. The creation of unique processes creates value for the Company and its stakeholders by: enhancing the performance of operations through cost efficiency and improved product quality; promoting process-driven product development; and enabling environmental improvements, including carbon reductions and improvements in air, land and water. Process improvements contribute decisively to the future of the Company, both helping to preserve its license to operate and ensuring its financial sustainability through important management gains.

By-products and circular economy. Work in this area includes the re-use of slag as a valuable product for many applications, which reduces waste while avoiding the ecosystem disruption that can result from the extraction of other materials such as natural stone or sand. For example, the Company is making innovative re-use of slag in the following applications: ballast in offshore wind turbine foundations to replace natural ballast; a construction material for building protection walls to reduce noise and dust; a fertilizer source for agriculture; and the potential re-use of slag from furnaces in water filtration and greenhouse gas capture. Other circular economy initiatives include: working on the use of mining tailings as a secondary raw material, either by finding marketable solutions or generating valuable products to be used in-house; and improving the quality of the scrap the Company uses, as well as exploring automated sorting processes for treating scrap.

Improvement in air, land, water. Work in this area includes research in technology for cleaning fumes from stacks, reducing dust diffusive emissions, cleaning water discharges, and solving water scarcity issues.

In 2019, the research on cleaning fumes was extended to investigate a holistic combination of technologies for

multipollutant abatement (of dust, SOx, NOx and dioxins) with great success, and significant progress was made on developing improved pleated bags for boosting filters efficiency. Technology on desalination has been implemented at Tubarao, leading to an international award for the most innovative desalination project in 2019 by International Desalination Association. Also in 2019, an industrial demonstrator for waste water from Blast Furnace treatment was launched at Asturias, along with an innovative technology to reduce dust emissions in the chutes transfer with very high efficiency that was validated.

Reductions of carbon emissions and energy use. ArcelorMittal's global R&D division also continues to research processes to support carbon neutrality and energy efficiency. In 2019, significant progress was made in the concept development and engineering of a full H_2 MIDREX direct reduction process, and of a pilot plant in Hamburg for cold electrolysis of iron, which will be operational in 2022. Assessment through simulation and experiments of several CO2 reduction technologies has led to the creation of breakthrough projects that should allow the substantial reduction of blast furnace route CO2 emissions. Meanwhile, the roll-out of in-house developed solutions, such as smart oxygen sensors and innovative combustion control strategies, is enabling incremental reductions in energy and CO2 emissions.

The Company's Jet Vapor Deposition ("JVD") technology is an example of process-driven product development, which enables advanced steels for industry. The Company introduced its unique JVD line to create a new generation of coated products with improved quality and enhanced functionality (Jetgal® for automotive applications and Jetskin® for industrial applications).

Mining process improvements. Global R&D has developed the capabilities to upgrade and digitalize its systems using satellites, drones, wireless sensors and robots to feed a geographic information system for detailed monitoring of tailings dams, which forms part of the Company's mining circular economy initiative. In the future, this will be extended to both plants and wildlife, thus helping the Company respond to increasing expectations from stakeholders looking for reassurance that biodiversity hotspots are not negatively impacted by the Company's mining operations.

Fully capitalizing on opportunities from the digital economy. ArcelorMittal envisages itself as a fully digital enterprise where everything is connected. ArcelorMittal invested early and significantly in automation systems, and for decades the Company has been a pioneer in the introduction and use of artificial neural networks. ArcelorMittal is currently fully committed to a total digital transformation, including significant advances in a number of fields and relies on the secure and reliable performance of its digital technology platforms, information technology systems, continuously updating its security measures to avoid data breaches or data theft (see also "Risks related to the global economy and the mining and steel industry"). The Company is focusing its efforts on:

- Global platforms (Big Data, IIoT, Deep Learning developments);
- Manufacturing digitalization (Production, Quality and Maintenance); and
- Business digitalization (Procurement, Commercial, Supply Chain, Strategy, Finance).

The Company's global standard platform for Big Data storage and analytics (ARTHUR) and IIoT (DASHIELL) avoids the use of a mosaic of technologies and facilitates the global sharing and rapid implementation of Artificial Intelligence ("AI") models with proven results among all units. This approach makes the Company's size a key advantage.

In its digital strategy, the Company makes use of solutions that are directly acquired in the market, solutions that are co-developed with technology suppliers, and solutions that are fully developed internally to take advantage of the rich knowledge interfaces the Company has (process, product, AI). This combination leads to performance superiority.

The main driver for digitalization at ArcelorMittal is competitive advantage, with new technologies and especially cutting-edge AI and mathematical optimization tools contributing to ensure:

- The best product quality, through better prediction using advanced analytics made possible through Big Data and distributed computing. This means production issues can be detected before they happen, enabling adjustments to be made to production parameters to avoid them.
- Maximizing equipment operational time and avoiding unplanned stoppages via predictive maintenance. The Company is already seeing positive results in several production units in Brazil, Spain and Belgium, and is deploying this solution across the Company.
- Cost efficiency in production and logistics. For example, R&D has developed a unique, breakthrough technology for line scheduling - inspired by studying and mimicking the movements in ant colonies - that has significantly improved productivity. In addition, the deployment of automated stockyards, linked to line scheduling and transport devices such as autonomous cranes, means less stock is needed and lead times are cut, yielding two major supply chain benefits.

While the implementation of large-scale digital and industry 4.0 projects is challenging in a company of ArcelorMittal's size, once implemented these projects bring major benefits

and value because of the Company's scale and complexity. The global standard platforms strategy has contributed significantly to this initiative.

ArcelorMittal is also working with leading universities in the USA, Canada, Spain, the UK, Germany, Belgium and France to capture the best scientific expertise and fully industrialize new ideas and emerging academic theories. The Company also establishes partnerships with start-up companies, working on fields such as Big Data analytics, predictive maintenance, supercomputing and manufacturing intelligence. ArcelorMittal's approach is to work with a broad range of entities, thus maximizing the knowledge transference into its teams, avoiding black-boxes, and increasing its development capabilities. This has led to the development of new algorithms using Big Data technologies that can solve problems in ways that were not possible before, mainly due to limitations in the manipulation of large volumes of data.

Seizing the potential of additive manufacturing. ArcelorMittal sees significant potential in additive manufacturing and 3D printing. For example, within the Company's operations, it will be possible to 'print' spare parts when predictive analytics show that equipment needs replacing, thus reducing disruptions. As 3D technology matures, it will have an increasing impact on the way the Company and its customers do business. ArcelorMittal's R&D teams are exploring opportunities and partnering in this field.

Sustainable development

ArcelorMittal recognizes the important contribution its products and processes make to Sustainable Development ("SD") and aims to ensure that its steels are the material of choice in the transition towards a circular and low-carbon economy. This means preparing for and responding to the most significant long-term environmental and social trends that are transforming the context in which the Company operates. These include sector-focused decarbonization ambitions aligned with the Paris Agreement, the transformation of society towards a circular economy and the growing demand from customers for adherence to sustainability standards from their entire supply chains, from mine sites to delivery of products.

The Company's SD framework, launched in 2015, sets out the 10 SD outcomes it needs to achieve in order to protect and grow long-term value for its stakeholders. These outcomes are aligned with, and aim to contribute to, many of the United Nation's Sustainable Development Goals ("SDGs"). Details of the relationship between the 10 SD outcomes and the SDGs are included in the reporting index to ArcelorMittal's Integrated Annual Review 2018, which is available on the Company's website. The outcomes provide the basis for engaging the Company's workforce on SD issues, and support the development, management and reporting of sustainability across its operations.

ArcelorMittal's 10 SD Outcomes:	
1	Safe, healthy, quality working lives for ArcelorMittal's people
2	Products that accelerate more sustainable lifestyles
3	Products that create sustainable infrastructure
4	Efficient use of resources and high recycling rates
5	Trusted user of air, land and water
6	Responsible energy user that helps create a lower-carbon future
7	Supply chains that ArcelorMittal's customers trust
8	Active and welcomed member of the community
9	A pipeline of talented scientists and engineers for tomorrow
10	ArcelorMittal's contribution to society measured, shared and valued

To drive its goal of inventing smarter steels for a better world, the Company recognizes the value in creating an integrated marketing offer that combines many aspects of these 10 SD outcomes. These include being the supplier of choice for innovative products while maintaining steel and mine sites that operate to standards that meet and exceed the sustainability expectations of customers and investors. This is at the heart of the Company's approach to SD.

ArcelorMittal listens carefully to stakeholders, both locally and globally, and recognizes a trend of rising expectations among stakeholders regarding local community issues as well as the global transition toward a circular economy and the steel industry's critical role within it. The Company assesses stakeholder trust to be a key value driver, and accordingly adopts a Board-led strategic approach to deepening trust through stakeholder engagement.

Integration of SD into the business is therefore essential for ArcelorMittal to achieve long-term value for its shareholders and other stakeholders while maintaining a profitable market share. Over the last four years since the Company launched the 10 SD outcomes in 2015, it has been integrating them into the business, beginning at the site level by explaining the need for integrating SD into planning and reporting of results. In 2018, the Company's Board of Directors established the Appointments, Remuneration & Corporate Governance and Sustainability Committee of the Board (the "ARCGS"), an expansion of the previous Appointments, Remuneration & Corporate Governance Committee, which monitors the performance of corporate functions and business segments against the 10 SD outcomes pursuant to the five management themes discussed below. This integration of SD was fully embedded in 2019 with the implementation of theme dashboards and quarterly reporting from local sites to the board-level.

The ARCGS organizes its governance of SD through five management themes, which helps deepen the Company's strategic approach towards each one.

The themes (and the relevant SD outcomes to which they relate) are:

Management Theme		Relevant SD Outcome
1	Safety	1
2	Climate change	6
3	Customer reassurance	7
4	Environment	4, 5
5	Social	1, 8, 9, 10

The ARCGS's oversight underpins the Company's strategy to ensure that both corporate functions and business segments contribute to achieving the 10 SD outcomes with the following elements:

- Each business segment, acting on its understanding of SD trends and through its engagement with stakeholders, develops a plan in pursuit of the 10 SD outcomes as a priority, with a set of key performance indicators ("KPIs") established against which they must report quarterly to the ARCGS committee;
- Corporate functions lead on key areas including: progress towards low-carbon steelmaking, innovating steel solutions and steelmaking technologies with a positive SD impact, and developing a 'mine to metal' chain of assurance against multi-stakeholder environmental and social standards; and
- A robust articulation of the Company's approach and progress through clear narrative and transparent, third-party assured reporting.

The Company is committed to transparency as evidenced by the comprehensive SD disclosures made in the Integrated Annual Review and Factbook each year, and by the publication of its first stand-alone Climate Action Report in May 2019, which serves as the Company's response to the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD").

The Company now sees the need to go beyond transparency and invest in stakeholder dialogue by leading collaborative conversations with stakeholders on climate action and multi-stakeholder standard setting processes and certification for both steel sites and mines (see "Management Theme #3: Customer reassurance" below).

The Company's management of SD is summarized along the five management themes in the following pages.

Management Theme #1: Safety

ArcelorMittal's employees are essential to its ambition to build a high-performing organization. The Company wants all its employees to be safe and healthy, committed to ArcelorMittal's success and to act with integrity in everything they do. ArcelorMittal aims to build an inclusive culture in which diversity is valued, and every individual is respected and their potential developed. Safety is the number one priority.

Safety

The Company-wide safety program, "Journey to Zero", was introduced in 2007. It aims to achieve zero fatalities and severe lost-time injuries by creating a culture of shared vigilance in which risks and hazards are understood and monitored, best practices are shared, and appropriate action is taken at every level. The Company's remuneration policy links 10% of the bonuses of its leadership - from managers to the CEO - to safety KPIs (i.e., fatalities, LTIFR (defined below), PSIF (defined below)) in the business where he or she works, where relevant. The Company works with trade unions to drive safety improvements through a global partnership, which includes joint local Health and Safety Committees at every production unit and a Global Health and Safety Committee ("GHSC") which is made up of representatives from both the trade union IndustriALL and union members from ArcelorMittal, together with senior ArcelorMittal managers. This is supported internally by the ArcelorMittal Health and Safety Council.

It is with deep regret that the Company reported 21 fatalities during 2019, including 12 in steel and 9 in mining operations. Any fatality is a cause of great distress to families, friends, ArcelorMittal's leadership and the entire workforce. The Company's leadership is driving a campaign to ensure that a culture of vigilance and mutual accountability, in which every individual takes responsibility for their own actions, and the actions of those around them, prevails everywhere it operates. ArcelorMittal recognizes that, more than improving its performance against LTIFR (as defined below), it must work harder to ensure that its safety culture prevents fatalities and serious incidents. During the year, the Company implemented the following measures:

- The Safety Leadership program in CIS (Ukraine and Kazakhstan), training the top 100 managers and creating the key platform from which to roll out Take Care! training in the region. This program aims at developing the skills of middle and upper management to influence people's safety behavior and improve the safety culture within their teams. It has been successfully implemented over the past three years across ArcelorMittal's European operations and long operations in Latin America, where it entered into phase two in 2019;
- Strengthened health and safety policy on working at heights;

- Improved detection, recording, and understanding of hazards and risks through PSIFs in order to prevent severe incidents;
- Improved safety leadership practices, supported by the continuation of the Target 21 Safety Leadership Program, where managers undertake safety training through 21 days of 5-minute e-learning sessions ;
- Improved communications internally across the workforce using social media techniques; and
- Sharing lessons within the steel industry through the Company's participation in the Worldsteel Association.

The lost-time injury frequency rate ("LTIFR") for the Company, defined as the number of injuries per million hours worked that result in employees or contractors taking time off work, was at 0.75 (1.21 including ArcelorMittal Italia) in 2019 compared with 0.69 in 2018 (0.73 including ArcelorMittal Italia for the last two months of 2018). The industry average was 0.84 incidents per million hours worked in 2018, according to the Worldsteel Association. For comparison, ArcelorMittal recorded an LTIFR of 3.1 incidents per million hours worked in 2007, the year after the Company's formation. The table below shows the LTIFR by segment for the years ended December 31, 2019 and 2018:

	For the year ended December 31,	
Lost time injury frequency rate	2019	2018
Mining	0.97	0.61
NAFTA	0.58	0.53
Brazil	0.36	0.36
Europe	1.00*	0.93*
ACIS	0.69	0.61
Total Steel	0.73*	0.70*
Total (Steel and Mining)	0.75*	0.69*
ArcelorMittal Italia	11.13	8.20
Total (Steel and Mining) including ArcelorMittal Italia	1.21	0.73

*Data does not include the LTIFR for Ilva (subsequently renamed ArcelorMittal Italia) which was acquired on November 1, 2018.

Improving workers' ability to monitor and analyze potential severe injuries and fatalities ("PSIF"s) is also a key focus, as it provides a deeper understanding of how safety incidents can arise and therefore be avoided. Results show that sites with no fatalities proactively detect and manage twice as many PSIFs as sites that have one or more. The volume of proactive PSIFs logged across the Company has increased more than five times since 2016, and more than 3,500 situations have been proactively detected and addressed this year, a 29% increase in 2019 as compared to 2018. In addition, the Company is specifically focusing on improving the quality of its analysis and actions, including by sharing best practices across the Company, which has been further facilitated this year through the use of the intra-organization, social networking online tool Yammer.

PSIF is now a KPI for the Company and, alongside fatalities and LTIFR, is reported monthly to leadership as part of the governance process. Health and safety is reviewed by the GHSC and overseen by the ARCGS, which meets quarterly. When a fatality occurs, all levels of management are informed of the circumstances and the incident is subject to a comprehensive review process. The Company supports sites where fatalities have occurred to ensure stronger alignment between Group-level safety strategy and site-level implementation.

Health

ArcelorMittal takes a proactive approach to the health of employees and communities by partnering with local stakeholders on initiatives which raise the level of discourse on environmental matters and their effects on health from stakeholder sentiment to more empirical and technical debates necessary to find a solution to this complex issue.

For example, ArcelorMittal Tubarão signed a cooperation agreement in 2018 worth R$3.9 million with the State of Espírito Santo Federal University (UFES) to support their study to identify the relationship between pollutants and asthma cases in Vitoria, Brazil. For the next three years, 20 engineering and health specialists from UFES in Vitoria, will develop an unprecedented study in Brazil through which they will identify which pollutants, from particulate matters and gases, most influence the intensifying of asthma symptoms in children and adolescents with a goal to generate knowledge and information to guide other regulatory agencies in establishing maximum pollution limits tolerable for the population, thus helping to determine prevention policies based on qualitative data. This is significant because ArcelorMittal Tubarão is supporting research methods using primary data, genetics testing and air quality testing in subjects' homes and will build trust with its stakeholders by demonstrating it takes air pollution seriously.

Management Theme #2: Climate change

ArcelorMittal is committed to the objectives of the Paris Agreement and to keeping the global temperature increase to well below 2°C. The Company's ambition is to be carbon neutral in Europe by 2050 and to significantly reduce its carbon emissions globally. In 2019, in response to growing investor and customer expectations, and to align with and exceed the recommendations of the TCFD, the Company published its first Climate Action Report. To achieve this goal, the Company is building a strategic roadmap linked to the evolution of public policy and developments in low-emissions steelmaking technologies. A target to 2030 will be launched in 2020, replacing the Company's current target of

an 8% carbon footprint reduction by 2020, against a 2007 baseline.

Subsequently, in December 2019 ArcelorMittal Europe announced a CO2 roadmap to reduce emissions by 30% by 2030. The target is in line with an ambition announced in May last year, to be carbon neutral in Europe by 2050.

The Company sees the low-carbon transition as presenting significant opportunities as steel will remain a vital material in the application of new industrial technologies and the transition of the energy, transport and packaging industries, and the future construction sector. ArcelorMittal develops innovative products and processes that help its customers reduce their carbon footprint in all these sectors, including S-in motion® for automotive, Steligence® for the built environment, and glass-granulated blast furnace slag as a low carbon alternative for use in place of Portland cement.

The Company views steel as having many advantages in a decarbonizing world in which demand for materials will continue to grow. Steel is 100% recyclable without quality loss, and in many applications, it is a lower-carbon alternative over its lifecycle than other materials such as aluminum and concrete. However, modeling shows that global stocks of scrap will be insufficient to meet global demand for steel from secondary, recycled sources for many decades to come, so the world will continue to rely on primary steelmaking for decades to come. Existing iron and steelmaking processes are carbon intensive, and therefore the route to decarbonizing steel will be through developing new low-emissions technologies. The Company has identified three pathways to achieving this:

- Clean power used as the energy source for hydrogen-based ironmaking and, in the longer term, for direct electrolysis ironmaking, and also as a contributor to other low-emissions technologies. The Company is building a demonstration plant in Hamburg, called H2Hamburg, which will reduce iron ore with hydrogen. It is also collaborating with 11 partners on a project called Siderwin to build a three-meter industrial cell which will test iron ore reduction via electrolysis in Maizières, France.

- Circular carbon energy sources, including bio-based and plastic wastes from municipal and industrial sources and agricultural and forestry residues. Through a process called Torero, ArcelorMittal will reduce iron ore with waste carbon rather than fossil fuel coal in a demonstration plant in Ghent, Belgium. Meanwhile, the Company’s campus in Dunkirk, France is piloting the IGAR (Injection de Gaz Réformé) project which reforms carbon from the blast furnace, converting it into a synthetic gas to reduce iron ore.

- Fossil fuels with carbon capture and storage (“CCS”) enabling the continued use of existing iron and steelmaking processes while transforming them to a low-emissions pathway. The Carbon2Value process captures fossil fuel carbon for storage or re-use. The Group's Carbalyst® project, in partnership with LanzaTech, will capture carbon gas and recycle it into chemicals. Pilot plants for both technologies are under construction at the Company’s plant in Ghent, Belgium. Investment in Carbalyst® started in 2018 and is expected to be completed in 2021. the technology will capture approximately 15% of available waste gases at the demonstration plant and convert them into 80 million litres of ethanol annually.

These pathways could all lead to low-emissions steelmaking. However, they pose significant challenges in terms of new technology, expanded clean energy infrastructure and infrastructure for the transport and storage of CO_2. All three also lead to structurally higher costs of steelmaking and therefore, for them to become a reality, significant policy support is required.

Through its innovative low-emissions steelmaking program (which is a multi-year budget covering the Company’s low-carbon development and demonstration program with partners, aimed at building industrial pilots and demonstrations and is additional to its annual R&D expenditure), ArcelorMittal is actively testing technologies across each of these three pathways, and developing a broad portfolio of breakthrough low-carbon steelmaking processes. The Company believes that these initiatives present significant opportunities for the decarbonization of steelmaking provided the correct regulatory and investment environment exists.

In the medium term, ArcelorMittal is developing an emissions reduction roadmap to support a new global 2030 carbon target alongside its European target. However, ArcelorMittal has also identified that its most substantial climate-related risk stems from a policy environment that does not enable the industry to cover the higher structural costs that new low-emissions technologies bring.

The Company’s most significant policy work is on the need for a global framework to create a level playing field and avoid the risk of carbon leakage. For example, carbon border adjustments would ensure that steelmakers bearing the structurally higher capital and operating costs of low-emissions technology could compete with imports from steelmakers with higher emissions. The Company is advocating a green border adjustment in the new European Green Deal so that Phase 4 of the EU Emissions Trading Scheme (ETS), which requires a substantial reduction in the carbon intensity of European steel, does not result in carbon emissions being effectively exported from the EU to steelmakers with higher emissions in regions where carbon regulations are less stringent.

ArcelorMittal is also actively engaging in analyzes, with customers, investors, policymakers and global think tanks, on what policy mechanisms could be created to make low-emissions steelmaking more competitive. For example, the Company has been collaborating with the Energy Transitions Commission's Mission Possible initiative on pursuing net-zero carbon emissions from harder-to-abate sectors, and with the Science-Based Targets initiative ("SBTi") on the steel sector decarbonization approach. ArcelorMittal has also been driving multi-stakeholder efforts through ResponsibleSteel™ to develop standards on greenhouse gas emissions ("GHG") for steel.

Other global policy recommendations are:

- **Access to abundant and affordable clean energy**. Policies giving the steel industry access to abundant and affordable renewable electricity will be key to scaling up the clean power pathway. For acceleration of the circular carbon pathway, the steel industry requires priority access to biomass and waste.
- **Facilitating necessary energy infrastructure**. In addition to abundant renewable electricity, policies to support investments in hydrogen infrastructure will be needed to advance large-scale hydrogen-based processes. Similarly, for the fossil fuels with CCS pathway, policies are also important to enable and accelerate the development of carbon transport and storage infrastructure and services.
- **Access to sustainable finance for low-emissions steelmaking**. The scale of the challenge requires an acceleration of technology development and roll out. Breakthrough steelmaking technologies need to be identified as a key priority area for public funding.
- **Accelerate transition to a circular economy**. Materials policy should divert waste streams from landfill and incineration. It should focus on driving recycling and reuse of all waste streams and incentivize the use of waste streams as inputs in manufacturing processes. It should reward products for their reusability and recyclability.

In addition to new technologies and policy work, ArcelorMittal's low emissions strategy focuses on energy efficiency in its existing steelmaking operations across the globe, and on expanding opportunities for further steel production using end-of-life scrap. Each year, the Company's Investment Allocation Committee ("IAC") approves a number of capital investments that will bring significant energy and carbon efficiency improvements, enabling the Company to meet its medium-term emissions reduction targets. In 2019, the ArcelorMittal's IAC has allocated a total of $711 million to 25 projects with energy and/or carbon benefits to be spent in the next years.

For the third consecutive year, ArcelorMittal has won the Steelie Award for excellence in sustainability in recognition of the Company's publication of the steel sector's first Climate Action report. Announced at the Worldsteel Association's annual meeting in Monterrey, Mexico, the award distinguishes the Company's industry leadership on sustainability amid the growing pressure steel companies are facing to outline their approach to reducing carbon emissions.

Management Theme #3: Customer reassurance

The Company envisions the momentum behind supply chain accountability continuing to grow, with a particular focus on mined raw materials. Consumer-facing brands want to demonstrate responsible sourcing, and customers are joining together to demand, and validate, higher standards in their supply chains, driven by their own due diligence processes. This is expressed through growing demand from the Company's customers for reassurance on environmental and social standards. As a result, ArcelorMittal regards supply chain certification and reassurance as a vital commercial opportunity to forge closer links with customers and believes that taking a leading role in multi-stakeholder engagement is one of the most effective ways to achieve results. It is working with peers in the steel and mining industries, and with other stakeholders, to advance the development of new third-party standards.

To establish a single, global standard for the entire 'mine-to-metal' steel value chain, and in response to the strong trend of rising assurance expectations from customers, ArcelorMittal has been playing a leading role in developing ResponsibleSteel™ since 2015. ResponsibleSteel™ is the steel industry's only global multi-stakeholder certification initiative, which has 40 members including steel producers, mining companies, NGOs, steel-consuming customers, financial institutions, and industry bodies. It enables steel producers to prove their production processes and products meet rigorously defined standards across a broad range of social, environmental and ethical criteria. It also improves responsible sourcing of the raw materials used in steelmaking and reduces supply-chain risk.

In November 2019, following a robust accreditation process, ResponsibleSteel™ launched its first site certification standard. The standard presents 12 principles underpinned by over 50 criteria and over 200 auditable requirements, addressing: health and safety, human rights, local communities, biodiversity and GHG among other sustainability and assurance issues. In 2020, a full product certification standard will follow, which will also cover the mining of raw materials before they arrive on site, and the full chain of custody from mine to site to final customer.

ArcelorMittal has carried out readiness assessments against the ResponsibleSteel™ site standard across nearly all its

European flat products production sites with positive results. It is currently working on a site assessment and verification plan and is on track to seek certification for its European Flat sites next year. ArcelorMittal believes that its leading role in the development of ResponsibleSteel™, and its commitment to achieve certification in 2020, will enable the Company to improve customer relations, increase market share among customers already seeking certification, and create demand for certified products.

ArcelorMittal also plays a leading role in the wider movement towards establishing social and environmental standards for mining that stakeholders recognize and value. As a member of the IRMA (the Initiative for Responsible Mining Assurance) steering committee, ArcelorMittal participates in the multi-stakeholder expert panels shaping its standards. Another example is its commitment to the Mining Association of Canada's Towards Sustainable Mining initiative at its mines in Canada, which helps the Company to monitor and improve performance and customer reassurance.

The Company is also a member of a multi-stakeholder collaboration on sustainable tin production in Indonesia, the Tin Working Group.

The Company engages directly on responsible supply chain issues with customers from the automotive, rail and other sectors, including construction, household goods and packaging, as well as with initiatives used by customers to share their processes for assessing supply chain risk, such as DRIVE Sustainability, Electronic Industry Citizen Coalition, Railsponsible, EcoVadis and the Green Building Council.

Alongside these multi-stakeholder, customer-focused initiatives, the Company is committed to driving standards in its own supply chain. Since 2011, the Company's Code for Responsible Sourcing has set out minimum standards for its suppliers and described how it will work with suppliers to achieve them. In 2018, the Company continued to ask all new global suppliers to sign the Code and surveyed key suppliers for their implementation of the Code. At the same time, it reinforced its risk mapping analyses, with particular reference to its raw material suppliers. This process aims to identify social and environmental areas of concern, and the key hotspots for further due diligence; the Company is developing action plans where these are needed. It also identifies those suppliers which have the potential to take part in certification schemes in the future.

Overall, the Company is shaping its supplier process to be better aligned to the Organization for Economic Co-operation and Development ("OECD") guidelines on due diligence on supply chains, in particular for conflict minerals, which reflect continued concern that some conflicts around the world are being financed by the trade in minerals such as tin, tantalum, tungsten and gold. From a portfolio of more than 2,000 steel products, only a very limited number of ArcelorMittal products contain tin and tungsten, which are necessary for the functionality or production of certain products.

Management Theme #4: Environment

Behind the SDGs to which ArcelorMittal is committed, is a vision of progress that leaves no-one behind. The Company therefore focuses on making steel in ways that work for society, without creating harmful carbon footprints (as discussed in "*Management Theme #2:* Climate Change" above), or other negative environmental impacts. The Company aims to meet stakeholders' expectations around the use of shared resources, particularly natural capital in the form of air, land and water. Operating transparently and responsibly in these areas is essential for retaining stakeholders' trust.

The Company continues to make significant environmental investments, and in 2019, ArcelorMittal's IAC has approved a total of 38 projects with environmental benefits totalling $692 million.

Some of the challenges affecting air, land and water are global in nature, and ArcelorMittal engages in multi-stakeholder forums aimed at addressing them. Where the issues and the means of addressing them are local, country managers engage with stakeholders at every level, including site-by-site. Before developing any new mine or steel plant, the Company carries out detailed environmental impact assessments, and establishes an environmental management plan. At all existing production sites, it monitors air, water, energy and residue data, and publishes data annually in its Integrated Annual Review and country level sustainability reports, of which 12 were published in 2019.

The Company monitors regulatory developments and aims to be fully compliant with regulatory standards. The Company also aims to listen to concerns wherever they are raised, and to respond appropriately, including by acknowledging where its standards have fallen short. In 2019, the Company's focus on responding to environmental issues was centered on addressing air quality concerns, managing tailing storage facilities and tailings transition plans, improving land use and biodiversity and responsible water use, as further discussed below.

Addressing air quality concerns

In 2019, the Company's investments in environmental improvements included 16 projects to improve air quality. ArcelorMittal understands that air quality is among the most salient issues for the communities around its operations. It is also a continuing focus for regulators, and the Company's goal is to comply fully with regulatory standards. Although the specific sources of pollutants, particularly in urban and industrial areas, are not always identifiable, the Company

aims to listen to concerns wherever they are raised, and to respond appropriately. The Company also continues to make significant environmental investments that address air quality.

In 2019, the following sites raised particular air quality concerns, which were addressed by the Company:

Fos-sur-Mer (France)

In Fos-sur-Mer (France), ArcelorMittal acknowledges stakeholder concerns and historic regulatory non-compliance around emissions from the coke plant. Between 2012 and 2017, the Company invested €100 million in the site, and succeeded in reducing dust emissions by 50%, dioxins by 70%, and sulphur dioxide by 50%. After a further investment of €130 million in the coke plant over 2012-2018, and substantive work completed in 2019, the coke ovens are now compliant. Investment will continue with an additional €100 million by 2023 to reduce environmental impact by a further 30%. Moreover, on public health issues, ArcelorMittal supports scientific studies to establish an accurate measure of air quality, its sources and its implications for health.

Krivyi Rih (Ukraine)

The Company is also responding to concerns raised by local stakeholders in Ukraine and Kazakhstan. In Ukraine, over 14 years of operating in Krivyi Rih, the Company has invested $4.4 billion (2006-2018) in production processes which resulted not only in improving the Company's competitiveness but also reduced environmental footprint: waste water discharge was reduced by 81% and dust emissions by 48%.

ArcelorMittal Kryvyi Rih's strategy to further reduce their environmental impact from dust covers all the main types of production - mining, coke, steelmaking, rolling and sintering. The latter is of key importance, since it accounts for about 75% of the plant's total dust emissions. The Company is planning to build a pellet plant to replace the sinter plant at the steel production site and sinter plant number 1 at the mining production site, as well as modernizing sinter plant number 2 at the mining production site. As a result of these investments, dust emissions will be reduced by about 79% within the sinter plant area and 43% across the whole site between 2018 and 2024.

In addition, to further reduce emissions, ArcelorMittal Kryvyi Rih applied an innovative method of repairing coke oven batteries. The method is based on ceramic welding of deep cracks with subsequent injection of powder mixtures to seal small cracks in the refractory brickwork of coke ovens. Such method to reduce dust emissions is already being used in Europe, but is being implemented for the first time in Ukraine. The Company is also planning construction of two continuous casting machines and the new rolling mill which will further reduce the environmental footprint of the operations.

Kazakhstan

In Kazakhstan, where emissions and their impact on air quality is the most pressing concern for local communities, ArcelorMittal has built a comprehensive environmental plan with local stakeholders. As part of this plan, in 2018, the Company announced a $198 million environmental investment program. The projects in its scope will result in a series of incremental performance improvements throughout the investment plan's implementation period to 2025. The program is focused on removing dust from a range of facilities including the lime plant, the coke shop and related processes, the sinter plant, the steel shop, blast furnace 2 and its associated storage area.

ArcelorMittal Italia

ArcelorMittal Italia, has undertaken an ambitious environmental engineering project at its Taranto site: creating the world's largest suite of primary raw materials coverage yards. Work on the iron ore yard coverage was completed in late 2019 and it will play a key role in reducing diffused dust dispersion towards the city, particularly in the Tamburi district. The coke yard coverage is expected to be completed in May 2020.

Another key milestone will be the coverage of the coal yard. Each structure is made up of six arches which collectively use around 22,000 tonnes of steel pipes produced by ArcelorMittal. With a height of 77 meters, the equivalent of an 18-floor building, and a length of 476 meters and a width of 254 meters, equal to around 17 professional-sized football pitches. The ongoing work and the scope of the environmental plan is subject to ongoing negotiations with the Commissioners for a new industrial plan for ArcelorMittal Italia. For further information, see "Key transactions and events in 2019—ArcelorMittal Italia acquisition".

Managing tailings storage facilities

The stability of tailings dams is a risk that every mining company faces and managing them carefully to ensure they are structurally sound is a vital aspect of ArcelorMittal's responsibility as a mining company. The tragedy of the Vale-owned Feijão dam failure prompted all mining companies to examine the monitoring systems at their tailings storage facilities ("TSFs"). ArcelorMittal has 24 TSFs, which include dry stack and in-pit disposal, of which 19 are active, 5 are dormant.

The Company employs a strong governance model based on the Mining Association of Canada's ("MAC") guidelines for TSFs. Its global tailings stewardship program employs three types of audits: in-house at site level, in-house at corporate level and an entirely independent audit, which are benchmarked against international guidelines of Australian

National Committee on Large Dams ("ANCOLD"), MAC and Canadian Dam Association ("CDA").

ArcelorMittal's Serra Azul mine's tailings has been dormant since 2012 and the Company had commenced reclamation to re-process tailings through the concentrator in January 2019. In February 2019, following stress tests on the Serra Azul dam model safety factors, the Company decided to evacuate the local community downstream of the dam as a precaution, enabling the Company to carry out further testing and safely implement any mitigation measures.

Mining operations were simultaneously suspended but were recommenced on March 18, 2019. Following an update of the theoretical dam break analysis, and adopting the most conservative assumptions, the potential area of impact has been expanded, in order to keep a greater margin of safety. In response, ArcelorMittal relocated 23 families from two communities to temporary homes as a precautionary measure. Monthly emergency payments have been made to the relocated families as well as to people who lost access to their land - in total 149 families have been directly impacted. For safety reasons, access to the evacuated area continues to be restricted and controlled according to guidance from local authorities.

ArcelorMittal is employing continuous 24/7 monitoring of the tailings storage facility via radar, accelerometers, piezometers and imaging, and is currently reviewing its approach to safely deconstructing the Serra Azul TSF.

The Company is working on potential application of non-wet or reduced moisture tailings disposal methodologies such as thickened, paste, dry stack and in-pit tailings options where appropriate. This approach is already in use in Mexico, Brazil and Quebec iron ore mines.

Improving land use and biodiversity

ArcelorMittal aims to practice good land use management, and to protect biodiversity in the environments where it operates, including through partnerships with local environmental organizations and others to improve and research local biodiversity.

Mining is a key focus both in terms of responsible land management and biodiversity.

In Liberia, the Company operates a Biodiversity Conservation Program ("BCP") to address the damage caused by agriculture and mining.

ArcelorMittal's Liberian mines are set in Nimba County, surrounded by both mountain and lowland rainforest. ArcelorMittal's mining area consists of approximately 51,000 hectares in Nimba County, representing less than 1% of the total forest. The Nimba Mountains are renowned for their biodiversity but have been damaged by agricultural practices and overhunting.

Launched in 2011, the BCP is the Company's approach to developing sustainable forest management throughout the area. Through the BCP, the Company is partnering with authorities and communities to create a healthy ecosystem and sustainable livelihoods across the region. The Company spent almost $2 million on the BCP program in the last three years and its achievements include training 1,000 farmers in conservation agriculture, retraining 50 hunters as front-line conservationists and replanting trees in Tokedeh and Gangra.

The impact of the Company's steelmaking activities on biodiversity can be less apparent than mining, given that most steel operations are located in urban areas. Nonetheless, ArcelorMittal runs a range of programs aimed at protecting and enhancing ecosystems. For example, ArcelorMittal Tubarão has implemented a green belt around the plant, housing about 2.6 million trees and shrubs and eight different permanent preservation areas, with lagoons, swamps, mangroves, and beaches. In partnership with the Capixaba Institute for Research, Technical Assistance and Rural Extension (Incaper), ArcelorMittal Tubarão is currently conducting research to improve the diversity of flora and fauna in its green project. Another example is ArcelorMittal Mediterranee which works with the bureau d'étude écologique Eco-Med to manage close to 450 hectares of protected natural spaces within its Fos-sur-Mer site.

Responsible water use

Water is a vital resource to the Company and its stakeholders, and ArcelorMittal aims to be responsible both in the amount of water it consumes, and in the quality of the water discharged by its sites into the environment. Its work in the area is aligned to the UN's SDG 6 (Clean water and sanitation), with particular reference to the target 6.3 on water recycling, target 6.4 on water efficiency, and target 6.5 on water management.

The Company's net water use in steelmaking, defined as the difference between the water it withdraws and the water discharged, is measured, monitored and managed at each site by a dedicated team. In general, steel plants treat and recycle the same intake of water repeatedly, losing water only through evaporation. Water withdrawn from groundwater sources makes up less than 1% of the Company's water intake. Water treatment facilities play a vital role in managing the Company's emissions to water, and in improving the water efficiency of its operations.

Unlike reducing carbon emissions, which is a global challenge, water use is a more localized issue. Where freshwater is scarce, or when there is a drought, the Company works with local municipal and water authorities to explore the best sources for water, including seawater, rainwater and wastewater from water treatment plants. When issues occur, ArcelorMittal aims to act swiftly and co-operatively with local authorities.

In August 2019, ArcelorMittal Burns Harbor experienced a failure at the pump station for the blast furnace process water recycle system, which is believed to have contributed to the reported excess of Ammonia-N and cyanide at two outfalls and impacted aquatic wildlife near those outfalls. ArcelorMittal Burns Harbor has continued daily sampling for cyanide and ammonia and other regulated pollutants. The results are provided to the state regulatory authority responsible for water issues. The Company believes the circumstances leading up to the station failure were unique and it continues to investigate the station failure and related water concerns in coordination with regulatory authorities to understand what happened and to implement measures designed to prevent recurrence.

ArcelorMittal Burns Harbor has two permits which impose monitoring requirements and establish certain limits for pollutants regulated under those permits. Any surpassing of limits or other violations of permit requirements are reported to the state water authority. While any instance of non-compliance is concerning, the Company does not believe that the reported non-compliance with the permit requirements in any way reflect systemic issues. Any instances of non-compliance are investigated, and appropriate actions are taken in response. Governmental authorities are tasked with responding to non-compliance with permits in the way they deem appropriate in response to the reported information. For further information, see note 9.3 to the consolidated financial statements.

Recognizing the importance of water within our business and our communities, the Company continued its leadership role in Sustain Our Great Lakes ("SOGL") in 2019, a public-private partnership with the National Fish and Wildlife Foundation ("NFWF"), U.S. EPA, U.S. Fish and Wildlife Service, U.S.D.A. Forest Service, the National Oceanic and Atmospheric Administration, and U.S.D.A. Natural Resources Conservation Service. SOGL's mission is to restore and protect fish, wildlife and habitat throughout the basin by leveraging funding, building conservation capacity and focusing partners and their resources on key ecological issues. Since 2006, the program has awarded 337 grants totaling nearly $81 million, which when combined with $93.5 million in grantee match, has resulted in a total conservation investment of more than $174.5 million in the region.

The Company seeks to improve water use and the quality of effluent discharge at its mine sites and conducts regular water quality monitoring as standard at all operations. Run-off from the Company's mining operations is treated either chemically or through sediment control dams and tested before being released into surface water bodies or reused elsewhere at the mine. Where possible, water is reused for processing, for example, as part of the cooling process during pellet production. At AMMC, a multi-year holistic water management project aimed at controlling the surface effluents on the waste rock piles and to achieve compliance with federal regulations is ongoing. This consists of the construction of collector ditches on the perimeter of the waste rock piles and the installation of temporary and permanent water treatment units in Mont Wright and Fire-Lake.

ArcelorMittal Brasil has one of the highest rates of water recirculation amongst Brazilian steelmakers, of approximately 98%. Between 2015 and 2017, ArcelorMittal Mineração Serra Azul managed to reduce its water intake by more than 50%, from efficiencies in both the mining and processing stages. The plant's water resource management from ArcelorMittal Mineração Serra Azul provides high rates of water recirculation in the iron ore beneficiation process. In 2019, the index was 88.5%.

Management Theme #5: Social

ArcelorMittal wants communities to recognize it as a good neighbor, that actively engages with local stakeholders to make a positive contribution in terms of creating economic and social value through employment, procurement, taxation and sustainable development initiatives and through strong risk management and respect for human rights. To do this, the Company understands it must take a partnership approach, listening to the concerns of stakeholders at the site, country and segment levels, to give them the confidence that ArcelorMittal will address the impacts it has on them and their environment. ArcelorMittal wants to be a pro-active partner in local socio-economic development; one which is trusted to have an open dialogue and find constructive solutions when challenges arise. This approach is an essential part of the Company's integrated approach to managing risks and impacts, and thus maintaining the Company's social license to operate.

Direct management of community issues, monitoring of local risks and opportunities and how these are being addressed is led by local operations. In 2019, community dashboards were established with the ARCGS Committee to oversee the significance of a site's risks and opportunities.

The aim is to use the dashboards to improve performance at sites identified as being at risk, in particular those consider to be high risk. For all sites that are considered 'high risk', a deeper dive is performed by the corporate responsibility team, usually with site visits, to understand the underlying factors behind the site's situation. This root cause analysis is used to identify trends and patterns in the factors behind poor community relations. A similar but less in-depth approach is taken with 'medium risk' sites.

In addition, in 2019, the Company continued to increase its corporate oversight of local sites' stakeholder engagement plans and grievance-handling mechanisms, developing a new standard for ArcelorMittal community procedures to be implemented at all sites. This standard sets the minimum requirements for planning, implementation, monitoring and

evaluation of community engagement and development activities. It is defined by four priorities:

- Understanding local communities by conducting social context analyses of local impacts and opportunities, human rights and associated impacts, and trends linked to the local risk profile;
- Comprehensive planning of human rights assessments, stakeholder engagement, mechanisms to manage community complaints and grievances, and community investment strategies;
- Effective implementation of development activities through strong leadership, appropriate resource, timely engagement, and robust governance; and
- Consistent monitoring and evaluation of performance through community perception surveys, analysis of grievances, and annual independent verification of data and social performance.

The Company also analyzes broader trends across its global portfolio in relation to community issues enabling it to make sure best practices are shared between sites. Examples of how the Company works to share best practices for community engagement include the Company's quarterly Community Liaison Committee in Avilés, Spain and its multi-stakeholder forum in Poland which follows the AA1000 Stakeholder Engagement Standard (2015) methodology. The Company also continues to foster collaborative relations, bringing sites' corporate responsibility teams across the group together through webinars and internal seminars. In February 2019, ArcelorMittal corporate responsibility representatives from over 18 countries met in Milan, Italy for a three-day knowledge management program to network, discuss current issues and learn from one another.

Alongside responding to communities' needs and concerns, the Company's community investment strategy focuses on developing skills in STEM (science, technology, engineering and mathematics). This reflects the important role scientists and engineers will play in building a sustainable future for society at large, for the steel industry and for the Company. The strategy is delivered in many ways: from providing teaching aids and technological support, through inviting students to steel plants, to the Company's long-term partnerships with leading academic organizations around the world.

Sustainable Development Governance

The Company's commitment to integrity is enshrined in its code of business conduct and is supported by a comprehensive framework of policies in areas such as human rights, anti-corruption, and insider dealing. These reflect the principles and concepts of the UN Global Compact, the OECD Guidelines on Multinational Enterprises and UN Sustainable Development Goal 16 ("Peace, justice and strong institutions"). See also " Directors, senior management and employees and Board practices/corporate governance".

Listening, learning, respect and transparency are key to the integrity of the Company's leadership and governance, which helps ensure ArcelorMittal operates effectively and ethically in all parts of the world.

ArcelorMittal considers its relationships with its various stakeholders to be vital to its success. Conducted in the right way, these relationships help the Company know how best to respond to challenges, to anticipate future problems, and to earn trust. ArcelorMittal's operations in each country are encouraged to assess their stakeholders' expectations and concerns, in order to inform their approach to the 10 SD outcomes and 5 management themes. Working with customers, suppliers, unions and others can also contribute to UN SDG 17 (Partnership for the goals).

Fully integrating SD into the business is essential to reach the Company's aim of achieving long-term value for its shareholders and other stakeholders, while maintaining a profitable market share. As discussed above, ArcelorMittal introduced a sustainable development framework including 10 SD outcomes in 2015 and the ARCGS oversees the Company's progress towards these outcomes, as well as the Company's overarching strategy towards SD according to the five management themes described above. The Company's approach to meeting its SD targets includes:

- ***Key Performance Indicators.*** A set of KPIs for every business segment to report against, overseen by the ARCGS;
- ***SD-focused Business Plans.*** An expectation that SD is integrated into each business segment plan, acting on the relevant SD issues material to its business;
- ***SD-focused Corporate Initiatives.*** Corporate initiatives on SD for the benefit of the Group, which include, for example, accelerating progress towards low-carbon steelmaking; innovating steel solutions for a positive SD impact; and developing a 'mine to metal' chain of assurances measured against multi-stakeholder environmental and social standards; and
- ***SD-focused Reporting.*** A robust articulation of the Company's approach and progress through clear narrative and transparent, third-party assured reporting. In 2018, climate change was identified as one of the themes to be overseen by the ARCGS, which then nominated senior officers to take responsibility for its low-carbon transition strategy, its carbon performance, and its work on advocating for the introduction of carbon-related government policies.

These senior officers are supported by corporate functions covering strategy, technology, R&D, corporate responsibility and communications, all of which are represented on the Carbon and Environment Group and report to one executive vice-president, who works closely with the CEO and CFO on climate issues. The Company also convenes a number of working groups on particular topics, tracks stakeholder expectations as well as long-term trends and considers their implications for the business.

ArcelorMittal continues to work with external organizations on SD issues, and is a member of the Extractive Industries Transparency Initiative.

In Brazil, where transparency is of particular stakeholder concern, ArcelorMittal partners with the non-governmental organization Transparency International.

ArcelorMittal's human rights policy draws on the UN Universal Declaration of Human Rights, the International Bill of Human Rights, the core conventions of the International Labor Organization, and the UN Global Compact; it also aims to contribute to UN SDG 8 (Decent work and economic growth) focus on decent working conditions, including target 8.7 on modern slavery. The policy includes commitments to workers, local communities and business partners, and covers health and safety, labor rights and the rights of indigenous people. Employees working in relevant functions are required to undertake training in the Company's policy every three years, and in 2019, 90.1% of the Company's relevant workforce had completed up-to-date human rights training, down from 94% in 2018. Where appropriate, ArcelorMittal provides face-to-face training for employees on human rights. The Company also conducts wider ethical and integrity training: in 2019, 88.6% of ArcelorMittal's employees had completed up to date training in the Code of Business Conduct, and 95.4% had completed their Anti-Corruption training.

In 2019, the Company also continued to deepen its understanding of the relevant risks in its supply chain by strengthening its supply chain risk management and audit processes, focusing on its work to develop ResponsibleSteel™ (see "—Management Theme #3: Customer reassurance" above), as well as several mining certification standards aimed at ensuring that both its own sites and its supply chain uphold international human rights, environmental and governance standards.

Corporate governance

The "Corporate Governance" section of the Company's Annual Report 2019 contains a full overview of its corporate governance practices.

Directors and senior management

Board of Directors

ArcelorMittal places a strong emphasis on corporate governance. ArcelorMittal has five independent directors on its nine member Board of Directors. The Board's Audit & Risk Committee and Appointments, Remuneration, Corporate Governance and Sustainability Committee ("ARCGS Committee") are each comprised exclusively of independent directors.

The annual general meeting of shareholders on May 7, 2019 acknowledged the expiration of the terms of office of Mrs. Vanisha Mittal Bhatia, Mrs. Suzanne Nimocks, Mr. Karel De Gucht and Mr. Jeannot Krecké.

At the same meeting, the shareholders re-elected Mrs. Vanisha Mittal Bhatia, Mrs. Suzanne Nimocks, Mr. Karel De Gucht and Mr. Jeannot Krecké for a new term of three years each.

The Board of Directors is composed of nine directors, of which eight are non-executive directors and five are independent directors. The Board of Directors comprises only one executive director, Mr. Lakshmi N. Mittal, the Chairman and Chief Executive Officer of ArcelorMittal.

Mr. Bruno Lafont is the Lead Independent Director. In the most recent assessment of the Company's leadership structure, the ARCGS Committee reviewed the key duties and responsibilities of the Company's Chairman and Chief Executive Officer and its Lead Independent Director as follows:

Chairman	Lead Independent Director
* Chairs the Board of Directors' and shareholders' meetings	* Provides independent leadership to the Board of Directors
* Works with the Lead Independent Director to set agenda for the Board of Directors and reviews the schedule of the meetings	* Presides at executive sessions of independent directors
* Serves as a public face of the Board of Directors and of the Company	* Advises the Chairman of any decisions reached and suggestions made at the executive sessions, as appropriate
* Serves as a resource for the Board of Directors	* Coordinates the activities of the other independent directors
* Guides discussions at the Board of Directors meetings and encourages directors to express their positions	* Oversees Board of Directors' governance processes, including succession planning and other governance-related matters
* Communicates significant business developments and time-sensitive matters to the Board of Directors	* Liaison between the Chairman and the other independent directors
* Is responsible for managing day-to-day business and affairs of the Company	* Calls meetings of the independent directors when necessary and appropriate
* Interacts with the CEO Office and Executive Officers of the Company and frequently meets stakeholders and provides feedback to the Board of Directors	* Leads the Board of Directors' self-evaluation process and such other duties as are assigned from time to time by the Board of Directors

The members of the Board of Directors are set out below:

Name	Age[4]	Date of joining the Board[5]	End of Term	Position within ArcelorMittal
Lakshmi N. Mittal	69	May 1997	May 2020	Chairman of the Board of Directors and Chief Executive Officer
Vanisha Mittal Bhatia[6]	39	December 2004	May 2022	Director
Jeannot Krecké	69	January 2010	May 2022	Director
Suzanne P. Nimocks[2 3]	60	January 2011	May 2022	Director
Bruno Lafont[1 2 3]	63	May 2011	May 2020	Lead Independent Director
Tye Burt[2 3]	62	May 2012	May 2021	Director
Michel Wurth	65	May 2014	May 2020	Director
Karyn Ovelmen[1 3]	56	May 2015	May 2021	Director
Karel de Gucht[1 3]	65	May 2016	May 2022	Director

1. Member of the Audit & Risk Committee.
2. Member of the Appointments, Remuneration, Corporate Governance and Sustainability Committee.
3. Non-executive and independent director.
4. Age as of December 31, 2019.
5. Date of joining the Board of ArcelorMittal or, if prior to 2006, its predecessor Mittal Steel Company NV.
6. Mrs. Vanisha Mittal Bhatia is the daughter of Mr. Lakshmi N. Mittal and sister of Mr. Aditya Mittal.

Henk Scheffer is the Company Secretary and, accordingly, acts as secretary of the Board of Directors.

Lakshmi N. Mittal, 69, is the Chairman and Chief Executive Officer of ArcelorMittal, a renowned global businessman who serves on the boards of various companies and advisory councils. He is an active philanthropist engaged in the fields of education and child health. Mr. Mittal was born in Sadulpur in Rajasthan in 1950. He graduated from St Xavier's College in Kolkata, where he received a Bachelor of Commerce degree. He has received numerous awards for his contribution to the steel industry over the years and recently, in April 2018, Mr. Mittal was awarded by the American Iron and Steel Institute with the Gary medal award recognizing his great contribution to the steel industry. He is widely recognized for successfully integrating many company acquisitions in North America, South America, Europe, South Africa and the CIS. Mr. Mittal is Chairman of the board of Aperam and a member of the board of Goldman Sachs. He previously sat on the board of Airbus N.V. He is a member of the Foreign Investment Council in Kazakhstan, the National Investment Council of Ukraine, the Global CEO Council of the Chinese People's Association for Friendship with Foreign Countries, the World Economic Forum's International Business Council, the World Steel Association's Executive Committee, the European Round Table of Industrialists, the Indian School of Business and a member of the board of Trustees of Cleveland Clinic. Mr. Mittal is the father of Aditya Mittal (who is President and Chief Financial Officer of ArcelorMittal) and Vanisha Mittal Bhatia (who is a Director of ArcelorMittal). Mr. Mittal is a citizen of India.

Vanisha Mittal Bhatia, 39, is a non-independent Director of ArcelorMittal. She was appointed as a member of the LNM Holdings Board of Directors in June 2004. Ms. Vanisha Mittal Bhatia was appointed to Mittal Steel's Board of Directors in December 2004, where she worked in the Procurement department leading various initiatives including "total cost of ownership program". She joined Aperam in April 2011 and since has held the position of Chief Strategy Officer. She has a Bachelor of Sciences from the European Business School. Ms. Mittal Bhatia is a citizen of India.

Jeannot Krecké, 69, is a non-executive and non-independent Director of ArcelorMittal. He started his university studies at the Université Libre de Bruxelles (ULB) in Belgium in 1969, from where he obtained a degree in physical and sports education. He decided in 1983 to change professional direction. His interests led him to retrain in economics, accounting and taxation. He enrolled in various courses, in particular in the United States. Following the legislative elections of June 13, 2004, Mr. Krecké was appointed Minister of the Economy and Foreign Trade of Luxembourg on July 13, 2004. Upon the return of the coalition government formed by the Christian Social Party (CSV) and the Luxembourg Socialist Workers' Party (LSAP) as a result of the legislative elections of June 7, 2009, Mr. Krecké retained the portfolio of Minister of the Economy and Foreign Trade on July 23, 2009. As of July 2004, Mr. Krecké represented the Luxembourg government at the Council of Ministers of the EU in the Internal Market and Industry sections of its Competitiveness configuration, as well as in the Economic and Financial Affairs Council, and in the Energy section of its Transport, Telecommunications and Energy configuration. He was also a member of the Eurogroup from July 2004 to June 2009. On February 1, 2012, Mr. Krecké retired from government and decided to end his active political career in order to pursue a range of different projects. Mr. Krecké is currently the CEO of Key International Strategy Services. He is a member of the boards of JSFC Sistema, of East West United Bank, of Calzedonia Finanziara S.A., Jan De Nul S.A. and Novenergia Holding Company S.A. Mr. Krecké is a citizen of Luxembourg.

Suzanne P. Nimocks, 60, is a non-executive and independent Director of ArcelorMittal and a member of the Appointments, Remuneration, Corporate Governance and Sustainability Committee. She was previously a director (senior partner) with McKinsey & Company, a global management consulting firm, from June 1999 to March 2010, and was with the firm in various other capacities beginning in 1989, including as a leader in the firm's Global Petroleum Practice, Electric Power & Natural Gas Practice, Organization Practice, and Risk Management Practice. Ms. Nimocks chaired the Environmental Committee of the Greater Houston Partnership, the primary advocate of Houston's business community, until December 31, 2010. She holds a Bachelor of Arts in Economics from Tufts University and a Masters in Business Administration from the Harvard Graduate School of Business. Ms. Nimocks is currently a board member of Ovintiv Inc (formerly Encana Corporation), Valaris Plc (formerly Rowan Companies Plc), and Owens Corning, all listed companies. Ovintiv Inc is a major natural gas exploration and production company, Valaris Plc provides drilling services for the oil and gas industry and Owens Corning is a manufacturer of building products. In the non-profit sector, she is a member of the board of directors of the Houston Zoo and serves as a Trustee of the Texas Children's Hospital. Ms. Nimocks is a citizen of the United States of America.

Bruno Lafont, 63, is Lead Independent Director of ArcelorMittal, a member of the Audit & Risk Committee and chairman of the Appointments, Remuneration, Corporate Governance and Sustainability Committee. He began his career at Lafarge in 1983 and has held numerous positions in finance and international operations with the same company. In 1995, Mr. Lafont was appointed Group Executive Vice President, Finance, and thereafter, Executive Vice President of the Gypsum Division in 1998. Mr. Lafont joined Lafarge's General Management as Chief Operating Officer between May 2003 and December 2005, Chief Executive Officer in January 2006, and he was appointed Chairman and Chief Executive Officer in May 2007. In July 2015 Mr. Lafont was appointed Honorary Chairman of Lafarge. He was co-Chairman of the Board of Directors of LafargeHolcim between July 2015 and May 2017. He was a board member of EDF from 2008 to 2019. Mr. Lafont left the Executive Committee of the World Business Council for Sustainable Development (WBCSD) in December 2019. Born in 1956, Mr. Lafont is a graduate from the Hautes Etudes Commerciales business school (HEC 1977, Paris) and the Ecole Nationale d'Administration (ENA 1982, Paris). Mr. Lafont is a citizen of France. Mr. Lafont has informed the Company that, on December 8, 2017, he (along with five other former Lafarge officers) was placed under formal investigation (mis en examen) in his capacity as former CEO of Lafarge SA, in relation to alleged payments made by a subsidiary of Lafarge SA (Lafarge Cement Syria) to terrorist groups in Syria, and that alleged violations of EU economic sanctions and French labor law are also being investigated.

Tye Burt, 62, is a non-executive and independent Director of ArcelorMittal and a member of the Appointments, Remuneration, Corporate Governance Committee and Sustainability Committee. He was appointed President and Chief Executive Officer of Kinross Gold Corporation in March 2005. He held this position until August 1, 2012. Kinross is listed on the New York Stock Exchange and the Toronto Stock Exchange. Mr. Burt was also a member of the board of directors of Kinross. Mr. Burt has broad experience in the global mining industry, specializing in corporate finance, business strategy and mergers and acquisitions. Prior to joining Kinross, he held the position of Vice Chairman and Executive Director of Corporate Development at Barrick Gold Corporation. He was President of the Cartesian Capital Group from 2000 to 2002; Chairman of Deutsche Bank Canada and Deutsche Bank Securities Canada; Global Managing Director of Global Metals and Mining for Deutsche Bank AG from 1997 to 2000; and Managing Director and Co-Head of the Global Mining Group at BMO Nesbitt Burns from 1995 to 1997, holding various other positions at BMO Nesbitt Burns from 1986 to 1995. Mr. Burt is the Chair and Principal at Carbon Arc Capital

Investments Corp. and was the Life Sciences Research Campaign Chair of the University of Guelph's Better Planet Project. Mr. Burt is a member of the Board of Directors of Boart Longyear, a global leader in the drilling services and equipment industry. He is a graduate of Osgoode Hall Law School, a member of the Law Society of Upper Canada, and he holds a Bachelor of Arts degree from the University of Guelph. Mr. Burt is a citizen of Canada.

Michel Wurth, 65, is a non-independent Director of ArcelorMittal. He joined Arbed in 1979 and held a variety of functions before joining the Arbed Group Management Board and becoming its chief financial officer in 1996. The merger of Aceralia, Arbed and Usinor, leading to the creation of Arcelor in 2002, led to Mr. Wurth's appointment as senior executive vice president and CFO of Arcelor. He became a member of ArcelorMittal's Group Management Board in 2006, responsible for Flat Carbon Europe, Global R&D, Distribution Solutions and Long Carbon Worldwide respectively. Michel Wurth retired from the GMB in April 2014 and was elected to ArcelorMittal's board of directors in May 2014. He holds a Law degree from the University of Grenoble, France, and a degree in Political Science from the Institut d'Études Politiques de Grenoble as well as a Master's of Economics from the London School of Economics, UK. Mr. Wurth is also doctor of laws honoris causa of the Sacred Heart University, Luxembourg. Mr. Wurth is Chairman of ArcelorMittal Luxembourg S.A. (a wholly owned subsidiary of ArcelorMittal S.A.) as well as Vice Chairman of the supervisory board of Dillinger Hütte AG and Dillinger Hütte Saarstahl AG (associates of ArcelorMittal). Mr. Wurth served as Chairman of the Luxembourg Chamber of Commerce between May 2004 and May 2019 and is a member of the Council of the Central Bank of Luxembourg. He is also non-executive Chairman of Paul Wurth S.A. and member of the supervisory board of SMS Group (the controlling shareholder of Paul Wurth S.A.) as well as non-executive Chairman of BIP Investment Partners S.A. and BIP Capital Partners S.A., of Brasserie Nationale. Paul Wurth S.A. is controlled by SMS Group, a leading family owned equipment and engineering supplier for the steel and non-ferrous metal producing industry. BIP Investment Partners and BIP Capital Partners S.A. are Luxembourg based companies organized as investment funds investing in small and mid-cap private equity and Brasserie Nationale is a privately owned brewery based in Luxembourg. Mr. Wurth is vice-chairman of the Luxembourg Red Cross. Mr. Wurth is a citizen of Luxembourg.

Karyn Ovelmen, 56, is a non-executive and independent Director of ArcelorMittal as well as the chairman of the Audit & Risk Committee. From January 2019 to December 31, 2019, Mrs. Ovelmen was the Gas Power Transformation Leader for the General Electric Company. Prior to that, she served as Executive Vice President and Chief Financial Officer of Flowserve, a position that she held from June 2015 to February 2017. Previously, she also served as Chief Financial Officer and Executive Vice President of LyondellBasell Industries NV from 2011 to May 2015, as Executive Vice President and Chief Financial Officer of Petroplus Holdings AG from May 2006 to September 2010 and as Executive Vice President and Chief Financial Officer of Argus Services Corporation from 2005 to 2006. Prior to that, she was Vice President of External Reporting and Investor Relations for Premcor Refining Group Inc. She also spent 12 years with PricewaterhouseCoopers, primarily serving energy industry accounts. Mrs. Ovelmen was a member of the Gates Industrial Corporation plc. Board of Directors as a non-executive director and was a member of their Audit Committee from December 2017 to March 2019. Mrs. Ovelmen holds a Bachelor of Arts degree from the University of Connecticut, USA, and is a Certified Public Accountant ("CPA"). Mrs. Ovelmen is a citizen of the United States of America.

Karel de Gucht, 65, is a non-executive and independent Director. Mr. de Gucht is a Belgian Minister of State. He was the European Commissioner for Trade in the 2nd Barroso Commission from 2010 to 2014 and for Development and Humanitarian Aid in the 1st Barroso Commission from 2009 to 2010. Previously, Mr. De Gucht served as Belgium's Minister of Foreign Affairs from 2004 to 2009 and Vice Prime Minister of Belgium from 2008 to 2009. In addition, in 2006, he was the Chairman in Office of the Organization for Security and Cooperation in Europe (OSCE) and Member of the Security Council of the United Nations from 2007 to 2008. Since 1991, Mr. De Gucht has been a Professor of Law at the VUB (the Dutch-speaking Free University Brussels). He is currently a member of the European Advisory Board of CVC Capital Partners, a member of the board of directors of the listed company Proximus NV and the president of the IES, the Institute of European Studies at the VUB. Mr. de Gucht holds a Master of Law degree from the VUB. Mr. de Gucht is a Belgian citizen.

Senior management

On December 15, 2015, the Company announced that it would simplify its management structure in-line with the ongoing drive to promote a performance-driven culture, empowering the segments to deliver optimum business results. As a result the GMB, which was established to ensure a smooth integration following the creation of ArcelorMittal, was replaced, effective January 1, 2016, with a more flexible structure. As of December 31, 2019, ArcelorMittal's senior management is comprised of the CEO Office supported by five other Executive Officers. ArcelorMittal's CEO Office is comprised of the Chief Executive Officer ("CEO"), Mr. Lakshmi N. Mittal, and the President and Chief Financial Officer ("CFO"), Mr. Aditya Mittal. Together, the Executive Officers are responsible for the implementation of the Company strategy, overall management of the business and all operational decisions.

Name	Age[1]	Position
Lakshmi N. Mittal	69	Chairman and Chief Executive Officer of ArcelorMittal
Aditya Mittal	43	President and Chief Financial Officer of ArcelorMittal, Investor Relations, and Chief Executive Officer of ArcelorMittal Europe
Brian Aranha	64	Executive vice president, head of strategy, CTO, R&D, CCM, and global automotive
Jefferson de Paula	61	Executive vice president, CEO ArcelorMittal South America Long
Geert Van Poelvoorde	54	Executive vice president, CEO ArcelorMittal Europe Flat
Simon C. Wandke	60	Executive vice president, CEO ArcelorMittal Mining
Bart Wille	58	Executive vice president, head of HR

1. Age as of December 31, 2019.

Lakshmi N. Mittal (See "–Board of Directors").

Aditya Mittal, 43, is the President and Chief Financial Officer of ArcelorMittal. He is also the Chief Executive Officer of ArcelorMittal Europe. Following the formation of ArcelorMittal in 2006, Aditya Mittal held various senior leadership roles, including managerial oversight of the Group's flat carbon steel businesses in the Americas and Europe, in addition to his role as CFO and membership in the Group Management Board. Aditya Mittal joined Mittal Steel in January 1997, serving in various finance and management roles. In 1999, he was appointed Head of Mergers and Acquisitions. In his position, he led the Company's acquisition strategy, resulting in Mittal Steel's expansion into Central Europe, Africa and the United States. Subsequently, he was also involved in post-merger integration, turnaround and improvement strategies of the acquired companies. Between 2004 and 2006, Aditya Mittal was the President and CFO of Mittal Steel. In 2006, he initiated and led Mittal Steel's offer for Arcelor, creating the world's first 100 million tonnes plus steel company. In 2008, Aditya Mittal was named 'European Business Leader of the Future' by CNBC Europe and was ranked fourth in Fortune magazine's '40 under 40' list in 2011. He is an active philanthropist with a particular interest in child health. Together with his wife Megha, he is a significant supporter of the Great Ormond Street Children's Hospital in London, having funded the Mittal Children's Medical Centre, and in India, the couple work closely with UNICEF, having funded the first ever country-wide survey into child nutrition, the result of which will be used by the Government of India to inform relevant policy. Aditya Mittal serves on the board of Aperam, Iconiq Capital and Wharton School,is Chairman of India's second largest refinery, HPCL-Mittal Energy Limited (HMEL), and is Chairman of the Board of Directors of AMNS India. He is also a trustee at Brookings Institute and an alumni of the World Economic Forum Young Global Leader's Programme. Aditya Mittal holds a Bachelor's degree in Economics with concentrations in Strategic Management and Corporate Finance from the Wharton School in Pennsylvania, United States. Aditya Mittal is the son of Mr. Lakshmi N. Mittal and brother of Ms. Vanisha Mittal Bhatia. Mr. Aditya Mittal is a citizen of India.

Brian Aranha, 64, is a member of the Group management committee and an executive vice president, responsible for several corporate functions: Strategy, Technology, R&D, Commercial Coordination, Global Automotive, Communications and CR, Capital Goods as well as certain JVs in China and Saudi Arabia. He joined Dofasco in 1979 and held various diverse positions until 2003 when he was appointed Vice President of Commercial. Following Dofasco's integration into ArcelorMittal in 2007 he held various positions in Europe and NAFTA until he assumed his current role in 2016. Brian holds a Bachelor of applied sciences and engineering from the University of Toronto and has attended the Executive Program at Queens University in Kingston, Ontario (Canada). Mr. Aranha is a citizen of Canada.

Jefferson de Paula, 61, is a member of the Group management committee who joined the group in 1991 as Meltshop Manager of Cariacica's plant (Brazil) and became the plant's General Manager in 1998. In 2001, he moved to Acindar in Argentina as COO and was appointed its Industrial and Commercial Vice President in 2006. In 2008, he joined Long Carbon Europe as COO of the Sections, Rails and Piles business division, later becoming CEO of Long Carbon Europe - South Division. In 2011, he was named CEO of Long Carbon Americas, which in 2014 became Long Carbon Central & South America. Mr. de Paula holds a Bachelor's Degree in metallurgical engineering from Universidade Federal Fluminense (Brazil), a Master's Degree in finance and marketing from Universidad Austral (Argentina) and has attended to senior executive courses from Insead (France) and from Kellogg - Northwestern University (USA). In addition to his position in the Group, Mr. de Paula is the current vice president and member of the strategic board of Minas Gerais State Industry Association (FIEMG), he sits in the board of directors of Brazil's Steel Association (Aço Brasil) and is the former president and member of Latin American Steel Association board (Alacero). Mr. de Paula is a citizen of Brazil.

Geert Van Poelvoorde, 54, is a member of the Group management committee. He started his career in 1989 as a project engineer at the Sidmar Gent hot strip mill, where he held several senior positions in the automation and process

computer department. He moved to Stahlwerke Bremen in 1995 as senior project manager. Between 1998 and 2002, he headed a number of departments, and in 2003 he was appointed director of Stahlwerke Bremen, responsible for operations and engineering. In 2005, Mr. Van Poelvoorde returned to ArcelorMittal Gent to take up the position of Chief Operating Officer. In 2008, he became Chief Executive Officer of ArcelorMittal Gent with direct responsibility for primary operations. He was appointed Chief Executive Officer of the Business Division North within Flat Carbon Europe in 2009 and in January 2014, he was appointed Chief Executive Officer of Flat Carbon Europe and Purchasing. Since November 2015 he is also president of Eurofer, the European steel federation. He graduated from the University of Ghent with a degree in civil engineering and electronics. Mr. Van Poelvoorde is a citizen of Belgium.

Simon C. Wandke, 60, is a member of the Group management committee and the Chief Executive Officer of ArcelorMittal Mining. He joined ArcelorMittal in January 2011 as chief commercial officer of ArcelorMittal Mining. He has over 30 years' experience in the mining and minerals industry, starting his career in 1981 at BHP, where he held positions in mines in Australia and Indonesia and held other commercial offices globally until 2002. He then joined Destra Consulting Group as Partner before becoming Chief Marketing Officer for Ferrexpo plc in 2006 based in Hong Kong, Switzerland & United Kingdom. Simon is a graduate of the Australian Institute of Company Directors with a diploma in Company Directorship. He also holds a post graduate diploma in Corporate Finance from Swinburne University as well as a B.A., Psych, Marketing (Comm) from the University of Melbourne. Mr. Wandke holds dual citizenship in Australia and the United Kingdom.

Bart Wille,58, is a member of the Group management committee. He was appointed head of human resources in January 2018. He joined ArcelorMittal after more than 30 years of global human resources management experience in various multinational companies. Mr. Wille joined Unilever in 1985 with 22 years of service and positions held in Belgium, the United Kingdom, Brazil and the Netherlands. After having joined Puratos (food ingredients) for a short period, Mr. Wille pursued his career with Bekaert as chief human resources officer at the beginning of 2009. As a member of the Bekaert Group Executive Board, Mr. Wille was responsible for human resources and the reorganization agenda of the company worldwide. In this role, he supported the international expansion of the company and he participated in the restructuring and change of the company's organization, as well as the continuous transformation of its culture. Mr. Wille is a graduate in international business administration of UFSIA, the University of Antwerp. Mr. Wille is a citizen of Belgium.

Board practices/corporate governance

This section describes the corporate governance practices of ArcelorMittal for the year ended December 31, 2019.

Board of Directors and senior management

ArcelorMittal is governed by a Board of Directors and managed by the senior management. ArcelorMittal's senior management is comprised of the CEO Office - comprising the CEO, Mr. Lakshmi N. Mittal and the President and CFO, Mr. Aditya Mittal. The CEO Office is supported by a team of five other Executive Officers, who together encompass the key regions and corporate functions.

A number of corporate governance provisions in the Articles of Association of ArcelorMittal reflect provisions of the Memorandum of Understanding signed on June 25, 2006 (prior to Mittal Steel Company N.V.'s merger with Arcelor), amended in April 2008 and which mostly expired on August 1, 2009. For more information about the Memorandum of Understanding, see "Memorandum and articles of association".

ArcelorMittal fully complies with the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. ArcelorMittal also complies with the New York Stock Exchange Listed Company Manual as applicable to foreign private issuers.

Board of Directors

9 members	8 non-executive directors	5 independent directors	1 executive director (CEO)
33% women	67% men	7 average years on the Board	61 average age of directors

The Board of Directors is in charge of the overall governance and direction of ArcelorMittal. It is responsible for the performance of all acts of administration necessary or useful in furtherance of the corporate purpose of ArcelorMittal, except for matters reserved by Luxembourg law or the Articles of Association to the general meeting of shareholders. The Articles of Association provide that the Board of Directors is composed of a minimum of three and a maximum of 18 members, all of whom, except the CEO, must be non-executive directors. None of the members of the Board of Directors, except for the CEO, may hold an executive position or executive mandate within ArcelorMittal or any entity controlled by ArcelorMittal.

For further information on the composition of the Board of Directors, including the expiration of each Director's term and the period during which each Director has served, see "Directors and Senior Management" above.

The Articles of Association provide that directors are elected and removed by the general meeting of shareholders by a simple majority of votes cast. Other than as set out in the Company's Articles of Association, no shareholder has any specific right to nominate, elect or remove directors. Directors are elected by the general meeting of shareholders for three-year terms. In the event that a vacancy arises on the Board of Directors for any reason, the remaining members of the Board of Directors may by a simple majority elect a new director to temporarily fulfill the duties attaching to the vacant post until the next general meeting of the shareholders.

Mr. Lakshmi N. Mittal was elected Chairman of the Board of Directors on May 13, 2008. Mr. Mittal is also ArcelorMittal's CEO. Mr. Mittal was re-elected to the Board of Directors for a three-year term at the annual general meeting of shareholders on May 10, 2017.

A director is considered "independent" if:

(a) he or she is independent within the meaning of the New York Stock Exchange Listed Company Manual, as applicable to foreign private issuers,

(b) he or she is unaffiliated with any shareholder owning or controlling more than two percent of the total issued share capital of ArcelorMittal, and

(c) the Board of Directors makes an affirmative determination to this effect.

For these purposes, a person is deemed affiliated to a shareholder if he or she is an executive officer, a director who also is an employee, a general partner, a managing member or a controlling shareholder of such shareholder. The 10 Principles of Governance of the Luxembourg Stock Exchange, which constitute ArcelorMittal's domestic corporate governance code, require ArcelorMittal to define the independence criteria that apply to its directors, which are described in article 8.1 of its Articles of Association.

Specific characteristics of the director role

Required share ownership Lead Independent Director - minimum of 6,000 ordinary shares Non-executive directors - minimum of 4,000 ordinary shares	*Maximum 12 year service* (independent directors)	*May not serve* on the boards of directors of *more than four* publicly listed companies (non-executive directors)	Required to *sign the Company's Code of Business Conduct* and confirm their adherence annually

The Company's Articles of Association do not require directors to be shareholders of the Company. The Board of Directors nevertheless adopted a share ownership policy on October 30, 2012, that was amended on November 7, 2017, considering that it is in the best interests of all shareholders for all non-executive directors to acquire and hold a minimum number of ArcelorMittal ordinary shares in order to better align their long-term interests with those of ArcelorMittal's shareholders. The Board of Directors believes that this share ownership policy will result in a meaningful holding of ArcelorMittal shares by each non-executive director, while at the same time taking into account the fact that the share ownership requirement should not be excessive in order not to unnecessarily limit the pool of available candidates for appointment to the Board of Directors. Directors must hold their shares directly or indirectly, and as sole or joint beneficiary owner (e.g., with a spouse or minor children), at the latest within three years of his or her election to the Board of Directors . Each director will hold the shares acquired on the basis of this policy for so long as he or she serves on the Board of Directors. Directors purchasing shares in compliance with this policy must comply with the ArcelorMittal Insider Dealing Regulations and, in particular, refrain from trading during any restricted period, including any such period that may apply immediately after the Director's departure from the Board of Directors for any reason.

On October 30, 2012, the Board of Directors also adopted a policy that places limitations on the terms of independent directors as well as the number of directorships that directors may hold in order to align the Company's corporate governance practices with best practices in this area (as highlighted in the table above). Nevertheless, the Board of Directors may, by way of exception to this rule, make an affirmative determination, on a case-by-case basis, that a Director may continue to serve beyond the 12-year rule if the Board of Directors considers it to be in the best interest of the Company based on the contribution of the Director involved taking into consideration the balance

between the knowledge, skills, experience of the director and the need for renewal of the Board.

As membership of the Board of Directors represents a significant time commitment, the policy requires both executive and non-executive directors to devote sufficient time to the discharge of their duties as a director of ArcelorMittal. Directors are therefore required to consult with the Chairman and the Lead Independent Director before accepting any additional commitment that could conflict with or impact the time they can devote to their role as a Director of ArcelorMittal. A non-executive Director's service on the board of directors of any subsidiary or affiliate of ArcelorMittal or of any non-publicly listed company is not taken into account for purposes of complying with the service limitation.

Although non-executive directors of ArcelorMittal who change their principal occupation or business association are not necessarily required to leave the Board of Directors, the policy requires each non-executive director, in such circumstances, to promptly inform the Board of Directors of the action he or she is contemplating. Should the Board of Directors determine that the contemplated action would generate a conflict of interest, such non-executive director would be asked to tender his or her resignation to the Chairman of the Board of Directors, who would decide to accept the resignation or not.

None of the members of the Board of Directors, including the executive director, have entered into service contracts with ArcelorMittal or any of its subsidiaries that provide for any form of remuneration or for benefits upon the termination of their term. All non-executive Directors of the Company signed the Company's Appointment Letter, which confirms the conditions of their appointment by the General Meeting of the Shareholders including compliance with certain non-compete provisions, the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange and the Company's Code of Business Conduct.

The remuneration of the members of the Board of Directors is determined on a yearly basis by the annual general meeting of shareholders.

Share transactions by management

In compliance with laws prohibiting insider dealing, the Board of Directors of ArcelorMittal has adopted insider dealing regulations, which apply throughout the ArcelorMittal group. These regulations are designed to ensure that insider information is treated appropriately within the Company and avoid insider dealing and market manipulation. Any breach of the rules set out in this procedure may lead to criminal or civil charges against the individuals involved, as well as disciplinary action by the Company.

Operation

General

The Board of Directors and the Board committees may engage the services of external experts or advisers as well as take all actions necessary or useful to implement the Company's corporate purpose. The Board of Directors (including its two committees) has its own budget, which covers functioning costs such as external consultants, continuing education activities for directors and travel expenses.

Meetings

The Board of Directors meets when convened by the Chairman of the Board or any two members of the Board of Directors. The Board of Directors holds physical meetings at least on a quarterly basis as five regular meetings are scheduled per year. The Board of Directors holds additional meetings if and when circumstances require, in person or by teleconference and can take decisions by written circulation, provided that all members of the Board of Directors agree.

6 meetings (2019)	100% Average attendance rate

In order for a meeting of the Board of Directors to be validly held, a majority of the directors must be present or represented, including at least a majority of the independent directors. In the absence of the Chairman, the Board of Directors will appoint by majority vote a chairman for the meeting in question. The Chairman may decide not to participate in a Board of Directors' meeting, provided he has given a proxy to one of the directors who will be present at the meeting. For any meeting of the Board of Directors, a director may designate another director to represent him or her and vote in his or her name, provided that the director so designated may not represent more than one of his or her colleagues at any time.

Each director has one vote and none of the directors, including the Chairman, has a casting vote. Decisions of the Board of Directors are made by a majority of the directors present and represented at a validly constituted meeting, except for the decisions of the Board of Directors relating to the issue of any financial instruments carrying or potentially carrying a right to equity pursuant to the authorization conferred by article 5.5 of the Articles of Association, which shall be taken by a majority of two-thirds of the directors present or represented at a validly constituted meeting.

Lead Independent Director

Mr. Bruno Lafont was elected by the Board of Directors as ArcelorMittal's Lead Independent Director and re-elected as a director for a three-year term at ArcelorMittal AGM held on May 10, 2017.

The agenda of each meeting of the Board of Directors is decided jointly by the Chairman of the Board of Directors and the Lead Independent Director.

Separate meetings of independent directors

The independent members of the Board of Directors may schedule meetings outside the presence of non-independent directors. One meeting of the independent directors outside the presence of management was held in 2019.

Annual self-evaluation

The Board of Directors decided in 2008 to start conducting an annual self-evaluation of its functioning in order to identify potential areas for improvement. The first self-evaluation process was carried out in early 2009. The self-evaluation process includes structured interviews between the Lead Independent Director and each director and covers the overall performance of the Board of Directors, its relations with senior management, the performance of individual directors, and the performance of the committees. The process is supported by the Company Secretary under the supervision of the Chairman and the Lead Independent Director. The findings of the self-evaluation process are examined by the ARCGS Committee and presented with recommendations from the ARCGS Committee to the Board of Directors for adoption and implementation. Suggestions for improvement of the Board of Directors' process based on the prior year's performance and functioning are implemented during the following year.

The 2019 Board of Directors' self-evaluation was completed by the Board on January 15, 2020. The Board of Directors was of the opinion that it and the management had cooperated successfully during 2019 on important matters including operational and financial performance, the acquisition of Ilva and of Essar Steel, the ongoing strengthening of the balance sheet, strategy, especially on short term strategic planning, sustainability, labor relations and health and safety. The Board of Directors reviewed the practical implementation of the governance structure and thought it was working well. The Board set new priorities for discussion and review and identified a number of priority topics for 2020.

The Board of Directors believes that its members have the appropriate range of skills, knowledge and experience, as well as the degree of diversity necessary to enable it to effectively govern the business. The Board of Directors composition is reviewed on a regular basis and additional skills and experience are actively searched for in line with the expected development of ArcelorMittal's business as and when appropriate.

Required skills, experience and other personal characteristics

Diverse skills, backgrounds, knowledge, experience, geographic location, nationalities and gender are required in order to effectively govern a global business the size of the Company's operations. The Board of Directors and its committees are therefore required to ensure that the Board has the right balance of skills, experience, independence and knowledge necessary to perform its role in accordance with the highest standards of governance.

The Company's directors must demonstrate unquestioned honesty and integrity, preparedness to question, challenge and critique constructively, and a willingness to understand and commit to the highest standards of governance. They must be committed to the collective decision-making process of the Board of Directors and must be able to debate issues openly and constructively, and question or challenge the opinions of others. Directors must also commit themselves to remain actively involved in Board decisions and apply strategic thought to matters at issue. They must be clear communicators and good listeners who actively contribute to the Board in a collegial manner. Each director must also ensure that no decision or action is taken that places his or her interests before the interests of the business. Each director has an obligation to protect and advance the interests of the Company and must refrain from any conduct that would harm it.

In order to govern effectively, non-executive directors must have a clear understanding of the Company's strategy, and a thorough knowledge of the ArcelorMittal group and the industries in which it operates. Non-executive directors must be sufficiently familiar with the Company's core business to effectively contribute to the development of strategy and monitor performance.

With specific regard to the non-executive directors of the Company, the composition of the group of non-executive directors should be such that the combination of experience, knowledge and independence of its members allows the Board to fulfill its obligations towards the Company and other stakeholders in the best possible manner.

The ARCGS Committee ensures that the Board of Directors is comprised of high-caliber individuals whose background, skills, experience and personal characteristics enhance the overall profile of the Board and meets its needs and diversity aspirations by nominating high quality candidates for election to the Board by the general meeting of shareholders.

Board profile

The key skills and experience of the directors, and the extent to which they are represented on the Board of Directors and its committees, are set out below. In summary, the non-executive directors contribute:

Renewal

The Board of Directors plans for its own succession, with the assistance of the ARCGS Committee. In doing this, the Board of Directors:

- considers the skills, backgrounds, knowledge, experience and diversity of geographic location, nationality and gender necessary to allow it to meet the corporate purpose;
- assesses the skills, backgrounds, knowledge, experience and diversity currently represented;
- identifies any inadequate representation of those attributes and agrees the process necessary to ensure a candidate is selected who brings them to the Board of Directors; and
- reviews how Board performance might be enhanced, both at an individual director level and for the Board as a whole.

The Board believes that orderly succession and renewal is achieved through careful planning and by continuously reviewing the composition of the Board.

When considering new appointments to the Board, the ARCGS Committee oversees the preparation of a position specification that is provided to an independent recruitment firm retained to conduct a global search, taking into account, among other factors, geographic location, nationality and gender. In addition to the specific skills, knowledge and experience required of the candidate, the specification contains the criteria set out in the ArcelorMittal Board profile.

Diversity

In line with the worldwide effort to increase gender diversity on the boards of directors of listed and unlisted companies, the Board met its goal of increasing the number of women on the Board to at least three by the end of 2015 with the election of Mrs. Karyn Ovelmen in May 2015. Out of 9 members of the Board of Directors, women represent 33.33% in 2019. The ArcelorMittal Board's diversity not only relates to gender, but also to the region, background and industry of its members.

Director induction, training and development

The Board considers that the development of the directors' knowledge of the Company, the steel-making and mining industries, and the markets in which the Company operates is an ongoing process. To further bolster the skills and knowledge of directors, the Company set up a continuous development program in 2009.

Upon his or her election, each new non-executive director undertakes an induction program specifically tailored to his or her needs and includes ArcelorMittal's long-term vision centered on the concept of "Safe Sustainable Steel".

The Board's development activities include the provision of regular updates to directors on each of the Company's products and markets. Non-executive directors may also participate in training programs designed to maximize the effectiveness of the directors throughout their tenure and link in with their individual performance evaluations. The training and development program may cover not only matters of a business nature, but also matters falling into the environmental, social and governance area.

Structured opportunities are provided to build knowledge through initiatives such as visits to plants and mine sites and business briefings provided at Board meetings. Non-executive directors also build their Company and industry knowledge through the involvement of the CEO Office and other senior employees in Board meetings. Business briefings, site visits and development sessions underpin and support the Board's work in monitoring and overseeing progress towards the corporate purpose of creating long-term shareholder value through the development of the ArcelorMittal business in steel and mining. The Company therefore continuously builds directors' knowledge to ensure that the Board remains up-to-date with developments within the Company's segments, as well as developments in the markets in which the Company operates.

During the year, non-executive directors participated in the following activities:

- comprehensive business briefings intended to provide the directors with a deeper understanding of the Company's activities, environment, key issues and strategy of the Company's segments. These briefings are provided to the Board of Directors by senior executives, including CEO Office members. The briefings provided during the course of 2019 covered health and safety processes, cyber security, risk management, corporate responsibility,

carbon reduction strategy in steelmaking, capital allocation process, strategy. Business briefings took place at Board and committee meetings;

- briefing meetings with Company executives in charge of specific business segments or markets;
- site visits to plants and R&D centers; and
- development sessions on specific topics of relevance, such as health and safety, commodity markets, HR, investor relations, accounting, the world economy, changes in corporate governance standards, directors' duties and shareholder feedback.

The ARCGS Committee oversees director training and development. This approach allows induction and learning opportunities to be tailored to the directors' committee memberships, as well as the Board of Directors' specific areas of focus. In addition, this approach ensures a coordinated process in relation to succession planning, Board renewal, training, development and committee composition, all of which are relevant to the ARCGS Committee's role in securing the supply of talent to the Board.

Board of Directors committees

The Board of Directors has two committees:

- the Audit & Risk Committee, and
- the ARCGS Committee.

Audit & Risk Committee

3 members (100% independent)	7 meetings (2019)

In 2015, the Board decided to combine the Audit Committee with the Risk Management Committee in order to provide their members with a more holistic view of ArcelorMittal's current governance, risks and control systems.

- The primary function of the Audit & Risk Committee is to assist the Board in fulfilling its oversight responsibilities by reviewing:
- the integrity of the financial reports and other financial information provided by the Company to any governmental body or the public;
- the Company's compliance with legal and regulatory requirements;
- the registered public accounting firm's (Independent Auditor) qualifications and independence;
- the Company's system of internal control regarding finance, accounting, legal compliance, ethics and risk management that management and the Board have established;
- the Company's auditing, accounting and financial reporting processes generally;
- the identification and management of risks to which the ArcelorMittal group is exposed and
- conducting investigations into any matters, including whistleblower complaints, within its scope of responsibility and obtaining advice from outside legal, accounting, or other advisers, as necessary, to perform its duties and responsibilities.

The Audit & Risk Committee must be composed solely of independent members of the Board of Directors. The members are appointed by the Board of Directors each year after the annual general meeting of shareholders. The Audit & Risk Committee comprises three members, all of whom must be independent under the company's corporate governance guidelines, the New York Stock Exchange (NYSE) standards as applicable to foreign private issuers and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. The Audit & Risk Committee makes decisions by a simple majority with no member having a casting vote.

At least one member must qualify as an Audit & Risk Committee "financial expert" as defined by the SEC and determined by the Board.

At least one member must qualify as an Audit & Risk Committee "risk management expert" having experience in identifying, assessing, and managing risk exposures of large, complex companies.

The Audit & Risk Committee currently consists of 3 members: Mrs. Karyn Ovelmen, Mr. Bruno Lafont and Mr. Karel de Gucht, each of whom is an independent Director according to the NYSE standards and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. The Chairman of the Audit & Risk Committee is Mrs. Ovelmen.

According to its charter, the Audit & Risk Committee is required to meet at least four times a year. The Audit & Risk Committee performs an annual self-evaluation and completed its 2019 self-evaluation on January 15, 2020. The charter of the Audit & Risk Committee is available from ArcelorMittal upon request.

Appointments, Remuneration, Corporate Governance and Sustainability Committee (former ARCG Committee)

3 members (100% independent)

6 meetings (2019)

The ARCGS Committee is comprised of three directors, each of whom is independent under the New York Stock Exchange standards as applicable to foreign private issuers and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange.

The members are appointed by the Board of Directors each year after the annual general meeting of shareholders. The ARCGS Committee makes decisions by a simple majority with no member having a casting vote.

The Board of Directors has established the ARCGS Committee to:

- determine, on its behalf and on behalf of the shareholders within agreed terms of reference, ArcelorMittal's compensation framework, including short and long term incentives for the CEO, the President and CFO and for the five other Executive Officers;
- review and approve succession and contingency plans for key managerial positions at the level of the Executive Officers;
- consider any candidate for appointment or reappointment to the Board of Directors at the request of the Board of Directors and provide advice and recommendations to it regarding the same;
- evaluate the functioning of the Board of Directors and monitor the Board of Directors' self-evaluation process;
- assess the roles of the Chairman and CEO and deliberate on the merits of the Board's leadership structure to ensure that the most efficient and appropriate structure is in place; and
- develop, monitor and review corporate governance principles and corporate responsibility policies applicable to ArcelorMittal, as well as their application in practice;
- review the company's sustainable development plan and associated management systems and ensure the group is well positioned to meet the evolving expectations of stakeholders, including investors, customers, regulators, employees and communities.

During its meeting of May 8, 2018, the Board renewed its emphasis on four key areas (health & safety, environment and community relations, climate change and social issues) and added these to the scope of the ARCG Committee to ensure a Board level review of these important topics. Accordingly, the ARCG Committee was renamed the ARCGS Committee ("Appointments, Remuneration, Corporate Governance and Sustainability Committee") to highlight the Company's focus on these key areas. As a result, ArcelorMittal complies with the new Principle 9 on companies' corporate social responsibility introduced subsequently to the revision of the 10 Principles of the Luxembourg Stock Exchange. According to Recommendation 9.3 under the Principles, the Board shall regularly consider the Company's non-financial risks, including social and environmental risks. To this end, the ARCGS Committee oversees the Company's sustainable development plan and associated management systems to ensure that ArcelorMittal is well positioned to meet the evolving expectations of stakeholders including investors, customers, regulators, employees and communities.

The ARCGS Committee's principal criteria in determining the compensation of executives is to encourage and reward performance that will lead to long-term enhancement of shareholder value. The ARCGS Committee may seek the advice of outside experts.

The three members of the ARCGS Committee are Mr. Bruno Lafont, Mrs. Suzanne P. Nimocks and Mr. Tye Burt, each of whom is independent in accordance with the NYSE standards applicable to foreign private issuers and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. The Chairman of the ARCGS Committee is Mr. Lafont.

The ARCGS Committee is required to meet at least three times a year.

The ARCGS Committee performs an annual self-evaluation and completed its 2019 self-evaluation on January 15, 2020.

The charter of the ARCGS Committee is available from ArcelorMittal upon request.

Succession management

Succession management at ArcelorMittal is a systematic, structured process for identifying and preparing employees with potential to fill key organizational positions, should the position become vacant. This process applies to all ArcelorMittal key positions up to and including the CEO Office. Succession management aims to ensure the continued effective performance of the organization by providing for the availability of experienced and capable employees who are prepared to assume these roles as they become available. For each position, candidates are identified based on performance, potential and an assessment of leadership capabilities and their "years to readiness". Development needs linked to the succession plans are discussed, after which "Personal Development Plans" are put in place, to accelerate development and

prepare candidates. Regular reviews of succession plans are conducted at different levels of the organization to ensure that they are accurate and up to date, leading to at least once a year formal review by the CEO Office, of all key positions. Succession management is a necessary process to reduce risk of vacant positions or skill gap transitions, create a pipeline of future leaders, ensure smooth business continuity and improve employee motivation and engagement. This process has been in place for several years and reinforced, widened and made more systematic in all regions of the organization. The responsibility to review and approve succession plans and contingency plans at the highest level rests with the Board's ARCGS Committee.

Other corporate governance practices

ArcelorMittal is committed to adhere to best practices in terms of corporate governance in its dealings with shareholders and aims to ensure good corporate governance by applying rules on transparency, quality of reporting and the balance of powers. ArcelorMittal continually monitors U.S., EU and Luxembourg legal requirements and best practices in order to make adjustments to its corporate governance controls and procedures when necessary, as evidenced by the policies adopted by the Board of Directors in 2012.

ArcelorMittal complies with the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange in all respects. However, in respect of Recommendation 1.3 under the Principles, which advocates separating the roles of chairman of the board and the head of the executive management body, the Company has made a different choice. This is permitted, however, as, unlike the 10 Principles themselves with which ArcelorMittal must comply, the Recommendations are subject to a more flexible "comply or explain" standard.

The nomination of the same person to both positions was approved by the shareholders (with Lumen and Nuavam, companies controlled by the Significant Shareholder abstaining). Since that date, the rationale for combining the positions of CEO and Chairman of the Board of Directors has become even more compelling. The Board of Directors is of the opinion that Mr. Mittal's strategic vision for the steel industry in general and for ArcelorMittal in particular in his role as CEO is a key asset to the Company, while the fact that he is fully aligned with the interests of the Company's shareholders means that he is uniquely positioned to lead the Board of Directors in his role as Chairman. The combination of these roles was revisited at the AGM of the Company held in May 2017, when Mr. Lakshmi N. Mittal was re-elected to the Board of Directors for another three year term by a strong majority.

Ethics and conflicts of interest

Ethics and conflicts of interest are governed by ArcelorMittal's Code of Business Conduct, which establishes the standards for ethical behavior that are to be followed by all employees and Directors of ArcelorMittal in the exercise of their duties. Each employee of ArcelorMittal is required to sign and acknowledge the Code of Conduct upon joining the Company. This also applies to the members of the Board of Directors of ArcelorMittal, who signed the Company's Appointment Letter in which they acknowledged their duties and obligations. Any new member of the Board of Directors must sign and acknowledge the Code of Conduct upon appointment.

Employees must always act in the best interests of ArcelorMittal and must avoid any situation in which their personal interests conflict, or could conflict, with their obligations to ArcelorMittal. Employees are prohibited from acquiring any financial or other interest in any business or participating in any activity that could deprive ArcelorMittal of the time or the attention needed to devote to the performance of their duties. Any behavior that deviates from the Code of Business Conduct is to be reported to the employee's supervisor, a member of the management, the head of the legal department or the head of the internal assurance department.

Code of Business Conduct training is offered throughout ArcelorMittal on a regular basis in the form of face-to-face trainings, webinars and online trainings. Employees are periodically trained about the Code of Business Conduct in each location where ArcelorMittal has operations. The Code of Business Conduct is available in the "Corporate Governance-Our Policies-Code of Business Conduct" section of ArcelorMittal's website at www.arcelormittal.com.

In addition to the Code of Business Conduct, ArcelorMittal has developed a Human Rights Policy and a number of other compliance policies in more specific areas, such as antitrust, anti-corruption, economic sanctions, insider dealing and data protection. In all these areas, specifically targeted groups of employees are required to undergo specialized compliance training. Furthermore, ArcelorMittal's compliance program also includes a quarterly compliance certification process covering all business segments and entailing reporting to the Audit & Risk Committee.

Process for Handling Complaints on Accounting Matters

As part of the procedures of the Board of Directors for handling complaints or concerns about accounting, internal controls and auditing issues, ArcelorMittal's Anti-Fraud Policy and Code of Business Conduct encourage all employees to bring such issues to the Audit & Risk Committee's attention on a confidential basis. In accordance with ArcelorMittal's Anti-Fraud and Whistleblower Policy, concerns with regard to possible fraud or irregularities in

accounting, auditing or banking matters or bribery within ArcelorMittal or any of its subsidiaries or other controlled entities may also be communicated through the “Corporate Governance — Whistleblower” section of the ArcelorMittal website at www.arcelormittal.com, where ArcelorMittal’s Anti-Fraud Policy and Code of Business Conduct are also available in each of the main working languages used within the Group. In recent years, ArcelorMittal has implemented local whistleblowing facilities, as needed.

During 2019, there were 162 complaints received relating to alleged fraud, which were referred to and duly reviewed by the Company’s Internal Assurance Department. Following review by the Audit & Risk Committee, none of these complaints were found to be significant.

Internal assurance

ArcelorMittal has an Internal Assurance function that, through its Head of Internal Assurance, reports to the Audit & Risk Committee. The function is staffed by full-time professional staff located within each of the principal operating subsidiaries and at the corporate level. Recommendations and matters relating to internal control and processes are made by the Internal Assurance function and their implementation is regularly reviewed by the Audit & Risk Committee.

Independent auditors

The appointment and determination of fees of the independent auditors is the direct responsibility of the Audit & Risk Committee. The Audit & Risk Committee is further responsible for obtaining, at least once each year, a written statement from the independent auditors that their independence has not been impaired. The Audit & Risk Committee has also obtained a confirmation from ArcelorMittal’s principal independent auditors to the effect that none of its former employees are in a position within ArcelorMittal that may impair the principal auditors’ independence.

Measures to prevent insider dealing and market manipulation

The Board of Directors of ArcelorMittal has adopted Insider Dealing Regulations (“IDR”), which are updated when necessary (most recently in January 2019) and in relation to which training is conducted throughout the Group. The IDR’s most recent version has been updated in light of the new Market Abuse Regulation and is available on ArcelorMittal’s website, www.arcelormittal.com.

The IDR apply to the worldwide operations of ArcelorMittal. The compliance and data protection officer of ArcelorMittal is also the IDR compliance officer and answers questions that members of senior management, the Board of Directors, or employees may have about the IDR’s interpretation. The IDR compliance officer maintains a list of insiders as required by Regulation No 596/2014 of the European Parliament and the Council dated 16 April 2014 on market abuse or “MAR” and the Commission Implementing Regulation 2016/347 of 10 March 2016 laying down technical standards with regard to the precise format of insider lists and for updating insider lists in accordance with MAR. The IDR compliance officer may assist senior executives and directors with the filing of notices required by Luxembourg law to be filed with the Luxembourg financial regulator, the CSSF (Commission de Surveillance du Secteur Financier). Furthermore, the IDR compliance officer has the power to conduct investigations in connection with the application and enforcement of the IDR, in which any employee or member of senior management or of the Board of Directors is required to cooperate.

Selected new employees of ArcelorMittal are required to participate in a training course about the IDR upon joining ArcelorMittal and every three years thereafter. The individuals who must participate in the IDR training include the members of senior management, employees who work in finance, legal, sales, mergers and acquisitions and other areas that the Company may determine from time to time. In addition, ArcelorMittal’s Code of Business Conduct contains a section on “Trading in the Securities of the Company” that emphasizes the prohibition to trade on the basis of inside information. An online interactive training tool based on the IDR was developed in 2010 and deployed across the group through ArcelorMittal’s intranet, with the aim to enhance the staff’s awareness of the risks of sanctions applicable to insider dealing. The importance of the IDR was again reiterated in the Group's internal Group Policies and Procedures Manual in 2013.

Compensation

Content

Abbreviations

EBITDA	Operating income plus depreciation, impairment expenses and exceptional items
FCF	Free cash flow
STI	Short-term incentives
LTI/LTIP	Long-term incentives (plans)
EPS	Earnings per share
PSU	Performance share units
RSU	Restricted share units
ROCE	Return on capital employed
TSR	Total shareholder return

Annual statement by the ARCGS Committee Chairman

Dear Shareholders,

Description of the year:

Business and results

After a strong 2018, market conditions in 2019 were challenging, with the profitability of ArcelorMittal's steel segments suffering due to lower steel prices combined with higher raw material costs. This was only partially offset by improved profitability from the mining segment. Despite this challenging environment, ArcelorMittal has achieved notable progress which reflects the efforts in recent years through Action 2020 to strengthen the business. Significant cash flow generation in 2019 resulted in a historical low point for ArcelorMittal net debt. Global overcapacity remains a clear challenge, as such the Company reduced capacity in Europe in response to the current weak demand environment. Further action needs to be taken to address the increasing level of imports entering the continent due to ineffective safeguard measures. ArcelorMittal continues to engage with the European Commission to create a level playing field for the sector. A supportive regulatory and funding environment is also crucial for the Company's ambition to significantly reduce its emissions. ArcelorMittal also continue to evolve its sustainable product offering, for example with Steligence, its low-carbon solutions for the construction market. Despite the current challenges, the Company is well positioned to benefit from any improvement in market conditions and the current very low spread environment.

Board and Committees

The Board and Chairman have overall responsibility for the governance and strategic direction of ArcelorMittal, which includes considering the effects of climate change. The Board has two committees with further oversight and responsibilities on climate-related issues. Risks are also considered by boards of subsidiaries worldwide. The ARCGS oversees the implications of sustainability issues under five sustainability pillars, of which one is climate change. The chair of the ARCGS also liaises closely with the chair of the Audit & Risk Committee. The Committee considers the implications of climate change for the business and oversees the Company’s strategic planning in response to the risks and opportunities that arise. It receives regular reports from senior management on stakeholder expectations, the Company’s low-emissions technology strategy, climate-related policy engagement and carbon performance.

Activities

Remuneration and Nomination

During 2019, the ARCGS Committee conducted the Annual Self-Assessment of the Board of Directors, reviewed and approved short term incentive proposals for senior management and approved the remuneration report for 2019. The ARCGS Committee also reviewed remuneration and governance related proposals for the annual general meeting of shareholders. The ARCGS Committee revised succession plans for the Board, the CEO office and senior executives. The ARCGS Committee also reviewed the salaries for the CEO, CFO and the Executive Vice Presidents. It reviewed the grant and vesting criteria for future grants, reviewed and selected performance and compensation peer groups under the Long-Term Incentive Plan and confirmed the vesting of existing plans in accordance with the criteria set in advance. The ARCGS Committee also considered the need for additional retention plans. The annual general meeting of shareholders in May 2019 approved an increase in remuneration for the non-executive members of the Board of Directors. A review of this remuneration takes place once every three years.

Environment

In May 2019 ArcelorMittal published its first Climate Action report in which it announced its ambition to significantly reduce CO_2 emissions globally and be carbon neutral in Europe by 2050. The report explains in greater detail the future challenges and opportunities for the steel industry, the plausible technology pathways the Company is exploring as well as its views on the policy environment required for the steel industry to succeed in meeting the targets of the Paris Agreement. In addition, the Committee held quarterly meetings dedicated to Corporate Social Responsibilities, including Health & Safety, Environment and Community relations and reviewed progress and proposed management actions in this field. The year showed substantial progress in terms of quality of reporting and follow up actions.

Going forward

The acquisition of AMNS India is an important strategic step for ArcelorMittal. The newly established joint venture with Nippon Steel Corporation, called AMNS India, with nominal crude steel production capacity of 9.6 million tonnes per year in India, is one of the most promising steel markets in the world. ArcelorMittal is confident that AMNS India will create significant value - for shareholders, its business partners, employees and communities in India.

As for ArcelorMittal Italia, the Company experienced both business and stakeholder issues at the Taranto plant. These issues are persistent and ongoing.

As a result of the implementation of the recommendations of the previous Board self-assessment in January 2019, there were noticeable improvements in this year’s process. In particular, the new responsibilities of the Committee on sustainable development matters and the increased emphasis given to succession planning are seen as important improvements.

Corporate Social Responsibility including Climate Action will remain a key focus area for the Committee in 2020. Even greater emphasis will be placed on health and safety matters as well. In the field of Remuneration, the Committee expects to consider proposals to ensure appropriate remuneration and management retention in challenging market conditions. Succession planning will remain a priority.

Sincerely yours,

Bruno Lafont

Board of Directors

Directors' fees

The ARCGS Committee of the Board of Directors prepares proposals on the remuneration to be paid annually to the members of the Board of Directors.

At the May 7, 2019 annual general meeting of shareholders, the shareholders approved the annual remuneration for non-executive directors for the 2018 financial year, based on the following annual fees (euro denominated amounts are translated into U.S. dollars as of December 31, 2018):

- Basic director's remuneration: €151,956 ($173,990);
- Lead Independent Director's remuneration: €214,326 ($245,403);
- Additional remuneration for the Chair of the Audit & Risk Committee: €29,484 ($33,759);
- Additional remuneration for the other Audit & Risk Committee members: €18,144 ($20,775);
- Additional remuneration for the Chairs of the other committees: €17,010 ($19,476); and
- Additional remuneration for the members of the other committees: €11,340 ($12,984).

The total annual remuneration of the members of the Board of Directors for their service for the last five financial years was as follows:

	Year ended December 31,				
(Amounts in $ thousands except Long-term incentives information)	2019	2018	2017	2016	2015
Base salary[1]	1,569	1,604	1,505	1,550	1,746
Director fees	1,554	1,509	1,744	1,900	1,856
Short-term performance-related bonus[1]	3,198	2,775	2,333	—	1,910
Long-term incentives [1, 2, 3]	89,933	70,302	49,431	168,214	59,773

1. Chairman and CEO only. Slight differences between the years are possible, due to foreign currency effects.
2. See "Remuneration - Long-term incentive plan".
3. Long-term incentives for the 2015 financial year were 179,320 prior to the 2017 reverse stock split which consolidated each three existing shares in the Company without nominal value into one share without nominal value.

The annual remuneration for the last five financial years to the current and former members of the Board of Directors for services in all capacities was as follows:

(Amounts in $ thousands)	2019[1]	2018[1]	2017[1]	2016[1]	2015[1]
Lakshmi N. Mittal	1,569	1,604	1,505	1,550	1,746
Vanisha Mittal Bhatia	171	166	174	153	160
Narayanan Vaghul	—	—	69	182	204
Suzanne P. Nimocks	183	178	187	164	184
Wilbur L. Ross, Jr.	—	—	32	171	180
Lewis B. Kaden	—	—	95	250	244
Bruno Lafont	280	272	255	171	180
Tye Burt	183	178	187	164	173
Antoine Spillmann	—	—	—	55	198
Karyn Ovelmen	204	198	203	171	—
Jeannot Krecké	171	166	174	153	173
Michel Wurth	171	166	174	153	160
Karel de Gucht	191	185	194	114	—
Total	3,123	3,113	3,249	3,451	3,602

1. Remuneration for non-executive Directors with respect to 2019 will be paid in 2020 subject to the shareholder approval at the annual general meeting to be held on May 5, 2020. Remuneration for non-executive Directors with respect to 2018, 2017, 2016 and 2015 was paid in 2019, 2018, 2017 and 2016, respectively, following the shareholder approval at the annual general meetings held on May 7, 2019, May 9, 2018, May 10, 2017 and May 4 , 2016, respectively. Slight differences between the years are possible, due to foreign currency effects.

Members of the Board of Directors have not received any remuneration from any subsidiary of the Group.

The annual remuneration for the last five financial years on a full-time equivalent basis of employees of ArcelorMittal S.A. was as follows:

(Amounts in $ thousands)	2019[1]	2018[1]	2017[1]	2016[1]	2015[1]
Average Remuneration	389	408	379	336	326

1. The annual remuneration is calculated for the approximately 20 employees with a labor contract with ArcelorMittal S.A.

ArcelorMittal has performed a benchmarking on remuneration with its selected peers and fixed the remuneration of the employees and Directors based on the outcome of that exercise.

The policy of the Company is not to grant any share-based remuneration to members of the Board of Directors who are not executives of the Company. As of December 31, 2019, ArcelorMittal did not have any loans or advances outstanding to members of its Board of Directors and ArcelorMittal had not given any guarantees in favor of any member of its Board of Directors. None of the members of the Board of Directors, including the Chairman and CEO, benefit from an ArcelorMittal pension plan. Executive short-term incentives were as follows for the last five financial years:

	2019	2018	2017	2016	2015
	Short-term Incentives				
Lakshmi N. Mittal	3,198	2,775	2,333	—	1,910

The following tables provide a summary of the options and the exercise price of options and PSUs granted (long-term incentives) to the Chairman and CEO, who is the sole executive director on the Board of Directors, as of December 31, 2019.

	Options granted in 2010
Lakshmi N. Mittal	18,833
Exercise price	91.98
Term (in years)	10
Expiration date	Aug. 3, 2020

	PSUs grants in 2019	PSUs granted in 2018	PSUs granted in 2017	PSUs granted in 2016	PSUs granted in 2015
Lakshmi N. Mittal[2]	89,933	70,302	49,431	168,214	59,773
Term (in years)	3	3	3	3+2	3
Vesting date[1]	January 1, 2023	January 1, 2022	January 1, 2021	January 1, 2020 and January 1, 2022	June 30, 2018

1. See "Remuneration - Long-term incentive plan for vesting conditions".
2. The PSUs granted were revised following the completion of the Company's share consolidation of each three existing shares without nominal value into one share without nominal value on May 22, 2017.

Remuneration at a glance - senior management

The following table provides a brief overview of the Company's remuneration policy for senior management. Additional information is provided below.

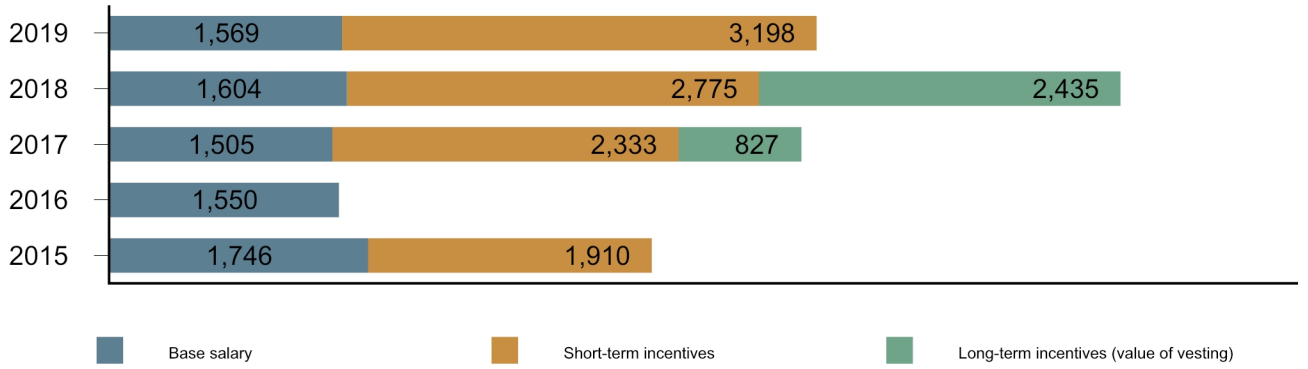
ArcelorMittal's Remuneration Policy			
Remuneration	Period	Strategy	Characteristic
Salary	2019	Recruitment and retention	• Reviewed annually by the ARCGS Committee considering market data • Increases based on Company performance and individual performance
STI	2019	Delivery of strategic priorities and financial success	• Maximum STI award of 270% of base salary for the CEO, 225% of base salary for the CFO and 135% of base salary for other Executive Officers • 100% STI paid in cash • ArcelorMittal's first priority Health and Safety is part of the STI • Overperformance towards competition
LTIP	2020-2022	Encourages long term shareholder return	• Performance share units granted with a face value of 100% of base salary for the CEO and CFO and 60% for Executive Officers • Shares vest after a three-year performance period • Performance related vesting

Key Performance Metrics from 2019		
Metrics	Scheme	Rationale
EBITDA	STI	• Demonstrates growth and operational performance of the underlying businesses
FCF	STI	
ROCE	STI	• Critical factor for long-term success and sustainability of the Company
Gap to competition	STI / LTIP	• Outperform peers
Health & Safety	STI	• Employee health and safety is a core value for the Company
Business Specific measures	STI	• For corporate functions, links reward to strategic priorities of their functions
EPS	LTIP	• Links reward to delivery of underlying equity returns to shareholders
TSR	LTIP	• Creates a direct link between executive pay and shareholder value • Measure is split equally between comparison against S&P 500 index and a peer group of companies

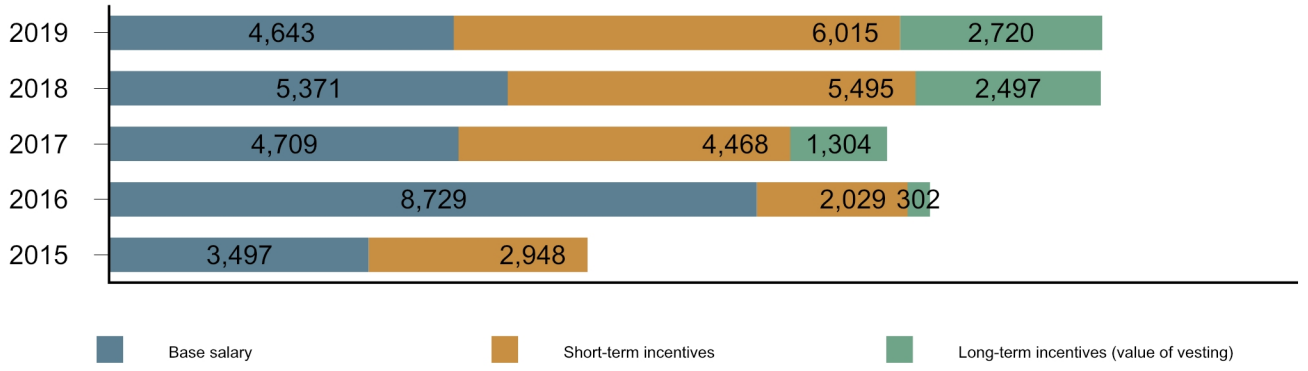
Remuneration at a glance - 2019 Pay outcomes

The following graphics compare the compensation paid to the CEO, CFO and other Executive Officers in 2019, 2018, 2017, 2016 and 2015 in thousands of U.S. dollars. Information with respect to total remuneration paid is provided under "—Remuneration—2019 Total remuneration" below.

Chief Executive Officer



President and Chief Financial Officer and Executive officers



2018 short-term incentives paid in 2019

	Executive	Realization as % of business target
CEO office	Lakshmi Mittal Aditya Mittal	139%
Corporate	Brian Aranha	139%
Flat Carbon Europe	Geert van Poelvoorde	118%
Long Carbon South America	Jefferson de Paula	150%
Mining	Simon Wandke	75%
Corporate	Bart Wille	138%

Note: Individual performance not included in the percent of realization.

2019 LTI vesting (2016 grants)

The following tables provide information about the vesting in 2019 of long-term incentives granted to senior management in prior years. See also note 8.3 to the consolidated financial statements.

CEO office

There was no vesting scheduled in 2019 for the CEO Office.

Executive Officers

In 2019, the following long-term incentives vested:

Vehicle	Date of vesting	Date of Grant	Number of PSUs granted to the Executive Officers and outstanding	Number of Shares acquired by the Executive Officers
PSUs	January 1, 2019 Performance approved by ARCGS Committee on March 19, 2019	December 18, 2015	10,668	11,603
PSUs[1]	January 1, 2019 Performance approved by ARCGS Committee on March 19, 2019	June 30, 2016	149,920	112,818

1. The grant number corresponds to half of the grant as only half vested in 2019.

Remuneration

Remuneration strategy

The ARCGS Committee assists the Board of Directors to maintain a formal and transparent procedure for setting policy on senior management's remuneration and to determine an appropriate remuneration package for senior management. The ARCGS Committee should ensure that remuneration arrangements support the strategic aims of the business and enable the recruitment, motivation and retention of senior executives while complying with applicable rules and regulations.

Board oversight

To this end, the Board of Directors has established the ARCGS Committee to assist it in making decisions affecting employee remuneration. All members of the ARCGS Committee are required to be independent under the Company's corporate governance guidelines, the NYSE standards and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange.

The members are appointed by the Board of Directors each year after the annual general meeting of shareholders. The members have relevant expertise or experience relating to the purposes of the ARCGS Committee. The ARCGS Committee makes decisions by a simple majority with no member having a casting vote and is chaired by Mr. Bruno Lafont, Lead Independent Director.

Appointments, remuneration, corporate governance and sustainability committee

The primary function of the ARCGS Committee is to assist the Board of Directors with respect to the following:

- review and approve corporate goals and objectives regarding remuneration relevant to the CEO Office and Executive Officers and other members of executive management as deemed appropriate by the committee, and assess performance against goals and objectives;
- make recommendations to the Board with respect to incentive remuneration plans and equity-based plans;
- identify candidates qualified to serve as members of the Board, the CEO Office and Executive Officers;
- recommend candidates to the Board for appointment by the general meeting of shareholders or for appointment by the Board to fulfill interim Board vacancies;
- develop, monitor and review corporate governance principles applicable to the Company;
- facilitate the evaluation of the Board;
- review the succession planning and the executive development of the members of the CEO Office and Executive Officers;
- submit proposals to the Board on the remuneration of the members of the CEO Office and Executive Officers, and on the appointment of new members thereto and new directors; and

- make recommendations to the Board of Directors in respect of the Company's framework of remuneration for the members of the CEO Office and Executive Officers and such other members of the executive management as designated by the committee. In making such recommendations, the committee may take into account factors that it deems necessary. This may include a member's total cost of employment (factoring in equity/long term incentives, any perquisites and benefits in kind and pension contributions).

The ARCGS Committee met six times in 2019. Its members comprise Mr. Bruno Lafont (Chairman), Mrs. Suzanne Nimocks and Mr. Tye Burt.

Regular invitees include Mr. Lakshmi N. Mittal (CEO and Chairman) and Mr. Bart Wille (Head of Group Human Resources and Corporate Services). Mr. Henk Scheffer (Company Secretary) acts as secretary.

Individual remuneration is discussed by the ARCGS Committee without the person concerned being present. The ARCGS Committee Chairman presents its decisions and findings to the Board of Directors after each ARCGS Committee meeting.

Remuneration policy

The ARCGS Committee set policies applied to senior management on base salary, short-term incentives and long-term incentives. According to Shareholders Right Directive II, that was transposed into Luxembourg law in August 1, 2019, the remuneration policies must be approved at the AGM at least every 4 years and whenever there is a material change.

Scope

ArcelorMittal's remuneration philosophy and framework apply to the following groups of senior management:

- the CEO and the President and CFO; and
- the other Executive Officers.

The remuneration philosophy and governing principles also apply, with certain limitations, to a wider group of employees including Executive Vice Presidents, Vice Presidents, General Managers and Managers.

Remuneration philosophy

ArcelorMittal's remuneration philosophy for its senior management is based on the following principles:

- provide total remuneration competitive with executive remuneration levels of peers of similar size, scope and industry;
- encourage and reward performance that will lead to long-term enhancement of shareholder value; and
- promote internal pay equity by providing base pay and total remuneration levels that reflect the role, job size and responsibility as well as the performance and effectiveness of the individual.

Remuneration framework

The ARCGS Committee develops proposals for senior management remuneration annually for the Board of Directors' consideration. Such proposals include the following components:

- fixed annual salary;
- short-term incentives (i.e., performance-based bonus); and
- long-term incentives (i.e., stock options (prior to May 2011), RSUs and PSUs (after May 2011), PSUs only as from 2016).

The Company does not have any deferred compensation plans for senior management, including the Chairman and CEO.

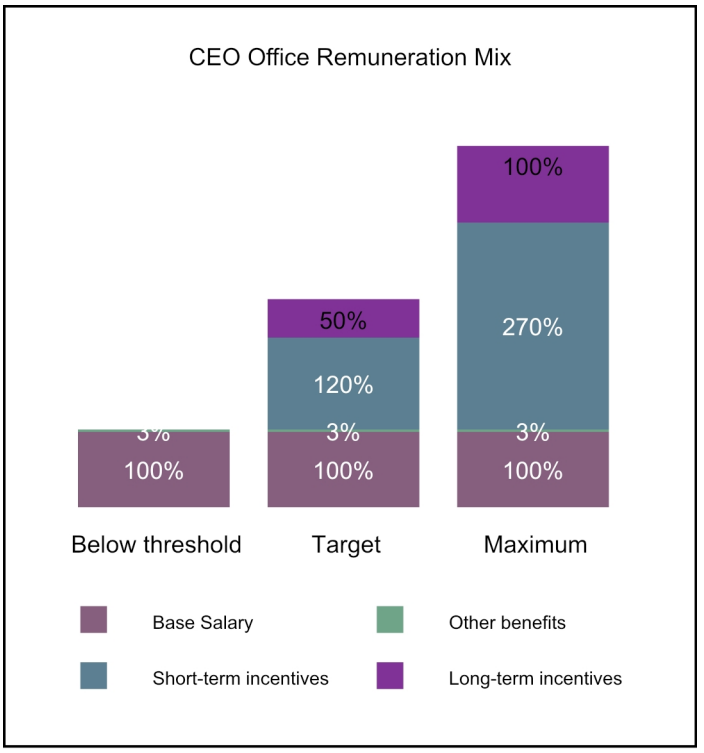
The following table provides an overview of the remuneration policy applied by the ARCGS:

Remuneration component and link to strategy	Operational and performance framework	Opportunity
Fixed annual salary *Competitive base salary to attract and retain high-quality and experienced senior executives*	* Base salary levels are reviewed annually with effect from April 1 (except promotion) compared to the market to ensure that ArcelorMittal remains competitive with market median base pay levels * Reviews are based on market information obtained but not led by benchmarking to comparable roles, changes in responsibility and general economic conditions	The ARCGS does not set a maximum salary, instead when determining any salary increases it takes into account a number of reference points including salary increases across the Company
Benefits *Competitive level to ensure coverage of the executives*	* May include costs of health insurance, death and disability insurances, company car, tax return preparation, etc. * Relocation benefits may be provided where a change of location is made at Company's request	The cost to the Company of providing benefits can change from year to year. The level of benefit provided is intended to remain competitive
Pension *Competitive level of post-employment benefit to attract and retain executives*	* Local benchmark of pension contributions for comparable roles	
Short term incentives (STI) *Motivate the senior executives to achieve stretch performance on strategic priorities*	* Scorecard is set at the commencement of each financial year * Measures and relative weights are chosen by the ARCGS Committee to drive overall performance for the coming year * STI calculations for each executive reflect the performance of ArcelorMittal and /or the performance of the relevant business units, the achievement of specific objectives of the department and the individual executive's overall performance * No STI is paid for a performance below threshold 80% for each criteria; 100% STI payout for performance achieved at 100% for each criteria; 150% STI payout for performance achieved at 120% or above for each criteria	Range for CEO: 0 to 270% with a target at 120% of base salary Range for President and CFO: 0 to 225% with a target at 100% of base salary Range for Executive Officers: 0 to 135% with a target at 60% of base salary
LTIP *Sustain shareholder wealth creation in excess of performance of a peer group and incentivize executives to achieve strategy*	CEO Office LTIP * The vesting is subject to a relative TSR (Total Shareholder Return) compared to the S&P 500 and a peer group and to a relative EPS of a peer group over a three year- period *The peer group is determined by the ARCGS Committee * No vesting will occur below the median for all grants as from 2016 * Performance is determined by the ARCGS Committee Executive Officers LTIP - The vesting is subject to one or two measures depending on the business units, Gap to competition and ROCE, in 2019 - Vesting will occur if the performance is reached - Performance is determined by the ARCGS Committee	Maximum value at grant: 100% of base salary for CEO and President and CFO 60% of base salary for Executive Officers

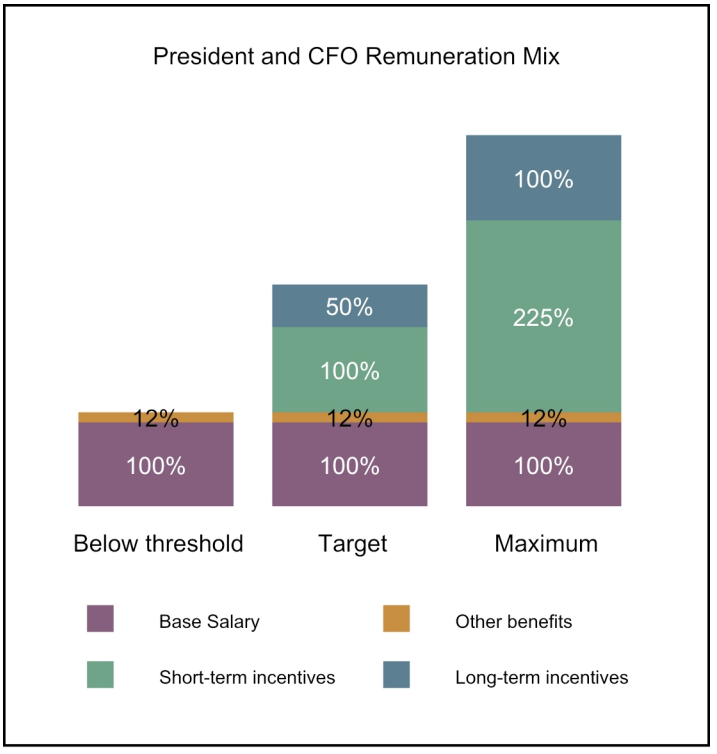
Remuneration mix

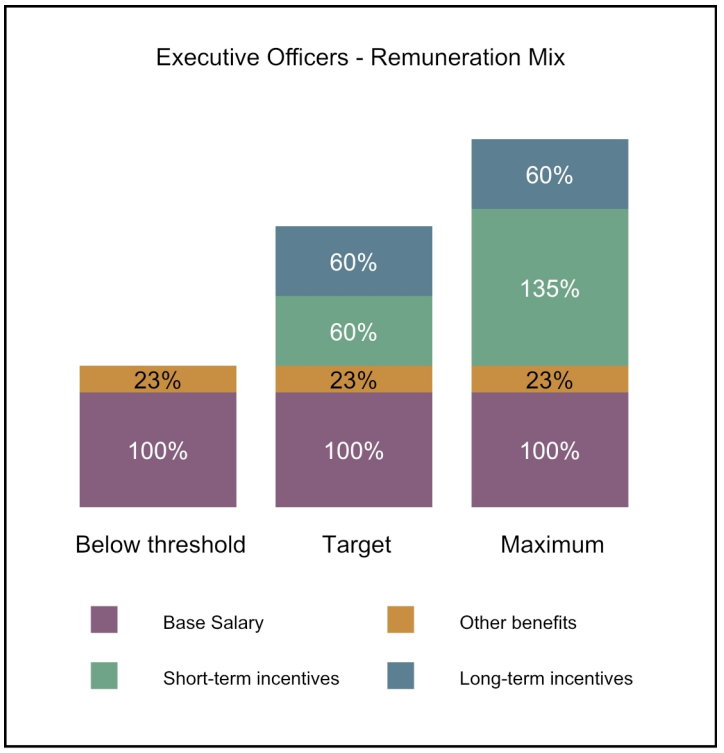
The total remuneration target of the CEO and the President and CFO is structured to attract and retain executives; the amount of the remuneration received is dependent on the achievement of superior business and individual performance and on generating sustained shareholder value from relative performance.

The following remuneration charts, which illustrate the various elements of the CEO, the President and CFO and the other Executive Officers' compensation, are applicable for 2019. For each of the charts below, the columns on the left, middle and on the right, respectively, reflect the breakdown of compensation if targets are not met, met and exceeded.



Note: no pension contribution





Note: Other benefits, as shown above, do not include international mobility incentives that may be provided.

2019 Total remuneration

The total remuneration paid in 2019 to members of ArcelorMittal's senior management (including Mr. Lakshmi N. Mittal in his capacity as CEO) was $6.5 million in base salary and other benefits paid in cash (such as health, other insurances, lunch allowances, financial services, gasoline and car allowance) and $9.2 million in short-term performance-related variable remuneration consisting of a short-term incentive linked to the Company's 2018 results. During 2019, approximately $0.7 million was accrued by ArcelorMittal to provide pension benefits to senior management (other than Mr. Mittal).

No loans or advances to ArcelorMittal's senior management were made during 2019, and no such loans or advances were outstanding as of December 31, 2019.

The following table shows the remuneration received by the CEO, the President and CFO and the Executive Officers as determined by the ARCGS Committee in relation to the five most recent financial years including all remuneration components:

		Chief Executive Officer					President and Chief Financial Officer and Executive Officers (Other GMB members for 2015)				
(Amounts in $ thousands except for Long-term incentives)		2019	2018	2017	2016	2015[7]	2019	2018[5]	2017	2016[6]	2015[7]
Base salary[1]		1,569	1,604	1,505	1,550	1,746	4,643	5,371	4,709	8,729	3,497
Retirement benefits		—	—	—	—	—	698	862	849	898	305
Other benefits[2]		47	48	41	42	40	223	314	250	225	101
Short-term incentives[3]		3,198	2,775	2,333	—	1,910	6,015	5,495	4,468	2,029	2,948
Long-term incentives	- fair value in $ thousands[4]	1,339	1,166	1,130	2,297	1,530	3,096	2,702	1,922	6,882	2,431
	- number of share units	89,933	70,302	49,431	168,214	59,773	183,084	141,109	94,553	509,623	94,995

1. The base salaries of the CEO and President and CFO were increased by 3.4% in 2019
2. Other benefits comprise benefits paid in cash such as lunch allowances, financial services, gasoline and car allowances. Health insurance and other insurances are also included.
3. Short-term incentives are entirely performance-based and are fully paid in cash. The short-term incentive for a given year relates to the Company's results in the previous year.
4. Fair value determined at the grant date is recorded as an expense using the straight line method over the vesting period and adjusted for the effect of non-market based vesting conditions. The remuneration expenses recognized for the PSUs granted to the CEO and to the President and CFO and Executive Officers was nil and $4 million (net of reversal of expenses relating to unvested PSUs) for the year ended December 31, 2019 and December 31, 2018, respectively.
5. Henri Blaffart was included until March 31, 2018, Robrecht Himpe was included until June 30, 2018.
6. Jim Baske was included until June 30, 2016, Davinder Chugh was included until July 20, 2016 and Robrecht Himpe was included as from July 1, 2016.
7. Long-term incentives for the 2015 financial year were 179,320 for the CEO and 284,985 for the President and CFO and Executive Officers (Other GMB members for 2015) prior to the 2017 reverse stock split which consolidated each three existing shares in the Company without nominal value into one share without nominal value.

Short-term incentives

Targets associated with ArcelorMittal's 2019 Annual Performance Bonus Plan were aligned with the companies' strategic objectives of improving health and safety performance and overall business performance and competitiveness.

For the CEO and the President and CFO, the 2019 annual performance bonus formula is based on the achievement of the following performance targets:

- EBITDA targets at Group level: 30% ;
- FCF targets at Group level: 20%;
- ROCE targets at Group level: 20%;
- Gap to competition targets at Group level: 20%; and
- Health and safety performance targets at Group level: 10%.

For the CEO , 100% achievement of the agreed performance targets results in an annual performance bonus which equals to 120% of base salary. For the CFO, 100% achievement of the agreed performance targets results in an annual performance bonus which equals to 100% of base salary.

For the other Executive Officers, the 2019 annual performance bonus formula has been tailored for their respective positions and is generally based on the following performance targets:

- EBITDA targets at Group, segment or Business unit level;
- FCF targets at Group, segment or Business unit level;
- ROCE targets at Group level, segment or Business unit level;
- Gap to competition targets at Group level, segment or Business unit level;
- Health and safety performance targets at Group, Segment or Business unit level; and
- Business specific measures for corporate functions.

For the other Executive Officers, 100% achievement of the agreed performance targets results in an annual performance bonus which equals to 60% of base salary.

For the calculation of the annual performance bonus, the achievement level of every performance target is calculated separately, and these are added up.

Individual performance and assessment ratings define the individual annual performance bonus multiplier that will be applied to the annual performance bonus calculated based on actual performance against the performance measures. Those individuals who consistently perform at expected levels will have an individual multiplier of 1. For outstanding performers, an individual multiplier of up to 1.5 may cause the annual performance bonus pay-out to be higher than 150% of the target annual performance bonus, up to 270% of the target annual performance bonus being the absolute maximum for the CEO. Similarly, a reduction factor will be applied for those at the lower end.

In exceptional circumstances, the ARCGS committee can exercise discretion in the final determination of the annual performance bonus.

The achievement level of performance for the annual performance bonus for the CEO, the President and CFO and the other Executive Officers is summarized as follows:

Functional level	Target achievement threshold @ 80%	Target achievement @ 100%	Target achievement ≥ ceiling @ 120%
Chief Executive Officer	60% of base pay	120% of base pay	180% of base pay
President and Chief Financial Officer	50% of base pay	100% of base pay	150% of base pay
Executive Officers	30% of base pay	60% of base pay	90% of base pay

Long-term incentive plan

ArcelorMittal operates a long-term incentive plan to incentivize shareholder wealth creation in excess of performance of a peer group and incentivize executives to achieve strategy.

On May 10, 2011, the annual general meeting of shareholders approved the ArcelorMittal Equity Incentive Plan, a new equity-based incentive plan that replaced the Global Stock Option Plan (see below and note 8.3 to the consolidated financial statements for a description of the Global Stock Option Plan). The ArcelorMittal Equity Incentive Plan is intended to align the interests of the Company's shareholders and eligible employees by allowing them to participate in the success of the Company. The ArcelorMittal Equity Incentive Plan provides for the grant of RSUs and PSUs to eligible Company employees (including the Executive Officers) and is designed to incentivize employees, improve the Company's long-term performance and retain key employees. On May 8, 2013, the annual general meeting of shareholders approved the

GMB PSU Plan, which provides for the grant of PSUs to GMB members (and is now applicable to the CEO Office). Until the introduction of the GMB PSU Plan in 2013, GMB members were eligible to receive RSUs and PSUs under the ArcelorMittal Equity Incentive Plan. In 2016, a special grant was approved in order to align the grant with the Action 2020 plan put in place by ArcelorMittal.

The maximum number of PSUs (and RSUs previously) available for grant during any given year is subject to the prior approval of the Company's shareholders at the annual general meeting. The annual shareholders' meeting on May 4, 2016 approved the maximum to be granted until the next annual shareholders' meeting. For the period from the May 2016 annual general shareholders' meeting to the May 2017 annual general shareholders' meeting, a maximum of 30,000,000 PSUs (10,000,000 after the reverse stock split) may be allocated to eligible employees under the ArcelorMittal Equity Incentive Plan and the GMB PSU Plan combined. The 2017 Cap for the number of PSUs that may be allocated to the CEO Office and other retention based grants below the CEO Office was approved at the annual shareholders' meeting on May 10, 2017 at a maximum of 3,000,000 shares (9,000,000 before the reverse stock split). The 2018 Cap for the number of PSUs that may be allocated to the CEO Office and other retention based grants below the CEO Office level was approved at the annual shareholders' meeting on May 9, 2018 at a maximum of 1,500,000 shares. The 2019 Cap for the number of PSUs that may be allocated to the CEO Office and other performance based grants below the CEO Office level, was approved at the annual shareholders' meeting held on May 7, 2019 at a maximum of 2,500,000 shares.

In 2016, ArcelorMittal adapted the plan:

- To consider the comments of shareholders that vesting should not happen below the median and
- To adapt to Action 2020 (Special grant)

Conditions of the 2019 grant were as follows:

	CEO Office			**Executive Officers**	
2019 Grant	• PSUs with a three year performance period • Value at grant 100% of base salary for the CEO and the President and CFO • Vesting conditions:			• PSUs with a three year performance period • Vesting conditions	
		Threshold	**Target**		**Target**
	TSR/EPS vs. peer group	100% median	≥120% median	ROCE	100% target 100% vesting
	TSR vs. S&P 500	Performance equal to Index	≥Performance equal to Index + 2% outperformance	Gap to competition (where applicable)	100% target 100% vesting
	Vesting percentage	50%	100%		

Awards made in 2015 through 2018

The Company's Long-Term Incentive Plan for senior management including Executive Officers follows the Company's strategy.

In 2016, a special grant was deployed on a five-year performance period to achieve the Company's Action 2020 plan. ROCE remained a key target and Gap to Competition was added as performing against competition is essential.

The plans in 2015, 2016, 2017 and 2018 are summarized below.

<table>
<tr><th></th><th colspan="4">CEO Office</th><th colspan="4">Other Executive Officers</th></tr>
<tr><td rowspan="6">2015 Grant</td><td colspan="4">• PSUs with a three-year performance period
• Performance criteria: 50% TSR (½ vs. S&P 500 and ½ vs. peer group) and 50% EPS vs. peer group
• Value at grant: 100% of base salary for the CEO and 80% for the President and CFO
Vesting conditions:</td><td colspan="4">• RSUs with a three-year vesting period (2015 grant vested in December 2018)
• PSUs with a three-year performance period
• Performance target: mainly ROCE and mining volume plan for the Mining segment
• One PSU can give right to 0 through up to 1.5 share
• Vesting conditions:</td></tr>
<tr><td></td><td>Threshold</td><td>Target</td><td>Stretch</td><td>Performance</td><td>Threshold</td><td>Target</td><td>Stretch</td></tr>
<tr><td>TSR/EPS vs. peer group</td><td>80% median</td><td>100% median</td><td>≥120% median</td><td>Performance</td><td>80%</td><td>100%</td><td>≥120%</td></tr>
<tr><td>TSR vs. S&P 500</td><td>Performance equal to 80% of Index</td><td>Performance equal to Index</td><td>≥Performance equal to Index + 2% outperformance</td><td>Vesting</td><td>50%</td><td>100%</td><td>150%</td></tr>
<tr><td>Vesting percentage</td><td>50%</td><td>100%</td><td>150%</td><td colspan="4"></td></tr>
<tr><td colspan="5"></td><td colspan="4"></td></tr>
<tr><td rowspan="6">2016 Special Grant</td><td colspan="4">• PSUs with a five-year performance period, 50% vesting after three-year performance period and 50% after additional two-year performance period
• Performance criteria: 50% TSR (½ vs. S&P 500 and ½ vs. peer group) and 50% EPS vs. peer group
• Value at grant: 150% of base salary for the CEO and the President and CFO
• Vesting conditions:</td><td colspan="4">• PSUs with a five-year performance period, 50% vesting after three-year performance period and 50% after additional two-year performance period
• Performance criteria: ROCE and Gap to competition in some areas
one target grant: a share will vest if performance is met at target
one overperformance grant: a share will vest if performance exceeds 120%
• Vesting conditions:</td></tr>
<tr><td></td><td colspan="2">Threshold</td><td>Target</td><td>Performance</td><td>100%</td><td>≥120%</td></tr>
<tr><td>TSR/EPS vs. peer group</td><td colspan="2">100% median</td><td>≥120% median</td><td>Target award vesting</td><td>100%</td><td>100%</td></tr>
<tr><td>TSR vs. S&P 500</td><td colspan="2">Performance equal to Index</td><td>≥Performance equal to Index + 2% outperformance</td><td>Overperformance award (=20% of target award)</td><td>-</td><td>100%</td></tr>
<tr><td>Vesting percentage</td><td colspan="2">50%</td><td>100%</td><td colspan="2"></td></tr>
<tr><td colspan="5"></td><td colspan="3"></td></tr>
<tr><td rowspan="6">2017 Grant</td><td colspan="4">• PSUs with a three-year performance period
• Performance criteria: 50% TSR (½ vs. S&P 500 and ½ vs. peer group) and 50% EPS vs. peer group
• Value at grant: 100% of base salary for the CEO and the President and CFO
• Vesting conditions:</td><td colspan="4">• PSUs with a three-year performance period
• Performance criteria: TSR and Gap to competition in some areas
• Vesting conditions:</td></tr>
<tr><td colspan="2"></td><td>Threshold</td><td>Target</td><td>Performance</td><td>Threshold</td><td>Target</td></tr>
<tr><td colspan="2">TSR/EPS vs. peer group</td><td>100% median</td><td>≥120% median</td><td>TSR vs. peer group</td><td>100% median 50% vesting</td><td>≥120% median 100% vesting</td></tr>
<tr><td colspan="2">TSR vs. S&P 500</td><td>Performance equal to Index</td><td>≥Performance equal to Index + 2% outperformance</td><td>Gap to competition (where applicable)</td><td>-</td><td>100% target 100% vesting</td></tr>
<tr><td colspan="2">Vesting percentage</td><td>50%</td><td>100%</td><td colspan="2"></td></tr>
</table>

	CEO Office			Executive Officers	
2018 Grant	• PSUs with a three year performance period • Value at grant 100% of base salary for the CEO and the President and CFO • Vesting conditions:			• PSUs with a three year performance period • Vesting conditions	
		Threshold	**Target**		**Target**
	TSR/EPS vs. peer group	100% median	≥120% median	ROCE	100% target 100% vesting
	TSR vs. S&P 500	Performance equal to Index	≥Performance equal to Index + 2% outperformance	Gap to competition (where applicable)	100% target 100% vesting
	Vesting percentage	50%	100%		

See note 8.3 to the consolidated financial statements for further details on PSUs.

Global Stock Option Plan

Prior to the May 2011 annual general shareholders' meeting adoption of the ArcelorMittal Equity Incentive Plan described above, ArcelorMittal's equity-based incentive plan took the form of a stock option plan known as the Global Stock Option Plan.

See note 8.3 to the consolidated financial statements for further details on stock options

Other benefits

In addition to the remuneration described above, other benefits may be provided to senior management and, in certain cases, other employees. These other benefits can include insurance, housing (in cases of international transfers), car allowances and tax assistance.

SOX 304 and clawback policy

Under Section 304 of the Sarbanes-Oxley Act, the SEC may seek to recover remuneration from the CEO and CFO of the Company in the event that it is required to restate accounting information due to any material misstatement thereof or as a result of misconduct in respect of a financial reporting requirement under the U.S. securities laws (the "SOX Clawback").

Under the SOX Clawback, the CEO and the CFO may have to reimburse ArcelorMittal for any short-term incentive or other incentive- or equity-based remuneration received during the 12-month period following the first public issuance or filing with the SEC (whichever occurs first) of the relevant filing, and any profits realized from the sale of ArcelorMittal securities during that 12-month period.

The Board of Directors, through its ARCGS Committee, decided in 2012 to adopt its own clawback policy (the "Clawback Policy") that applies to the members of the former GMB and to the Executive Vice President of Finance of ArcelorMittal. In 2016, the Clawback Policy was updated to reflect the Company's structural changes and now applies to the CEO Office and the Executive Officers.

The Clawback Policy comprises cash short-term incentives and any other incentive-based or equity-based remuneration, as well as profits from the sale of the Company's securities received during the 12-month period following the first public issuance or filing with the SEC (whichever first occurs) of the filing that contained the material misstatement of accounting information.

For purposes of determining whether the Clawback Policy should be applied, the Board of Directors will evaluate the circumstances giving rise to the restatement (in particular, whether there was any fraud or misconduct), determine when any such misconduct occurred and determine the amount of remuneration that should be recovered by the Company. In the event that the Board of Directors determines that remuneration should be recovered, it may take appropriate action on behalf of the Company, including, but not limited to, demanding repayment or cancellation of cash short-term incentives, incentive-based or equity-based remuneration or any gains realized as the result of options being exercised or awarded or long-term incentives vesting. The Board may also choose to reduce future remuneration as a means of recovery.

Major shareholders and related party transactions

Major shareholders

The following table sets out information as of December 31, 2019 with respect to the beneficial ownership of ArcelorMittal ordinary shares by each person who is known to be the beneficial owner of more than 5% of the shares and all directors and senior management as a group.

	ArcelorMittal Ordinary Shares[1]	
	Number	%
Significant Shareholder[2]	382,277,751	37.41%
Treasury Shares[3]	9,824,202	0.96%
Other Public Shareholders	629,801,670	61.63%
Total	1,021,903,623	100.00%
Of which: Directors and Senior Management[4]	267,905	0.03%

1 For purposes of this table, a person or group of persons is deemed to have beneficial ownership of any ArcelorMittal ordinary shares as of a given date on which such person or group of persons has the right to acquire such shares within 60 days after December 31, 2019 upon exercise of vested portions of stock options. All stock options that have been granted to date by ArcelorMittal have vested.

2 For purposes of this table, ordinary shares owned directly by Mr. Lakshmi Mittal and his wife, Mrs. Usha Mittal, and options held directly by Mr. Lakshmi Mittal, are aggregated with those ordinary shares beneficially owned by the Significant Shareholder. At December 31, 2019, Mr. Lakshmi Mittal and his wife, Mrs. Usha Mittal, had direct ownership of ArcelorMittal ordinary shares and beneficial ownership (within the meaning set forth in Rule 13d-3 of the Exchange Act), through the Significant Shareholder, of the outstanding equity of two holding companies that own ArcelorMittal ordinary shares—Nuavam Investments S.à r.l. ("Nuavam") and Lumen Investments S.à r.l. ("Lumen"). Nuavam, a limited liability company organized under the laws of Luxembourg, was the owner of 63,658,348 ArcelorMittal ordinary shares. Lumen, a limited liability company organized under the laws of Luxembourg, was the owner of 318,288,328 ArcelorMittal ordinary shares. Mr. Mittal was the direct owner of 286,742 ArcelorMittal ordinary shares and held options to acquire an additional 18,833 ArcelorMittal ordinary shares, all of which are, for the purposes of this table, deemed to be beneficially owned by Mr. Mittal due to the fact that these options are exercisable within 60 days. Mrs. Mittal was the direct owner of 25,500 ArcelorMittal ordinary shares. Mr. Mittal, Mrs. Mittal and the Significant Shareholder shared beneficial ownership of 100% of the outstanding equity of each of Nuavam and Lumen (within the meaning set forth in Rule 13d-3 of the Exchange Act). Accordingly, Mr. Mittal was the beneficial owner of 382,252,251 ArcelorMittal ordinary shares, Mrs. Mittal was the beneficial owner of 381,972,176 ordinary shares and the Significant Shareholder (when aggregated with ordinary shares of ArcelorMittal and options to acquire ordinary shares of ArcelorMittal held directly by Mr. and Mrs. Mittal) was the beneficial owner of 382,277,751 ordinary shares. Excluding options, Mr. Lakshmi Mittal and Mrs. Usha Mittal together beneficially owned 382,258,918 ArcelorMittal ordinary shares at such date. As of December 31, 2018 and 2017 , the Significant Shareholder (together with Mr. Mittal and Mrs. Mittal) held 37.41% and 37.41% of the Company's ordinary shares respectively.

3 Represents ArcelorMittal ordinary shares repurchased pursuant to share repurchase programs, fractional shares returned in various transactions, and the use of treasury shares in various transactions; includes (1) 29,250 stock options that can be exercised by senior management (other than Mr. Mittal) and (2) 18,833 stock options that can be exercised by Mr. Mittal, in each case within 60 days of December 31, 2019, i.e. 0.001% of the total amount of outstanding shares. If exercised, the shares underlying these options will either have to be delivered out of Treasury shares or by the issuance of additional shares.

4 Includes shares beneficially owned by directors and members of senior management and excludes shares beneficially owned by Mr. Mittal. Note that (i) stock options included in this item that are exercisable within 60 days are excluded from "Treasury Shares" above (see also note 3 above) and (ii) ordinary shares included in this item are included in "Other Public Shareholders" above.
Aditya Mittal is the direct owner of 120,413 ArcelorMittal ordinary shares and holds options to acquire an additional 15,067 ArcelorMittal ordinary shares, together representing 0.01% of the ArcelorMittal ordinary shares outstanding. Aditya Mittal holds a total of 326,118 PSUs of which 40,653 may vest in 2021, 64,559 may vest in 2022,138,322 of which 50% may vest in 2020 and 50% may vest in 2022 and 82,584 which may vest in 2023. As the vesting of PSUs is dependent on company performance criteria not fully within the control of the PSU holder, Aditya Mittal does not beneficially own ArcelorMittal ordinary shares by virtue of his ownership of the PSUs. Aditya Mittal is the son of Mr. Mittal and Mrs. Mittal and is Group President and CFO and CEO of ArcelorMittal Europe. Vanisha Mittal Bhatia is the direct owner of 8,500 ArcelorMittal ordinary shares, representing less than 0.1% of the ArcelorMittal ordinary shares outstanding. Vanisha Mittal Bhatia is the daughter of Mr. Mittal and Mrs. Mittal and a member of the Company's Board of Directors.

The EGM of ArcelorMittal shareholders held on May 10, 2017 approved a reverse stock split. Following this approval, on May 22, 2017 ArcelorMittal completed the consolidation of each three existing shares in ArcelorMittal without nominal value into one share without nominal value. As a result, the aggregate number of shares issued and fully paid up decreased from 3,065,710,869 to 1,021,903,623.

The ArcelorMittal ordinary shares may be held in registered form on the Company's register only. Registered shares are fully fungible and may consist of:

a. ArcelorMittal Registry Shares, which are registered directly on ArcelorMittal's Luxembourg shareholder register,

b. shares traded on Euronext Amsterdam, Euronext Paris, the regulated market of the Luxembourg Stock Exchange and the Spanish Stock Exchanges, which are held in Euroclear, or

c. shares traded on the NYSE, the ("New York Registry Shares"), which are registered (including in the name of the nominee of DTC) in a New York Share Register kept on behalf of ArcelorMittal by Citibank N.A., its New York transfer agent.

Under Luxembourg law, the ownership of registered shares is evidenced by the inscription of the name of the shareholder, the number of shares held by such shareholder and the amount paid up on each share in the shareholder register of ArcelorMittal.

At December 31, 2019, 2,691 shareholders other than the Significant Shareholder, holding an aggregate of 21,826,165 ArcelorMittal ordinary shares were registered in ArcelorMittal's shareholder register, representing approximately 2.14% of the ordinary shares issued (including treasury shares).

At December 31, 2019, there were 175 registered shareholders holding an aggregate of 51,794,561 New York Registry Shares, representing approximately 5.07% of the ordinary shares issued (including treasury shares). ArcelorMittal's knowledge of the number of New York Registry Shares held by U.S. holders is based solely on the records of its New York transfer agent regarding registered ArcelorMittal ordinary shares.

At December 31, 2019, 576,975,297 ArcelorMittal ordinary shares were held through the Euroclear/Iberclear clearing system in The Netherlands, France, Luxembourg and Spain, representing approximately 56.5% of the ordinary shares issued (including treasury shares).

Voting rights

Each share entitles the holder to one vote at the general meeting of shareholders, and no shareholder benefits from special voting rights. For more information relating to ArcelorMittal shares, see "Memorandum and articles of association, Voting and information rights".

Related party transactions

ArcelorMittal engages in certain commercial and financial transactions with related parties, including associates and joint ventures of ArcelorMittal. Please refer to note 12 of ArcelorMittal's consolidated financial statements. Further information related to required disclosure of related party transactions under the Shareholders' Rights Law of August 1, 2019 implementing the European Union's Shareholders' Rights Directive in Luxembourg (the "Shareholders' Rights Law") is included in "Memorandum and Articles of Association" below.

Shareholder's Agreement

Mr. Lakshmi Mittal and ArcelorMittal are parties to a shareholder and registration rights agreement (the "Shareholder's Agreement") dated August 13, 1997. Pursuant to the Shareholder's Agreement and subject to the terms and conditions thereof, ArcelorMittal shall, upon the request of certain holders of restricted ArcelorMittal shares, use its reasonable efforts to register under the Securities Act of 1933, as amended, the sale of ArcelorMittal shares intended to be sold by those holders. By its terms, the Shareholder's Agreement may not be amended, other than for manifest error, except by approval of a majority of ArcelorMittal's shareholders (other than the Significant Shareholder and certain permitted transferees) at a general shareholders' meeting.

Memorandum of Understanding

The Memorandum of Understanding entered into in connection with the Mittal Steel acquisition of Arcelor, certain provisions of which expired in August 2009 and August 2011, is described under "Material contracts, Memorandum of Understanding".

Agreements with Aperam SA post-Stainless Steel Spin-Off

In connection with the spin-off of its stainless steel division into a separately focused company, Aperam SA ("Aperam"), which was completed on January 25, 2011, ArcelorMittal entered into several agreements with Aperam and/ or certain Aperam subsidiaries which are still in force: a purchasing services agreement for negotiation services from ArcelorMittal Purchasing (the "Purchasing Services Agreement") as well as certain commitments regarding cost-sharing in Brazil and certain other ancillary arrangements governing the relationship between Aperam and ArcelorMittal following the spin-off, as well as certain agreements relating to financing.

The parties agreed to renew a limited number of services where expertise and bargaining power created value for each party. ArcelorMittal will continue to provide certain services in 2020 and 2021 relating to areas including environmental and technical support.

In the area of research and development at the time of the spin-off, Aperam entered into a framework arrangement with ArcelorMittal to establish a structure for future cooperation in relation to certain ongoing or new research and development programs. Currently, only limited research and development support is implemented through this agreement, but new collaborative endeavors are foreseen in 2020.

Under the terms of the Purchasing Services Agreement and ArcelorMittal Sourcing Agreement, Aperam still relies on ArcelorMittal for services in relation to the negotiation of certain contracts with global or large regional suppliers, including those relating to the following key categories: operating materials (rolls (only hot strip mill), electrodes and refractory materials), spare parts, sea freight, industrial products and support services (excluding industrial services). The Purchasing Services Agreement also permits Aperam to avail itself of the services and expertise of ArcelorMittal for certain capital expenditure items. The Purchasing Services Agreement was entered into for an initial term of two years, which was to expire on January 24, 2013. However, since that date, the Purchasing Services Agreement has been extended successively and will remain in force until 2021. The ArcelorMittal Sourcing Agreement is effective starting from January 2020 for the sale of electrodes to Aperam. Specific IT service agreements have been put in place with Aperam, one for Asset Reliability Maintenance Program ("ARMP") in its Brazilian entities, and

two others for the use in Europe of ARMP and for the use of the global wide area network (WAN). In Europe, Aperam purchased most of its electricity and natural gas though energy supply contracts put in place for the period 2014-2019 with ArcelorMittal Energy SCA and ArcelorMittal Purchasing SAS, and such contracts are to be automatically renewed in 2020.

Purchasing activities will continue to be provided to Aperam pursuant to existing contracts with ArcelorMittal entities that it has specifically elected to assume. In addition, since 2011, a services agreement has been concluded between ArcelorMittal Shared Service Center Europe Sp z.o.o. Sp.k. and Aperam for accounting services.

In connection with the spin-off, management also renegotiated an existing Brazilian cost-sharing agreement between ArcelorMittal Brasil and Aperam Inox América do Sul S.A. (formerly known as ArcelorMittal Inox Brasil), pursuant to which, as of April 1, 2011, ArcelorMittal Brasil continued to perform purchasing for the benefit of certain of Aperam's Brazilian subsidiaries, with costs being shared on the basis of cost allocation parameters agreed between the parties.

Headquarters

ArcelorMittal Kirchberg Real Estate s.à r.l., Kennedy 2020 SAS, and Aperam Real Estate s.à r.l, which are subsidiaries of ArcelorMittal and Aperam, respectively, signed a land use right for a combined head office project in Kirchberg, Luxembourg with Fonds Kirchberg on March 7, 2019.

Memorandum and Articles of Association

Below is a summary of ArcelorMittal's Articles of Association, filed as an exhibit to this annual report on Form 20-F and incorporated by reference herein. The full text of the Company's Articles of Association is also available on www.arcelormittal.com under "Investors-Corporate Governance-Articles of Association."

Corporate purpose

Article 3 of the Articles of Association provides that the corporate purpose of ArcelorMittal is the manufacture, processing and marketing of steel, steel products and all other metallurgical products, as well as all products and materials used in their manufacture, their processing and their marketing, and all industrial and commercial activities connected directly or indirectly with those objects, including mining and research activities and the creation, acquisition, holding, exploitation and sale of patents, licenses, know-how and, more generally, intellectual and industrial property rights.

The Company may realize its corporate purpose either directly or through the creation of companies, the acquisition, holding or acquisition of interests in any companies or partnerships, membership in any associations, consortia and joint ventures.

In general, the Company's corporate purpose comprises the participation, in any form whatsoever, in companies and partnerships and the acquisition by purchase, subscription or in any other manner as well as the transfer by sale, exchange or in any other manner of shares, bonds, debt securities, warrants and other securities and instruments of any kind.

It may grant assistance to any affiliated company and take any measure for the control and supervision of such companies.

It may carry out any commercial, financial or industrial operation or transaction that it considers to be directly or indirectly necessary or useful in order to achieve or further its corporate purpose.

Form and transfer of shares

The shares of ArcelorMittal are issued in registered form only and are freely transferable. There are no restrictions on the rights of Luxembourg or non-Luxembourg residents to own ArcelorMittal shares.

Under Luxembourg law, the ownership of registered shares is evidenced by the inscription of the name of the shareholder and the number of shares held by such shareholder in the shareholders' register. Each transfer of shares is made by a written declaration of transfer recorded in the shareholders' register of ArcelorMittal, dated and signed by the transferor and the transferee or by their duly appointed agent. ArcelorMittal may accept and enter into its shareholders' register any transfer based on an agreement between the transferor and the transferee provided a true and complete copy of the agreement is provided to ArcelorMittal.

The Articles of Association provide that shares may be held through a securities settlement (clearing) system or a professional depositary of securities. Shares held in this manner have the same rights and obligations as the registered shares. Shares held through a securities settlement system or a professional depositary of securities may be transferred in accordance with customary procedures for the transfer of securities in book-entry form.

The ArcelorMittal ordinary shares may be held in registered form on the Company's register only. Registered shares are fully fungible and may consist of:

a. ArcelorMittal Registry Shares, which are registered directly on ArcelorMittal's Luxembourg shareholder register,

b. shares traded on Euronext Amsterdam, Euronext Paris, the regulated market of the Luxembourg Stock Exchange

and the Spanish Stock Exchanges, which are held in Euroclear, or

c. shares traded on the NYSE, (the "New York Registry Shares"), which are registered (including in the name of the nominee of DTC) in a New York Share Register kept on behalf of ArcelorMittal by Citibank N.A., its New York transfer agent.

Since March 2009, ArcelorMittal has used the services of BNP Paribas Securities Services to assist it with certain administrative tasks relating to the day-to-day administrative management of the shareholders' register. The Company maintains a New York Share Register with Citibank N.A. (located at 388 Greenwich Street, New York, New York 10013) for its New York Registry Shares that trade on the NYSE with underlying positions held in Euroclear. As of December 31, 2019, 51,794,561 shares (or approximately 5.07% of ArcelorMittal's total issued shares) were New York Registry Shares.

The law of April 6, 2013 concerning dematerialized securities allows Luxembourg issuers to opt for the full dematerialization of shares. The EGM of ArcelorMittal shareholders held on May 10, 2017 authorized and empowered the Board of Directors to give effect to such dematerialization and to determine its effective date, following which new shares in the Company may only be issued in dematerialized form (the "Effective Date"). Notice of the compulsory dematerialization will be given in accordance with Article 6.9 (i) of the Company's Articles of Association. As from the Effective Date, shareholders would be required to hold their shares in a securities account at a bank or other financial intermediary, which would in turn hold the shares via an account with a securities depository such as Clearstream or Euroclear. Dematerialized securities would be solely represented by account entries with the securities depositary and would therefore exist only in electronic form. It would then no longer be possible for shareholders to hold shares through a direct, nominative registration in the Company's register of shareholders as is currently the case. As of December 31, 2019, notice of the Effective Date has not been given.

Issuance of shares

The issuance of shares by ArcelorMittal requires either an amendment of the Articles of Association approved by an EGM or a decision of the Board of Directors that is within the limits of the authorized share capital set out in the Articles of Association. In the latter case, the Board of Directors may determine the conditions for the issuance of shares, including the consideration (cash or in kind) payable for such shares.

The EGM may not validly deliberate unless at least half of the share capital is present or represented upon the first call. If the quorum is not met, the meeting may be reconvened as described in "–General meeting of shareholders" below. The second meeting will be held regardless of the proportion of share capital represented. At both meetings, resolutions, in order to be adopted, must be carried by at least two-thirds of the votes cast.

The EGM of ArcelorMittal shareholders held on May 10, 2017 approved a reverse stock split and an increase of the Company's authorized share capital from €337 million to €345 million. Following this approval, on May 22, 2017 ArcelorMittal completed the consolidation of every three existing shares in ArcelorMittal without nominal value into one share without nominal value. As a result, the authorized share capital increased from €337 million represented by 3,372,281,956 ordinary shares without nominal value as of December 31, 2016 to €345 million represented by 1,151,576,921 ordinary shares without nominal value. There was no change in the issued share capital of ArcelorMittal but the aggregate number of shares issued and fully paid up decreased from 3,065,710,869 to 1,021,903,623.

Articles 4, 5, 7, 8, 9, 11, 13, 14 and 15 of the Articles of Association have been amended to reflect the recent changes in Luxembourg law. Such amendments to the Articles of Association were filed with the Luxembourg Register of Commerce and Companies on May 18, 2017.

The EGM of ArcelorMittal shareholders held on May 16, 2018 approved the change of the currency of the share capital of the Company from euro into U.S. dollar (the "Change of Currency") based on the EUR/USD exchange rate of 1.1883 published by the European Central Bank at about 4 pm CET on May 15, 2018, the day preceding the EGM. As a result, the issued share capital amounts to $364 million represented by 1,021,903,623 ordinary shares fully paid without nominal value. The Company's authorized share capital, including the issued share capital, amounts to $411 million represented by 1,151,576,921 ordinary shares without nominal value.

Articles 5.1, 5.2 and the second paragraph of article 17 of the Articles of Association of the Company have been amended to reflect the Change of Currency. Such amendments to the Articles of Association were filed with the Luxembourg Register of Commerce and Companies on May 31, 2018.

Preemptive rights

Unless limited or canceled by the Board of Directors as described below or by an EGM, holders of ArcelorMittal shares have a pro rata preemptive right to subscribe for newly issued shares, except for shares issued for consideration other than cash (i.e., in kind).

The Articles of Association provide that preemptive rights may be limited or cancelled by the Board of Directors in the event of an increase in the Company's issued share capital until the date being five years from the date of publication

via the online platform called *Recueil électronique des sociétés et associations* ("RESA") of the relevant meeting minutes, which publication occurred on May 18, 2017 with respect to the minutes of the EGM held on May 10, 2017. This power of the Board of Directors may from time to time be renewed by an EGM for subsequent periods not to exceed five years each.

Repurchase of shares

ArcelorMittal is prohibited by Luxembourg law from subscribing for its own shares. ArcelorMittal may, however, repurchase its own shares or have another person repurchase shares on its behalf, subject to certain conditions, including:

- a prior authorization of the general meeting of shareholders setting out the terms and conditions of the proposed repurchase, including the maximum number of shares to be repurchased, the duration of the period for which the authorization is given (which may not exceed five years) and the minimum and maximum consideration per share;
- the repurchase may not reduce the net assets of ArcelorMittal on a non-consolidated basis to a level below the aggregate of the issued share capital and the reserves that ArcelorMittal must maintain pursuant to Luxembourg law or its Articles of Association;
- only fully paid-up shares may be repurchased. At December 31, 2019, all of ArcelorMittal's issued ordinary shares were fully paid-up; and
- the acquisition offer is made on the same terms and conditions to all the shareholders who are in the same position, it being noted however that listed companies may repurchase their own shares on the stock exchange without an acquisition offer having to be made to the shareholders.

In addition, Luxembourg law allows the Board of Directors to approve the repurchase of ArcelorMittal shares without the prior approval of the general meeting of shareholders if necessary to prevent serious and imminent harm to ArcelorMittal. In such a case, the next general meeting of shareholders must be informed by the Board of Directors of the reasons for and the purpose of the acquisitions made, the number and nominal values, or in the absence thereof, the accounting par value of the shares acquired, the proportion of the issued share capital that they represent, and the consideration paid for them.

The general meeting of shareholders held on May 5, 2015 (the "General Meeting") decided (a) to cancel with effect as of the date of the General Meeting the authorization granted to the Board of Directors by the general meeting of shareholders held on May 11, 2010 with respect to the share buy-back program, and (b) to authorize, effective immediately after the General Meeting, the Board of Directors, with the option to delegate to the corporate bodies of the other companies in the ArcelorMittal group in accordance with the Luxembourg law of August 10, 1915 on commercial companies, as amended (the "Law"), to acquire and sell shares in the Company in accordance with the Law and any other applicable laws and regulations, including but not limited to entering into off-market and over-the-counter transactions and to acquire shares in the Company through derivative financial instruments.

Any acquisitions, disposals, exchanges, contributions or transfers of shares by the Company or other companies in the ArcelorMittal group must be in accordance with Luxembourg laws transposing Directive 2003/6/EC regarding insider dealing and market manipulation as repealed and replaced by Regulation (EU) No. 596/2014 of the European Parliament and of the Council of April 16, 2014 on market abuse and Commission Delegated Regulation (EU) No. 2016/1052 of March 8, 2016 with regard to regulatory technical standards for the conditions applicable to buy-back programs and stabilization measures.

Such transactions may be carried out at any time, including during a tender offer period, subject to applicable laws and regulations including Section 10(b) and Section 9(a)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 10b-5 promulgated under the Exchange Act.

The authorization is valid for a period of five years, i.e., until the annual general meeting of shareholders to be held in May 2020, or until the date of its renewal by a resolution of the general meeting of shareholders if such renewal date is prior to the expiration of the five-year period.

The maximum number of shares that may be acquired is the maximum allowed by the Law (as defined above) in such manner that the accounting par value of the Company's shares held by the Company does not in any event exceed 10% of the Company's issued share capital. The maximum number of own shares that the Company may hold at any time directly or indirectly may not have the effect of reducing its net assets ("actif net") below the amount mentioned in paragraphs 1 and 2 of Article 461-2 of the Law. The purchase price per share to be paid shall not represent more than 110% of the trading price of the shares on the New York Stock Exchange and on the Euronext markets where the Company is listed, the Luxembourg Stock Exchange or the Spanish stock exchanges of Barcelona, Bilbao, Madrid and Valencia, depending on the market on which the purchases are made, and no less than one cent. For off-market transactions, the maximum purchase price shall be 110% of the reference price on the Euronext markets where the Company is listed. The reference price will be deemed to be the average of the final listing prices per share on the relevant stock exchange during 30

consecutive days on which the relevant stock exchange is open for trading preceding the three trading days prior to the date of purchase. In the event of a share capital increase by incorporation of reserves or issue premiums and the free allotment of shares as well as in the event of the division or regrouping of the shares, the purchase price indicated above shall be adjusted by a multiplying coefficient equal to the ratio between the number of shares comprising the issued share capital prior to the transaction and such number following the transaction. The total amount allocated for the Company's share repurchase program may not in any event exceed the amount of the Company's then available equity.

Capital reduction

The Articles of Association provide that the issued share capital of ArcelorMittal may be reduced subject to the approval of at least two-thirds of the votes cast at an extraordinary general meeting of shareholders where, at first call, at least 50% of the issued share capital is required to be represented, with no quorum being required at a reconvened meeting.

General meeting of shareholders

The shareholders' rights law of May 24, 2011, which transposes into Luxembourg law Directive 2007/36/EC of the European Parliament and of the Council of July 11, 2007 (on the exercise of certain rights of shareholders in listed companies) of July 14, 2007 came into force on July 1, 2011 was amended by the law of August 1, 2019 which entered into force on August 24, 2019 implementing the Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC (as regards the encouragement of long term shareholder engagement) (the "Shareholders' Rights Law") and includes provisions relating to general meetings of shareholders, as discussed below.

General meetings of shareholders are convened by the publication of a notice at least 30 days before the meeting date in a Luxembourg newspaper, via the online platform called *Recueil électronique des sociétés et associations* ("RESA"), and by way of press release sent to the major news agencies. Ordinary general meetings are not subject to any minimum shareholder participation level. Extraordinary general meetings, however, are subject to a minimum quorum of 50% of the share capital. In the event the 50% quorum is not met upon the first call, the meeting may be reconvened by way of convening notice published in the same manner as the first notice, at least 17 days before the meeting date. No quorum is required upon the second call.

Shareholders whose share ownership is directly registered in the shareholders' register of the Company must receive the convening notice by regular mail, unless they have accepted to receive it through other means (i.e., electronically). In addition, all materials relating to a general meeting of shareholders must be made available on the website of ArcelorMittal from the first date of publication of the convening notice.

The Shareholders' Rights Law abolished the blocking period and introduced the record date system into Luxembourg law. As set out in the Articles of Association, the record date applicable to ArcelorMittal is the 14th day at midnight before the general meeting date. Only the votes of shareholders who are shareholders of the Company on the record date will be taken into account, regardless of whether they remain shareholders on the general meeting date. Shareholders who intend to participate in the general meeting must notify the Company at the latest on the date indicated in the convening notice of their intention to participate (by proxy or in person).

Ordinary general meetings of shareholders.

At an ordinary general meeting of shareholders there is no quorum requirement and resolutions are adopted by a simple majority, irrespective of the number of shares represented. Ordinary general meetings deliberate on any matter that does not require the convening of an extraordinary general meeting.

Based on an amendment voted by the extraordinary general meeting of shareholders on May 10, 2017, the Articles of Association provide that the annual general meeting of shareholders is held each year within six months from the end of the previous financial year at the Company's registered office or at any other place in the Grand Duchy of Luxembourg as determined by the Board of Directors and indicated in the convening notice.

Extraordinary general meetings of shareholders.

An extraordinary general meeting must be convened to deliberate on the following types of matters:

- an increase or decrease of the authorized or issued share capital,
- a limitation or exclusion of existing shareholders' preemptive rights,
- the acquisition by any person of 25% or more of the issued share capital of ArcelorMittal,
- approving a merger or similar transaction such as a spin-off, and
- any transaction or matter requiring an amendment of the Articles of Association.

The extraordinary general meeting must reach a quorum of shares present or represented at the meeting of 50% of the share capital in order to validly deliberate. If this quorum is

not reached, the meeting may be reconvened and the second meeting will not be subject to any quorum requirement. In order to be adopted by the extraordinary general meeting (on the first or the second call), any resolution submitted must be approved by at least two-thirds of the votes cast except for certain limited matters where the Articles of Association require a higher majority (see "— Memorandum and Articles of Association"). Votes cast do not include votes attaching to shares with respect to which the shareholder has not taken part in the vote, has abstained or has returned a blank or invalid vote.

In addition, Luxembourg law requires the Board of Directors to convene a general meeting of shareholders if shareholders representing in the aggregate 10% of the issued share capital so require in writing with an indication of the requested agenda. In this case, the general meeting of shareholders must be held within one month of the request. If the requested general meeting of shareholders is not so convened, the relevant shareholder or group of shareholders may petition the competent court in Luxembourg to have a court appointee convene the general meeting.

Shareholder participation at general meetings

The Board of Directors may decide to arrange for shareholders to be able to participate in the general meeting by electronic means by way, among others, of (i) real-time transmission to the public of the general meeting, (ii) two-way communication enabling shareholders to address the general meeting from a remote location, or (iii) a mechanism allowing duly identified shareholders to cast their votes before or during the general meeting without the need for them to appoint a proxyholder who would be physically present at the meeting.

A shareholder may act at any general meeting of shareholders by appointing another person (who need not be a shareholder) as his or her attorney by means of a written proxy using the form made available on the website of the Company. The completed and signed proxy must be sent to the Company in accordance with the instructions set out in the convening notice.

The Board of Directors may also decide to allow shareholders to vote by correspondence by means of a form providing for a positive or negative vote or an abstention on each agenda item. The conditions for voting by correspondence are set out in the Articles of Association and in the convening notice.

Shareholders representing in the aggregate 5% of the issued share capital may also request that additional items be added to the agenda of a general meeting and may draft alternative resolutions to be submitted to the general meeting regarding existing agenda items. The request must be made in writing and sent either to the electronic address or to the Company's postal address set out in the convening notice.

The Shareholders' Rights Law provides that a company's articles of association may allow shareholders to ask questions prior to the general meeting which will be answered by management during the general meeting's questions and answers session prior to the vote on the agenda items. Although the Articles of Association do not specifically address this point, shareholders may ask questions in writing ahead of a general meeting, which are taken into account in preparing the general meeting's questions and answers session. With regard to the May 7, 2019 general meeting, shareholders were expressly encouraged to send questions and comments to the Company in advance by writing to a dedicated e-mail address indicated in the convening notice.

Identification of shareholders

Pursuant to the Shareholders' Rights Law, listed companies now have the ability to identify their shareholders and ultimately improve communication between them and their shareholders. Intermediaries, including those in third countries, are required to provide the Company with information to enable the identification of shareholders. Intermediaries in-scope of the Shareholders' Rights Law are investment firms, credit institutions and central securities depositories which provide share safekeeping or administration of securities accounts or maintenance services to shareholders or other persons. Third country in-scope intermediaries are those which provide these services to shareholders or other intermediaries with respect to shares in the Company and are located outside of the European Union.

Voting and information rights

There are no restrictions on the rights of Luxembourg or non-Luxembourg residents to vote ArcelorMittal shares. Each share entitles the shareholder to attend a general meeting of shareholders in person or by proxy, to address the general meeting of shareholders and to vote. Each share entitles the holder to one vote at the general meeting of shareholders. There is no minimum shareholding (beyond owning a single share or representing the owner of a single share) required to be able to attend or vote at a general meeting of shareholders.

The voting and information rights of ArcelorMittal's shareholders have been further expanded since the entry into force of the Shareholders' Rights Law.

Election and removal of directors.

Members of the Board of Directors are elected by simple majority of the represented shareholders at an ordinary general meeting of shareholders. Directors are elected for a period ending on a date determined at the time of their appointment. The directors of ArcelorMittal are elected for three-year terms in staggered intervals. Any director may be removed with or without cause by a simple majority vote at any general meeting of shareholders.

(a) a director's power to vote on a proposal, arrangement or contract in which the director is materially interested;

If a Director has directly or indirectly a financial interest in a transaction that is submitted to the Board of Directors for approval and this interest conflicts with that of ArcelorMittal (other than transactions which are ordinary business operations and are entered into under normal conditions), the Director must advise the Board of Directors of the existence and nature of the conflict and cause a record of his/her statement to be included in the minutes of the meeting. In addition, the Director may not take part in the discussions on and may not vote on the relevant transaction and he or she shall not be counted for the purposes of whether the quorum is present, in which case the Board of Directors may validly deliberate if at least the majority of the non-conflicted directors are present or represented. At the next following general meeting of shareholders of ArcelorMittal, before any other resolution is put to a vote, a special report will be made by the Board of Directors to the shareholders' meeting on any such transaction.

If a material transaction with a related party involves a Director, that Director may not participate in the approval of such transaction.

(b) the directors' power, in the absence of an independent quorum, to vote compensation to themselves or any members of their body;

The remuneration of the Directors is determined each year by the annual general meeting of shareholders subject to Article 17 of the Articles of Association. The annual shareholders meeting of the Company decides on the directors' remuneration. The Chairman & CEO is not remunerated for his membership on the Board of Directors. The remuneration of the Chairman & CEO is determined by the Board's ARCGS Committee, which consists solely of independent directors. For more information, see "Compensation".

Pursuant to the Shareholders' Rights Law, the shareholders must be informed in detail of the remuneration of the members of the Company's Board of Directors and its CEO and the company's remuneration policy. Companies must prepare a management remuneration policy describing all components, criteria, methods and modalities applied to determine the fixed and variable remuneration of such persons. Such remuneration policy must contribute to the Company' business strategy and long term interests. It must be resubmitted to an advisory vote at the general meeting of shareholders for approval each time there is a significant change thereto and at least every four years. In addition, companies must prepare a renumeration report for the annual general meeting on the remuneration and benefits granted to directors, and such remuneration report is required to be submitted for an advisory vote at the general meeting of shareholders each year.

(c) borrowing powers exercisable by the directors and how such borrowing powers can be varied;

Any transaction between ArcelorMittal or a subsidiary of ArcelorMittal and a Director (or an affiliate of a Director) must be conducted on arm's length terms and, if material, must obtain the approval of the Independent Directors.

(d) retirement or non-retirement of directors under an age limit requirement

There is no retirement or non-retirement of directors under an age limit requirement. However, on October 30, 2012, the Board of Directors adopted a policy that places limitations on the terms of independent directors as well as the number of directorships Directors may hold in order to align the Company's corporate governance practices with best practices in this area. The policy provides that an independent director may not serve on the Board of Directors for more than 12 consecutive years, although the Board of Directors may, by way of exception to this rule, make an affirmative determination, on a case-by-case basis, that he or she may continue to serve beyond the 12 years rule if the Board of Directors considers it to be in the best interest of the Company based on the contribution of the Director involved and the balance between the knowledge, skills, experience and need for renewal of the Board.

(e) number of shares, if any, required for director's qualification.

Article 8.2 of the Articles of Association states that the members of the Board of Directors do not have to be shareholders in the Company. However, the Board of Directors introduced on October 30, 2012 (as amended on November 7, 2017) a policy that requires members of the Board of Directors to hold 4,000 shares in the Company (6,000 for the Lead Independent Director). For more information, see "Board practices/corporate governance, Specific characteristics of the director role"

ArcelorMittal's Articles of Association provide that the Significant Shareholder is entitled to nominate a number of candidates for election by the shareholders to the Board of Directors in proportion to its shareholding. The Significant Shareholder has not exercised this right to date.

Amendment of the Articles of Association

Any amendments to the Articles of Association must be approved by an extraordinary general meeting of shareholders held in the presence of a Luxembourg notary, followed by the publications required by Luxembourg law.

In order to be adopted, amendments of the Articles of Association relating to the size and the requisite minimum number of independent and non-executive directors of the Board of Directors, the composition of the Audit & Risk Committee, and the nomination rights to the Board of Directors of the Significant Shareholder require a majority of votes representing two-thirds of the voting rights attached to the shares in ArcelorMittal. The same majority rule would apply to amendments of the provisions of the Articles of Association that set out the foregoing rule.

Annual accounts

Each year before submission to the annual ordinary general meeting of shareholders, the Board of Directors approves the stand-alone audited annual accounts for ArcelorMittal, the parent company of the ArcelorMittal group as well as the consolidated annual accounts of the ArcelorMittal group, each of which are prepared in accordance with IFRS. The Board of Directors also approves the management reports on each of the stand-alone audited annual accounts and the consolidated annual accounts, and in respect of each of these sets of accounts a report must be issued by the independent auditors.

The stand-alone audited annual accounts, the consolidated annual accounts, the management reports and the auditor's reports will be available on request from the Company and on the Company's website from the date of publication of the convening notice for the annual ordinary general meeting of shareholders.

The stand-alone audited annual accounts and the consolidated annual accounts, after their approval by the annual ordinary general meeting of shareholders, are filed with the Luxembourg Register of Commerce and Companies.

Dividends

Except for shares held in treasury by the Company, each ArcelorMittal share is entitled to participate equally in dividends if and when declared out of funds legally available for such purposes. The Articles of Association provide that the annual ordinary general meeting of shareholders may declare a dividend and that the Board of Directors may declare interim dividends within the limits set by Luxembourg law.

Declared and unpaid dividends held by ArcelorMittal for the account of its shareholders do not bear interest. Under Luxembourg law, claims for dividends lapse in favor of ArcelorMittal five years after the date on which the dividends have been declared.

Merger and division

A merger whereby the Luxembourg company being acquired transfers to an existing or newly incorporated Luxembourg company all of its assets and liabilities in exchange for the issuance to the shareholders of the company being acquired of shares in the acquiring company, and a division whereby a company (the company being divided) transfers all its assets and liabilities to two or more existing or newly incorporated companies in exchange for the issuance of shares in the beneficiary companies to the shareholders of the company being divided or to such company, and certain similar restructurings must be approved by an extraordinary general meeting of shareholders of the relevant companies held in the presence of a notary. These transactions require the approval of at least two-thirds of the votes cast at a general meeting of shareholders of each of the companies where at least 50% of the share capital is represented upon first call, with no such quorum being required at a reconvened meeting.

Liquidation

In the event of the liquidation, dissolution or winding-up of ArcelorMittal, the assets remaining after allowing for the payment of all liabilities will be paid out to the shareholders pro rata to their respective shareholdings. The decision to liquidate, dissolve or wind-up requires the approval of at least two-thirds of the votes cast at a general meeting of shareholders where at first call at least 50% of the share capital is represented, with no quorum being required at a reconvened meeting. Irrespective of whether the liquidation is subject to a vote at the first or a subsequent extraordinary general meeting of shareholders, it requires the approval of at least two-thirds of the votes cast at the extraordinary general meeting of shareholders.

Mandatory bid—squeeze-out right—sell-out right

Mandatory bid. The Luxembourg law of May 19, 2006 implementing Directive 2004/25/EC of the European Parliament and the Council of April 21, 2004 on takeover bids (the "Takeover Law"), provides that, if a person acting alone or in concert acquires securities of ArcelorMittal which, when added to any existing holdings of ArcelorMittal securities, give such person voting rights representing at least one third of all of the voting rights attached to the issued shares in ArcelorMittal, this person is obliged to make an offer for the remaining shares in ArcelorMittal. In a mandatory bid situation the "fair price" is in principle considered to be the highest price paid by the offeror or a person acting in concert with the offeror for the securities during the 12–month period preceding the mandatory bid.

ArcelorMittal's Articles of Association provide that any person who acquires shares giving them 25% or more of the total voting rights of ArcelorMittal must make or cause to be made, in each country where ArcelorMittal's securities are admitted to trading on a regulated or other market and in each of the countries in which ArcelorMittal has made a public offering of its shares, an unconditional public offer of acquisition for cash to all shareholders for all of their shares and also to all holders of securities giving access to capital or linked to capital or whose rights are dependent on the profits of ArcelorMittal. The price offered must be fair and equitable and must be based on a report drawn up by a leading international financial institution or other internationally recognized expert.

Squeeze-out right. The Takeover Law provides that, when an offer (mandatory or voluntary) is made to all of the holders of voting securities of ArcelorMittal and after such offer the offeror holds at least 95% of the securities carrying voting rights and 95% of the voting rights, the offeror may require the holders of the remaining securities to sell those securities (of the same class) to the offeror. The price offered for such securities must be a fair price. The price offered in a voluntary offer would be considered a fair price in the squeeze-out proceedings if the offeror acquired at least 90% of the ArcelorMittal shares carrying voting rights that were the subject of the offer. The price paid in a mandatory offer is deemed a fair price. The consideration paid in the squeeze-out proceedings must take the same form as the consideration offered in the offer or consist solely of cash. Moreover, an all-cash option must be offered to the remaining ArcelorMittal shareholders. Finally, the right to initiate squeeze-out proceedings must be exercised within three months following the expiration of the offer.

Sell-out right. The Takeover Law provides that, when an offer (mandatory or voluntary) is made to all of the holders of voting securities of ArcelorMittal and if after such offer the offeror holds securities carrying more than 90% of the voting rights, the remaining security holders may require that the offeror purchase the remaining securities of the same class. The price offered in a voluntary offer would be considered "fair" in the sell-out proceedings if the offeror acquired at least 90% of the ArcelorMittal shares carrying voting rights and which were the subject of the offer. The price paid in a mandatory offer is deemed a fair price. The consideration paid in the sell-out proceedings must take the same form as the consideration offered in the offer or consist solely of cash. Moreover, an all-cash option must be offered to the remaining ArcelorMittal shareholders. Finally, the right to initiate sell-out proceedings must be exercised within three months following the expiration of the offer.

Disclosure of significant ownership in ArcelorMittal shares

Holders of ArcelorMittal shares and derivatives or other financial instruments linked to ArcelorMittal shares may be subject to the notification obligations of the Luxembourg law of January 11, 2008, as last amended by the law dated May 10, 2016, on transparency requirements regarding information about issuers whose securities are admitted to trading on a regulated market (the "Transparency Law"). The following description summarizes these obligations. ArcelorMittal shareholders are advised to consult with their own legal advisers to determine whether the notification obligations apply to them.

The Transparency Law provides that, if a person acquires or disposes of a shareholding in ArcelorMittal, and if following the acquisition or disposal the proportion of voting rights held by the person reaches, exceeds or falls below one of the thresholds of 5%, 10%, 15%, 20%, 25%, one-third, 50% or two-thirds of the total voting rights existing when the situation giving rise to a declaration occurs, the relevant person must simultaneously notify ArcelorMittal and the CSSF (the Luxembourg securities regulator) of the proportion of voting rights held by it further to such event within four Luxembourg Stock Exchange trading days of the day of execution of the transaction triggering the threshold crossing.

A person must also notify ArcelorMittal of the proportion of his or her voting rights if that proportion reaches, exceeds or falls below the above mentioned thresholds as a result of events changing the breakdown of voting rights.

The above notification obligations also apply to persons who directly or indirectly hold financial instruments linked to ArcelorMittal shares. Pursuant to article 12 a. of the Transparency Law, persons who hold ArcelorMittal shares and financial instruments linked to ArcelorMittal shares must aggregate their holding.

ArcelorMittal's Articles of Association also provide that the above disclosure obligations also apply to:

- any acquisition or disposal of shares resulting in the threshold of 2.5% of voting rights in ArcelorMittal being crossed upwards or downwards,
- any acquisition or disposal of shares resulting in the threshold of 3.0% of voting rights in ArcelorMittal being crossed upwards or downwards, and
- with respect to any shareholder holding at least 3.0% of the voting rights in ArcelorMittal, to any acquisition or disposal of shares resulting in successive thresholds of 1.0% of voting rights being crossed upwards or downwards.

Pursuant to the Articles of Association, any person who acquires shares giving him or her 5% or more or a multiple of 5% or more of the voting rights must inform ArcelorMittal within 10 Luxembourg Stock Exchange trading days following the date on which the threshold was crossed by registered letter with return receipt requested as to whether he or she intends to acquire or dispose of shares in

ArcelorMittal within the next 12 months or intends to seek to obtain control over ArcelorMittal or to appoint a member to ArcelorMittal's Board of Directors.

The sanction of suspension of voting rights automatically applies, subject to limited exceptions set out in the Transparency Law as amended from time to time, to any shareholder (or group of shareholders) who has (or have) crossed the thresholds set out in article 7 of the Articles of Association and articles 8 to 15 of the Luxembourg law of 11 January 2008 on the transparency requirements regarding issuers of securities (the "Transparency Law") but have not notified the Company accordingly. The sanction of suspension of voting rights will apply until such time as the notification has been properly made by the relevant shareholder(s).

For the purposes of calculating the percentage of a shareholder's voting rights in ArcelorMittal, the following are taken into account:

- voting rights held by a third party with whom that person or entity has concluded an agreement and which obliges them to adopt, by concerted exercise of the voting rights they hold, a lasting common policy towards ArcelorMittal;
- voting rights held by a third party under an agreement concluded with that person or entity providing for the temporary transfer for consideration of the voting rights in question;
- voting rights attaching to shares pledged as collateral with that person or entity, provided the person or entity controls the voting rights and declares its intention to exercise them;
- voting rights attaching to shares in which a person or entity holds a life interest;
- voting rights which are held or may be exercised within the meaning of the four foregoing points by an undertaking controlled by that person or entity;
- voting rights attaching to shares deposited with that person or entity which the person or entity may exercise at its discretion in the absence of specific instructions from the shareholders;
- voting rights held by a third party in its own name on behalf of that person or entity; and
- voting rights which that person or entity may exercise as a proxy where the person or entity may exercise the voting rights in its sole discretion.

In addition, the Articles of Association provide that, for the purposes of calculating a person's voting rights in ArcelorMittal, the voting rights attached to shares underlying any other financial instruments owned by that person (such as convertible notes) must be taken into account for purposes of the calculation described above.

Disclosure of insider dealing transactions

Members of the Board of Directors and the members of the CEO Office, Executive Officers and other executives fulfilling senior management responsibilities within ArcelorMittal and falling with the definition of "Persons Discharging Senior Managerial Responsibilities" set out below and persons closely associated with them must disclose to the CSSF and to ArcelorMittal all transactions relating to shares or debt instruments of ArcelorMittal or derivatives or other financial instruments linked to any shares or debt instruments of ArcelorMittal (together the "Financial Instruments") conducted by them or for their account.

Such notifications shall be made promptly and not later than three business days after the date of the transaction.

"Persons Discharging Senior Managerial Responsibilities" within ArcelorMittal are the members of the Board of Directors, and the CEO Office, the Executive Officers, and other executives occupying a high level management position with regular access to non-public material information relating, directly or indirectly, to ArcelorMittal and have the authority to make management decisions about the future development of the Company and its business strategy (see "Key Transactions and events in 2019" for a description of senior management). Persons closely associated with them include their respective family members.

Both information on trading in Financial Instruments by "Persons Discharging Senior Managerial Responsibilities" and ArcelorMittal's Insider Dealing Regulations are available on www.arcelormittal.com under "Investors—Corporate Governance—Share Transactions by Management".

In 2019, two notifications were received by ArcelorMittal from such persons and filed with the CSSF.

Related Party Transactions

The Shareholders' Rights Law provides that a company is now required to publicly disclose material transactions (excluding "transactions taking place as part of the company's ordinary activity and concluded under normal market conditions") with related parties no later than at the time of conclusion of the transaction. The same requirement applies to material transactions concluded between related parties of a company and subsidiaries of such company. The Board of Directors must approve material transactions of the Company with related parties. A transaction with a related party is material if (i) its publication and divulgation may have a significant impact on the economic decisions of shareholders and (ii) it may create a risk for the company and its shareholders which are not related parties, including

minority shareholders. In the determination of whether a transaction is material both the nature of the transaction and the position of the related party must be taken into account.

Publication of regulated information

Since January 2009, disclosure to the public of "regulated information" (within the meaning of the Luxembourg Transparency Law) concerning ArcelorMittal has been made by publishing the information through the centralized regulated information filing and storage system managed by the Luxembourg Stock Exchange and accessible in English and French on www.bourse.lu, in addition to the publication by ArcelorMittal of the information by way of press release. All news and press releases issued by the Company are available on www.arcelormittal.com in the "News and Media" section.

Limitation of directors' liability/indemnification of Directors and the members of the CEO Office

The Articles of Association provide that ArcelorMittal will, to the broadest extent permitted by Luxembourg law, indemnify every director and member of the CEO Office as well as every former director or member of the CEO Office for fees, costs and expenses reasonably incurred in the defense or resolution (including a settlement) of all legal actions or proceedings, whether civil, criminal or administrative, he or she has been involved in his or her role as former or current director or member of the CEO Office.

The right to indemnification does not exist in the case of gross negligence, fraud, fraudulent inducement, dishonesty or for a criminal offense, or if it is ultimately determined that the director or members of the CEO Office has not acted honestly, in good faith and with the reasonable belief that he or she was acting in the best interests of ArcelorMittal.

Luxembourg takeover law disclosure

The following disclosure is provided based on article 11 of the Luxembourg law of 19 May 2006 transposing Directive 2004/25/EC of the European Parliament and the Council of 21 April 2004 on takeover bids (the "Takeover Law"). The Articles of Association of the Company are available on www.arcelormittal.com, under Investors, Corporate Governance.

With regard to articles 11 (1) (a) and (c) of the Takeover Law, the Company has issued a single category of shares (ordinary shares), and the Company's shareholding structure showing each shareholder owning 2.5% or more of the Company's share capital is available elsewhere in this report and on www.arcelormittal.com under Investors, Corporate Governance, Shareholding Structure, where the shareholding structure chart is updated monthly.

With regard to article 11(1) (b) of the Takeover Law, the ordinary shares issued by the Company are listed on various stock exchanges including NYSE and are freely transferable.

With regard to article 11(1) (d), each ordinary share of the Company gives right to one vote, as set out in article 13.6 of the Articles of Association, and there are no special control rights attaching to the shares. Article 8 of the Articles of Association provides that the Mittal Shareholder (as defined in the Articles of Association) may, at its discretion, exercise the right of proportional representation and nominate candidates for appointment to the Board of Directors (defined as "Mittal Shareholder Nominees"). The Mittal Shareholder has not, to date, exercised that right.

Articles 11(1) (e) and (f) of the Takeover Law are not applicable to the Company. However, the sanction of suspension of voting rights automatically applies, subject to limited exceptions set out in the Transparency Law as amended from time to time (as defined below), to any shareholder (or group of shareholders) who has (or have) crossed the thresholds set out in article 7 of the Articles of Association and articles 8 to 15 of the Luxembourg law of 11 January 2008 on the transparency requirements regarding issuers of securities (the "Transparency Law") but have not notified the Company accordingly. The sanction of suspension of voting rights will apply until such time as the notification has been properly made by the relevant shareholder(s).

Article 11(1) (g) of the Takeover Law is not applicable to the Company.

With regard to article 11(1) (h) of the Takeover Law, the Articles of Association provide that the directors are elected by annual general meeting of shareholders for a term that may not exceed three years, and may be re-elected. The rules governing amendments to the Articles of Association are described elsewhere in this report and are set out in article 19 of the Articles of Association.

With regard to article 11(1) (i) of the Takeover Law, the general meeting of shareholders held on May 05, 2015 granted the Board of Directors a new share buy-back authorization whereby the Board may authorize the acquisition or sale of Company shares including, but not limited to, entering into off-market and over-the-counter transactions and the acquisition of shares through derivative financial instruments. Any acquisitions, disposals, exchanges, contributions or transfers of shares by the Company or other companies in the ArcelorMittal group must be in accordance with Luxembourg laws transposing Directive 2003/6/EC regarding insider dealing and market manipulation as repealed and replaced by Regulation (EU) No. 596/2014 of the European Parliament and of the Council of April 16, 2014 on market abuse and Commission Delegated Regulation (EU) No. 2016/1052 of March 8, 2016 with regard to regulatory technical standards for the conditions applicable to buy-back programs and stabilization

measures and may be carried out by all means, on or off-market, including by a public offer to buy-back shares, or by the use of derivatives or option strategies. The fraction of the capital acquired or transferred in the form of a block of shares may amount to the entire program. Such transactions may be carried out at any time, including during a tender offer period, in accordance with applicable laws and regulations, including Section 10(b) and Section 9(a)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 10b-5 promulgated under the Exchange Act. The authorization is valid for a period of five years, i.e., until the annual general meeting of shareholders to be held in May 2020, or until the date of its renewal by a resolution of the general meeting of shareholders if such renewal date is prior to the expiration of the five-year period. The maximum number of own shares that the Company may hold at any time directly or indirectly may not have the effect of reducing its net assets ("actif net") below the amount mentioned in paragraphs 1 and 2 of Article 461-2 of the Grand-Ducal Regulation coordinating the amended law of 10 August 1915 on commercial companies. The purchase price per share to be paid shall not represent more than 110% of the trading price of the shares on the New York Stock Exchange and on the Euronext markets where the Company is listed, the Luxembourg Stock Exchange or the Spanish stock exchanges of Barcelona, Bilbao, Madrid and Valencia, depending on the market on which the purchases are made, and no less than one cent. For off-market transactions, the maximum purchase price shall be 110% of the reference price on the Euronext markets where the Company is listed. The reference price will be deemed to be the average of the final listing prices per share on the relevant stock exchange during 30 consecutive days on which the relevant stock exchange is open for trading preceding the three trading days prior to the date of purchase. In the event of a share capital increase by incorporation of reserves or issue premiums and the free allotment of shares as well as in the event of the division or regrouping of the shares, the purchase price indicated above shall be adjusted by a multiplying coefficient equal to the ratio between the number of shares comprising the issued share capital prior to the transaction and such number following the transaction. The total amount allocated for the Company's share repurchase program may not in any event exceed the amount of the Company's then available equity.

Articles 11(1) (j) and (k) of the Takeover Law are not applicable to the Company.

Material contracts

The following are material contracts, not entered into in the ordinary course of business, to which ArcelorMittal has been a party during the past two years.

ArcelorMittal Equity Incentive Plan, Performance Share Unit Plan and Special Grant

For a description of such plans, please refer to "Compensation."

Memorandum of Understanding

Mr. Lakshmi Mittal, Mrs. Usha Mittal, Lumen Investments S.à r.l., Nuavam Investments S.à r.l. (together, the "MoU Group") and the Company are parties to a Memorandum of Understanding ("MoU"), dated June 25, 2006, to combine Mittal Steel and Arcelor in order to create the world's leading steel company. (Lumen Investments S.à r.l. and Nuavam Investments S.à r.l. became parties following the assumption of the obligations of original parties to the MoU that have since ceased to hold Company shares). In April 2008, the Board of Directors approved resolutions amending certain provisions of the MoU in order to adapt it to the Company's needs in the post-merger and post-integration phase, as described under "Board practices/ corporate governance, Operation, Lead Independent Director".

On the basis of the MoU, Arcelor's Board of Directors recommended Mittal Steel's offer for Arcelor, and the parties to the MoU agreed to certain corporate governance and other matters relating to the combined ArcelorMittal group. Certain provisions of the MoU relating to corporate governance were incorporated into the Articles of Association of ArcelorMittal at the extraordinary general meeting of the shareholders on November 5, 2007.

Certain additional provisions of the MoU expired effective August 1, 2009 and on August 1, 2011. ArcelorMittal's corporate governance rules will continue to reflect, subject to those provisions of the MoU that have been incorporated into the Articles of Association, the best standards of corporate governance for comparable companies and to conform with the corporate governance aspects of the NYSE listing standards applicable to non-U.S. companies and Ten Principles of Corporate Governance of the Luxembourg Stock Exchange.

The following summarizes the main provisions of the MoU that remain in effect or were in effect in 2019.

Standstill

The MoU Group agreed not to acquire, directly or indirectly, ownership or control of an amount of shares in the capital stock of the Company exceeding the percentage of shares in the Company that it will own or control following completion of the Offer (as defined in the MoU) for Arcelor and any subsequent offer or compulsory buy-out, except with the prior written consent of a majority of the independent directors on the Company's Board of Directors. Any shares acquired in violation of this restriction will be deprived of voting rights and shall be promptly sold by the

MoU Group. Notwithstanding the above, if (and whenever) the MoU Group holds, directly and indirectly, less than 45% of the then-issued Company shares, the MoU Group may purchase (in the open market or otherwise) Company shares up to such 45% limit. In addition, the MoU Group is also permitted to own and vote shares in excess of the threshold mentioned in the immediately preceding paragraph or the 45% limit mentioned above, if such ownership results from (1) subscription for shares or rights in proportion to its existing shareholding in the Company where other shareholders have not exercised the entirety of their rights or (2) any passive crossing of this threshold resulting from a reduction of the number of Company shares (e.g., through self-tender offers or share buy-backs) if, in respect of (2) only, the decisions to implement such measures were taken at a shareholders' meeting in which the MoU Group did not vote or by the Company's Board of Directors with a majority of independent directors voting in favor.

Once the MoU Group exceeds the threshold mentioned in the first paragraph of this "Standstill" subsection or the 45% limit, as the case may be, as a consequence of any corporate event set forth in (1) or (2) above, it shall not be permitted to increase the percentage of shares it owns or controls in any way except as a result of subsequent occurrences of the corporate events described in (1) or (2) above, or with the prior written consent of a majority of the independent directors on the Company's Board of Directors.

If subsequently the MoU Group sells down below the threshold mentioned in the first paragraph of this "Standstill" subsection or the 45% limit, as the case may be, it shall not be permitted to exceed the threshold mentioned in the first paragraph of this "Standstill" subsection or the 45% limit, as the case may be, other than as a result of any corporate event set out in (1) or (2) above or with the prior written consent of a majority of the independent directors.

Finally, the MoU Group is permitted to own and vote shares in excess of the threshold mentioned in the first paragraph of this "Standstill" subsection or the 45% limit mentioned above if it acquires the excess shares in the context of a takeover bid by a third party and (1) a majority of the independent directors of the Company's Board of Directors consents in writing to such acquisition by the MoU Group or (2) the MoU Group acquires such shares in an offer for all of the shares of the Company.

Non-compete

For so long as the MoU Group holds and controls at least 15% of the outstanding shares of the Company or has representatives on the Company's Board of Directors or CEO Office, the MoU Group and its affiliates will not be permitted to invest in, or carry on, any business competing with the Company, except for PT ISPAT Indo.

Additional information

ArcelorMittal produces a range of publications to inform its shareholders. These documents are available in various formats: they can be viewed online, downloaded or obtained on request in paper format. Please refer to www.arcelormittal.com, where they can be located within the Investors menu, under Financial Reports, or within the Corporate Library.

Sustainable development

ArcelorMittal's sustainable development information is detailed in the Integrated Annual Review that will be published during the second quarter of 2020 and will be available within the Corporate Library on www.arcelormittal.com.

ArcelorMittal as parent company of the ArcelorMittal group

ArcelorMittal, incorporated under the laws of Luxembourg, is the parent company of the ArcelorMittal group and is expected to continue this role during the coming years. The Company has no branch offices.

Group companies listed on the Luxembourg Stock Exchange

ArcelorMittal's securities are traded on several exchanges, including the Luxembourg Stock Exchange, and its primary stock exchange regulator is the Luxembourg CSSF (Commission de Surveillance du Secteur Financier). ArcelorMittal's CSSF issuer number is E-0001.

Other listings

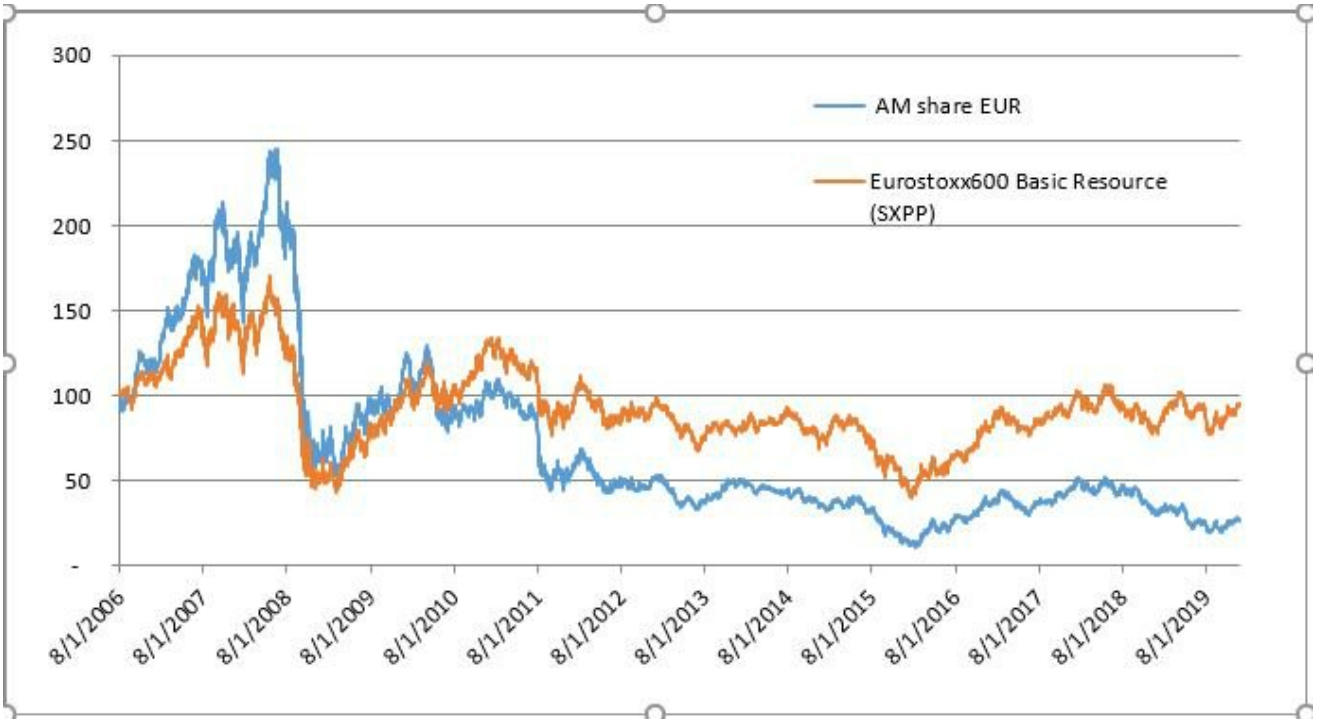
ArcelorMittal is listed on the stock exchanges of New York (MT), Amsterdam (MT), Paris (MT), Luxembourg (MT) and on the Spanish stock exchanges of Barcelona, Bilbao, Madrid and Valencia (MTS).

Indexes

ArcelorMittal is a member of more than 120 indices including the following leading indices: DJ SOTXX 50, DJ EURO STOXX 50, CAC40, AEX, FTSE Eurotop 100, MSCI Pan-Euro, DJ Stoxx 600, S&P Europe 500, Bloomberg World Index, IBEX 35 index, and NYSE Composite Index. Recognized for its commitments to sustainable development, ArcelorMittal is also included in the FTSE4Good Index and the Bloomberg Gender Equality Index. Further, ArcelorMittal has been participating in CDP since 2005 (currently a 'B' grade) and the United National Global Compact since 2003. It was awarded a Gold rating by Ecovadis in 2018.

Share price performance

During 2019, the price of ArcelorMittal shares decreased by 15% in dollar terms compared to 2018; the chart below shows a comparison between the performance of ArcelorMittal's shares and the Eurostoxx600 Basic Resource (SXPP).



Dividend

ArcelorMittal intends to progressively increase the base dividend paid to its shareholders, and, given the resilient cash flow and progress towards its net debt target, the Board proposes a base dividend of $0.30 per share for 2020 (in respect of 2019) which will be proposed to the shareholders at the AGM in May 2020.

Investor relations

As the world's leading steel company and major investment vehicle in the steel sector, ArcelorMittal has a dedicated investor relations team at the disposal of analysts and investors. By implementing high standards of financial information disclosure and providing clear, regular, transparent and even-handed information to all its shareholders, ArcelorMittal aims to be the first choice for investors in the sector.

To meet this objective and provide information to fit the needs of all parties, ArcelorMittal implements an active and broad investor communications policy: conference calls, road shows with the financial community, regular participation at investor conferences, plant visits and meetings with individual investors.

ArcelorMittal's senior management plans to meet investors and shareholder associations in road shows throughout 2020.

Depending on their geographical location, investors may use the following e-mails or contact numbers to reach the investor relations team:

institutionalsamericas@arcelormittal.com	+1 312 899 3985
investor.relations@arcelormittal.com	+352 4792 2484
privateinvestors@arcelormittal.com	+352 4792 3198
creditfixedincome@arcelormittal.com	+33 1 7192 1026

Sustainable responsible investors

The Investor Relations team is also a source of information for the growing sustainable responsible investment community. The team organizes special events on ArcelorMittal's corporate responsibility strategy and answers all requests for information sent to the Group crteam@arcelormittal.com or may be contacted at +44 207 543 1132.

Financial calendar

The schedule is available on ArcelorMittal's website www.arcelormittal.com under Investor>Financial calendar.

*Financial results**

February 6, 2020 - Results for the 4th quarter 2019 and 12 months 2019.

May 7, 2020 - Results for the 1st quarter 2020.

July 30, 2020 - Results for the 2nd quarter 2020 and 6 months 2020.

November 5, 2020 - Results for the 3rd quarter 2020.

* Earnings results are issued before the opening of the stock exchanges on which ArcelorMittal is listed.

Meeting of shareholders

May 5, 2020 - Annual General Meeting of Shareholders.

Contact the investor relations team on the information detailed above or please visit www.arcelormittal.com/corp/investors/contact.

Controls and procedures

Disclosure controls and procedures

Management maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the Company's reports under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported within time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. ArcelorMittal's controls and procedures are designed to provide reasonable assurance of achieving their objectives.

Management carried out an evaluation, under the supervision and with the participation of its Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)) as of December 31, 2019. Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of December 31, 2019 so as to provide reasonable assurance that (1) information required to be disclosed by the Company in the reports that the Company files under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and (2) that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and its Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

The Company's internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of ArcelorMittal;
- provide reasonable assurance that transactions are recorded, as necessary, to permit preparation of financial statements in accordance with IFRS;
- provide reasonable assurance that receipts and expenditures of ArcelorMittal are made in accordance with authorizations of ArcelorMittal's management and directors; and
- provide reasonable assurance that unauthorized acquisition, use or disposition of ArcelorMittal's assets that could have a material effect on the financial statements would be prevented or detected on a timely basis.

Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of the Company's financial statements would be prevented or detected. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of internal control over financial reporting as of December 31, 2019 based upon the framework in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, management concluded that ArcelorMittal's internal control over financial reporting was effective as of December 31, 2019.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting that occurred during the year ended December 31, 2019 that have materially affected or are reasonably likely to have materially affected the Company's internal control over financial reporting.

Chief executive officer and chief financial officer's responsibility statement

We confirm, to the best of our knowledge, that:

1. the consolidated financial statements of ArcelorMittal presented in this Annual Report and prepared in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board and as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position, profit or loss of ArcelorMittal and the undertakings included within the consolidation taken as a whole; and

2. the management report includes a fair review of the development and performance of the business and position of ArcelorMittal and undertakings included within the consolidation taken as a whole, together with a description of the principal risks and uncertainties they face.

Chief executive officer

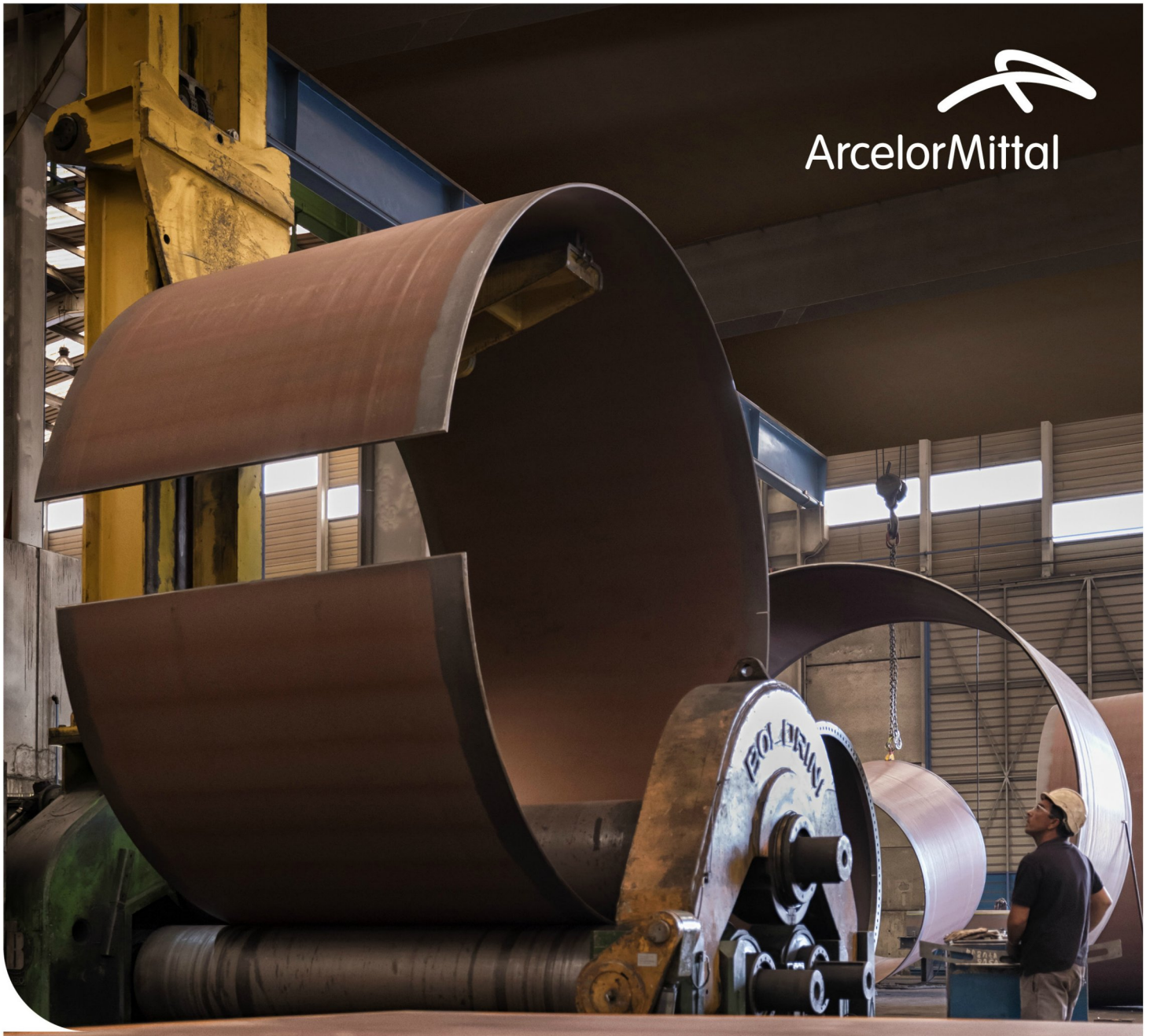
Lakshmi N. Mittal

March 3, 2020

Chief financial officer

Aditya Mittal

March 3, 2020



ArcelorMittal

Consolidated Financial Statements

ArcelorMittal and Subsidiaries
Consolidated Statements of Operations
(millions of U.S. dollars, except share and per share data)

		Year Ended December 31,		
	Notes	2019	2018	2017
Sales	4.1 and 12.1	70,615	76,033	68,679
(including 7,442, 8,259 and 7,503 of sales to related parties for 2019, 2018 and 2017, respectively)				
Cost of sales	4.2 and 12.2	68,887	67,025	60,876
(including 1,092, 1,116 and 1,033 of purchases from related parties for 2019, 2018 and 2017, respectively)				
Gross margin		1,728	9,008	7,803
Selling, general and administrative expenses		2,355	2,469	2,369
Operating (loss) / income		(627)	6,539	5,434
Income from investments in associates, joint ventures and other investments	2.6	347	652	448
Financing costs - net	6.2	(1,652)	(2,210)	(875)
(Loss) / income before taxes		(1,932)	4,981	5,007
Income tax expense/(benefit)	10.1	459	(349)	432
Net (loss) / income (including non-controlling interests)		(2,391)	5,330	4,575
Net (loss) / income attributable to equity holders of the parent		(2,454)	5,149	4,568
Net income attributable to non-controlling interests		63	181	7
Net (loss) / income (including non-controlling interests)		(2,391)	5,330	4,575

		Year Ended December 31,		
		2019	2018	2017
(Loss) / earning per common share (in U.S. dollars)				
Basic		(2.42)	5.07	4.48
Diluted		(2.42)	5.04	4.46
Weighted average common shares outstanding (in millions)	11.3			
Basic		1,013	1,015	1,020
Diluted		1,013	1,021	1,024

The accompanying notes are an integral part of these consolidated financial statements.

ArcelorMittal and Subsidiaries
Consolidated Statements of Other Comprehensive Income
(millions of U.S. dollars, except share and per share data)

	Year Ended December 31,		
	2019	2018	2017
Net (loss) income (including non-controlling interests)	**(2,391)**	**5,330**	**4,575**
Items that can be recycled to the consolidated statements of operations			
Available-for-sale-investments:			
Gain arising during the period	—	—	497
Reclassification adjustments for loss (gain) included in the consolidated statements of operations	—	—	—
	—	—	497
Derivative financial instruments:			
Gain (loss) arising during the period	354	755	(340)
Reclassification adjustments for (gain) loss included in the consolidated statements of operations	(1,004)	353	28
	(650)	1,108	(312)
Exchange differences arising on translation of foreign operations:			
Gain (loss) arising during the period	177	(1,996)	2,025
Reclassification adjustments for gain included in the consolidated statements of operations	(105)	(15)	(21)
	72	(2,011)	2,004
Share of other comprehensive (loss) income related to associates and joint ventures			
(Loss) gain arising during the period	(82)	(239)	341
Reclassification adjustments for loss (gain) included in the consolidated statements of operations	10	(123)	217
	(72)	(362)	558
Income tax benefit (expense) related to components of other comprehensive income (loss) that can be recycled to the consolidated statements of operations	279	(274)	167
Items that cannot be recycled to the consolidated statements of operations			
Investments in equity instruments at FVOCI:			
Gain (loss) arising during the period	28	(603)	—
Share of other comprehensive gain (loss) related to associates and joint ventures	10	(5)	—
	38	(608)	—
Employee benefits - Recognized actuarial (losses) gains	(259)	344	1,098
Share of other comprehensive income (loss) related to associates and joint ventures	—	—	29
Income tax (expense) benefit related to components of other comprehensive income that cannot be recycled to the consolidated statements of operations	(32)	228	42
Total other comprehensive (loss) income	**(624)**	**(1,575)**	**4,083**
Total other comprehensive (loss) income attributable to:			
Equity holders of the parent	(666)	(1,478)	4,037
Non-controlling interests	42	(97)	46
	(624)	(1,575)	4,083
Total comprehensive (loss) income	**(3,015)**	**3,755**	**8,658**
Total comprehensive (loss) income attributable to:			
Equity holders of the parent	(3,120)	3,671	8,605
Non-controlling interests	105	84	53
Total comprehensive (loss) income	**(3,015)**	**3,755**	**8,658**

The accompanying notes are an integral part of these consolidated financial statements.

ArcelorMittal and Subsidiaries
Consolidated Statements of Financial Position
(millions of U.S. dollars, except share data)

	Notes	December 31, 2019	2018
ASSETS			
Current assets:			
Cash and cash equivalents	6.1.3	4,867	2,172
Restricted cash	6.1.3	128	182
Trade accounts receivable and other (including 298 and 366 from related parties at December 31, 2019 and 2018, respectively)	4.3 and 12.1	3,569	4,432
Inventories	4.4	17,296	20,744
Prepaid expenses and other current assets	4.5	2,756	2,834
Assets held for sale	2.3.2	—	2,111
Total current assets		28,616	32,475
Non-current assets:			
Goodwill and intangible assets	5.1 and 5.3	5,432	5,728
Property, plant and equipment and biological assets	5.2, 5.3 and 7	36,231	35,638
Investments in associates and joint ventures	2.4	6,529	4,906
Other investments	2.5	772	855
Deferred tax assets	10.4	8,680	8,287
Other assets	4.6	1,648	3,360
Total non-current assets		59,292	58,774
Total assets		87,908	91,249
LIABILITIES AND EQUITY			
Current liabilities:			
Short-term debt and current portion of long-term debt	6.1.2.1 and 7	2,869	3,167
Trade accounts payable and other (including 251 and 201 to related parties at December 31, 2019 and 2018, respectively)	4.7 and 12.2	12,614	13,981
Short-term provisions	9.1	516	539
Accrued expenses and other liabilities	4.8	4,910	4,709
Income tax liabilities		378	238
Liabilities held for sale	2.3.2	—	821
Total current liabilities		21,287	23,455
Non-current liabilities:			
Long-term debt, net of current portion	6.1.2.2 and 7	11,471	9,316
Deferred tax liabilities	10.4	2,331	2,374
Deferred employee benefits	8.2	7,343	6,982
Long-term provisions	9.1	2,475	1,995
Other long-term obligations	9.2	2,518	3,019
Total non-current liabilities		26,138	23,686
Total liabilities		47,425	47,141
Contingencies and commitments	9.3 and 9.4		
Equity:	11		
Common shares (no par value, 1,151,576,921 and 1,151,576,921 shares authorized, 1,021,903,623 and 1,021,903,623 shares issued, and 1,012,079,421 and 1,013,568,258 shares outstanding at December 31, 2019 and 2018, respectively)		364	364
Treasury shares (9,824,202 and 8,335,365 common shares at December 31, 2019 and 2018, respectively, at cost)		(602)	(569)
Additional paid-in capital		34,826	34,894
Retained earnings		22,883	25,611
Reserves		(18,950)	(18,214)
Equity attributable to the equity holders of the parent		38,521	42,086
Non-controlling interests		1,962	2,022
Total equity		40,483	44,108
Total liabilities and equity		87,908	91,249

The accompanying notes are an integral part of these consolidated financial statements.

ArcelorMittal and Subsidiaries
Consolidated Statements of Changes in Equity
(millions of U.S. dollars, except share and per share data)

						Reserves						
						Items that can be recycled to the Consolidated Statements of Operations		Items that cannot be recycled to the Consolidated Statements of Operations				
	Shares[1]	Share Capital	Treasury Shares	Additional Paid-in Capital	Retained Earnings	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Derivative Financial Instruments relating to CFH	Unrealized Gains (Losses) on Investments in Equity Instruments at FVOCI	Recognized actuarial (losses) gains	Equity attributable to the equity holders of the parent	Non-controlling interests	Total Equity
Balance at December 31, 2016	1,020	401	(371)	34,826	16,049	(16,544)	142	322	(4,690)	30,135	2,190	32,325
Net income (including non-controlling interests)	—	—	—	—	4,568	—	—	—	—	4,568	7	4,575
Other comprehensive income (loss)	—	—	—	—		2,602	(235)	501	1,169	4,037	46	4,083
Total comprehensive income (loss)	—	—	—	—	4,568	2,602	(235)	501	1,169	8,605	53	8,658
Recognition of share-based payments (note 8.3)	—	—	9	22	—	—	—	—	—	31	—	31
Dividend (note 11.4)	—	—	—	—	—	—	—	—	—	—	(145)	(145)
Acquisition of Bekaert Sumaré Ltda (note 2.2.4)	—	—	—	—	—	—	—	—	—	—	48	48
Mandatorily convertible bonds extension (note 11.2)	—	—	—	—	—	—	—	—	—	—	(83)	(83)
Other movements	—	—	—	—	18	—	—	—	—	18	3	21
Balance at December 31, 2017	1,020	401	(362)	34,848	20,635	(13,942)	(93)	823	(3,521)	38,789	2,066	40,855
Net income (including non-controlling interests)	—	—	—	—	5,149	—	—	—	—	5,149	181	5,330
Other comprehensive income (loss)	—	—	—	—	—	(2,174)	732	(608)	572	(1,478)	(97)	(1,575)
Total comprehensive income (loss)	—	—	—	—	5,149	(2,174)	732	(608)	572	3,671	84	3,755
Recognition of share-based payments (note 8.3)	—	—	19	9	—	—	—	—	—	28	—	28
Dividend (note 11.4)	—	—	—	—	(101)	—	—	—	—	(101)	(115)	(216)
Share buyback (note 11.1)	(7)	—	(226)	—	—	—	—	—	—	(226)	—	(226)
Change in share capital currency (note 11.1)	—	(37)	—	37	—	—	—	—	—	—	—	—
Acquisition of non-controlling interests (note 11.5)	—	—	—	—	(55)	—	—	—	—	(55)	(13)	(68)
Other movements	1	—	—	—	(17)	—	—	(3)	—	(20)	—	(20)
Balance at December 31, 2018	1,014	364	(569)	34,894	25,611	(16,116)	639	212	(2,949)	42,086	2,022	44,108
Net (loss) income (including non-controlling interests)	—	—	—	—	(2,454)	—	—	—	—	(2,454)	63	(2,391)
Other comprehensive income (loss)	—	—	—	—	—	(9)	(404)	38	(291)	(666)	42	(624)
Total comprehensive income (loss)	—	—	—	—	(2,454)	(9)	(404)	38	(291)	(3,120)	105	(3,015)
Recognition of share-based payments (note 8.3)	2	—	57	(68)	—	—	—	—	—	(11)	—	(11)
Dividend (note 11.4)	—	—	—	—	(203)	—	—	—	—	(203)	(154)	(357)
Share buyback (note 11.1)	(4)	—	(90)	—	—	—	—	—	—	(90)	—	(90)
Sharing of cash flow hedge (gain) from INR/USD hedging programs related to AMNS India (note 2.4.1)	—	—	—	—	(141)	—	—	—	—	(141)	—	(141)
Transfer of fair value reserve of equity instruments designated at FVOCI (note 2.5)	—	—	—	—	70	—	—	(70)	—	—	—	—
Other movements	—	—	—	—	—	—	—	—	—	—	(11)	(11)
Balance at December 31, 2019	1,012	364	(602)	34,826	22,883	(16,125)	235	180	(3,240)	38,521	1,962	40,483

1. Amounts are in millions of shares (treasury shares are excluded). On May 22, 2017, ArcelorMittal completed the consolidation of each three existing shares in ArcelorMittal without nominal value into one share without nominal value. As a result of this reverse stock split, the number of outstanding shares decreased from 3,058 to 1,020 and all prior periods have been recast in accordance with IFRS. Please refer to note 11 for further information.

The accompanying notes are an integral part of these consolidated financial statements.

ArcelorMittal and Subsidiaries
Consolidated Statements of Cash Flows
(millions of U.S. dollars, except share and per share data)

	Notes	Year Ended December 31, 2019	2018	2017
Operating activities:				
Net (loss) income (including non-controlling interests)		(2,391)	5,330	4,575
Adjustments to reconcile net income to net cash provided by operations:				
Depreciation and amortization	5.1 and 5.2	3,067	2,799	2,768
Impairment	5.3	1,927	994	206
Bargain purchase gain	2.2.4	—	(209)	—
Interest expense	6.2	695	687	879
Interest income	6.2	(88)	(72)	(56)
Income tax expense/ (benefit)	10.1	459	(349)	432
Remeasurement loss relating to US deferred employee benefits	8.2	—	15	—
Net gain on disposal of subsidiaries	2.3.1	(101)	(16)	(18)
Income from investments in associates, joint ventures and other investments	2.6	(347)	(652)	(448)
Provision on pensions and OPEB	8.2	435	463	555
Change in fair value adjustment on call option on mandatory convertible bonds and pellet purchase agreement	6.2	320	572	(578)
Unrealized foreign exchange effects		7	152	(541)
Write-downs (reversal) of inventories to net realizable value, provisions and other non-cash operating expenses net	4.4	818	789	781
Changes in assets and liabilities that provided (required) cash, net of acquisitions:				
Trade accounts receivable		964	(646)	(620)
Inventories	4.4	2,469	(4,652)	(2,347)
Trade accounts payable and other	4.7	(1,236)	914	1,094
Interest paid		(723)	(749)	(947)
Interest received		118	67	57
Income taxes paid		(484)	(629)	(506)
Dividends received from associates, joint ventures and other investments		370	360	232
Cash contributions to plan assets and benefits paid for pensions and OPEB	8.2	(348)	(472)	(496)
VAT and other amounts received (paid) from/to public authorities		196	(544)	(177)
Other working capital and provisions movements		(110)	44	(282)
Net cash provided by operating activities		6,017	4,196	4,563
Investing activities:				
Purchase of property, plant and equipment and intangibles		(3,572)	(3,305)	(2,819)
Disposals of net assets of subsidiaries, net of cash disposed of 38, 1 and 13 in 2019, 2018 and 2017, respectively	2.3.1	514	65	6
Acquisitions of net assets of subsidiaries, net of cash acquired of 3, 13 and 617 in 2019, 2018 and 2017, respectively	2.2.4	(46)	(39)	16
Lease installments and capital expenditure refund relating to ArcelorMittal Italia acquisition		(200)	—	—
Acquisition of AMNS India	2.4.1	(755)	—	—
Acquisition of Uttam Galva and KSS Petron debt	4.6	(83)	(1,001)	—
Disposals of associates and joint ventures	2.4.1 and 2.5	—	220	—
Disposals of financial assets	2.5 and 2.6	196	44	44
Other investing activities net		122	257	(77)
Net cash used in investing activities		(3,824)	(3,759)	(2,830)
Financing activities:				
Acquisition of non-controlling interests	11.5.2	—	(68)	—
Proceeds from put and call option on shares	2.2.4	—	115	—
Proceeds from short-term debt	6.1.3	600	2,319	1,859
Proceeds from long-term debt	6.1.3	5,772	1,138	1,407
Payments of short-term debt	6.1.3	(1,811)	(2,871)	(2,102)
Payments of long-term debt	6.1.3	(3,299)	(798)	(2,691)
Share buyback	11.1	(90)	(226)	—
Dividends paid (includes 129, 119 and 141 of dividends paid to non-controlling shareholders in 2019, 2018 and 2017, respectively)		(332)	(220)	(141)
Payment of principal portion of lease liabilities and other financing activities	6.1.3	(326)	(78)	(63)
Net cash provided by (used in) financing activities		514	(689)	(1,731)
Net increase (decrease) in cash and cash equivalents		2,707	(252)	2
Effect of exchange rate changes on cash		(22)	(140)	58
Cash and cash equivalents:				
At the beginning of the year		2,172	2,574	2,501
Reclassification of the period-end cash and cash equivalents from (to) held for sale	2.3	10	(10)	13
At the end of the year		4,867	2,172	2,574

The accompanying notes are an integral part of these consolidated financial statements.

Summary of notes to consolidated financial statements

NOTE 1: ACCOUNTING PRINCIPLES

ArcelorMittal (“ArcelorMittal” or the “Company”), together with its subsidiaries, owns and operates steel manufacturing and mining facilities in Europe, North and South America, Asia and Africa. Collectively, these subsidiaries and facilities are referred to in the consolidated financial statements as the “operating subsidiaries”. These consolidated financial statements were authorized for issuance on March 3, 2020 by the Company’s Board of Directors.

1.1 Basis of presentation

The consolidated financial statements have been prepared on a historical cost basis, except for equity instruments and trade receivables at fair value through other comprehensive income ("FVOCI"), financial assets at fair value through profit or loss ("FVTPL"), derivative financial instruments, biological assets and certain assets and liabilities held for sale, which are measured at fair value less cost to sell, inventories, which are measured at the lower of net realizable value or cost, and the financial statements of the Company’s Venezuelan tubular production facilities Industrias Unicon CA (“Unicon”) and the Company's Argentinian operation Acindar Industria Argentina de Aceros S.A. ("Acindar"), for which hyperinflationary accounting is applied (see note 2.2.2). The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”) and as adopted by the European Union and are presented in U.S. dollars with all amounts rounded to the nearest million, except for share and per share data.

1.2 Use of judgment and estimates

The preparation of consolidated financial statements in conformity with IFRS recognition and measurement principles and, in particular, making the critical accounting judgments requires the use of estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Management reviews its estimates on an ongoing basis using currently available information. Changes in facts and circumstances or obtaining new information or more experience may result in revised estimates, and actual results could differ from those estimates.

The following summary provides further information about the Company’s critical accounting policies under which significant judgments, estimates and assumptions are made. It should be read in conjunction with the notes mentioned in the summary:

- Deferred tax assets (note 10.4): The Company assesses the recoverability of deferred tax assets based on future taxable income projections, which are inherently uncertain and may be subject to changes over time. Judgment is required to assess the impact of such changes on the measurement of these assets and the time frame for their utilization. In addition, the Company applies judgment to recognize income tax liabilities when they are probable and can be reasonably estimated depending on the interpretation, which may be uncertain, of applicable tax laws and regulations. ArcelorMittal periodically reviews its estimates to reflect changes in facts and circumstances.

- Provisions for pensions and other post-employment benefits (note 8.2): Benefit obligations and plan assets can be subject to significant volatility, in particular due to changes in market conditions and actuarial assumptions. Such assumptions differ by plan, take local conditions into account and include discount rates, expected rates of compensation increases, health care cost trend rates, mortality and retirement rates. They are determined following a formal process involving the Company's expertise and independent actuaries. Assumptions are reviewed annually and adjusted following actuarial and experience changes.

- Provisions (note 9): Provisions, which result from legal or constructive obligations arising as a result of past events, are recognized based on the Company's, and in certain instances, third-party's best estimate of costs when the obligation arises. They are reviewed periodically to take into consideration changes in laws and regulations and underlying facts and circumstances.

- Impairment of tangible and intangible assets, including goodwill (note 5.3): In the framework of the determination of the recoverable amount of assets, the estimates, judgments and assumptions applied for the value in use calculations relate primarily to growth rates, expected changes to average selling prices, shipments and direct costs. Assumptions for average selling prices and shipments are based on historical experience and expectations of future changes in the market. Discount rates are reviewed annually.

- Business combinations (note 2.2.3): Assets acquired and liabilities assumed as part of a business combination are recorded at their acquisition-date fair values. Similarly, consideration including consideration receivable and contingent consideration is measured at fair value. Determining the fair value of identifiable assets and liabilities requires the use of valuation techniques which may include judgment and estimates and which may affect the allocation of the amount of consideration paid to the assets and liabilities acquired and goodwill or gain from a bargain purchase recorded as part of the business combination.

- Financial instruments (note 6.1.5) and financial amounts receivable (note 4.6): Certain of the Company's financial instruments are classified as Level 3 as they include unobservable inputs. In particular, the Company uses estimates to compute unobservable historical volatility

based on movements of stock market prices for the fair valuation of the call option on the 1,000 mandatory convertible bonds and unobservable inputs such as discounted cash flow model for the fair valuation of financial amounts receivable relating to Uttam Galva and KSS Petron.

- Mining reserve estimates (note 5.2): Proven iron ore and coal reserves are those quantities whose recoverability can be determined with reasonable certainty from a given date forward and under existing government regulations, economic and operating conditions; probable reserves have a lower degree of assurance but high enough to assume continuity between points of observation. Their estimates and the estimates of mine life have been prepared by ArcelorMittal experienced engineers and geologists and detailed independent verifications of the methods and procedures are conducted on a regular basis by external consultants. Reserves are updated annually and calculated using a reference price duly adjusted for quality, ore content, logistics and other considerations. In order to estimate reserves, estimates are required for a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies to be determined by analyzing geological data such as drilling samples. This process may require complex and difficult geological judgments to interpret the data. Because the economic assumptions used to estimate reserves change from period to period, and because additional geological data is generated during the course of operations, estimates of reserves may change from period to period.

1.3 Accounting standards applied

1.3.1 Adoption of new IFRS standards, amendments and interpretations applicable from January 1, 2019

On January 1, 2019, the Company adopted IFRS 16 "Leases", which has an impact on the disclosures in the consolidated financial statements of the Company.

- IFRS 16 "Leases" was issued on January 13, 2016, and replaced International Accounting Standards "IAS" 17 “Leases”. This new standard specifies how to recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. This standard is effective for annual periods beginning on or after January 1, 2019, with early application permitted if IFRS 15 "Revenue from Contracts with Customers" has also been applied.The Company adopted IFRS 16 “Leases” as of January 1, 2019, using the modified retrospective transition approach with right-of-use assets measured at an amount equal to the lease liability recognized at January 1, 2019, adjusted by the amount of any prepaid or accrued lease payments relating to those leases. In addition, the Company applied the practical expedient not to reassess whether or not a contract meets the definition of a lease on transition and accordingly applied IFRS 16 to all contracts entered into before January 1, 2019 and identified as leases in accordance with IAS 17 "Leases" and IFRIC 4 "Determining whether an Arrangement contains a lease". Also, the Company used the practical expedient of not recognizing lease liabilities and right-of-use assets for which the lease term ended within twelve months of the date of initial application and corresponding expenses have been recognized as part of short-term lease expenses in the statement of operations. On January 1, 2019, the Company recognized additional lease liabilities (discounted at the incremental borrowing rates at that date) and right of use assets (including reclassifications from intangible assets) for an amount of 1,136 and 1,405, respectively (see note 7).

On January 1, 2019, the Company also adopted the following amendments which did not have a material impact on the consolidated financial statements of the Company:

- IFRIC 23 “Uncertainty over Income Tax Treatments” issued by the IASB on June 7, 2017. This interpretation addresses the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates when there is uncertainty over income tax treatments under IAS 12 "Income Taxes".

- Amendment to IFRS 9 "Financial Instruments" issued by the IASB on October 12, 2017 in respect of prepayment features with negative compensation and which amends the existing requirements in IFRS 9 regarding termination rights in order to allow measurement at amortized cost (or, depending on the business model, at fair value through other comprehensive income) even in the case of negative compensation payments.

- Amendment to IAS 28 “Investments in Associates and Joint Ventures” also issued on October 12, 2017 in relation to long-term interests in associates and joint ventures. The amendment clarifies that an entity should apply IFRS 9 to long-term interests in an associate or joint venture that form part of the net investment in the associate or joint venture but to which the equity method is not applied.

- Amendments to IAS 19 “Employee benefits” issued by the IASB on February 7, 2018, which clarify that current service cost and net interest after a remeasurement resulting from a plan amendment, curtailment or settlement should be determined using the assumptions applied for the remeasurement. In addition, the amendments clarify the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling.

On January 1, 2019, the Company also adopted the Annual Improvements 2015–2017 issued by the IASB on December 12, 2017 to make amendments to the following standards:

- IFRS 3 "Business Combinations" clarifies that when an entity obtains control of a business that is a joint operation, it remeasures previously held interests in that business.
- IFRS 11 "Joint Arrangements" clarifies that when an entity obtains joint control of a business that is a joint operation, the entity does not remeasure previously held interests in that business.
- IAS 12 "Income Taxes" clarifies that an entity shall recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized those past transactions or events.
- IAS 23 "Borrowing Costs" clarifies that if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, that borrowing becomes part of the funds that an entity borrows generally when calculating the capitalization rate on general borrowings.

1.3.2 New IFRS standards and amendments applicable from 2020 onward

On March 29, 2018, the IASB published its revised "Conceptual Framework for Financial Reporting", which includes revised definitions of an asset and a liability as well as new guidance on measurement and derecognition, presentation and disclosure. The Company does not expect that the adoption of this amendment, which is effective for annual periods beginning on or after January 1, 2020, will have a material impact to its consolidated financial statements.

On October 31, 2018, the IASB issued amendments to IAS 1 "Presentation of Financial Statements" and IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" to clarify the definition of ‘material’ and to align the definition used in the Conceptual Framework and the standards themselves. The Company does not expect that the adoption of these amendments, which are effective for annual periods beginning on or after January 1, 2020, will have a material impact to its consolidated financial statements.

On September 26, 2019, the IASB published Interest Rate Benchmark Reform, Amendments to IFRS 9, IAS 39 and IFRS 7 (the amendments). The amendments provide relief from the specific hedge accounting requirements, so that entities would apply those hedge accounting requirements (highly probable forecast transaction and prospective effectiveness test under IFRS 9 which is applied by the Company) assuming that the interest rate benchmark is not altered as a result of the interest rate benchmark reform. Application of the relief is mandatory and is effective for annual periods beginning on or after January 1, 2020, with early application permitted. The requirements must be applied retrospectively. The Company does not expect that the adoption of these amendments will have a material impact to its consolidated financial statements as it is relieving the possible effects of the uncertainty due to the Interest rate benchmark reform "IBOR".

The Company does not plan to early adopt the new accounting standards, amendments and interpretations.

1.3.3 New IFRS standards, amendments and interpretations not yet endorsed by the European Union

On May 18, 2017, the IASB issued IFRS 17 "Insurance Contracts", which is designed to achieve the goal of a consistent, principle-based accounting for insurance contracts. IFRS 17 requires insurance liabilities to be measured at a current fulfillment value and provides a more uniform measurement and presentation approach for all insurance contracts. IFRS 17 supersedes IFRS 4 "Insurance Contracts" and related interpretations and is effective for periods beginning on or after January 1, 2021, with earlier adoption permitted if both IFRS 15 "Revenue from Contracts with Customers" and IFRS 9 "Financial Instruments" have also been applied. The Company does not expect that the adoption of this interpretation will have a material impact to its consolidated financial statements.

On October 22, 2018, the IASB issued amendments to IFRS 3 "Business Combinations", which includes the definition of a business aimed at resolving the difficulties that arise when an entity determines whether it has acquired a business or a group of assets. The Company does not expect that the adoption of these amendments, which are effective for annual periods beginning on or after January 1, 2020, will have a material impact to its consolidated financial statements.

On January 23, 2020, the IASB issued narrow-scope amendments to IAS 1 "Presentation of Financial Statements" to clarify how to classify debt and other liabilities as current or non-current. The amendments aim to

promote consistency in applying the requirements by helping companies determine whether, in the statement of financial position, debt and other liabilities with an uncertain settlement date should be classified as current (due or potentially due to be settled within one year) or non-current. The amendments include clarifying the classification requirements for debt a company might settle by converting it into equity. The Company does not expect that the adoption of these amendments, which are effective for annual periods beginning on or after January 1, 2022, will have a material impact to its consolidated financial statements.

The Company does not plan to early adopt the new accounting standards, amendments and interpretations.

NOTE 2: SCOPE OF CONSOLIDATION

2.1 Basis of consolidation

The consolidated financial statements include the accounts of the Company, its subsidiaries and its interests in associated companies and joint arrangements. Subsidiaries are consolidated from the date the Company obtains control (ordinarily the date of acquisition) until the date control ceases. The Company controls an entity when the Company is exposed to or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Associated companies are those companies over which the Company has the ability to exercise significant influence on the financial and operating policy decisions, which it does not control. Generally, significant influence is presumed to exist when the Company holds more than 20% of the voting rights. Joint arrangements, which include joint ventures and joint operations, are those over whose activities the Company has joint control, typically under a contractual arrangement. In joint ventures, ArcelorMittal exercises joint control and has rights to the net assets of the arrangement. The investment is accounted for under the equity method and therefore recognized at cost at the date of acquisition and subsequently adjusted for ArcelorMittal's share in undistributed earnings or losses since acquisition, less any impairment incurred. Any excess of the cost of the acquisition over the Company's share of the net fair value of the identifiable assets, liabilities, and contingent liabilities of the associate or joint venture recognized at the date of acquisition is considered as goodwill. The goodwill, if any, is included in the carrying amount of the investment and is evaluated for impairment as part of the investment. The consolidated statements of operations include the Company's share of the profit or loss of associates and joint ventures from the date that significant influence or joint control commences until the date significant influence or joint control ceases, adjusted for any impairment losses. Adjustments to the carrying amount may also be necessary for changes in the Company's proportionate interest in the investee arising from changes in the investee's equity that have not been recognized in the investee's profit or loss. The Company's share of those changes is recognized directly in the relevant reserve within equity.

The Company assesses the recoverability of its investments accounted for under the equity method whenever there is an indication of impairment. In determining the value in use of its investments, the Company estimates its share in the present value of the projected future cash flows expected to be generated by operations of associates and joint ventures. The amount of any impairment is included in income (loss) from investments in associates, joint ventures and other investments in the consolidated statements of operations (see also note 2.6).

For investments in joint operations, in which ArcelorMittal exercises joint control and has rights to the assets and obligations for the liabilities relating to the arrangement, the Company recognizes its assets, liabilities and transactions, including its share of those incurred jointly.

Investments in other entities, over which the Company and/or its operating subsidiaries do not have the ability to exercise significant influence, are accounted for as investments in equity instruments at FVOCI with any resulting gain or loss, net of related tax effect, recognized in the consolidated statements of other comprehensive income. Realized gains and losses from the sale of investments in equity instruments at FVOCI are reclassified from other comprehensive income to retained earnings within equity upon disposal.

While there are certain limitations on the Company's operating and financial flexibility arising from the restrictive and financial covenants of the Company's principal credit facilities described in note 6.1.2, there are no significant restrictions resulting from borrowing agreements or regulatory requirements on the ability of consolidated subsidiaries, associates and jointly controlled entities to transfer funds to the parent in the form of cash dividends to pay commitments as they come due.

Intercompany balances and transactions, including income, expenses and dividends, are eliminated in the consolidated financial statements. Gains and losses resulting from intercompany transactions are also eliminated.

Non-controlling interests represent the portion of profit or loss and net assets not held by the Company and are presented separately in the consolidated statements of operations, in the consolidated statements of other comprehensive income and within equity in the consolidated statements of financial position.

2.2 Investments in subsidiaries

2.2.1 List of subsidiaries

The table below provides a list of the Company's principal operating subsidiaries at December 31, 2019. Unless otherwise stated, the subsidiaries listed below have share capital consisting solely of ordinary shares or voting interests in the case of partnerships, which are held directly or indirectly by the Company and the proportion of ownership interests held equals to the voting rights held by the Company. The country of incorporation corresponds to their principal place of operations.

Name of Subsidiary	Country	% of Ownership
NAFTA		
ArcelorMittal Dofasco G.P.	Canada	100.00%
ArcelorMittal México S.A. de C.V.	Mexico	100.00%
ArcelorMittal USA LLC	United States	100.00%
ArcelorMittal Long Products Canada G.P.	Canada	100.00%
Brazil and neighboring countries ("Brazil")		
ArcelorMittal Brasil S.A.	Brazil	97.01%
Acindar Industria Argentina de Aceros S.A.	Argentina	100.00%
Europe		
ArcelorMittal France S.A.S.	France	100.00% [1]
ArcelorMittal Belgium N.V.	Belgium	100.00%
ArcelorMittal España S.A.	Spain	99.85%
ArcelorMittal Flat Carbon Europe S.A.	Luxembourg	100.00%
ArcelorMittal Poland S.A.	Poland	100.00%
ArcelorMittal Eisenhüttenstadt GmbH	Germany	100.00%
ArcelorMittal Bremen GmbH	Germany	100.00%
ArcelorMittal Méditerranée S.A.S.	France	100.00%
ArcelorMittal Belval & Differdange S.A.	Luxembourg	100.00%
ArcelorMittal Hamburg GmbH	Germany	100.00%
ArcelorMittal Duisburg GmbH	Germany	100.00%
ArcelorMittal International Luxembourg S.A.	Luxembourg	100.00%
ArcelorMittal Italia S.p.A.	Italy	94.45%
Africa and Commonwealth of Independent States ("ACIS")		
ArcelorMittal South Africa Ltd. ("AMSA")	South Africa	69.22%
JSC ArcelorMittal Temirtau	Kazakhstan	100.00%
PJSC ArcelorMittal Kryvyi Rih ("AM Kryvyi Rih")	Ukraine	95.13%
Mining		
ArcelorMittal Mining Canada G.P. and ArcelorMittal Infrastructure G.P.("AMMC")	Canada	85.00%
ArcelorMittal Liberia Ltd	Liberia	85.00%
JSC ArcelorMittal Temirtau	Kazakhstan	100.00%
PJSC ArcelorMittal Kryvyi Rih	Ukraine	95.13%

1. On July 1, 2019, ArcelorMittal Atlantique et Lorraine S.A.S. was merged into ArcelorMittal France S.A.S.

2.2.2 Translation of financial statements denominated in foreign currency

The functional currency of ArcelorMittal S.A. is the U.S. dollar. The functional currency of each of the principal operating subsidiaries is the local currency, except for ArcelorMittal México, AMMC and ArcelorMittal International Luxembourg, whose functional currency is the U.S. dollar and ArcelorMittal Poland, whose functional currency is the euro.

Transactions in currencies other than the functional currency of a subsidiary are recorded at the rates of exchange prevailing at the date of the transaction. Monetary assets and liabilities in currencies other than the functional currency are remeasured at the rates of exchange prevailing on the date of the consolidated statements of financial position and the related translation gains and losses are reported within financing costs in the consolidated statements of operations. Non-monetary items

that are carried at cost are translated using the rate of exchange prevailing at the date of the transaction. Non-monetary items that are carried at fair value are translated using the exchange rate prevailing when the fair value was determined and the related translation gains and losses are reported in the consolidated statements of comprehensive income.

Upon consolidation, the results of operations of ArcelorMittal's subsidiaries, associates and joint arrangements whose functional currency is other than the U.S. dollar are translated into U.S. dollars at the monthly average exchange rates and assets and liabilities are translated at the year-end exchange rates. Translation adjustments are recognized directly in other comprehensive income and are included in net income (including non-controlling interests) only upon sale or liquidation of the underlying foreign subsidiary, associate or joint arrangement.

Since July 1, 2018, Argentina has been considered a highly inflationary country and therefore the financial statements of the Company's long production facilities Acindar Industria Argentina de Aceros S.A. ("Acindar") in Argentina, using a historical cost approach, are adjusted prospectively to reflect the changes in the general purchasing power of the local currency before being translated into U.S. dollars at the year end exchange rate. The Company used an estimated general price index (Consumer Price Index "IPC") changed by 54.7% and 47.9% for the year ended December 31, 2019 and 2018, respectively, for this purpose. As a result of the inflation-related adjustments on non-monetary items, a gain of 64 and 45 was recognized in net financing costs for the year ended December 31, 2019 and 2018, respectively.

Since 2010 Venezuela has been considered a hyperinflationary economy and therefore the financial statements of Unicon are adjusted to reflect the changes in the general purchasing power of the local currency before being translated into U.S. dollars. The Company used estimated general price indices changed by 12,922%, 213,605% and 2,056% for the years ended December 31, 2019, 2018 and 2017, respectively, for this purpose.

2.2.3 Business combinations

Business combinations are accounted for using the acquisition method as of the acquisition date, which is the date on which control is transferred to ArcelorMittal. The Company controls an entity when it is exposed to or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

The Company measures goodwill at the acquisition date as the total of the fair value of consideration transferred, plus the proportionate amount of any non-controlling interest, plus the fair value of any previously held equity interest in the acquiree, if any, less the net recognized amount (generally at fair value) of the identifiable assets acquired and liabilities assumed.

In a business combination in which the fair value of the identifiable net assets acquired exceeds the cost of the acquired business, the Company reassesses the fair value of the assets acquired and liabilities assumed. If, after reassessment, ArcelorMittal's interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities exceeds the cost of the business combination, the excess (bargain purchase) is recognized immediately as a reduction of cost of sales in the consolidated statements of operations.

Any contingent consideration payable is recognized at fair value at the acquisition date and any costs directly attributable to the business combination are expensed as incurred.

2.2.4 Acquisitions

Ilva (renamed ArcelorMittal Italia)

On November 1, 2018, ArcelorMittal completed the acquisition of Ilva S.p.A. and certain of its subsidiaries ("Ilva") following the signing on June 28, 2017 of a lease agreement with a conditional obligation to purchase between the commissioners appointed in the ongoing extraordinary administration proceedings to which the former Ilva business is subject and AM InvestCo Italy S.p.A. ("AM InvestCo"), a consortium formed by ArcelorMittal and Intesa San Paolo S.p.A. ("ISP") with respective interests of 94.45% and 5.55%. The completion of the acquisition followed ArcelorMittal's notification to the European Commission ("EC") of AM InvestCo's proposed acquisition of Ilva on September 21, 2017 and the submission of commitments on October 19, 2017. The EC initiated a Phase II review of AM InvestCo's proposed acquisition of Ilva on November 8, 2017 and approved the transaction on May 7, 2018 subject to the fulfillment of divestment commitments (see note 2.3.1) and the exit of Marcegaglia from AM InvestCo (Marcegaglia initially held a 15% interest in AM InvestCo) completed on November 9, 2018 (see note 11.5.2).

Ilva (now ArcelorMittal Italia) is Europe's largest single steel site and only integrated steelmaker in Italy with its main production facility based in Taranto. ArcelorMittal Italia also has significant steel finishing capacity in Taranto, Novi Ligure and Genova. As a result of the lease agreement, the assets and liabilities subject to the transaction are leased by subsidiaries of AM InvestCo, including ArcelorMittal Italia S.p.A., which combines the sites of Taranto, Novi Ligure and Genova. The nominal purchase price amounted to €1.8 billion (2.1 billion) subject to certain adjustments including

working capital adjustment, with annual leasing costs of €180 million (206) to be paid in quarterly installments resulting in a present value of 1,540 at acquisition date. The total consideration included a 54 liability corresponding to environmental capital expenditures already completed by the former Ilva business and which was refunded by ArcelorMittal to the latter. In September 2018, the former Ilva business' trade unions ratified a labor agreement following which ArcelorMittal committed to initially hire 10,700 workers based on their existing contractual terms of employment. In addition, between 2023 and 2025, the Company committed to hire any workers who remain under the former Ilva business' extraordinary administration. The business units are initially leased with rental payments qualifying as down payments against the purchase price and are part of the Europe reportable segment. The lease period is for a minimum of four years followed by a conditional purchase obligation, subject to certain conditions precedent (see note 9.3). The Company accounted for this transaction as a business combination as it obtained control of the business subject to the lease.

ISP's interest is subject to put and call option arrangements exercisable by ISP and ArcelorMittal between November 1, 2020 and November 1, 2025 and between November 1, 2021 and November 1, 2025, respectively. The Company determined that it has a present ownership interest in the shares subject to the put option. Accordingly, it recognized at acquisition date a 122 financial liability measured at the present value of the redemption amount.

Following the closing of the transaction, the acquisition-date fair value of the identifiable assets and liabilities of ArcelorMittal Italia was determined on a provisional basis as of December 31, 2018, in particular with respect to property, plant and equipment, environmental provisions, indemnification asset, tax implications and working capital balances at closing date. ArcelorMittal finalized the acquisition-date fair values during the fourth quarter of 2019. ArcelorMittal recognized provisions of 397 in connection with environmental remediation obligations. As the latter will be funded with funds seized by the Italian Government from the former shareholder, the Company recognized an indemnification asset for the same amount, of which 359 was classified as non-current assets. Current assets include trade receivables of 437 with gross contract amounts receivable of 501 and contractual cash flows not expected to be collected of 64. Intangible assets include 201 relating to CO_2 emission rights held by the former Ilva business at acquisition date (the Company also recognized liabilities of 158 relating to estimated emissions for 2018) and favorable land lease contracts for 61. ArcelorMittal recognized a 209 bargain purchase gain in cost of sales in 2018 mainly as a result of the preliminary €0.4 billion (0.5 billion) working capital reduction while the total fair value of net assets acquired remained substantially driven by the economic obsolescence applied to property, plant and equipment. Following the finalization of the acquisition-date fair values, the bargain purchase gain decreased by 28 mainly as a result of the finalization of the environmental provisions (118 decrease of both environmental provision and indemnification asset), tax implications (74) and working capital balances. Property, plant and equipment increased by 92.

Revenue and net loss of ArcelorMittal Italia for the year ended December 31, 2018 since acquisition date were 398 and (49), respectively. The Company recognized acquisition-related costs of 25 in selling, general and administrative expenses for the year ended December 31, 2018. The agreement includes industrial capital expenditure commitments of approximately €1.3 billion (1.4 billion) over a seven-year period focused on blast furnaces, steel shops and finishing lines and environmental capital expenditure commitments of approximately €0.8 billion (0.9 billion).

Votorantim (renamed AMSF)

On April 1, 2018, ArcelorMittal completed the acquisition of Votorantim Siderurgia (subsequently renamed ArcelorMittal Sul Fluminense "AMSF"), Votorantim S.A.'s long steel business in Brazil pursuant to which Votorantim Siderurgia became a wholly-owned subsidiary of ArcelorMittal Brasil. The combination of ArcelorMittal Brasil's long steel business and AMSF aims to create cost, logistical and operational synergies. The combined operations include ArcelorMittal Brasil's production sites at Monlevade, Juiz de Fora and Piracicaba, and AMSF's production sites at Barra Mansa, Resende and its 50% interest in the joint venture Sitrel in Três Lagoas. On February 7, 2018, the Brazilian antitrust authority CADE approved the transaction, conditioned to the fulfillment of divestment commitments by ArcelorMittal Brasil which were completed in May 2018 (see note 2.3).

The acquisition was completed through the issuance of preferred shares to Votorantim S.A. representing a 2.99% interest in ArcelorMittal Brasil. Pursuant to the shareholders' agreement, such preferred shares are subject to put and call option arrangements exercisable by Votorantim S.A. and ArcelorMittal Brasil between July 1, 2019 and December 31, 2022 and between January 1, 2023 and December 31, 2024, respectively. The Company determined that it has a present ownership interest in the preferred shares subject to the put option. Accordingly, it recognized at acquisition date a 328 financial liability at amortized cost and measured at the present value of the redemption amount. The Company completed its acquisition-date fair value of the identifiable assets and liabilities of AMSF in the first half of 2019 and recognized an increase of 8 in goodwill and other liabilities following a revised measurement of contingent liabilities. Other non-current assets include an 83 indemnification asset towards Votorantim S.A. relating to contingent liabilities of 93 and an 82 investment in Sitrel. Other liabilities include unfavorable contracts for 293 and borrowings of 211. Current assets include cash and

receivables for 13 and 141, respectively (including trade receivable of 92 with gross contractual amounts of 108 and contractual cash flows not expected to be collected of 16). Revenue and net loss of AMSF for the year ended December 31, 2018 since acquisition date were 285 and (108), respectively. The Company recognized acquisition-related costs of 8 in selling, general and administrative expenses in 2018.

Revenue and net income attributable to the equity holders of the parent of the Company for the year ended December 31, 2018 were 79,192 and 4,801 respectively, as though the acquisition date for ArcelorMittal Italia and AMSF had been as of January 1, 2018.

Other

On June 4, 2019, the Company completed the acquisition of Münker Metallprofile GmbH ("Münker") for total consideration of €48 million (54) of which €44 million (46 net of cash acquired of 3) was paid at closing and €4 million (5) payable contingent upon certain criteria. The acquisition of Münker will strengthen ArcelorMittal Downstream Solutions' construction business within the Europe segment. The Company completed its acquisition-date fair value of the identifiable assets and liabilities of Münker in the second half of 2019. It recognized 6 of goodwill and 34, 11 and 22 of property, plant and equipment, intangible assets and current assets, respectively, following the final measurement. Revenue and net income since acquisition date were 45 and 2, respectively.

Revenue and net loss attributable to the equity holders of the parent of the Company, for year ended December 31, 2019 were 70,646 and 2,454, respectively, as though the acquisition date of Münker had been as of January 1, 2019.

On December 21, 2017, the Company acquired from Alcatel Lucent the reinsurance company Electro-Re S.A. for total consideration of €246 million (290; cash inflow was 35 net of cash acquired of 325).

On June 21, 2017, as a result of the extension of the partnership between ArcelorMittal and Bekaert Group ("Bekaert") in the steel cord business in Brazil, the Company completed the acquisition from Bekaert of a 55.5% controlling interest in Bekaert Sumaré Ltda. subsequently renamed ArcelorMittal Bekaert Sumaré Ltda. ("Sumaré"), which subsequently merged into Belgo-Mineira Bekaert Artefatos de Arames Ltda. a manufacturer of metal ropes for automotive tires located in the municipality of Sumaré/SP, Brazil. The Company agreed to pay total cash consideration of €56 million (63; 49, net of cash acquired of 14) of which €52 million (58) settled on closing date and €4 million (5) to be paid subsequently upon conclusion of certain business restructuring measures by Bekaert. Sumaré is part of the Brazil reportable segment.

On May 18, 2017, the Company acquired from Crédit Agricole Assurances the reinsurance company Crédit Agricole Reinsurance S.A. for consideration of €186 million (208; cash inflow was 20, net of cash acquired of 228).

On January 18, 2017, the Company acquired from Parfinada B.V. the reinsurance company Artzare S.A. for total consideration of €43 million (45; cash inflow was 5, net of cash acquired of 50). The reinsurance company is incorporated in Luxembourg and operates through a series of reinsurance agreements with the Company’s subsidiaries.

The Company concluded that the acquisitions of Electro-Re S.A. and Crédit Agricole Reinsurance S.A. were not business combinations mainly as the transactions did not include the acquisition of any strategic management processes, operational processes and resource management processes.

The table below summarizes the final acquisition-date fair value of the assets acquired and liabilities assumed in respect of Münker, AMSF and the former Ilva business in 2019:

	Münker	AMSF	Ilva
Current assets	22	262	1,156
Property, plant and equipment	34	600	1,118
Intangible assets	11	19	267
Other non-current assets	—	252	369
Total assets acquired	67	1,133	2,910
Deferred tax liabilities	(8)	(45)	(74)
Other liabilities	(14)	(792)	(1,113)
Total liabilities acquired	(22)	(837)	(1,187)
Net assets acquired	45	296	1,723
Non-controlling interests	—	—	—
Consideration paid, net	46	—	52
Consideration payable	5	328	1,490
Goodwill/(bargain purchase gain)	6	32	(181)

2.3 Divestments and assets held for sale

Non-current assets and disposal groups that are classified as held for sale are measured at the lower of carrying amount and fair value less costs to sell. Assets and disposal groups are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. The non-current asset, or disposal group, is classified as held for sale only when the sale is highly probable and is available for immediate sale in its present condition and is marketed for sale at a price that is reasonable in relation to its current fair value. Assets held for sale are presented separately in the consolidated statements of financial position and are not depreciated. Gains (losses) on disposal of subsidiaries are recognized in cost of sales, whereas gains (losses) on disposal of investments accounted for under the equity method are recognized in income (loss) from investments in associates, joint ventures and other investments.

2.3.1 Divestments

Divestments in 2019

ArcelorMittal Italia remedies

On May 7, 2018, the EC approved the acquisition of Ilva (renamed "ArcelorMittal Italia"). As part of the approval, ArcelorMittal agreed to divest certain of its European assets (“ArcelorMittal Italia remedies”) which were part of the Europe reportable segment. The ArcelorMittal Italia remedies included the following three divestment packages.

The Dudelange and Liège divestment package was composed of ArcelorMittal Dudelange and certain finishing facilities of ArcelorMittal Liège in Belgium including the hot dipped galvanizing lines 4 and 5 in Flémalle, hot-rolled pickling, cold rolling and tin packaging lines in Tilleur.

The Galati divestment package was mainly composed of the integrated steel making site of ArcelorMittal Galati S.A., ArcelorMittal Tubular Products Galati SRL, both in Romania, ArcelorMittal Skopje AD in North Macedonia and ArcelorMittal Piombino S.p.A. in Italy, the Company’s only galvanizing steel plant in Italy.

The Ostrava divestment package was mainly composed of the integrated steel making site of ArcelorMittal Ostrava a.s. and its subsidiary, ArcelorMittal Tubular Products Ostrava a.s.

On June 30, 2019, ArcelorMittal completed the sale of the ArcelorMittal Italia remedies to Liberty House Group ("Liberty"). The total consideration which consisted of amounts payable upon closing and deferred consideration in part contingent upon certain criteria, net of €110 million (125) deposited in escrow was €740 million (842) subject to customary closing adjustments. Of this total amount, €610 million (694) was received on June 28, 2019. The escrow which was subsequently drawn was to be used by Liberty for certain capital expenditure projects to satisfy commitments given in the EC approval process.

During 2019, prior to the completion of the disposal, the Company recorded an impairment charge in cost of sales of 497 to adjust the carrying amount of the disposal group to the sale proceeds of 692 including a cash consideration of 518 (694, net of cash disposed of 34, the escrow deposit of 125 and proceeds of 17 paid to a joint venture of the Company) and 174 of deferred consideration (of which 161 outstanding as of December 31, 2019 following subsequent receipt of a portion of the consideration receivable) recognized at present value and fair value of contingent consideration. The Company also assigned receivables of 404 mainly comprised of cash pooling balances to Liberty. The fair value measurement of ArcelorMittal Italia remedies was determined using the contract price, a Level 3

unobservable input, which was revised in the first half of 2019.

Global Chartering

On December 31, 2019, ArcelorMittal completed the sale of a 50% controlling interest in Global Chartering Ltd. ("Global Chartering") to DryLog Ltd. ("DryLog") for total deferred consideration of 6. The resulting net gain on disposal was 29 including the reclassification from other comprehensive income to the consolidated statements of operations of 33 foreign exchange translation gains. In connection with the disposal, the Company derecognized right-of-use assets and lease liabilities of 390 and 400, respectively (see note 7).

Global Chartering is a Mauritius-based shipping company that handles shipping for a portion of the Company's raw materials through the chartering of vessels on a short- to long-term basis. Global Chartering's fleet includes owned and leased Capesize, Panamax and Supramax vessels on a medium- to long-term charter. Simultaneously, ArcelorMittal entered into a joint venture agreement with DryLog to operate jointly the Global Chartering fleet and certain other vessels chartered from DryLog. Accordingly, the Company's remaining 50% interest in Global Chartering is accounted for under the equity method. The fair value measurement was determined using the selling price, a Level 3 unobservable input. At inception of the joint venture, certain of Global Chartering's lease terms were unfavorable compared to market rates and therefore the Company agreed to indemnify the joint venture for operating losses that could potentially arise within an agreed time frame if market rates do not improve and recognized accordingly in cost of sales a 126 provision (see note 9.1) representing the net present value of the maximum amount agreed.

Divestments in 2018

On February 28, 2018, ArcelorMittal completed the sale of Go Steel Frýdek Místek ("Frýdek Místek"), for consideration of 49 (net of cash disposed of 1) of which 10 remained outstanding at December 31, 2018. Frýdek Místek was part of the Europe segment. The fair value measurement was determined using the contract price, a Level 3 unobservable input.

On February 7, 2018, the Brazilian Antitrust Authority (CADE) approved the acquisition of Votorantim subject to divestment commitments (see note 2.2.4). Accordingly, in May 2018, ArcelorMittal Brasil disposed of its two production sites Cariacica and Itaúna as well as some wire drawing equipment in Brazil (the “Votorantim remedies”), which were part of the Brazil reportable segment. Prior to the disposal, the Company recorded an impairment charge in cost of sales of 86 to adjust the carrying amount of the disposal group to the sale proceeds of 84 (net of cash disposed of 1) of which 58 remained outstanding as of December 31, 2018. The fair value measurement of these Votorantim remedies was determined using the contract price, a Level 3 unobservable input.

Divestments in 2017

On December 15, 2017, ArcelorMittal completed the sale of its 100% shareholding in ArcelorMittal Georgetown Inc. ("Georgetown"), a wire rod mill in Georgetown in the United States for total cash consideration of 19 and the result on disposal was 18. The fair value measurement of Georgetown, which was part of the NAFTA reportable segment, was determined using the contract price, a Level 3 unobservable input.

On March 13, 2017, ArcelorMittal and the management of ArcelorMittal Tailored Blanks Americas (“AMTBA”), comprising the Company’s tailored blanks operations in Canada, Mexico and the United States, entered into a joint venture agreement following which the Company recognized an investment of 65 in AMTBA accounted for under the equity method. AMTBA was part of the NAFTA reportable segment and was classified as held for sale at December 31, 2016.

On February 10, 2017, ArcelorMittal completed the sale of certain ArcelorMittal Downstream Solutions entities in the Europe segment following its commitment to sell such operations in December 2015. The Company recorded an impairment charge of 18 in cost of sales in 2015. The assets and liabilities subject to the sale were classified as held for sale at December 31, 2016. The fair value measurement of these operations, which were part of the Europe reportable segment, was determined using the contract price, a Level 3 unobservable input.

The table below summarizes the significant divestments

	2019		2018		2017		
	ArcelorMittal Italia remedies	Global Chartering Limited	Frýdek Místek	Votorantim remedies	AMTBA	Downstream Solutions Europe	Georgetown
Cash and cash equivalents	—	—	—	—	13	—	—
Other current assets	1,386	14	48	40	46	38	—
Property, plant and equipment	178	517	35	48	55	2	4
Other assets	11	21	—	—	10	17	—
Total assets	1,575	552	83	88	124	57	4
Current liabilities	1,046	229	31	4	52	18	1
Other long-term liabilities	241	311	4	—	7	12	2
Total liabilities	1,287	540	35	4	59	30	3
Total net assets	288	12	48	84	65	27	1
Assigned receivables	404	—	—	—	—	—	—
% of net assets sold	100%	50%	100%	100%	100%	100%	100%
Total net assets disposed of	692	6	**48**	**84**	**65**	**27**	**1**
Cash consideration received, net of escrow deposit and cash disposed	518	(4)	39	26	65	6	19
Consideration receivable	174	6	10	58			
Reclassification of foreign exchange reserves	72	33	15	—	—	21	—
Gain on disposal	**72**	**29**	**16**	**—**	**—**	**—**	**18**

2.3.2 Assets held for sale

The assets and liabilities of the Steelton facility in the United States ceased to be classified as held for sale at December 31, 2019 as the Company is no longer committed to a sale of the assets.

The table below provides the details for the entities classified as held for sale at December 31, 2018. The ArcelorMittal Italia remedies were disposed during 2019 as disclosed in note 2.3.1.

	December 31, 2018		
	ArcelorMittal Italia remedies	Steelton	Total
Current Assets:			
Cash and cash equivalents	10	—	10
Trade accounts receivable, prepaid expenses and other current assets	291	28	319
Inventories	1,011	23	1,034
Total Current Assets	1,312	51	1,363
Non-current Assets:			
Property, plant and equipment	638	78	716
Other assets	32	—	32
Total Non-current Assets	670	78	748
Total Assets	1,982	129	2,111
Current Liabilities:			
Trade accounts payables, accrued expenses and other liabilities	542	21	563
Total Current Liabilities	542	21	563
Non-current Liabilities:			
Long-term debt	77	—	77
Other long-term liabilities	164	17	181
Total Non-current Liabilities	241	17	258
Total Liabilities	783	38	821

2.4 Investments in associates and joint arrangements

The carrying amounts of the Company's investments accounted for under the equity method were as follows:

	December 31,	
Category	2019	2018
Joint ventures	2,586	1,011
Associates	2,859	2,871
Individually immaterial joint ventures and associates[1]	1,084	1,024
Total	6,529	4,906

1 Individually immaterial joint ventures and associates represent in aggregate less than 20% of the total carrying amount of investments in joint ventures and associates at December 31, 2019 and 2018, and none of them have a carrying value exceeding 100 at December 31, 2019 and 2018.

2.4.1 Joint ventures

The following tables summarize the latest available financial information and reconcile it to the carrying value of each of the Company's material joint ventures, as well as the income statement of the Company's material joint ventures:

						December 31, 2019
Joint Ventures	AMNS India	Calvert	VAMA	Tameh	Borçelik	Total
Place of incorporation and operation [1]	India	United States	China	Poland	Turkey	
Principal Activity	Integrated flat steel producer [5,6]	Automotive steel finishing	Automotive steel finishing	Energy production and supply	Manufacturing and sale of steel [2,3,4]	
Ownership and voting rights at December 31, 2019	60.00%	50.00%	50.00%	50.00%	50.00%	
Current assets	2,318	1,604	313	171	508	4,914
of which cash and cash equivalents	444	62	81	75	106	768
Non-current assets	6,295	1,282	637	580	267	9,061
Current liabilities	5,922	984	485	183	378	7,952
of which trade and other payables and provisions	670	144	226	139	274	1,453
Non-current liabilities	189	764	147	244	49	1,393
of which trade and other payables and provisions	46	—	—	26	49	121
Net assets	2,502	1,138	318	324	348	4,630
Company's share of net assets	1,501	569	159	162	174	2,565
Adjustments for differences in accounting policies and other	48	6	—	—	(33)	21
Carrying amount in the statements of financial position	1,549	575	159	162	141	2,586
Revenue	—	3,504	772	499	1,141	5,916
Depreciation and amortization	—	(63)	(31)	(37)	(24)	(155)
Interest income	2	2	1	—	1	6
Interest expense	(10)	(48)	(23)	(7)	(19)	(107)
Income tax benefit (expense)	(83)	—	(22)	(7)	(10)	(122)
Profit (loss) from continuing operations	(116)	156	10	28	19	97
Total comprehensive income (loss)	(116)	156	10	28	19	97
Cash dividends received by the Company	—	57	—	9	12	78

1. The country of incorporation corresponds to the country of operation except for Tameh whose country of operation is also the Czech Republic.
2. Ownership interest in Borçelik was 45.33% and 50.00% based on issued shares and outstanding shares, respectively, at December 31, 2019; voting interest was 48.01% at December 31, 2019.
3. The non-current liabilities include 42 deferred tax liability.
4. Adjustment in Borçelik relates primarily to differences in accounting policies regarding revaluation of fixed assets.
5. Adjustments in AMNS India correspond to transaction costs incurred to set up the joint venture.
6. Includes AMNS Luxembourg, AMNS India and intermediate holding entities.

					December 31, 2018
Joint Ventures	Calvert	VAMA	Tameh	Borçelik	Total
Place of incorporation and operation[1]	United States	China	Poland	Turkey	
Principal Activity	Automotive steel finishing	Automotive steel finishing	Energy production and supply	Manufacturing and sale of steel [2,3,4]	
Ownership and voting rights at December 31, 2018	50.00%	50.00%	50.00%	50.00%	
Current assets	1,490	329	205	519	2,543
of which cash and cash equivalents	76	85	90	67	318
Non-current assets	1,282	688	540	282	2,792
Current liabilities	824	491	208	398	1,921
of which trade and other payables and provisions	173	180	176	263	792
Non-current liabilities	853	217	226	49	1,345
of which trade and other payables and provisions	—	—	22	—	22
Net assets	1,095	309	311	354	2,069
Company's share of net assets	548	156	156	177	1,037
Adjustments for differences in accounting policies and other	6	—	—	(32)	(26)
Carrying amount in the statements of financial position	554	156	156	145	1,011
Revenue	3,295	625	467	1,328	5,715
Depreciation and amortization	(62)	(32)	(31)	(22)	(147)
Interest income	1	1	—	2	4
Interest expense	(40)	(26)	(4)	(20)	(90)
Income tax benefit (expense)	—	(1)	(8)	(18)	(27)
Profit (loss) from continuing operations	312	5	30	6	353
Other comprehensive income (loss)	—	—	3	1	4
Total comprehensive income (loss)	312	5	33	7	357
Cash dividends received by the Company	48	—	4	34	86

1. The country of incorporation corresponds to the country of operation except for Tameh whose country of operation is also the Czech Republic.
2. Ownership interest in Borçelik was 45.33% and 50.00% based on issued shares and outstanding shares, respectively, at December 31, 2018; voting interest was 48.01% at December 31, 2018.
3. The non-current liabilities include 43 deferred tax liability.
4. Adjustment in Borçelik relates primarily to differences in accounting policies regarding revaluation of fixed assets.

(millions of U.S. dollars, except share and per share data)

	December 31, 2017					
Joint Ventures	Calvert	Macsteel	VAMA	Tameh	Borçelik	Total
Place of incorporation and operation[1]	United States	Netherlands	China	Poland	Turkey	
Principal Activity	Automotive steel finishing	Steel trading and shipping	Automotive steel finishing	Energy production and supply	Manufacturing and sale of steel [2,3]	
Ownership and voting rights at December 31, 2017	50.00%	50.00%	49.00%	50.00%	45.33%	
Current assets	1,135	739	283	158	519	2,834
of which cash and cash equivalents	13	95	71	57	7	243
Non-current assets	1,303	389	754	476	296	3,218
Current liabilities	612	404	449	132	357	1,954
of which trade and other payables and provisions	118	235	190	118	244	905
Non-current liabilities	947	43	277	189	46	1,502
of which trade and other payables and provisions	—	3	—	20	—	23
Net assets	879	681	311	313	412	2,596
Company's share of net assets	440	341	152	156	187	1,276
Adjustments for differences in accounting policies and other	6	(3)	—	—	(30)	(27)
Carrying amount in the statements of financial position	446	338	152	156	157	1,249
Revenue	2,870	2,775	489	330	1,234	7,698
Depreciation and amortization	(62)	(1)	(30)	(27)	(22)	(142)
Interest income	—	14	1	—	1	16
Interest expense	(35)	(10)	(28)	4	(12)	(81)
Income tax benefit (expense)	—	(5)	—	(7)	(20)	(32)
Profit (loss) from continuing operations	270	31	5	42	65	413
Other comprehensive income (loss)	—	2	—	(1)	(1)	—
Total comprehensive income (loss)	270	33	5	41	64	413
Cash dividends received by the Company	20	—	—	4	30	54

1. The country of incorporation corresponds to the country of operation except for Tameh whose country of operation is also the Czech Republic and Macsteel whose countries of operation are mainly the United States, the United Arab Emirates and China.
2. The non-current liabilities include 40 deferred tax liability.
3. Adjustment in Borçelik relates primarily to differences in accounting policies regarding revaluation of fixed assets.

ESIL (renamed AMNS India)

On December 11, 2019, following the unconditional approval received by the Indian Supreme Court of ArcelorMittal's acquisition plan ("the Resolution Plan") for Essar Steel India Limited ("ESIL") subsequently renamed AMNS India Limited ("AMNS India") on November 15, 2019, ArcelorMittal and Nippon Steel Corporation ("NSC"), Japan's largest steel producer and the third largest steel producer in the world, created a joint venture to own and operate AMNS India with ArcelorMittal holding a 60% interest and NSC holding 40% in accordance with the second amended joint venture formation agreement signed as of December 8, 2019. ArcelorMittal and NSC contributed their respective initial equity funding of 1,362 and 891 into AMNS Luxembourg Holding S.A. ("AMNS Luxembourg"), the parent company of the joint venture. ArcelorMittal's 60% interest is accounted for under the equity method. ArcelorMittal also transferred 360 cash proceeds (of which 293 recognized in 2019 and the remainder in 2018), including through a 193 equity contribution, into the joint venture following hedging programs entered into to hedge the volatility between the Indian Rupee and the U.S. dollar in relation to the acquisition of AMNS India. The total cash proceeds included 353 designated as cash flow hedge gains and the Company reflected in retained earnings NSC's 40% entitlement in the amount of 141 in accordance with the final joint venture formation agreement.

On December 16, 2019, AMNS Luxembourg completed the acquisition of AMNS India. ArcelorMittal and NSC financed the joint venture for the acquisition of AMNS India through a combination of partnership equity of 2,253 and debt of 3,679 including 2,204 drawn by the joint venture under the 7 billion term facility agreement (see note 6.1.2) and 1,475 shareholder loan from NSC. The joint venture accounted for the acquisition of AMNS India as a business combination. Following the recent closing of the transaction, the acquisition-date fair value of identifiable assets and liabilities of AMNS India has been determined on a provisional basis, in particular with respect to intangible assets, property, plant and equipment, working capital balances, provisions and income taxes at closing date. The joint venture expects to complete its purchase price accounting during 2020.

AMNS India is an integrated flat steel producer, and the largest steel company in western India. AMNS India's main steel manufacturing facility is located at Hazira, Gujarat in western India. It also has:

- two iron ore beneficiation plants close to the mines in Kirandul and Dabuna, with slurry pipelines that then transport the beneficiated iron ore slurry to the pellet plants in the Kirandul-Vizag and Dabuna-Paradeep systems;
- a downstream facility in Pune (including a pickling line, a cold rolling mill, a galvanizing mill, a color coating mill and a batch annealing plant); and
- seven service centers in the industrial clusters of Hazira, Bhuj, Indore, Bahadurgarh, Chennai, Kolkata and Pune. It has a complete range of flat rolled steel products, including value added products, and significant iron ore pellet capacity with two main pellet plant systems in Kirandul-Vizag and Dabuna-Paradeep, which have the potential for expansion. Its facilities are located close to ports with deep draft for movement of raw materials and finished goods.

The Resolution Plan which was approved for the acquisition of AMNS India included an upfront payment of 6.0 billion towards AMNS India's debt resolution, with a further 1.1 billion of capital injection into AMNS India to support operational improvements, increase production levels and deliver enhanced levels of profitability. The Company provided a 0.6 billion performance guarantee in connection with the execution of the Resolution Plan, which terminated on December 31, 2019. In addition, the Resolution Plan includes a capital expenditure plan of 2.6 billion to be implemented in two stages over six years.

In the context of the creation of the AMNS India joint venture, the Company transferred the Uttam Galva Steels Ltd. payments (see note 4.6) to the joint venture. ArcelorMittal and NSC financed such payments through a combination of equity contributions into the joint venture of 173 and 115, respectively, and debt of 597 including 367 drawn by the joint venture under the 7 billion term facility agreement and a 230 shareholder loan from NSC. The joint venture used such proceeds to repay the loan granted by ArcelorMittal for an amount of 680 on December 31, 2019.

On February 13, 2020 and pursuant to the follow-on funding requirement in accordance with the second amended joint venture formation agreement, AMNS Luxembourg completed an additional equity injection into AMNS India of 840 mainly through an additional 475 drawn under the 7 billion term facility agreement and a 325 shareholder loan from NSC.

Macsteel

On May 28, 2018, ArcelorMittal announced the sale of its 50% shareholding in Macsteel International Holdings B.V. ("Macsteel"), a joint venture between Macsteel Holdings

Luxembourg S.à r.l. and ArcelorMittal South Africa, which provided the Company with an international network of traders and trading channels including the shipping of steel. The Company recorded a 132 impairment to adjust the carrying amount of the investment to the expected sale proceeds partially offset by a 142 gain following the recycling upon closing of the sale on October 31, 2018 of accumulated foreign exchange translation gains from other comprehensive income to income (loss) from investments in associates, joint ventures and other investments. The fair value measurement was determined using the contract price, a Level 3 unobservable input.

VAMA

Valin ArcelorMittal Automotive Steel (“VAMA”) is a joint venture between ArcelorMittal and Hunan Valin which produces steel for high-end applications in the automobile industry. VAMA supplies international automakers and first-tier suppliers as well as Chinese car manufacturers and their supplier networks.

Calvert

AM/NS Calvert ("Calvert"), a joint venture between the Company and NSC, is a steel processing plant in Calvert, Alabama, United States. Calvert had a 6-year agreement to purchase 2 million tonnes of slabs annually from ThyssenKrupp Steel USA ("TK CSA"), an integrated steel mill complex located in Rio de Janeiro, Brazil, using a market-based price formula. TK CSA had an option to extend the agreement for an additional 3 years on terms that are more favorable to the joint venture, as compared with the initial 6-year period. In December 2017 and in connection with the acquisition of TK CSA by Ternium S.A., the agreement was amended to (i) extend the term of the agreement to December 31, 2020, (ii) make a corresponding reduction in the annual slab purchase obligation so that the aggregate slab purchase obligation over the full term of the agreement remained the same and (iii) eliminate TK CSA’s extension option. The remaining slabs for Calvert's operations are sourced from ArcelorMittal plants in the United States, Brazil and Mexico. ArcelorMittal is principally responsible for marketing the product on behalf of the joint venture. Calvert serves the automotive, construction, pipe and tube, service center and appliance/ HVAC industries.

Tameh

Tameh is a joint venture between ArcelorMittal and Tauron Group including four energy production facilities located in Poland and the Czech Republic. Tameh’s objective is to ensure energy supply to the Company’s steel plants in Poland and external customers in the Czech Republic as well as the utilization of steel plant gases for energy production processes.

Borçelik

Borçelik Çelik Sanayii Ticaret Anonim Şirketi ("Borçelik"), incorporated and located in Turkey, is a joint venture between ArcelorMittal and Borusan Holding involved in the manufacturing and sale of cold-rolled and galvanized flat steel products.

2.4.2 Associates

The following table summarizes the financial information and reconciles it to the carrying amount of each of the Company's material associates, as well as the income statement of the Company's material associates:

					December 31, 2019
Associates	China Oriental	DHS Group	Gonvarri Steel Industries	Baffinland	Total
Financial statements reporting date	June 30, 2019	September 30, 2019	September 30, 2019	December 31, 2019	
Place of incorporation and operation[1]	Bermuda	Germany	Spain	Canada	
Principal Activity	Iron and steel manufacturing	Steel manufacturing [3]	Steel manufacturing [4]	Extraction of iron ore [5]	
Ownership and voting rights at December 31, 2019	37.02%	33.43%	35.00%	25.70%	
Current assets	2,920	1,385	2,062	479	6,846
Non-current assets	1,797	2,794	1,628	2,403	8,622
Current liabilities	1,837	402	1,038	663	3,940
Non-current liabilities	150	979	795	891	2,815
Non-controlling interests	44	122	218	—	384
Net assets attributable to equity holders of the parent	2,686	2,676	1,639	1,328	8,329
Company's share of net assets	994	895	574	341	2,804
Adjustments for differences in accounting policies and other	—	43	(49)	7	1
Other adjustments[2]	5	27	22	—	54
Carrying amount in the statements of financial position	999	965	547	348	2,859
Revenue	3,102	1,795	3,724	454	9,075
Profit (loss) from continuing operations	249	(116)	82	(72)	143
Other comprehensive income (loss)	—	8	(7)	—	1
Total comprehensive income (loss)	249	(108)	75	(72)	144
Cash dividends received by the Company	57	—	13	—	70

1. The country of incorporation corresponds to the country of operation except for China Oriental whose country of operation is China.
2. Other adjustments correspond to the difference between the carrying amount at December 31, 2019 and the net assets situation corresponding to the latest financial statements ArcelorMittal is permitted to disclose as of the reporting dates described in the table above.
3. The amount for DHS Group includes an adjustment to align the German GAAP financial information with the Company's accounting policies and is mainly linked to property, plant and equipment, inventory and pension.
4. Adjustments in Gonvarri Steel Industries primarily relate to differences in accounting policies regarding revaluation of fixed assets.
5. Adjustments in Baffinland primarily relate to differences in accounting policies regarding revaluation of fixed assets and locally recognized goodwill.

(millions of U.S. dollars, except share and per share data)

					December 31, 2018
Associates	China Oriental	DHS Group	Gonvarri Steel Industries	Baffinland	Total
Financial statements reporting date	June 30, 2018	September 30, 2018	September 30, 2018	December 31, 2018	
Place of incorporation and operation[1]	Bermuda	Germany	Spain	Canada	
Principal Activity	Iron and steel manufacturing	Steel manufacturing [3]	Steel manufacturing [4]	Extraction of iron ore [5]	
Ownership and voting rights at December 31, 2018	37.02%	33.43%	35.00%	28.76%	
Current assets	2,516	1,528	2,183	390	6,617
Non-current assets	1,443	3,062	1,526	1,949	7,980
Current liabilities	1,426	480	1,134	399	3,439
Non-current liabilities	35	1,005	677	694	2,411
Non-controlling interests	45	136	219	—	400
Net assets attributable to equity holders of the parent	2,453	2,969	1,679	1,246	8,347
Company's share of net assets	908	992	588	358	2,846
Adjustments for differences in accounting policies and other	—	27	(52)	22	(3)
Other adjustments[2]	44	(4)	(12)	—	28
Carrying amount in the statements of financial position	952	1,015	524	380	2,871
Revenue	3,370	1,959	3,544	320	9,193
Profit (loss) from continuing operations	474	20	60	(98)	456
Other comprehensive income (loss)	—	5	(37)	—	(32)
Total comprehensive income (loss)	474	25	23	(98)	424
Cash dividends received by the Company	92	5	16	—	113

1. The country of incorporation corresponds to the country of operation except for China Oriental whose country of operation is China.
2. Other adjustments correspond to the difference between the carrying amount at December 31, 2018 and the net assets situation corresponding to the latest financial statements ArcelorMittal is permitted to disclose as of the reporting dates described in the table above.
3. The amount for DHS Group includes an adjustment to align the German GAAP financial information with the Company’s accounting policies, and is mainly linked to property, plant and equipment, inventory and pension.
4. Adjustments in Gonvarri Steel Industries primarily relate to differences in accounting policies regarding revaluation of fixed assets.
5. Adjustments in Baffinland primarily relate to differences in accounting policies regarding revaluation of fixed assets and locally recognized goodwill.

					December 31, 2017
Associates	China Oriental	DHS Group	Gonvarri Steel Industries	Baffinland	Total
Financial statements reporting date	June 30, 2017	September 30, 2017	September 30, 2017	December 31, 2017	
Place of incorporation and operation[1]	Bermuda	Germany	Spain	Canada	
Principal Activity	Iron and steel manufacturing	Steel manufacturing [3]	Steel manufacturing [4]	Extraction of iron ore [5]	
Ownership and voting rights at December 31, 2017	39.02%	33.43%	35.00%	31.07%	
Current assets	1,737	1,699	1,967	355	5,758
Non-current assets	1,336	3,096	1,372	1,698	7,502
Current liabilities	1,261	555	889	302	3,007
Non-current liabilities	119	1,121	446	531	2,217
Non-controlling interests	23	136	220	—	379
Net assets attributable to equity holders of the parent	1,670	2,983	1,784	1,220	7,657
Company's share of net assets	652	997	624	379	2,652
Adjustments for differences in accounting policies and other	—	32	(54)	23	1
Other adjustments[2]	183	22	(4)	—	201
Carrying amount in the statements of financial position	835	1,051	566	402	2,854
Revenue	2,944	1,773	2,862	341	7,920
Profit (loss) from continuing operations	275	(4)	122	(20)	373
Other comprehensive income (loss)	(1)	(5)	(9)	—	(15)
Total comprehensive income (loss)	274	(9)	113	(20)	358
Cash dividends received by the Company	49	—	18	—	67

1. The country of incorporation corresponds to the country of operation except for China Oriental whose country of operation is China.
2. Other adjustments correspond to the difference between the carrying amount at December 31, 2017 and the net assets situation corresponding to the latest financial statements ArcelorMittal is permitted to disclose as of the reporting dates described in the table above.
3. The amount for DHS Group includes an adjustment to align the German GAAP financial information with the Company's accounting policies, and is mainly linked to property, plant and equipment, inventory and pension.
4. Adjustments in Gonvarri Steel Industries primarily relate to differences in accounting policies regarding revaluation of fixed assets.
5. Adjustments in Baffinland primarily relate to differences in accounting policies regarding revaluation of fixed assets and locally recognized goodwill.

China Oriental

China Oriental Group Company Limited ("China Oriental") is a Chinese integrated iron and steel company listed on the Hong Kong Stock Exchange ("HKEx"). On January 27, 2017, in order to restore the minimum free float requirement, China Oriental issued 586,284,000 new shares resulting in a decrease of the Company's interest from 46.99% to 39.02%. As a result, ArcelorMittal recorded a loss of 67 upon dilution partially offset by a gain of 23 following the recycling of accumulated foreign exchange translation gains from other comprehensive income to income from investments in associates, joint ventures and other investments. The trading of China Oriental's shares, which had been suspended since April 29, 2014, resumed on February 1, 2017.

In January 2018, China Oriental issued 192 million new shares to fulfill its obligations under its share-based compensation plans. As a result, ArcelorMittal's interest in China Oriental decreased to 37.02%. ArcelorMittal recorded a loss of 20 upon dilution partially offset by a gain of 8 following the recycling of accumulated foreign exchange translation gains in income from investments in associates, joint ventures and other investments.

DHS Group

DHS - Dillinger Hütte Saarstahl AG ("DHS Group"), incorporated and located in Germany, is a leading producer of heavy steel plates, cast slag pots and semi-finished products, such as pressings, pressure vessel heads and shell sections in Europe. The DHS Group also includes a further rolling mill operated by Dillinger France in Dunkirk (France).

Gonvarri Steel Industries

Holding Gonvarri SL (“Gonvarri Steel Industries”) is dedicated to the processing of steel. The entity is a European leader in steel service centers and renewable energy components, with strong presence in Europe and Latin America.

Baffinland

Baffinland owns the Mary River project, which has direct shipping, high grade iron ore on Baffin Island in Nunavut (Canada). During 2017, ArcelorMittal's shareholding in Baffinland decreased from 44.54% to 31.07% following capital calls exclusively fulfilled by Nunavut Iron Ore ("NIO"), the other shareholder, and the conversion of preferred shares held by NIO into equity. As a result, ArcelorMittal recognized a loss on dilution of 22, including the recycling of accumulated foreign exchange translation losses of 52, in income (loss) from investments in associates, joint ventures and other investments. During 2018 and 2019 the Company's shareholding in Baffinland decreased further from 31.07% to 28.76% and 25.70%, respectively, following capital calls exclusively fulfilled by NIO. The Company recognized additional losses in 2018 and 2019 on dilution of 3 and 4 including the recycling of accumulated foreign exchange translation losses of 9 and 12, respectively, in income (loss) from investments in associates, joint ventures and other investments.

2.4.3 Other associates and joint ventures that are not individually material

The Company has interests in a number of other joint ventures and associates, none of which are regarded as individually material. The following table summarizes the financial information of all individually immaterial joint ventures and associates that are accounted for using the equity method:

	December 31, 2019			December 31, 2018		
	Associates	Joint Ventures	Total	Associates	Joint Ventures	Total
Carrying amount of interests in associates and joint ventures	304	780	1,084	310	714	1,024
Share of:						
Income from continuing operations	26	87	113	8	80	88
Other comprehensive income (loss)	1	2	3	(5)	2	(3)
Total comprehensive income	27	89	116	3	82	85

During 2019, the Company converted 31 of shareholders loans into equity and made an additional cash injection of 30 to its joint venture ArcelorMittal Tubular Products Jubail (“Al Jubail”) to maintain 40.80% interest in the joint venture in line with shareholding restructuring, which resulted in an increase of carrying amount of the investment from nil as of December 31, 2018 to 26 as of December 31, 2019 including the Company's share of accumulated net losses, which were recognized against shareholder loans as of December 31, 2018 (as carrying amount of investment was nil). The Company had outstanding shareholder loans given to Al Jubail for 109 and 131 as of December 31, 2019 and 2018, respectively.

2.4.4 Impairment of associates and joint ventures

For the years ended December 31, 2019 and 2018, the Company identified an impairment indicator with respect to its investment and shareholder loans in Al Jubail. Accordingly, it performed a value in use calculation and concluded the carrying amount of the investment and shareholder loans was recoverable. For the remaining investments, the Company concluded there were no impairment triggers.

The Company is not aware of any material contingent liabilities related to associates and joint ventures for which it is severally liable for all or part of the liabilities of the associates, nor are there any contingent liabilities incurred jointly with other investors. See note 9.4 for disclosure of commitments related to associates and joint ventures.

2.4.5 Investments in joint operations

The Company had investments in the following joint operations as of December 31, 2019 and 2018:

Peña Colorada

Peña Colorada is an iron ore mine located in Mexico in which ArcelorMittal holds a 50.00% interest. Peña Colorada operates an open pit mine as well as concentrating facility and two-line pelletizing facility.

Hibbing Taconite Mines

The Hibbing Taconite Mines in which the Company holds a 62.31% interest are iron ore mines located in the USA and operations consist of open pit mining, crushing, concentrating and pelletizing. The Company assumed the

managing partner role of Hibbing Taconite company in August 2019 following the resignation of Cleveland-Cliffs without changes in the ownership group.

I/N Tek

I/N Tek in which the Company holds a 60.00% interest operates a cold-rolling mill in the United States.

Double G Coatings

ArcelorMittal holds a 50.00% interest in Double G Coating, a hot dip galvanizing and Galvalume facility in the United States.

Hibbing Taconite Mines and Peña Colorada are part of the Mining segment; other joint operations are part of NAFTA.

2.5 Other investments

Other investments include those investments in equity instruments for which the Company does not have significant influence. The Company irrevocably elected to present the changes in fair value of such equity instruments, which are not held for trading, in other comprehensive income, because these investments are held as long-term strategic investments that are not expected to be sold in the short to medium term. Other investments include the following:

	December 31,	
	2019	2018
Erdemir	642	577
Stalprodukt S.A.	57	101
Powercell Sweden	23	12
Gerdau	—	115
Others	50	50
Investments in equity instruments at FVOCI	772	855

The Company's significant investments in equity instruments at FVOCI at December 31, 2019 and 2018 are the following:

Ereğli Demir ve Çelik Fabrikalari T.A.S. ("Erdemir")

Erdemir is the leading steel producer in Turkey and produces plates, hot and cold rolled, tin chromium and zinc coated flat steel and supplies basic inputs to automotive, white goods, pipes and tubes, rolling, manufacturing, electrics-electronics, mechanical engineering, energy, heating equipment, shipbuilding, defense and packaging industries. Unrealized gains recognized in other comprehensive income were 196 and 127 for the year ended December 31, 2019 and 2018, respectively.

Stalprodukt S.A.

Stalprodukt S.A. is a leading manufacturer and exporter of highly processed steel products based in Poland. Unrealized (losses) gains recognized in other comprehensive income were (32) and 11 for the year ended December 31, 2019 and 2018, respectively.

Powercell Sweden AB

Powercell Sweden AB is the leading developer and producer of fuel cell stacks and systems, powered by hydrogen, and produce electricity and heat with no emissions other than water. In 2019 the Company sold in aggregate 3.4 million shares of Powercell Sweden AB for total consideration of 36. The accumulated gain recognized in other comprehensive income of 19 was transferred to retained earnings. The remaining share of ownership after disposal is equal to 3.9%.

Gerdau

Gerdau is the largest producer of long steel in the Americas and is headquartered in Brazil. The accumulated gain recognized in other comprehensive income was 48 at December 31 2018. On July 16, 2019, the Company sold its 30 million shares, representing a 2.6% stake of preferred shares for 116 in line with Company's ongoing efforts to optimize and unlock value from its asset portfolio that no longer coincides with the Company's investment strategy. The accumulated gain recognized in other comprehensive income of 51 was transferred to retained earnings.

Unconsolidated structured entities

Global Chartering has lease arrangements for two vessels (Panamax Bulk Carriers) involving structured entities whose main purpose is to hold legal title of the two vessels and to lease them to Global Chartering. Such entities are wholly-owned and controlled by a financial institution and are funded through equity instruments by the financial institution. Lease arrangements began for one vessel in 2013 and for the second vessel in 2014. On December 31, 2019, following the sale of a 50% controlling interest in Global Chartering to DryLog (see note 2.3.1), the Company's remaining 50% interest in Global Chartering is accounted for under the equity method and therefore ArcelorMittal has no longer any involvement with the structured entities as of December 31, 2019.

2.6 Income (loss) from investments in associates, joint ventures and other investments

Income (loss) from investments in associates, joint ventures and other investments consisted of the following:

	Year Ended December 31,		
	2019	2018	2017
Share in net earnings of equity-accounted companies	252	567	537
Impairment charges	—	(132)	(26)
Gain (loss) on disposal	(4)	126	(117)
Dividend income	99	91	54
Total	347	652	448

For the year ended December 31, 2019, the loss on disposal include loss on dilution of the Company's interest in Baffinland (see note 2.4.2).

For the year ended December 31, 2018, impairment charges include 132 relating to Macsteel in connection with the sale completed on October 31, 2018 (see note 2.4.1).

For the year ended December 31, 2017, impairment charges include 17 and 9 relating to the write down of receivables from associates and joint ventures.

For the year ended December 31, 2018, gain (loss) on disposal included mainly a 142 gain from the recycling of the currency translation reserve following the sale of Macsteel and a 12 loss on the dilution of the Company's interest from 39.02% to 37.02% in China Oriental (see note 2.4).

For the year ended December 31, 2017, gain (loss) on disposal includes a gain of 133 (the cash settlement occured through three annual installments of 44) on the disposal of the Company's 21% shareholding in Empire Iron Mining Partnership ("EIMP"), a loss of 44 on dilution of the Company's share in China Oriental (see note 2.4), a loss of 22 on dilution of the Company's interest in Baffinland (see note 2.4), a loss of 187 as a result of the reclassification of the accumulated foreign exchange translation losses from other comprehensive income to the statements of operations following the completion of the sale of the Company's 50% shareholding in Kalagadi Manganese to Kgalagadi Alloys (Proprietary) Ltd on August 25, 2017. As per sales agreement signed on October 21, 2016, ArcelorMittal received a contingent consideration to be paid during the life of the mine, which is capped at 150 and contingent upon the financial performance of the mine and cash flow availability.

NOTE 3: SEGMENT REPORTING

3.1 Reportable segments

The Company is organized in five operating and reportable segments, which are components engaged in business activities from which they earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the Company), for which discrete financial information is available and whose operating results are evaluated regularly by the chief operating decision maker “CODM” to make decisions about resources to be allocated to the segment and assess its performance. The Company's CODM is the CEO Office - comprising the Chairman and Chief Executive Officer, Mr. Lakshmi N. Mittal and the President and Chief Financial Officer of ArcelorMittal, Mr. Aditya Mittal.

These operating segments include the attributable goodwill, intangible assets, property, plant and equipment, and certain equity method investments. They do not include cash and short-term deposits, short-term investments, tax assets and other current financial assets. Attributable liabilities are also those resulting from the normal activities of the segment, excluding tax liabilities and indebtedness but including post retirement obligations where directly attributable to the segment. The treasury function is managed centrally for the Company and is not directly attributable to individual operating segments or geographical areas.

ArcelorMittal’s segments are structured as follows:

- NAFTA represents the flat, long and tubular facilities of the Company located in North America (Canada, United States and Mexico). NAFTA produces flat products such as slabs, hot-rolled coil, cold-rolled coil, coated steel and plate. These products are sold primarily to customers in the following sectors: automotive, energy, construction, packaging and appliances and via distributors or processors. NAFTA also produces long products such as wire rod, sections, rebar, billets, blooms and wire drawing, and tubular products;
- Brazil includes the flat operations of Brazil and the long and tubular operations of Brazil and neighboring countries including Argentina, Costa Rica and Venezuela. Flat products include slabs, hot-rolled coil, cold-rolled coil and

coated steel. Long products consist of wire rod, sections, bar and rebar, billets, blooms and wire drawing;

- Europe is the largest flat steel producer in Europe, with operations that range from Spain in the west to Romania in the east, and covering the flat carbon steel product portfolio in all major countries and markets. Europe produces hot-rolled coil, cold-rolled coil, coated products, tinplate, plate and slab. These products are sold primarily to customers in the automotive, general and packaging sectors. Europe also produces long products consisting of sections, wire rod, rebar, billets, blooms and wire drawing, and tubular products. In addition, it includes Downstream Solutions, primarily an in-house trading and distribution arm of ArcelorMittal. Downstream Solutions also provides value-added and customized steel solutions through further steel processing to meet specific customer requirements;
- ACIS produces a combination of flat, long and tubular products. Its facilities are located in Africa, Ukraine and the Commonwealth of Independent States; and
- Mining comprises all mines owned by ArcelorMittal in the Americas (Canada, United States, Mexico and Brazil), Asia (Kazakhstan), Europe (Ukraine and Bosnia & Herzegovina) and Africa (Liberia). It provides the Company's steel operations with high quality and low-cost iron ore and coal reserves and also sells limited amounts of mineral products to third parties.

The following table summarizes certain financial data for ArcelorMittal's operations by reportable segments.

	NAFTA	Brazil	Europe	ACIS	Mining	Others [1]	Elimination	Total
Year ended December 31, 2019								
Sales to external customers	18,478	6,927	37,487	6,487	1,165	71	—	70,615
Intersegment sales [2]	77	1,186	234	350	3,672	353	(5,872)	—
Operating income (loss)	(1,259)	846	(1,107)	(25)	1,215	(295)	(2)	(627)
Depreciation and amortization	(570)	(274)	(1,256)	(364)	(448)	(155)	—	(3,067)
Impairment	(1,300)	—	(525)	(102)	—	—	—	(1,927)
Capital expenditures	727	328	1,353	513	480	171	—	3,572
Year ended December 31, 2018								
Sales to external customers	20,145	7,041	40,247	7,506	1,009	85	—	76,033
Intersegment sales [2]	187	1,670	241	455	3,202	307	(6,062)	—
Operating income (loss)	1,889	1,356	1,632	1,094	860	(247)	(45)	6,539
Depreciation and amortization	(522)	(298)	(1,195)	(311)	(418)	(55)	—	(2,799)
Bargain purchase gain[3]	—	—	209	—	—	—	—	209
Impairment	—	(86)	(908)	—	—	—	—	(994)
Capital expenditures	669	244	1,336	534	485	37	—	3,305
Year ended December 31, 2017								
Sales to external customers	17,893	6,571	35,825	7,323	985	82	—	68,679
Intersegment sales [2]	104	1,184	383	298	3,048	303	(5,320)	—
Operating income (loss)	1,185	697	2,359	508	991	(288)	(18)	5,434
Depreciation and amortization	(518)	(293)	(1,201)	(313)	(416)	(27)	—	(2,768)
Impairment	—	—	—	(206)	—	—	—	(206)
Capital expenditures	466	263	1,143	427	495	25	—	2,819

1. Others include all other operational and non-operational items which are not segmented, such as corporate and shared services, financial activities, and shipping and logistics.
2. Transactions between segments are reported on the same basis of accounting as transactions with third parties except for certain mining products shipped internally and reported on a cost plus basis.
3. See note 2.2.4.

The reconciliation from operating income to net income (including non-controlling interests) is as follows:

	Year ended December 31,		
	2019	2018	2017
Operating (loss)/income	(627)	6,539	5,434
Income from investments in associates and joint ventures	347	652	448
Financing costs - net	(1,652)	(2,210)	(875)
(Loss) income before taxes	(1,932)	4,981	5,007
Income tax expense (benefit)	459	(349)	432
Net (loss) income (including non-controlling interests)	(2,391)	5,330	4,575

The Company does not regularly provide a measure of total assets and liabilities for each reportable segment to the CODM.

3.2 Geographical information

Geographical information, by country or region, is separately disclosed and represents ArcelorMittal's most significant regional markets. Attributed assets are operational assets employed in each region and include items such as pension balances that are specific to a country. Unless otherwise stated in the table heading as a segment disclosure, these disclosures are specific to the country or region stated. They do not include goodwill, deferred tax assets, other investments or receivables and other non-current financial assets. Attributed liabilities are those arising within each region, excluding indebtedness.

Sales (by destination)

	Year ended December 31,		
	2019	2018	2017
Americas			
United States	15,238	16,271	14,367
Brazil	5,094	4,982	4,149
Canada	3,004	3,563	3,034
Mexico	1,941	1,970	2,251
Argentina	814	960	1,230
Others	1,195	1,322	1,005
Total Americas	27,286	29,068	26,036
Europe			
Germany	5,694	6,757	5,933
Poland	3,957	4,518	3,746
France	4,114	4,431	4,051
Spain	3,855	4,265	3,751
Italy	4,317	3,333	2,711
Czech Republic	1,244	1,782	1,400
Turkey	1,499	1,683	1,937
United Kingdom	1,434	1,471	1,370
Belgium	1,617	1,309	1,129
Netherlands	1,142	1,209	1,117
Russia	876	1,144	1,204
Romania	720	708	621
Others	4,899	5,653	4,948
Total Europe	35,368	38,263	33,918
Asia & Africa			
South Africa	2,260	2,742	2,560
Morocco	583	628	596
Egypt	309	206	310
Rest of Africa	1,278	1,257	1,033
China	676	608	622
Kazakhstan	470	496	392
South Korea	380	365	259
India	95	92	163
Rest of Asia	1,910	2,308	2,790
Total Asia & Africa	7,961	8,702	8,725
Total	70,615	76,033	68,679

Revenues from external customers attributed to the country of domicile (Luxembourg) were 151, 162 and 111 for the years ended December 31, 2019, 2018 and 2017, respectively.

(millions of U.S. dollars, except share and per share data)

Non-current assets[1] per significant country:

	December 31,	
	2019	2018
Americas		
Canada	5,336	5,187
Brazil	4,254	4,259
United States	2,878	4,022
Mexico	1,408	1,163
Argentina	266	252
Venezuela	17	10
Others	16	19
Total Americas	14,175	14,912
Europe		
France	4,293	4,363
Germany	2,665	2,607
Belgium[2]	2,695	2,526
Poland	2,508	2,356
Ukraine	2,674	2,219
Spain	1,920	1,971
Italy	1,488	1,365
Luxembourg	1,231	1,229
Bosnia and Herzegovina	188	205
Romania[2]	62	86
Czech Republic[2]	31	24
Others	165	235
Total Europe	19,920	19,186
Asia & Africa		
Kazakhstan	1,519	1,309
South Africa	568	625
Liberia	157	148
Morocco	92	93
Others	128	107
Total Asia & Africa	2,464	2,282
Unallocated assets	22,733	22,394
Total	59,292	58,774

1. Non-current assets do not include goodwill (as it is not allocated to the individual countries), deferred tax assets, investments in associates and joint ventures, other investments and other non-current financial assets. Such assets are presented under the caption “Unallocated assets”.
2. ArcelorMittal Ostrava, ArcelorMittal Galati and certain assets of ArcelorMittal Belgium were classified as held for sale at December 31, 2018 and sold in 2019 (see note 2.3.1 and 2.3.2).

3.3 Sales by type of products

The table below presents sales to external customers by product type. In addition to steel produced by the Company, amounts include material purchased for additional transformation and sold through distribution services. Others mainly include non-steel and by-products sales, manufactured and specialty steel products sales, shipping and other services.

	Year ended December 31,		
	2019	2018	2017
Flat products	43,633	46,734	43,065
Long products	13,706	15,751	13,685
Tubular products	2,044	2,158	1,810
Mining products	1,165	1,009	985
Others	10,067	10,380	9,134
Total	70,615	76,033	68,679

3.4 Disaggregated revenue

Disaggregated revenue

The tables below summarize the disaggregated revenue recognized from contracts with customers:

Year ended December 31, 2019	NAFTA	Brazil	Europe	ACIS	Mining	Others	Total
Steel sales	17,669	6,467	33,759	5,789	—	—	63,684
Non-steel sales [1]	122	66	1,130	239	1,117	—	2,674
By-product sales [2]	114	93	816	135	—	—	1,158
Other sales [3]	573	301	1,782	324	48	71	3,099
Total	18,478	6,927	37,487	6,487	1,165	71	70,615

Year ended December 31, 2018	NAFTA	Brazil	Europe	ACIS	Mining	Others	Total
Steel sales	19,372	6,582	36,603	6,748	—	—	69,305
Non-steel sales [1]	148	31	882	243	968	—	2,272
By-product sales [2]	124	115	947	182	—	—	1,368
Other sales [3]	501	313	1,815	333	41	85	3,088
Total	20,145	7,041	40,247	7,506	1,009	85	76,033

Year ended December 31, 2017	NAFTA	Brazil	Europe	ACIS	Mining	Others	Total
Steel sales	17,210	6,128	32,676	6,661	—	—	62,675
Non-steel sales [1]	121	77	817	188	947	—	2,150
By-product sales [2]	98	89	683	159	—	—	1,029
Other sales [3]	464	277	1,649	315	38	82	2,825
Total	17,893	6,571	35,825	7,323	985	82	68,679

1. Non-steel sales mainly relate to iron ore, coal, scrap and electricity;
2. By-product sales mainly relate to slag, waste and coke by-products;
3. Other sales are mainly comprised of shipping and other services.

NOTE 4: OPERATING DATA

4.1 Revenue

The Company's revenue is derived from the single performance obligation to transfer primarily steel and mining products under arrangements in which the transfer of control of the products and the fulfillment of the Company's performance obligation occur at the same time. Revenue from the sale of goods is recognized when the Company has transferred control of the goods to the buyer and the buyer obtains the benefits from the goods, the potential cash flows and the amount of revenue (the transaction price) can be measured reliably, and it is probable that the

Company will collect the consideration to which it is entitled to in exchange for the goods.

Whether the customer has obtained control over the asset depends on when the goods are made available to the carrier or the buyer takes possession of the goods, depending on the delivery terms. For the Company's steel producing operations, generally the criteria to recognize revenue has been met when its products are delivered to its customers or to a carrier who will transport the goods to its customers, this is the point in time when the Company has completed its performance obligations. Revenue is measured at the transaction price of the consideration received or receivable, the amount the Company expects to be entitled to.

Additionally, the Company identifies when goods have left its premises, not when the customer receives the goods. Therefore, the Company estimates, based on its historical experience, the amount of goods in-transit when the transfer of control occurs at the destination and defers the revenue recognition.

The Company's products must meet customer specifications. A certain portion of the Company's products are returned or have claims filed against the sale because the products contained quality defects or other problems. Claims may be either of the following:

- Product Rejection - Product shipped and billed to an end customer that did not meet previously agreed customer specifications. Claims typically result from physical defects in the goods, goods shipped to the wrong location, goods produced with incorrect specifications and goods shipped outside acceptable time parameters.
- Consequential Damages - Damages reported by the customer not directly related to the value of the rejected goods (for example: customer processing cost or mill down time, sampling, storage, sorting, administrative cost, replacement cost, etc.).

The Company estimates the variable consideration for such claims using the expected value method and reduces the amount of revenue recognized.

Warranties:

The warranties and claims arise when the product fails on the criteria mentioned above. Sales-related warranties associated with the goods cannot be purchased separately and they serve as an assurance that the products sold comply with agreed-upon specifications. Accordingly, the Company accounts for warranties in accordance with IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" (see note 9)

Periodically, the Company enters into volume or other rebate programs where once a certain volume or other conditions are met, it refunds the customer some portion of the amounts previously billed or paid. For such arrangements, the Company only recognizes revenue for the amounts it ultimately expects to realize from the customer. The Company estimates the variable consideration for these programs using the most likely amount method or the expected value method, whichever approach best predicts the amount of the consideration based on the terms of the contract and available information and updates its estimates each reporting period.

The Company's payment terms range from 30 to 90 days from date of delivery, depending on the market and product sold. The Company received 354 as advances from its customers which are classified as unsatisfied performance obligations and recognized as liabilities in line with IFRS 15. The Company expects 100% of the unsatisfied performance obligations as of December 31, 2019 to be recognized as revenue during 2020 as the Company's contracts have an original expected duration of one year or less.

The tables below summarize the movements relating to the Company's trade receivable and other for the years ended December 31, 2019, 2018 and 2017.

	Year ended December 31,		
	2019	2018	2017
Trade accounts receivable and other - opening balance	4,432	3,863	2,974
Performance obligations satisfied	70,615	76,033	68,679
Payments received	(71,559)	(75,387)	(68,059)
Impairment of receivables (net of write backs and utilization)	9	(8)	—
Reclassification of the period-end receivables to held for sale	—	(182)	—
Additions through business combinations	4	532	33
Foreign exchange and others	68	(419)	236
Trade accounts receivable and other - closing balance	3,569	4,432	3,863

4.2 Cost of sales

Cost of sales includes the following components:

	Year ended December 31,		
	2019	2018	2017
Materials	47,809	46,842	42,813
Labor costs	9,094	9,206	8,842
Logistic expenses	4,951	4,974	4,161
Depreciation and amortization	3,067	2,799	2,768
Gain on bargain purchase[1]	—	(209)	—
Impairment	1,927	994	206
Other	2,039	2,419	2,086
Total	68,887	67,025	60,876

1. See note 2.2.4

4.3 Trade accounts receivable and other

Trade accounts receivable are initially recorded at their transaction price and do not carry any interest. ArcelorMittal maintains an allowance for lifetime expected credit loss at an amount that it considers to be a reliable estimate of expected credit losses resulting from the inability of its customers to make required payments. In judging the adequacy of the allowance for expected credit losses, ArcelorMittal considers multiple factors including historical bad debt experience, the current and forward looking economic environment and the aging of the receivables. Recoveries of trade receivables previously reserved in the allowance for expected credit losses are recognized as gains in selling, general and administrative expenses.

ArcelorMittal's policy is to record an allowance for expected lifetime credit losses and a charge in selling, general and administrative expense when a specific account is deemed uncollectible. The Company concluded that a trade receivable is in default when they are overdue by more than 180 days. Based on historical experience and analysis, the Company concluded that there is a risk of default as such receivables are generally not recoverable and therefore provided for, unless it can be clearly demonstrated that the receivable is still collectible. Trade receivables and the associated allowance are written off when ArcelorMittal has exhausted its recovery efforts and enforcement options.

Trade accounts receivable and allowance for lifetime expected credit losses

	December 31,	
	2019	2018
Gross amount	3,698	4,605
Allowance for lifetime expected credit losses	(129)	(173)
Total	3,569	4,432

The carrying amount of the trade accounts receivable and other approximates their fair value. Before granting credit to any new customer, ArcelorMittal uses an internally developed credit scoring system to assess the potential customer's credit quality and to define credit limits by customer. For all significant customers the credit terms must be approved by the credit committees of each reportable segment. Limits and scoring attributed to customers are reviewed periodically. There are no customers who represent more than 5% of the total balance of trade accounts receivable.

Exposure to credit risk by reportable segment

The maximum exposure to credit risk for trade accounts receivable by reportable segment is as follows:

	December 31,	
	2019	2018
NAFTA	285	579
Brazil	702	864
Europe	1,983	2,348
ACIS	523	531
Mining	76	110
Total	3,569	4,432

Aging of trade accounts receivable

	December 31, 2019			December 31, 2018		
	Gross	Allowance	Total	Gross	Allowance	Total
Not past due	2,851	(11)	2,840	3,377	(3)	3,374
Overdue 1-30 days	452	(2)	450	691	(3)	688
Overdue 31-60 days	85	(1)	84	178	(1)	177
Overdue 61-90 days	43	—	43	97	(1)	96
Overdue 91-180 days	67	(4)	63	59	(4)	55
More than 180 days	200	(111)	89	203	(161)	42
Total	3,698	(129)	3,569	4,605	(173)	4,432

The movements in the allowance are calculated based on lifetime expected credit loss model for 2019 and 2018 following the adoption of IFRS 9 and incurred loss model for 2017. The allowances in respect of trade accounts receivable during the periods presented is as follows:

	Year ended December 31,		
	2019	2018	2017
Allowance - opening balance	173	193	184
Additions	18	35	34
Write backs / utilization	(27)	(29)	(38)
Foreign exchange and others	(35)	(26)	13
Allowance - closing balance	129	173	193

The Company has established a number of programs for sales without recourse of trade accounts receivable to various financial institutions (referred to as true sale of receivables (“TSR”)). Through the TSR programs, certain operating subsidiaries of ArcelorMittal surrender the control, risks and benefits associated with the accounts receivable sold; therefore, the amount of receivables sold is recorded as a sale of financial assets and the balances are derecognized from the consolidated statements of financial position at the moment of sale. The Company classifies trade receivables subject to TSR programs as financial assets that are held to collect or to sell and recognized them at FVOCI (see note 6). The fair value measurement is determined based on the invoice amount net of TSR expense payable, a Level 3 unobservable input. The TSR expense is insignificant due to the rate applicable and the short timeframe between the time of sale and the invoice due date. Any loss allowance for these trade receivables is recognized in OCI.

4.4 Inventories

Inventories are carried at the lower of cost or net realizable value. Cost is determined using the average cost method. Costs of production in process and finished goods include the purchase costs of raw materials and conversion costs such as direct labor and an allocation of fixed and variable production overheads. Raw materials and spare parts are valued at cost, inclusive of freight, shipping, handling as well as any other costs incurred in bringing the inventories to their present location and condition. Interest charges, if any, on purchases have been recorded as financing costs. Costs incurred when production levels are abnormally low are capitalized as inventories based on normal capacity with the remaining costs incurred recorded as a component of cost of sales in the consolidated statements of operations.

Net realizable value represents the estimated selling price at which the inventories can be realized in the normal course of business after allowing for the cost of conversion from their existing state to a finished condition and for the cost of marketing, selling, and distribution. Net realizable value is estimated based on the most reliable evidence available at the time the estimates were made of the amount that the inventory is expected to realize, taking into account the purpose for which the inventory is held.

Previous write-downs are reversed in case the circumstances that previously caused inventories to be written down below cost no longer exist.

Inventories, net of allowance for slow-moving inventory, excess of cost over net realizable value and obsolescence of 1,760 and 1,168 as of December 31, 2019 and 2018, respectively, are comprised of the following:

	December 31,	
	2019	2018
Finished products	5,821	7,464
Production in process	4,165	4,596
Raw materials	5,101	6,822
Manufacturing supplies, spare parts and other [1]	2,209	1,862
Total	17,296	20,744

1. Including spare parts of 1.6 billion and 1.3 billion, and manufacturing and other of 0.6 billion and 0.6 billion as of December 31, 2019 and 2018, respectively.

Movements in the inventory reserve are as follows:

	Year ended December 31,		
	2019	2018	2017
Inventory reserve - opening balance	1,168	1,239	1,097
Additions [1]	726	423	442
Deductions / Releases [2]	(212)	(382)	(404)
Foreign exchange and others	78	(112)	104
Inventory reserve - closing balance	1,760	1,168	1,239

1. Additions in 2019 refer to write-downs of inventories excluding those utilized or written back during the same financial year. The additions in 2018 and 2017 refer to write-downs of inventories including those utilized or written back during the same financial year.
2. Deductions/releases correspond to write-backs and utilizations related to the prior periods in 2019 and correspond to write-backs and utilizations related to the current and prior periods in 2018 and 2017.

4.5 Prepaid expenses and other current assets

	December 31,	
	2019	2018
VAT receivables	941	1,049
Prepaid expenses and non-trade receivables	696	416
Financial amounts receivable	350	304
Income tax receivable	102	106
Receivables from public authorities	137	125
Receivables from sale of financial and intangible assets	153	149
Derivative financial instruments	268	617
Other [1]	109	68
Total	2,756	2,834

1. Other includes mainly advances to employees, accrued interest and other miscellaneous receivables.

Financial amounts receivable include a 127 short-term loan granted to Global Chartering (see note 12.3).

4.6 Other assets

Other assets consisted of the following:

	December 31,	
	2019	2018
Derivative financial instruments	130	609
Financial amounts receivable	594	1,679
Long-term VAT receivables	285	322
Cash guarantees and deposits	164	185
Receivables from public authorities	51	172
Accrued interest	65	86
Receivables from sale of financial and intangible assets	131	61
Income tax receivable	25	18
Other [1]	203	228
Total	1,648	3,360

1. Other mainly includes assets in pension funds and other amounts receivable.

Following the Indian Supreme Court ruling dated October 4, 2018, ArcelorMittal completed a series of payments to the financial creditors of Uttam Galva ("UG") and KSS Petron to clear overdue debts so that the Company's offer submitted for AMNS India remained eligible and could be considered by ESIL's Committee of Creditors. At December 31, 2018, financial amounts receivable included 844 and 193 related to such payments to UG and KSS Petron, respectively, measured at fair value recognized in profit or loss as of December 31, 2018 (a Level 3 fair value estimate). In 2019, ArcelorMittal made additional payments of 83. The fair value of the UG payments was determined on the basis of market multiples and a discounted cash flow model including market participant synergies. Unobservable inputs were used to measure fair value to the extent that relevant observable inputs were not available and include primarily the discount rate, growth rate, expected changes to average selling prices, shipments and direct costs. Assumptions for average selling prices and shipments were based on historical experience and expectations of future changes in the market.

On December 11, 2019, ArcelorMittal derecognized the UG payments as they were transferred to the AMNS India joint venture (see note 2.4.1).

4.7 Trade accounts payable and other

Trade accounts payable are obligations to pay for goods that have been acquired in the ordinary course of business from suppliers. Trade accounts payable have maturities from 15 to 180 days depending on the type of material, the geographic area in which the purchase transaction occurs and the various contractual agreements. The carrying value of trade accounts payable approximates fair value.

4.8 Accrued expenses and other liabilities

Accrued expenses and other liabilities are comprised of the following as of:

	December 31,	
	2019	2018
Accrued payroll and employee related expenses	1,560	1,613
Accrued interest and other payables	927	976
Payable from acquisition of intangible, tangible & financial assets	1,559	1,332
Other amounts due to public authorities	507	540
Derivative financial instruments [1]	308	190
Unearned revenue and accrued payables	49	58
Total	4,910	4,709

1. Derivative financial instruments include 125 as of December 31, 2019 relating to the fair value of the put option granted to ISP in the framework of the acquisition of ArcelorMittal Italia. As of December 31, 2018 the option's fair value of 124 was included in long-term liabilities (note 9.2).

NOTE 5: GOODWILL, INTANGIBLE AND TANGIBLE ASSETS

5.1 Goodwill and intangible assets

The carrying amounts of goodwill and intangible assets are summarized as follows:

	December 31,	
	2019	2018
Goodwill on acquisitions	5,104	4,986
Concessions, patents and licenses	197	293
Customer relationships and trade marks	95	90
Other[1]	36	359
Total	5,432	5,728

1. In 2018, other included 201 relating to CO2 emission rights, which were surrendered in 2019, and 77 related to favorable land lease contracts in ArcelorMittal Italia, which were reclassified as right-of-use assets upon adoption of IFRS 16 as of January 1, 2019 (see note 7)

Goodwill

Goodwill arising on an acquisition is recognized as previously described within the business combinations section in note 2.2.3. Goodwill is allocated to those groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose and in all cases is at the operating segment level, which represents the lowest level at which goodwill is monitored for internal management purposes.

Goodwill acquired in business combinations for each of the Company's operating segments is as follows:

	December 31, 2017	Divestments and assets held for sale [1]	Foreign exchange differences and other movements [2]	December 31, 2018
NAFTA	2,249	—	(51)	2,198
Brazil	1,640	(18)	(218)	1,404
Europe	582	(16)	(16)	550
ACIS	823	—	11	834
Total	5,294	(34)	(274)	4,986

1. See note 2.3.1 and 2.3.2
2. Other movements for Brazil include 24 related to the acquisition of AMSF (see note 2.2.4)

(millions of U.S. dollars, except share and per share data)

	December 31, 2018	Divestments and assets held for sale	Foreign exchange differences and other movements [1]	December 31, 2019
NAFTA	2,198	—	35	2,233
Brazil	1,404	—	(51)	1,353
Europe	550	—	(5)	545
ACIS	834	—	139	973
Total	4,986	—	118	5,104

1. Other movements for Europe include 6 relating to the acquisition of Münker and 8 for Brazil relating to the increase in goodwill following the completion of the acquisition-date fair value of AMSF (see note 2.2.4).

Intangible assets

Intangible assets are recognized only when it is probable that the expected future economic benefits attributable to the assets will accrue to the Company and the cost can be reliably measured. Intangible assets acquired separately by ArcelorMittal are initially recorded at cost and those acquired in a business combination are initially recorded at fair value at the date of the business combination. These primarily include the cost of technology and licenses purchased from third parties and operating authorizations granted by governments or other public bodies (concessions). Intangible assets are amortized on a straight-line basis over their estimated economic useful lives, which typically do not exceed five years. Amortization is included in the consolidated statements of operations as part of cost of sales.

ArcelorMittal's industrial sites which are regulated by the European Directive 2003/87/EC of October 13, 2003 on carbon dioxide ("CO2") emission rights, effective as of January 1, 2005, are located primarily in Belgium, France, Germany, Luxembourg, Poland, Spain and Italy. ArcelorMittal's operations in Ontario, Canada are subject to the "Climate Change Mitigation and Low-carbon Economy Act, 2016", a cap and trade program regulation effective from July 1, 2016, in South Africa, a CO_2 tax system was introduced in 2019 and in Kazakhstan, the Emission Trading Scheme restarted operation on January 1, 2018. The emission rights allocated to the Company on a no-charge basis pursuant to the annual national allocation plan are recorded at nil value and purchased emission rights are recorded at cost.

Other intangible assets are summarized as follows:

	Concessions, patents and licenses	Customer relationships and trade marks	Other	Total
Cost				
At December 31, 2017	766	1,214	96	2,076
Acquisitions	22	—	39	61
Acquisitions through business combinations (note 2.2.4)	2	—	317	319
Disposals	—	—	(5)	(5)
Foreign exchange differences	(61)	(83)	(4)	(148)
Transfers to assets held for sale (note 2.3)	(32)	—	—	(32)
Transfers and other movements[1]	64	1	—	65
Fully amortized intangible assets [2]	(16)	(4)	—	(20)
At December 31, 2018	745	1,128	443	2,316
Acquisitions	17	—	65	82
Acquisitions through business combination (note 2.2.4)	—	12	—	12
Disposal	—	—	(6)	(6)
Foreign exchange differences	(8)	(11)	(4)	(23)
Transfers and other movements [1]	(107)	4	(351)	(454)
Fully amortized intangible assets [2]	(17)	—	—	(17)
At December 31, 2019	630	1,133	147	1,910
Accumulated amortization and impairment losses				
At December 31, 2017	491	1,096	46	1,633
Amortization charge	47	22	42	111
Foreign exchange differences	(44)	(76)	(3)	(123)
Transfers to assets held for sale (note 2.3)	(27)	—	—	(27)
Transfers and other movements[1]	1	—	(1)	—
Fully amortized intangible assets [2]	(16)	(4)	—	(20)
At December 31, 2018	452	1,038	84	1,574
Amortization charge	53	11	30	94
Foreign exchange differences	(7)	(11)	(2)	(20)
Transfers and other movements[1]	(48)	—	(1)	(49)
Fully amortized intangible assets [2]	(17)	—	—	(17)
At December 31, 2019	433	1,038	111	1,582
Carrying amount				
At December 31, 2018	293	90	359	742
At December 31, 2019	197	95	36	328

1. In 2019, transfers and other movements mainly relate to CO2 emission rights utilized from the acquisition of ArcelorMittal Italia amounting to 158 (see note 2.2.4) and favorable land lease contracts from the acquisition of ArcelorMittal Italia and advances for land use which were transferred to right-of-use assets upon implementation of IFRS 16 (see notes 1 and 7). In 2018, transfers and other movements correspond mainly to transfer from assets under construction into patents and licenses.
2. Fully amortized assets correspond mainly to licenses in 2019 and 2018.

Research and development costs not meeting the criteria for capitalization are expensed as incurred. These costs amounted to 301, 290 and 278 for the years ended December 31, 2019, 2018, and 2017, respectively and were recognized in selling, general and administrative expenses.

5.2 Property, plant and equipment and biological assets

Property, plant and equipment is recorded at cost less accumulated depreciation and impairment. Cost includes all related costs directly attributable to the acquisition or construction of the asset. Except for land and assets used in mining activities, property, plant and equipment is depreciated using the straight-line method over the useful lives of the related assets as presented in the table below.

Asset Category	Useful Life Range
Land	Not depreciated
Buildings	10 to 50 years
Property plant & equipment	15 to 50 years
Auxiliary facilities	15 to 45 years
Other facilities	5 to 20 years

The Company's annual review of useful lives leverages on the experience gained from an in-depth review performed every five years, any significant change in the expected pattern of consumption embodied in the asset, and the specialized knowledge of ArcelorMittal's network of chief technical officers. The chief technical officer network includes engineers with facility-specific expertise related to plant and equipment used in the principal production units of the Company's operations. The most recent in-depth review took place in 2019, during which the Company performed a review of the useful lives of its assets and determined there were no material changes to the useful lives of plant and equipment. In performing this review, the Company gathered and evaluated data, including commissioning dates, designed capacities, maintenance records and programs, and asset performance history, among other attributes. In accordance with IAS 16, Property, Plant and Equipment, the Company considered this information at the level of components significant in relation to the total cost of the item of plant and equipment. Other factors the Company considered in its determination of useful lives included the expected use of the assets, technical or commercial obsolescence, and operational factors. In addition, the Company considered the accumulated technical experience and knowledge sharing programs that allowed for the exchange of best practices within the chief technical officer network and the deployment of these practices across the Company's principal production units.

Major improvements, which add to productive capacity or extend the life of an asset, are capitalized, while repairs and maintenance are expensed as incurred. Where a tangible fixed asset comprises major components having different useful lives, these components are accounted for as separate items.

Property, plant and equipment under construction is recorded as construction in progress until it is ready for its intended use; thereafter it is transferred to the related class of property, plant and equipment and depreciated over its estimated useful life. Interest incurred during construction is capitalized if the borrowing cost is directly attributable to the construction. Gains and losses on retirement or disposal of assets are recognized in cost of sales.

The residual values and useful lives of property, plant and equipment are reviewed at each reporting date and adjusted if expectations differ from previous estimates. Depreciation methods applied to property, plant and equipment are reviewed at each reporting date and changed if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset.

Mining assets comprise:

- Mineral rights acquired;
- Capitalized developmental stripping (as described below in "—Stripping and overburden removal costs").

Property, plant and equipment used in mining activities is depreciated over its useful life or over the remaining life of the mine, if shorter, and if there is no alternative use. For the majority of assets used in mining activities, the economic benefits from the asset are consumed in a pattern which is linked to the production level and accordingly, assets used in mining activities are primarily depreciated on a units-of-production basis. A unit-of-production is based on the available estimate of proven and probable reserves.

Capitalization of pre-production expenditures ceases when the mining property is capable of commercial production as it is intended by management. General administration costs that are not directly attributable to a specific exploration area are charged to the consolidated statements of operations.

Mining Reserves

Reserves are estimates of the amount of product that can be economically and legally extracted from the Company's properties. In order to estimate reserves, estimates are required for a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates.

Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies to be determined by analyzing geological data such as drilling samples. This

process may require complex and difficult geological judgments to interpret the data.

Because the economic assumptions used to estimate reserves change from period to period, and because additional geological data is generated during the course of operations, estimates of reserves may change from period to period. Changes in reported reserves may affect the Company's financial results and financial position in a number of ways, including the following:

- Asset carrying amounts may be affected due to changes in estimated future cash flows.
- Depreciation, depletion and amortization charged in the consolidated statements of operations may change where such charges are determined by the units of production basis, or where the useful economic lives of assets change.
- Overburden removal costs recognized in the consolidated statements of financial position or charged to the consolidated statements of operations may change due to changes in stripping ratios or the units of production basis of depreciation.
- Decommissioning, site restoration and environmental provisions may change where changes in estimated reserves affect expectations about the timing or cost of these activities.

Stripping and overburden removal costs

In open pit and underground mining operations, it is often necessary to remove overburden and other waste materials to access the deposit from which minerals can be extracted. This process is referred to as stripping. Stripping costs can be incurred before the mining production commences ("developmental stripping") or during the production stage ("production stripping").

A mine can operate several open pits that are regarded as separate operations for the purpose of mine planning and production. In this case, stripping costs are accounted for separately, by reference to the ore extracted from each separate pit. If, however, the pits are highly integrated for the purpose of mine planning and production, stripping costs are aggregated.

The determination of whether multiple pit mines are considered separate or integrated operations depends on each mine's specific circumstances. The following factors would point towards the stripping costs for the individual pits being accounted for separately:

- If mining of the second and subsequent pits is conducted consecutively with that of the first pit, rather than concurrently.
- If separate investment decisions are made to develop each pit, rather than a single investment decision being made at the outset.
- If the pits are operated as separate units in terms of mine planning and the sequencing of overburden and ore mining, rather than as an integrated unit.
- If expenditures for additional infrastructure to support the second and subsequent pits are relatively large.
- If the pits extract ore from separate and distinct ore bodies, rather than from a single ore body.

The relative importance of each factor is considered by local management to determine whether the stripping costs should be attributed to the individual pit or to the combined output from several pits.

Developmental stripping costs contribute to the future economic benefits of mining operations when the production begins and so are capitalized as tangible assets (construction in progress), whereas production stripping is a part of on-going activities and commences when the production stage of mining operations begins and continues throughout the life of a mine.

Capitalization of developmental stripping costs ends when the commercial production of the minerals commences.

Production stripping costs are incurred to extract the ore in the form of inventories and/or to improve access to an additional component of an ore body or deeper levels of material. Production stripping costs are accounted for as inventories to the extent the benefit from production stripping activity is realized in the form of inventories. Production stripping costs are recognized as a non-current asset ("stripping activity assets") to the extent it is probable that future economic benefit in terms of improved access to ore will flow to the Company, the components of the ore body for which access has been improved can be identified and the costs relating to the stripping activity associated with that component can be measured reliably.

All stripping costs assets (either stripping activity assets or capitalized developmental stripping costs) are presented within a specific "mining assets" class of property, plant and equipment and then depreciated on a units-of-production basis.

Exploration and evaluation expenditure

Exploration and evaluation activities involve the search for iron ore and coal resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource. Exploration and evaluation activities include:

- researching and analyzing historical exploration data;
- conducting topographical, geological, geochemical and geophysical studies;
- carrying out exploratory drilling, trenching and sampling activities;
- drilling, trenching and sampling activities to determine the quantity and grade of the deposit;
- examining and testing extraction methods and metallurgical or treatment processes; and
- detailed economic feasibility evaluations to determine whether development of the reserves is commercially justified and to plan methods for mine development.

Exploration and evaluation expenditure is charged to the consolidated statements of operations as incurred except in the following circumstances, in which case the expenditure is capitalized: (i) the exploration and evaluation activity is within an area of interest which was previously acquired in a business combination and measured at fair value on acquisition; or (ii) when management has a high degree of confidence in the project's economic viability and it is probable that future economic benefits will flow to the Company.

Capitalized exploration and evaluation expenditures are generally recorded as a component of property, plant and equipment at cost less impairment charges, unless their nature requires them to be recorded as an intangible asset. As the asset is not available for use, it is not depreciated and all capitalized exploration and evaluation expenditure is monitored for indications of impairment. To the extent that capitalized expenditure is not expected to be recovered, it is recognized as an expense in the consolidated statements of operations.

Cash flows associated with exploration and evaluation expenditure are classified as operating activities when they are related to expenses or as an investing activity when they are related to a capitalized asset in the consolidated statements of cash flows.

Development expenditure

Development is the establishment of access to the mineral reserve and other preparations for commercial production.

Development activities often continue during production and include:

- sinking shafts and underground drifts (often called mine development);
- making permanent excavations;
- developing passageways and rooms or galleries;
- building roads and tunnels; and
- advance removal of overburden and waste rock.

Development (or construction) also includes the installation of infrastructure (e.g., roads, utilities and housing), machinery, equipment and facilities.

When reserves are determined and development is approved, expenditures capitalized as exploration and evaluation are reclassified as construction in progress and are reported as a component of property, plant and equipment. All subsequent development expenditures are capitalized and classified as construction in progress. On completion of development, all assets included in construction in progress are individually reclassified to the appropriate category of property, plant and equipment and depreciated accordingly.

Biological assets

Biological assets are part of the Brazil operating segment and consist of eucalyptus forests located in the Brazilian state of Minas Gerais exclusively from renewable plantations and intended for the production of charcoal to be utilized as fuel and a source of carbon in the direct reduction process of pig iron production in some of the Company's blast furnaces in Brazil.

Biological assets are measured at their fair value, net of estimated costs to sell at the time of harvest. The fair value (Level 3 in the fair value hierarchy) is determined based on the discounted cash flow method, taking into consideration the cubic volume of wood, segregated by plantation year, and the equivalent sales value of standing trees. The average sales price was estimated based on domestic market prices. In determining the fair value of biological assets, a discounted cash flow model was used, with a harvest cycle of 6 to 7 years.

Property, plant and equipment and biological assets are summarized as follows:

	Land, buildings and Improvements	Machinery, equipment and other [2]	Construction in progress	Right-of-use assets[4]	Mining Assets	Total
Cost						
At December 31, 2017	12,845	50,174	3,732	—	3,875	70,626
Additions	36	282	3,064	—	28	3,410
Acquisitions through business combinations (note 2.2.4)	358	1,210	58	—	—	1,626
Foreign exchange differences	(888)	(4,006)	(220)	—	(100)	(5,214)
Disposals	(120)	(535)	(113)	—	(13)	(781)
Divestments (note 2.3.1)	(43)	(215)	(2)	—	—	(260)
Transfers (to)/ from assets held for sale (note 2.3.2)	(1,434)	(4,532)	(143)	—	—	(6,109)
Other movements [1]	125	1,684	(2,013)	—	111	(93)
At December 31, 2018	10,879	44,062	4,363	—	3,901	63,205
Adoption of IFRS 16 (notes 1 and 7)[3]	—	(921)	—	2,365	—	1,444
At January 1, 2019	10,879	43,141	4,363	2,365	3,901	64,649
Additions	35	471	3,245	259	26	4,036
Acquisitions through business combinations (note 2.2.4)	24	10	—	—	—	34
Foreign exchange differences	(99)	(98)	50	(7)	38	(116)
Disposals	(66)	(654)	(16)	(4)	(19)	(759)
Divestments (note 2.3.1)	—	(130)	—	(484)	—	(614)
Other movements [1]	124	1,888	(2,152)	(37)	167	(10)
At December 31, 2019	10,897	44,628	5,490	2,092	4,113	67,220
Accumulated depreciation and impairment						
At December 31, 2017	4,356	25,700	988	—	2,611	33,655
Depreciation charge for the year	356	2,212	—	—	120	2,688
Impairment (note 5.3)	21	930	9	—	—	960
Disposals	(110)	(494)	—	—	(13)	(617)
Foreign exchange differences	(484)	(2,715)	(7)	—	(81)	(3,287)
Divestments (note 2.3.1)	(31)	(181)	—	—	—	(212)
Transfers (to)/ from assets held for sale (note 2.3.2)	(989)	(4,456)	(26)	—	—	(5,471)
Other movements [1]	(6)	(158)	17	—	(2)	(149)
At December 31, 2018	3,113	20,838	981	—	2,635	27,567
Adoption of IFRS 16 (notes 1 and 7)[3]	—	(558)	—	597	—	39
At January 1, 2019	3,113	20,280	981	597	2,635	27,606
Depreciation charge for the year	338	2,171	—	343	121	2,973
Impairment (note 5.3)	154	1,202	9	65	—	1,430
Disposals	(45)	(614)	—	(3)	(17)	(679)
Foreign exchange differences	(58)	(112)	(4)	4	24	(146)
Divestments (note 2.3.1)	—	(3)	—	(94)	—	(97)
Other movements [1]	(14)	(35)	5	(55)	1	(98)
At December 31, 2019	3,488	22,889	991	857	2,764	30,989
Carrying amount						
At December 31, 2018	7,766	23,224	3,382	—	1,266	35,638
At December 31, 2019	7,409	21,739	4,499	1,235	1,349	36,231

1. Other movements predominantly represent transfers from construction in progress to other categories and retirement of fully amortized assets. In 2019, other movement also include 92 relating to finalization of acquisition date fair values of AM Italia (refer note 2.2.4).

2. Machinery, equipment and other includes biological assets of 59 and 49 as of December 31, 2019 and 2018 respectively, and bearer plants of 38 and 38 as of December 31, 2019 and 2018, respectively.

3. Includes additions due to implementation of IFRS 16 amounting to 1,136 as well as favorable terms of operating leases of ArcelorMittal Italia and amounts prepaid for the right of use of land, both reclassified from intangible assets (refer note 7).

4. Right-of-use assets as of December 31, 2018 include 921 of cost of assets and 558 of accumulated depreciation previously recognized under IAS 17 and presented within machinery, equipment and other. Upon implementation of IFRS 16, the right-of-use assets are presented separately in the table above.

The carrying amount of temporarily idle property, plant and equipment at December 31, 2019 and 2018 was 332 and 260 including 228 and 244 in Brazil, 14 and 14 in NAFTA, 88 and 2 in the Europe segment and 2 and 0 in the ACIS segment respectively.

The carrying amount of property, plant and equipment retired from active use and not classified as held for sale was 47 and 51 at December 31, 2019 and 2018, respectively. Such assets are carried at their recoverable amount.

Assets pledged as security

Refer note 9.4 for information on assets pledged as security by the Company.

Capital commitments

Refer note 9.4 for information on contractual commitments for acquisition of property, plant and equipment by the Company.

5.3 Impairment of intangible assets, including goodwill, and tangible assets

Impairment charges recognized were as follows:

	Year ended December 31,		
Type of asset	2019	2018	2017
Goodwill	—	34	—
Tangible assets	1,927	960	206
Total	1,927	994	206

Impairment test of goodwill

Goodwill is tested for impairment annually, as of October 1 or whenever changes in circumstances indicate that the carrying amount may not be recoverable, at the level of the groups of cash-generating units ("GCGU") which correspond to the operating segments representing the lowest level at which goodwill is monitored for internal management purposes. Whenever the cash-generating units comprising the operating segments are tested for impairment at the same time as goodwill, the cash-generating units are tested first and any impairment of the assets is recorded prior to the testing of goodwill. Until the year ended December 31, 2017, the Company performed its annual impairment test of goodwill using October 31 as the measurement date. Effective September 2018, the Company changed its impairment test date to October 1 in order to better align with its internal strategic and financial planning process. The Company believes that this change in date is preferable under the circumstances and does not result in the delay, acceleration or avoidance of an impairment charge.

The recoverable amounts of the GCGUs are mainly determined based on their value in use. The value in use of each GCGU is determined by estimating future cash flows. The 2019 impairment test of goodwill did not include the GCGU corresponding to the Mining segment as goodwill allocated to this GCGU was fully impaired in 2015. The key assumptions for the value in use calculations are primarily the discount rates, growth rates, expected changes to average selling prices, shipments and direct costs during the period. Assumptions for average selling prices and shipments are based on historical experience and expectations of future changes in the market. In addition, with respect to raw material price assumptions, the Company applied a range of $63 per tonne to $80 per tonne for iron ore and $145 per tonne to $170 per tonne for coking coal. Cash flow forecasts adjusted for the risks specific to the tested assets are derived from the most recent financial plans approved by management for the next five years. Beyond the specifically forecasted period, the Company extrapolates cash flows for the remaining years based on an estimated growth rate of 2%. This rate does not exceed the average long-term growth rate for the relevant markets.

Management estimates discount rates using pre-tax rates that reflect current market rates for investments of similar risk. The rate for each GCGU was estimated from the weighted average cost of capital of producers, which operate a portfolio of assets similar to those of the Company's assets.

	NAFTA	Brazil	Europe	ACIS
GCGU weighted average pre-tax discount rate used in 2019 (in %)	10.8	15.0	9.1	14.5
GCGU weighted average pre-tax discount rate used in 2018 (in %)	12.9	15.5	10.6	15.4

Once recognized, impairment losses for goodwill are not reversed.

There was no impairment charge recognized with respect to goodwill following the Company's impairment test as of October 1, 2019. The total value in use calculated for all GCGUs decreased overall in 2019 as compared to 2018. In 2018, the Company recognized a 18 and 16 impairment loss relating to goodwill in connection with the sale of the Votorantim remedies and the intended sale of the ArcelorMittal Italia remedies (see note 2.3.1).

In validating the value in use determined for the GCGUs, the Company performed a sensitivity analysis of key assumptions used in the discounted cash-flow model (such as discount rates, average selling prices and shipments). The Company believes that reasonably possible changes in key assumptions could cause an impairment loss to be recognized in respect of the NAFTA and ACIS segments.

ACIS produces a combination of flat and long products. Its facilities are located in Africa, Ukraine and the Commonwealth of Independent States. ACIS is significantly self-sufficient in raw materials. The Company believes that sales volumes, prices and discount rates are the key assumptions most sensitive to change. ACIS is also exposed to export markets and international steel prices which are volatile, reflecting the cyclical nature of the global steel industry, developments in particular steel consuming industries and macroeconomic trends of emerging markets, such as economic growth. Discount rates may be affected by changes in countries' specific risks. The ACIS value in use model anticipates an increase in sales volumes in 2020 and 2021 compared to 2019 (11.5 million tonnes for the year ended December 31, 2019) followed by stable volumes thereafter. Average selling prices in the model are expected to increase in 2020 due to higher international raw material prices and stabilize subsequently in line with such long-term prices.

The NAFTA segment produces a combination of flat, long and tubular products. Its facilities are located in North America including Canada, the USA and Mexico. The segment is primarily focused on the domestic automotive industry in Canada, the USA while in Mexico a major investment program has been launched to build downstream capabilities in order to anticipate increased demand from domestic customers for flat and long products. The Company believes that sales volumes, prices and discount rates are the key assumptions most sensitive to change. The NAFTA model anticipates a decrease in sales volumes in 2020 compared to 2019 (20.9 million tonnes for the year ended December 31, 2019) followed by an increase in 2021 and stable volumes thereafter. Average steel selling prices in the model are expected to decrease slightly and stabilize after 2022.

The following changes in key assumptions in projected earnings in every year of initial five-year period and perpetuity, at the GCGU level, assuming unchanged values for the other assumptions, would cause the recoverable amount to equal respective carrying value as of the impairment test date (i.e.: October 1, 2019).

	2019	
	NAFTA	ACIS
Excess of recoverable amount over carrying amount	789	152
Increase in pre-tax discount rate (change in basis points)	65	27
Decrease in average selling price (change in %)	0.37	0.29
Decrease in shipments (change in %)	1.06	1.00

In 2018, given the overall increase in value in use, the Company did not identify any reasonably possible change in key assumptions which could cause an impairment loss to be recognized.

Impairment test of property, plant and equipment

At each reporting date, ArcelorMittal reviews the carrying amounts of its intangible assets (excluding goodwill) and tangible assets to determine whether there is any indication that the carrying amount of those assets may not be recoverable through continuing use. If any such indication exists, the recoverable amount of the asset (or cash generating unit) is reviewed in order to determine the amount of the impairment, if any. The recoverable amount is the higher of its net selling price (fair value reduced by selling costs) and its value in use.

In estimating its value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset (or cash-generating unit). For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs. The cash-generating unit is the smallest identifiable group of assets corresponding to operating units that generate cash inflows. If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, an impairment loss is recognized. An impairment loss is recognized as an expense immediately as part of operating income in the consolidated statements of operations.

In the case of permanently idled assets, the impairment is measured at the individual asset level. Otherwise, the

Company's assets are measured for impairment at the cash-generating unit level. In certain instances, the cash-generating unit is an integrated manufacturing facility which may also be an operating subsidiary. Further, a manufacturing facility may be operated in concert with another facility with neither facility generating cash flows that are largely independent from the cash flows of the other. In this instance, the two facilities are combined for purposes of testing for impairment. As of December 31, 2019, the Company determined it has 61 cash-generating units.

In the context of the termination notice sent to the Ilva Commissioners indicating ArcelorMittal's intent to withdraw from or terminate the lease and purchase agreement, which was followed by subsequent negotiations (see note 9.3), the Company determined that ArcelorMittal Italia represented a separate cash-generating unit as of December 31, 2019 with a carrying amount of 1,970 (including property, plant and equipment of 1,477). In estimating its value in use, key assumptions impacting significantly the cash flow projections included the discount rate reflecting uncertainty associated with the ongoing negotiations, selling prices, shipments and direct costs resulting from the execution of the industrial plan as contractually agreed at inception of the lease.

An impairment loss, related to intangible assets other than goodwill and tangible assets recognized in prior years is reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. However, the increased carrying amount of an asset due to a reversal of an impairment loss will not exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recognized immediately as part of operating income in the consolidated statements of operations.

Impairment charges relating to property, plant and equipment were as follows for the years ended December 31, 2019, 2018 and 2017:

2019

In 2019, the Company recognized a total impairment charge related to property, plant and equipment amounting to 1,927, of which 1,300 relating to ArcelorMittal USA (NAFTA), 102 to ArcelorMittal South Africa (ACIS), and 525 in Europe, including 497 related to ArcelorMittal Italia remedies (see note 2.3.1).

During the six months ended June 30, 2019, the Company recognized an impairment charge for property, plant and equipment amounting to 600 relating to ArcelorMittal USA as a result of a downward revision of cash flow projections in particular with respect to near-term steel selling prices as follows:

Cash-Generating Unit	Country	Operating Segment	Impairment Recorded	2019 Pre-Tax Discount Rate	2018 Pre-Tax Discount Rate	Carrying amount of property, plant and equipment as of June 30, 2019
ArcelorMittal USA	USA	NAFTA	600	13.98%	16.91%	3,213

In the second half of 2019, in connection with management's annual test for impairment of goodwill, property, plant and equipment was also tested for impairment at that date. The Company recognized an impairment charge for property, plant and equipment amounting to 700 relating to ArcelorMittal USA in the NAFTA operating segment as a result of a downward revision of cash flow projections in particular with respect to near-term steel selling prices consisting of the following:

Cash-Generating Unit	Country	Operating Segment	Impairment Recorded	2019 Pre-Tax Discount Rate	2018 Pre-Tax Discount Rate	Carrying amount of property, plant and equipment as of December 31, 2019
ArcelorMittal USA	USA	NAFTA	700	10.17%	16.91%	2,568

In the same context, the Company recognized a impairment charge for property, plant and equipment of 75 relating to the Long Steel Products facility of Newcastle in ArcelorMittal South Africa as a result of a lower domestic volumes as follows:

Cash-Generating Unit	Country	Operating Segment	Impairment Recorded	2019 Pre-Tax Discount Rate	2018 Pre-Tax Discount Rate	Carrying amount of property, plant and equipment as of December 31, 2019
Long Steel Products	South Africa	ACIS	75	13.87%	15.13%	163

In addition, the Company recorded impairment charges for property, plant and equipment of ArcelorMittal South Africa of 27 including 20 with respect to the closure of the Saldanha facility.

2018

In 2018, the Company recognized a total impairment charge related to property, plant and equipment of 960 including 872 in connection with the intended sale of the ArcelorMittal Italia remedies and 68 in relation to the sale of the Votorantim remedies (see note 2.3.1).

2017

In 2017, the Company recognized a total impairment charge related to property, plant and equipment in ArcelorMittal South Africa (ACIS) amounting to 206.

During the six months ended June 30, 2017, management performed a test for impairment relating to the Long Steel Products cash-generating unit of ArcelorMittal South Africa as a result of a downward revision of cash flow projections. Accordingly, the Company recognized an impairment charge of 46 consisting of the following:

Cash-Generating Unit	Country	Operating Segment	Impairment Recorded	2017 Pre-Tax Discount Rate	2016 Pre-Tax Discount Rate	Carrying amount of property, plant and equipment as of June 30, 2017
Long Steel Products	South Africa	ACIS	46	17.12%	16.63%	325

In connection with management's annual test for impairment of goodwill, property, plant and equipment was also tested for impairment at that date. As of December 31, 2017, the Company concluded that the value in use of property, plant and equipment in ArcelorMittal South Africa was lower than its carrying amount in the context of the appreciation of the rand against U.S. dollar and the uncertainties about demand outlook. Accordingly, the Company recognized a total impairment charge of 160 consisting mainly of the following:

Cash-Generating Unit	Country	Operating Segment	Impairment Recorded	2017 Pre-Tax Discount Rate	2016 Pre-Tax Discount Rate	Carrying amount of property, plant and equipment as of December 31, 2017
Vanderbijlpark facility	South Africa	ACIS	86	15.23%	14.97%	296
Long Steel Products	South Africa	ACIS	33	15.24%	15.22%	306

NOTE 6: FINANCING AND FINANCIAL INSTRUMENTS

6.1 Financial assets and liabilities

Financial assets and liabilities mainly comprise:

- fair values versus carrying amounts (see note 6.1.1)
- gross debt (see note 6.1.2)
- cash and cash equivalents, restricted cash and reconciliations of cash flows (see note 6.1.3)
- net debt (see note 6.1.4)
- derivative financial instruments (see note 6.1.5)
- other non-derivative financial assets and liabilities (see note 6.1.6)

6.1.1 Fair values versus carrying amounts

The estimated fair values of certain financial instruments have been determined using available market information or other valuation methodologies that require judgment in interpreting market data and developing estimates. The following table summarizes assets and liabilities based on their categories at December 31, 2019:

(millions of U.S. dollars, except share and per share data)

	December 31, 2019					
	Carrying amount in the consolidated statements of financial position	Non-financial assets and liabilities	Assets/ Liabilities at amortized cost	Fair value recognized in profit or loss	Fair value recognized in OCI	Derivatives
ASSETS						
Current assets:						
Cash and cash equivalents	4,867	—	4,867	—	—	—
Restricted cash	128	—	128	—	—	—
Trade accounts receivable and other	3,569	—	3,146	—	423	—
Inventories	17,296	17,296	—	—	—	—
Prepaid expenses and other current assets	2,756	1,305	1,047	136	—	268
Total current assets	28,616	18,601	9,188	136	423	268
Non-current assets:						
Goodwill and intangible assets	5,432	5,432	—	—	—	—
Property, plant and equipment and biological assets	36,231	36,172	—	59	—	—
Investments in associates and joint ventures	6,529	6,529	—	—	—	—
Other investments	772	—	—	—	772	—
Deferred tax assets	8,680	8,680	—	—	—	—
Other assets	1,648	388	1,130	—	—	130
Total non-current assets	59,292	57,201	1,130	59	772	130
Total assets	87,908	75,802	10,318	195	1,195	398
LIABILITIES AND EQUITY						
Current liabilities:						
Short-term debt and current portion of long-term debt	2,869	—	2,869	—	—	—
Trade accounts payable and other	12,614	—	12,614	—	—	—
Short-term provisions	516	485	31	—	—	—
Accrued expenses and other liabilities	4,910	1,075	3,527	—	—	308
Income tax liabilities	378	378	—	—	—	—
Total current liabilities	21,287	1,938	19,041	—	—	308
Non-current liabilities:						
Long-term debt, net of current portion	11,471	—	11,471	—	—	—
Deferred tax liabilities	2,331	2,331	—	—	—	—
Deferred employee benefits	7,343	7,343	—	—	—	—
Long-term provisions	2,475	2,465	10	—	—	—
Other long-term obligations	2,518	501	1,779	—	—	238
Total non-current liabilities	26,138	12,640	13,260	—	—	238
Equity:						
Equity attributable to the equity holders of the parent	38,521	38,521	—	—	—	—
Non-controlling interests	1,962	1,962	—	—	—	—
Total equity	40,483	40,483	—	—	—	—
Total liabilities and equity	87,908	55,061	32,301	—	—	546

	December 31, 2018					
	Carrying amount in the consolidated statements of financial position	Non-financial assets and liabilities	Assets/ Liabilities at amortized cost	Fair value recognized in profit or loss	Fair value recognized in OCI	Derivatives
ASSETS						
Current assets:						
Cash and cash equivalents	2,172	—	2,172	—	—	—
Restricted cash	182	—	182	—	—	—
Trade accounts receivable and other	4,432	—	3,957	—	475	—
Inventories	20,744	20,744	—	—	—	—
Prepaid expenses and other current assets	2,834	1,405	812	—	—	617
Assets held for sale	2,111	2,111	—	—	—	—
Total current assets	32,475	24,260	7,123	—	475	617
Non-current assets:						
Goodwill and intangible assets	5,728	5,728	—	—	—	—
Property, plant and equipment and biological assets	35,638	35,589	—	49	—	—
Investments in associates and joint ventures	4,906	4,906	—	—	—	—
Other investments	855	—	—	—	855	—
Deferred tax assets	8,287	8,287	—	—	—	—
Other assets	3,360	526	1,188	1,037	—	609
Total non-current assets	58,774	55,036	1,188	1,086	855	609
Total assets	91,249	79,296	8,311	1,086	1,330	1,226
LIABILITIES AND EQUITY						
Current liabilities:						
Short-term debt and current portion of long-term debt	3,167	—	3,167	—	—	—
Trade accounts payable and other	13,981	—	13,981	—	—	—
Short-term provisions	539	528	11	—	—	—
Accrued expenses and other liabilities	4,709	1,212	3,307	—	—	190
Income tax liabilities	238	238	—	—	—	—
Liabilities held for sale	821	821	—	—	—	—
Total current liabilities	23,455	2,799	20,466	—	—	190
Non-current liabilities:						
Long-term debt, net of current portion	9,316	—	9,316	—	—	—
Deferred tax liabilities	2,374	2,374	—	—	—	—
Deferred employee benefits	6,982	6,982	—	—	—	—
Long-term provisions	1,995	1,984	11	—	—	—
Other long-term obligations	3,019	457	1,854	—	—	708
Total non-current liabilities	23,686	11,797	11,181	—	—	708
Equity:						
Equity attributable to the equity holders of the parent	42,086	42,086	—	—	—	—
Non-controlling interests	2,022	2,022	—	—	—	—
Total equity	44,108	44,108	—	—	—	—
Total liabilities and equity	91,249	58,704	31,647	—	—	898

The Company classifies the bases used to measure certain assets and liabilities at their fair value. Assets and liabilities carried or measured at fair value have been classified into three levels based upon a fair value hierarchy that reflects the significance of the inputs used in making the measurements.

The levels are as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date;

Level 2: Significant inputs other than within Level 1 that are observable for the asset or liability, either directly (i.e.: as prices) or indirectly (i.e.: derived from prices);

Level 3: Inputs for the assets or liabilities that are not based on observable market data and require management assumptions or inputs from unobservable markets.

The following tables summarize the bases used to measure certain Financial assets and Financial liabilities at their fair value on recurring basis.

As of December 31, 2019

	Level 1	Level 2	Level 3	Total
Assets at fair value:				
Investments in equity instruments at FVOCI	699	—	73	772
Trade accounts receivable and other subject to TSR programs*	—	—	423	423
Derivative financial current assets	—	268	—	268
Derivative financial non-current assets	—	3	127	130
Total assets at fair value	699	271	623	1,593
Liabilities at fair value:				
Derivative financial current liabilities	—	144	164	308
Derivative financial non-current liabilities	—	101	137	238
Total liabilities at fair value	—	245	301	546

*The fair value of TSR program receivables equals carrying amount due to the short time frame between the initial recognition and time of sale.

As of December 31, 2018

	Level 1	Level 2	Level 3	Total
Assets at fair value:				
Investments in equity instruments at FVOCI	793	—	62	855
Trade accounts receivable and other subject to TSR programs*	—	—	475	475
Derivative financial current assets	—	617	—	617
Derivative financial non-current assets	—	126	483	609
Total assets at fair value	793	743	1,020	2,556
Liabilities at fair value:				
Derivative financial current liabilities	—	75	115	190
Derivative financial non-current liabilities	—	131	577	708
Total liabilities at fair value	—	206	692	898

*The fair value of TSR program receivables equals carrying amount due to the short time frame between the initial recognition and time of sale.

Investments in equity instruments at FVOCI classified as Level 1 refer to listed securities quoted in active markets. A quoted market price in an active market provides the most reliable evidence of fair value and is used without adjustment to measure fair value whenever available, with limited exceptions. The total fair value is either the price of the most recent trade at the time of the market close or the official close price as defined by the exchange on which the asset is most actively traded on the last trading day of the period, multiplied by the number of units held without consideration of transaction costs. The decrease in investments in equity instruments at FVOCI in 2019 is mainly related to the sale of Gerdau (see note 2.5).

Derivative financial assets and liabilities classified as Level 2 refer to instruments to hedge fluctuations in interest rates, foreign exchange rates, raw materials (base metals), freight, energy and emission rights, see note 6.1.5 for further information.

Derivative financial assets and liabilities classified as Level 3 are described in note 6.1.5.

6.1.2 Gross debt

Gross debt includes bank debt, debenture loans and lease obligations and is stated at amortized cost. However, loans that are hedged under a fair value hedge are remeasured for the changes in the fair value that are attributable to the risk that is being hedged.

6.1.2.1 Short-term debt

Short-term debt, including the current portion of long-term debt, consisted of the following:

	December 31,	
	2019	2018
Short-term bank loans and other credit facilities including commercial paper [1]	1,838	1,968
Current portion of long-term debt	770	1,130
Lease obligations[2]	261	69
Total	2,869	3,167

1. The weighted average interest rate on short-term borrowings outstanding was 1.1% and 1.3% as of December 31, 2019 and 2018, respectively.
2. On January 1, 2019, the Company adopted IFRS 16 and recognized additional lease liabilities (discounted at the incremental borrowing rates at that date). In 2018, lease obligations corresponded to finance leases under IAS 17. See note 7.

In 2014, ArcelorMittal entered into certain short-term committed bilateral credit facilities. The facilities were subsequently extended annually. As of December 31, 2019, the facilities, totaling approximately 0.9 billion, remain fully available.

On April 26, 2019, the Company amended a €300 million term loan with a financial institution to extend the maturity to April 30, 2020. As of December 31, 2019, €300 million (337) was outstanding.

On April 1, 2019, ArcelorMittal entered into an agreement for financing with a financial institution for net proceeds of CAD 197 million (151) with repayment over several dates in 2020 and 2021. As of December 31, 2019, CAD 202 million (155) was outstanding.

Commercial paper

The Company has a commercial paper program enabling borrowings of up to €1.5 billion. As of December 31, 2019 and 2018, the outstanding amount was 1,200 and 1,295, respectively.

6.1.2.2 Long-term debt

Long-term debt is comprised of the following:

	Year of maturity	Type of Interest	Interest rate[1]	December 31, 2019	December 31, 2018
Corporate					
5.5 billion Revolving Credit Facility[4]	2023-2024	Floating		—	—
€750 million Unsecured Notes	2019	Fixed	3.00%	—	858
500 Unsecured Notes	2020	Fixed	5.13%	—	324
CHF 225 million Unsecured Notes	2020	Fixed	2.50%	233	228
€600 million Unsecured Notes	2020	Fixed	2.88%	316	685
1.0 billion Unsecured Bonds	2020	Fixed	5.25%	—	623
1.5 billion Unsecured Notes	2021	Fixed	5.50%	—	754
€500 million Unsecured Notes	2021	Fixed	3.00%	320	570
€750 million Unsecured Notes	2022	Fixed	3.13%	841	856
1.1 billion Unsecured Notes	2022	Fixed	6.25%	657	656
€500 million Unsecured Notes	2023	Fixed	0.95%	558	568
€750 million Unsecured Notes	2023	Fixed	1.00%	838	—
€1 billion Unsecured Notes	2024	Fixed	2.25%	1,131	—
750 Unsecured Notes	2024	Fixed	3.60%	746	—
500 Unsecured Notes	2025	Fixed	6.13%	498	497
€750 million Unsecured Notes	2025	Fixed	1.75%	834	—
750 Unsecured Notes	2026	Fixed	4.55%	745	—
500 Unsecured Notes	2029	Fixed	4.25%	493	—
1.5 billion Unsecured Bonds	2039	Fixed	7.00%	671	670
1.0 billion Unsecured Notes	2041	Fixed	6.75%	428	428
Other loans	2021	Fixed	3.10% - 3.46%	151	114
EIB loan	2025	Fixed	1.16%	344	401
7.0 billion Term Facility[3]	2020	Floating	3.09%	—	1,000
Other loans	2021 - 2035	Floating	0.35% - 4.06%	1,218	639
Total Corporate				11,022	9,871
Americas					
Other loans	2020 - 2030	Fixed/Floating	0.0% - 10.0%	81	84
Total Americas				81	84
Europe, Asia & Africa					
EBRD Facility	2024	Floating	3.8% - 4.1%	175	50
Other loans	2020 - 2029	Fixed/Floating	0.0% - 5.8%	97	86
Total Europe, Asia & Africa				272	136
Total				11,375	10,091
Less current portion of long-term debt				(770)	(1,130)
Total long-term debt (excluding lease obligations)				10,605	8,961
Long-term lease obligations[2]				866	355
Total long-term debt, net of current portion				11,471	9,316

1. Rates applicable to balances outstanding at December 31, 2019. For debt that has been redeemed in its entirety during 2019, the interest rates refer to the rates at repayment date.
2. Net of current portion of 261 and 69 as of December 31, 2019 and December 31, 2018, respectively. Further information regarding leases is provided in note 7.
3. Amount outstanding in 2018 was repaid on March 22, 2019 and March 29, 2019.
4. On November 27, 2019, ArcelorMittal exercised the option to extend the maturity by one year to December 19, 2024. The commitments are 5.5 billion until December 19, 2023 and 5.4 billion until December 19, 2024.

Corporate

5.5 billion Revolving Credit Facility

On December 19, 2018, ArcelorMittal signed an agreement for a 5.5 billion revolving credit facility (the "Facility"). This Facility amends and restates the 5.5 billion revolving credit facility dated April 30, 2015 and which was amended and extended on December 21, 2016. The new agreement incorporated initially a single tranche of 5.5 billion maturing on December 19, 2023. The Facility may be used for general corporate purposes. On November 27, 2019, all lenders except one approved a one year extension request. The new maturity date is December 19, 2024. The commitments are 5.5 billion until December 19, 2023 and 5.4 billion until December 19, 2024. As of December 31, 2019, the 5.5 billion revolving credit facility was fully available. The Company makes drawdowns from and repayments on this Facility in the framework of its cash management.

On September 30, 2010, ArcelorMittal entered into 500 revolving multi-currency letter of credit facility (the "Letter of Credit Facility"). The Letter of Credit Facility is used by the Company and its subsidiaries for the issuance of letters of credit and other instruments. The terms of the letters of credit and other instruments contain certain restrictions as to duration. The Letter of Credit Facility was amended on October 26, 2012 and September 30, 2014 to reduce its amount to 450 and to 350, respectively. On July 31, 2019, the Company refinanced its Letter of Credit Facility by entering into a 350 revolving multi-currency letter of credit facility, which matures on July 31, 2022.

Bonds

On January 17, 2019, ArcelorMittal issued €750 million (854) 2.25% Notes due 2024. The Notes were issued under ArcelorMittal's €10 billion wholesale Euro Medium Term Notes Program ("EMTN Program"). The proceeds of the issuance were used for general corporate purposes.

On March 11, 2019, ArcelorMittal issued 750 4.55% Notes due 2026 under the Company's automatic shelf registration statement filed with the U.S. Securities and Exchange Commission. The proceeds of the issuance were used towards repayment of existing debt including the 1 billion then outstanding under the 7 billion term facilities agreement entered into in connection with the acquisition of AMNS India through the joint venture with NSC (see below).

On March 25, 2019, at maturity, ArcelorMittal repaid its €750 million (854) Fixed Rate Notes.

On July 4, 2019, ArcelorMittal completed the issuance of €250 million (285) of 2.25% Fixed Rate Notes due 2024, which were consolidated and formed a single series with the existing €750 million 2.25% Fixed Rate Notes due 2024 originally issued on January 17, 2019 under its €10 billion EMTN Program. The proceeds of the issuance were used for general corporate purposes.

On July 16, 2019, ArcelorMittal issued 750 of 3.6% Notes due 2024 and 500 of 4.25% Notes due 2029. The proceeds were used for general corporate purposes including repayments of existing indebtedness and to partially pre-fund commitments under the AMNS India acquisition.

On August 30, 2019, ArcelorMittal redeemed all of the outstanding 324 of its 500 5.125% Notes due June 1, 2020 and the outstanding 626 of its 1 billion 5.25% Notes due August 5, 2020 for a total aggregate purchase price including accrued interest and premium on early repayment of 981, which was financed with existing cash and liquidity.

On November 19, 2019, ArcelorMittal issued €750 million (830) of 1% Notes due May 19, 2023 and €750 million (830) of 1.75% Notes due November 19, 2025.

On December 11, 2019, pursuant to cash tender offers, ArcelorMittal repurchased:

- €318 million (352) of its 2.875% Notes due July 6, 2020 (the "2020 Notes") for a total aggregate purchase price (including premiums and accrued interest) of €328 million (363). Following this purchase, €282 million (312) principal amount of the 2020 Notes remained outstanding.

- €214 million (238) of its 3% Notes due April 9, 2021 (the "2021 Notes") for a total aggregate purchase price (including premiums and accrued interest) of €227 million (252). Following this purchase, €286 million (316) principal amount of the 2021 Notes remained outstanding.

On December 27, 2019, ArcelorMittal redeemed all of the outstanding 756 of its 5.5% Notes due March 1, 2021, for a total aggregate purchase price including accrued interest and premium on early repayment of 800, which was financed with existing cash resources, including the proceeds of its Eurobond offering that closed on November 19, 2019.

On February 5, 2020, ArcelorMittal gave notice to redeem all of the outstanding 659 of its 6.25% Notes due February 25, 2022 on March 9, 2020.

The margin applicable to ArcelorMittal's principal credit facilities (5.5 billion revolving credit facility and certain other credit facilities) and the coupons on certain of its outstanding bonds are subject to adjustment in the event of a change in its long-term credit ratings. The following table provides details of the outstanding bonds on maturity, the original coupons and the current interest rates for the bonds impacted by changes in the long-term credit rating:

Nominal value	Date of issuance	Repayment date	Interest rate[1]	Issued at
CHF 225 million Unsecured Notes	Jul 3, 2015	Jul 3, 2020	2.50%	100.00%
€600 million Unsecured Notes	Jul 4, 2014	Jul 6, 2020	2.88%	99.18%
€500 million Unsecured Notes	Apr 9, 2015	Apr 9, 2021	3.00%	99.55%
€750 million Unsecured Notes	Jan 14, 2015	Jan 14, 2022	3.13%	99.73%
1.1 billion Unsecured Notes	Feb 28, 2012	Feb 25, 2022	6.25%	98.28%
€500 million Unsecured Notes	Dec 4, 2017	Jan 17, 2023	0.95%	99.38%
€750 million Unsecured Notes	Nov 19, 2019	May 19, 2023	1.00%	99.89%
€250 million Unsecured Notes	Jul 4, 2019	Jan 17, 2024	2.25%	105.59%
€750 million Unsecured Notes	Jan 17, 2019	Jan 17, 2024	2.25%	99.72%
750 Unsecured Notes	Jul 16, 2019	Jul 16, 2024	3.60%	99.86%
500 Unsecured Notes	Jun 1, 2015	Jun 1, 2025	6.13%	100.00%
€750 million Unsecured Notes	Nov 19, 2019	Nov 19, 2025	1.75%	99.41%
750 Unsecured Notes	Mar 11, 2019	Mar 11, 2026	4.55%	99.72%
500 Unsecured Notes	Jul 16, 2019	Jul 16, 2029	4.25%	99.00%
1.0 billion Unsecured Bonds	Oct 8, 2009	Oct 15, 2039	7.00%	95.20%
500 Unsecured Bonds	Aug 5, 2010	Oct 15, 2039	7.00%	104.84%
1.0 billion Unsecured Notes	Mar 7, 2011	Mar 1, 2041	6.75%	99.18%

1. Rates applicable at December 31, 2019.

European Investment Bank ("EIB") Loan

On December 16, 2016, ArcelorMittal signed a €350 million finance contract with the European Investment Bank in order to finance European research, development and innovation projects over the period 2017-2020 within the European Union, predominantly in France, Belgium and Spain, but also in Poland and Luxembourg. This operation benefits from a guarantee from the European Union under the European Fund for Strategic Investments. As of December 31, 2019, €306 million (344) was outstanding.

Other loans

On November 20, 2018, ArcelorMittal entered into a 7 billion term facility agreement with a group of lenders in connection with the acquisition of AMNS India. The agreement had an initial term of one year (until November 20, 2019), subject to ArcelorMittal's option to extend the term by six months. The agreement includes the same leverage ratio financial covenant as that included in the Company's 5.5 billion revolving credit facility. The facility may be used for certain payments by ArcelorMittal as well as by AMNS Luxembourg, the parent company of the AMNS India joint venture in partnership with NSC (see note 2.4.1). Any amounts borrowed by AMNS Luxembourg under the agreement are irrevocably and unconditionally guaranteed by ArcelorMittal. On November 29, 2018, 1 billion was drawn under this term facility agreement by ArcelorMittal and subsequently repaid in March 2019. On June 12, 2019, the contractual maturity date was extended to June 30, 2020 with one extension possible until December 31, 2020. AMNS Luxembourg has drawn under the facility to finance the portion of the initial funding requirement beyond the shareholders' equity contributions and NSC's share of the debt financing. On December 9, 2019, 2,571 was drawn under the facilities agreement by AMNS Luxembourg and was outstanding on December 31, 2019. On February 10, 2020, an additional 475 was drawn under the facility by AMNS Luxembourg, increasing the outstanding amount as of such date to 3,046.

On December 21, 2018, the Company entered into a facility agreement with a group of lenders for €235 million to finance the construction of a new hot strip mill in Mexico. This facility became effective upon issuance of a guarantee by the Oesterreichische Kontrollbank AG in March 2019. The last installment under this agreement is due 8½ years after the starting date of the credit facility (which means the earlier of (a) the date of issue of the provisional acceptance certificate for the hot strip mill and (b) June 30, 2021). The outstanding amount in total as of December 31, 2019 was €126 million (142).

On May 21, 2019, ArcelorMittal entered into a bilateral term loan due May 20, 2022. The bilateral term loan was fully drawn on June 3, 2019 and was outstanding as of December 31, 2019 for an amount of €125 million (142).

On July 1, 2019, ArcelorMittal completed the offering of a €450 million (512) variable rate loan in the German Schuldschein market. The proceeds of the issuance were used for general corporate purposes.

On December 20, 2019, ArcelorMittal entered into a €100 million bilateral term loan due June 20, 2023. The bilateral term loan was fully available as of December 31, 2019. On January 30, 2020, €100 million (110) bilateral term loan was fully drawn.

Other loans relate to various debt with banks and public institutions.

Americas

1 billion senior secured asset-based revolving credit facility

On May 23, 2016, ArcelorMittal USA LLC signed a 1 billion senior secured asset-based revolving credit facility maturing on May 23, 2021. The facility was amended and extended on August 22, 2019 and now matures on August 21, 2024. Borrowings under the facility are secured by inventory and certain other working capital and related assets of ArcelorMittal USA and certain of its subsidiaries in the United States. The facility may be used for general corporate purposes. The facility is not guaranteed by ArcelorMittal. As of December 31, 2019, the facility was fully available.

Other loans

Other loans relate mainly to loans contracted by ArcelorMittal subsidiaries in Mexico with different counterparties.

Europe, Asia and Africa

On December 21, 2017, ArcelorMittal Kryvyi Rih entered into a 175 loan agreement with the European Bank for Reconstruction and Development in order to support the upgrade of its production facilities, energy efficiency improvement and environmental impact reduction. The loan agreement also provides for an additional 175 in loan facilities which are currently uncommitted. As of December 31, 2019, 175 was drawn under the agreement.

On May 25, 2017, ArcelorMittal South Africa signed a 4.5 billion South African rand revolving borrowing base finance facility maturing on May 25, 2020. The facility was amended and extended on July 26, 2019 and now matures on July 26, 2022. Any borrowings under the facility are secured by certain eligible inventory and receivables, as well as certain other working capital and related assets of ArcelorMittal South Africa. The facility is used for general corporate purposes. The facility is not guaranteed by ArcelorMittal. As of December 31, 2019, 1.2 billion South African rand (81) was drawn.

Other loans

Other loans mainly relate to loans contracted by ArcelorMittal subsidiaries in Spain with different counterparties.

Other

Certain debt agreements of the Company or its subsidiaries contain certain restrictive covenants. Among other things, these covenants limit encumbrances on the assets of ArcelorMittal and its subsidiaries, the ability of ArcelorMittal's subsidiaries to incur debt and the ability of ArcelorMittal and its subsidiaries to dispose of assets in certain circumstances. Certain of these agreements also require compliance with a financial covenant.

Hedge of net investments

As of April 1, 2018, the Company designated a portfolio of euro denominated debt (€6,922 million as of December 31, 2019) as a hedge of certain euro denominated investments (€8,070 million as of December 31, 2019) in order to mitigate the foreign currency risk arising from certain euro denominated subsidiaries' net assets. The risk arises from the fluctuation in spot exchange rates between the U.S. dollar and euro, which causes the amount of the net investments to vary. The hedged risk in the hedge of net investments is a risk of a weakening euro against the U.S. dollar that will result in a reduction in the carrying amount of the Company's net investments in the subsidiaries subject to the hedge. The euro denominated debt is designated as a hedging instrument for the change in the value of the net investments that is attributable to changes in the euro/U.S. dollar spot rate.

To assess the hedge effectiveness, the Company determines the economic relationship between the hedging instrument and the hedged item by comparing changes in the carrying amount of the debt portfolio that are attributable to a change in the spot rate with changes in the net investments in the foreign operations due to movements in the spot rate.

As of December 31, 2019, the Company recognized 109 foreign exchange gains arising on the translation of the euro denominated debt designated as a hedge of the euro denominated net investments in foreign operations in other comprehensive income within the foreign exchange translation reserve.

Maturity profile

As of December 31, 2019 the scheduled maturities of short-term debt, long-term debt and long-term lease obligations, including their current portion are as follows:

Year of maturity	Amount
2020	2,869
2021	994
2022	1,956
2023	2,185
2024	2,062
Subsequent years	4,274
Total	14,340

Fair value

The following tables summarize the Company's bases used to estimate its debt at fair value. Fair value measurement has been classified into three levels based upon a fair value hierarchy that reflects the significance of the inputs used in making the measurements.

As of December 31, 2019	Carrying amount	Fair Value			
		Level 1	Level 2	Level 3	Total
Instruments payable bearing interest at fixed rates	10,999	9,963	1,747	—	11,710
Instruments payable bearing interest at variable rates	1,503		1,501	—	1,501
Total long-term debt, including current portion	12,502	9,963	3,248	—	13,211
Short term bank loans and other credit facilities including commercial paper	1,838	—	1,854	—	1,854

As of December 31, 2018	Carrying amount	Fair Value			
		Level 1	Level 2	Level 3	Total
Instruments payable bearing interest at fixed rates	8,692	8,029	1,049	—	9,078
Instruments payable bearing interest at variable rates	1,823	—	1,759	—	1,759
Total long-term debt, including current portion	10,515	8,029	2,808	—	10,837
Short term bank loans and other credit facilities including commercial paper	1,968	—	1,967	—	1,967

Instruments payable classified as Level 1 refer to the Company's listed bonds quoted in active markets. The total fair value is the official closing price as defined by the exchange on which the instrument is most actively traded on the last trading day of the period, multiplied by the number of units held without consideration of transaction costs.

Instruments payable classified as Level 2 refer to all debt instruments not classified as Level 1. The fair value of the debt is based on estimated future cash flows converted into U.S. dollar at the forward rate and discounted using current U.S. dollar zero coupon rates and ArcelorMittal's credit spread quotations for the relevant maturities.

There were no instruments payable classified as Level 3.

6.1.3 Cash and cash equivalents, restricted cash and reconciliations of cash flows

Cash and cash equivalents consist of cash and short-term highly liquid investments that are readily convertible to cash with original maturities of three months or less at the time of purchase and are carried at cost plus accrued interest, which approximates fair value.

Significant cash or cash equivalent balances may be held from time to time at the Company's international subsidiaries, including in particular those in France and the United States, where the Company maintains cash management systems under which most of its cash and cash equivalents are centralized. Other subsidiaries which may hold significant cash balances, include those in Brazil, Canada, Kazakhstan, South Africa and Ukraine. Some of these operating subsidiaries have debt outstanding or are subject to acquisition agreements that impose restrictions on such operating subsidiaries' ability to pay dividends, but such restrictions are not significant in the context of ArcelorMittal's overall liquidity. Repatriation of funds from operating subsidiaries may also be affected by tax and foreign exchange policies in place from time to time in the various countries where the Company operates, though none of these policies are currently significant in the context of ArcelorMittal's overall liquidity.

Cash and cash equivalents consisted of the following:

	December 31,	
	2019	2018
Cash at bank	3,443	1,832
Term deposits	246	283
Money market funds[1]	1,178	57
Total	4,867	2,172

1. Money market funds are highly liquid investments with a maturity of 3 months or less from the date of acquisition.

Restricted cash represents cash and cash equivalents not readily available to the Company, mainly related to insurance deposits, cash accounts in connection with environmental obligations and true sale of receivables programs, as well as various other deposits or required balance obligations related to letters of credit and credit arrangements. Changes in restricted cash are included within other investing activities (net) in the consolidated statements of cash flows.

Restricted cash of 128 as of December 31, 2019 included 80 relating to various environmental obligations and true sales of receivables programs in ArcelorMittal South Africa. Restricted cash of 182 as of December 31, 2018 included 103 relating to various environmental obligations and true sales of receivables programs in ArcelorMittal South Africa. It also included 20 and 20 in connection with the mandatory convertible bonds as of December 31, 2019 and December 31, 2018, respectively (see note 11.2).

Reconciliation of liabilities arising from financing activities

The table below details changes in the Company's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be classified in the Company's consolidated statements of cash flows from financing activities.

	Long-term debt, net of current portion	Short-term debt and current portion of long term debt
Balance as of December 31, 2017 (note 6.1.2)	10,143	2,785
Proceeds from long-term debt	1,138	—
Payments of long-term debt	(798)	—
Amortized cost	9	18
Unrealized foreign exchange effects	(240)	(219)
Proceeds from short-term debt	—	2,319
Payments of short-term debt [1]	—	(2,949)
Current portion of long-term debt	(1,130)	1,130
Debt acquired through business combinations	174	69
Debt classified as held for sale (note 2.3.2)	(77)	—
Other movements [2]	97	14
Balance as of December 31, 2018 (note 6.1.2)	9,316	3,167
Adoption of IFRS 16 (notes 1 and 7)	893	243
Balance as of January 1, 2019	10,209	3,410
Proceeds from long-term debt	5,772	—
Payments of long-term debt	(3,299)	—
Amortized cost	7	13
Unrealized foreign exchange effects	(78)	(42)
Proceeds from short-term debt	—	600
Payments of short-term debt	—	(1,811)
Payments of principal portion of lease liabilities (note 7)	(10)	(310)
Additions to lease liabilities (notes 5.2 and 7)	185	74
Current portion of long-term debt	(1,031)	1,031
Derecognition of lease liabilities following the divestment of Global Chartering (note 2.3.1)	(311)	(89)
Other movements	27	(7)
Balance as of December 31, 2019 (note 6.1.2)	11,471	2,869

1. Cash payments decreasing the outstanding liability relating to leases are classified under payments of principal portion of lease liabilities and other financing activities in the Company's consolidated statements of cash flows.
2. Others movements include non-current and current obligations under leases.

6.1.4 Net debt

The Company monitors its net debt in order to manage its capital. The following tables present the structure of the Company's net debt by original currency at December 31, 2019 and December 31, 2018:

As of December 31, 2019	Total USD	EUR	USD	CHF	PLN	CAD	Other (in USD)
Short-term debt and current portion of long-term debt	2,869	1,966	248	233	20	174	228
Long-term debt, net of current portion	11,471	6,240	4,754	—	239	106	132
Cash and cash equivalents including restricted cash	(4,995)	(2,986)	(1,383)	(2)	(64)	(32)	(528)
Net debt	**9,345**	**5,220**	**3,619**	**231**	**195**	**248**	**(168)**

As of December 31, 2018	Total USD	EUR	USD	CHF	INR	CAD	Other (in USD)
Short-term debt and current portion of long-term debt	3,167	2,566	338	—	8	151	104
Long-term debt, net of current portion	9,316	3,530	5,405	228	—	69	84
Cash and cash equivalents including restricted cash	(2,354)	(454)	(1,017)	(2)	(307)	(29)	(545)
Net debt	**10,129**	**5,642**	**4,726**	**226**	**(299)**	**191**	**(357)**

6.1.5 Derivative financial instruments

The Company uses derivative financial instruments principally to manage its exposure to fluctuations in interest rates, exchange rates, prices of raw materials, energy and emission rights allowances arising from operating, financing and investing activities. Derivative financial instruments are classified as current or non-current assets or liabilities based on their maturity dates and are accounted for at the trade date. Embedded derivatives are separated from the host contract and accounted for separately if they are not closely related to the host contract. The Company measures all derivative financial instruments based on fair values derived from market prices of the instruments or from option pricing models, as appropriate. Gains or losses arising from changes in fair value of derivatives are recognized in the consolidated statements of operations, except for derivatives that are designated and qualify for cash flow or net investment hedge accounting.

Changes in the fair value of a derivative that is designated and qualifies as a cash flow hedge are recorded in other comprehensive income. Amounts deferred in equity are recorded in the consolidated statements of operations in the periods when the hedged item is recognized in the consolidated statements of operations and within the same line item (see note 6.3 Cash flow hedges).

The Company formally assesses, both at the hedge's inception and on an ongoing basis, whether the derivatives that are used in hedging transactions are effective in offsetting changes in fair values or cash flows of hedged items. When a hedging instrument is sold, terminated, expired or exercised, the accumulated unrealized gain or loss on the hedging instrument is maintained in equity until the forecasted transaction occurs. If the hedged transaction is no longer probable, the cumulative unrealized gain or loss, which had been recognized in equity, is reported immediately in the consolidated statements of operations.

Foreign currency differences arising on the translation of a financial liability designated as a hedge of a net investment in a foreign operation are recognized directly as a separate component of equity, to the extent that the hedge is effective. To the extent that the hedge is ineffective, such differences are recognized in the consolidated statements of operations (see note 6.3 Net investment hedge).

The Company manages the counter-party risk associated with its instruments by centralizing its commitments and by applying procedures which specify, for each type of transaction and underlying position, risk limits and/or the characteristics of the counter-party. The Company does not generally grant to or require guarantees from its counterparties for the risks incurred. Allowing for exceptions, the Company's counterparties are part of its financial partners and the related market transactions are governed by framework agreements (mainly International Swaps and Derivatives Association agreements which allow netting only in case of counterparty default). Accordingly, derivative assets and derivative liabilities are not offset.

Derivative financial instruments classified as Level 2:

The following tables summarize this portfolio:

	December 31, 2019			
	Assets		Liabilities	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Foreign exchange rate instruments				
Forward purchase contracts	1,187	29	2,633	(36)
Forward sale contracts	1,716	42	705	(4)
Currency swaps sales	—	—	500	(41)
Exchange option purchases	2,317	38	1,030	(4)
Exchange options sales	1,213	10	1,418	(5)
Total foreign exchange rate instruments		119		(90)
Raw materials (base metals), freight, energy, emission rights				
Term contracts sales	250	29	182	(7)
Term contracts purchases	419	117	1,479	(142)
Options sales/purchases	12	6	10	(6)
Total raw materials (base metals), freight, energy, emission rights		152		(155)
Total		271		(245)

	December 31, 2018			
	Assets		Liabilities	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Foreign exchange rate instruments				
Forward purchase contracts	2,005	66	1,258	(13)
Forward sale contracts	5,810	252	724	(9)
Currency swaps sales	—	—	1,000	(101)
Exchange option purchases	2,000	71	43	—
Exchange options sales	234	3	1,000	(35)
Total foreign exchange rate instruments		392		(158)
Raw materials (base metals), freight, energy, emission rights				
Term contracts sales	79	4	24	(6)
Term contracts purchases	1,524	347	739	(42)
Total raw materials (base metals), freight, energy, emission rights		351		(48)
Total		743		(206)

Derivative financial assets and liabilities classified as Level 2 refer to instruments to hedge fluctuations in interest rates, foreign exchange rates, raw materials (base metals), freight, energy and emission rights. The total fair value is based on the price a dealer would pay or receive for the security or similar securities, adjusted for any terms specific to that asset or liability. Market inputs are obtained from well-established and recognized vendors of market data and the fair value is calculated using standard industry models based on significant observable market inputs such as foreign exchange rates, commodity prices, swap rates and interest rates.

Derivative financial instruments classified as Level 3:

Derivative financial non-current assets classified as Level 3 refer to the call option on the 1,000 mandatory convertible bonds (see note 11.2). The fair valuation of Level 3 derivative instruments is established at each reporting date and compared to the prior period. ArcelorMittal's valuation policies for Level 3 derivatives are an integral part of its internal control procedures and have been reviewed and approved according to the Company's principles for establishing such procedures. In particular, such procedures address the accuracy and reliability of input data, the

accuracy of the valuation model and the knowledge of the staff performing the valuations.

ArcelorMittal establishes the fair valuation of the call option on the 1,000 mandatory convertible bonds through the use of binomial valuation models based on the estimated values of the underlying equity spot price of $162 and volatility of 24%. Binomial valuation models use an iterative procedure to price options, allowing for the specification of nodes, or points in time, during the time span between the valuation date and the option's expiration date. In contrast to the Black-Scholes model, which provides a numerical result based on inputs, the binomial model allows for the calculation of the asset and the option for multiple periods along with the range of possible results for each period.

Observable input data used in the valuations include zero coupon yield curves, stock market prices of Erdemir and China Oriental, European Central Bank foreign exchange fixing rates and Libor interest rates. Unobservable inputs are used to measure fair value to the extent that relevant observable inputs are not available. Specifically, the Company computed unobservable volatility data during 2019 based mainly on the movement of Erdemir and China Oriental stock market prices observable in the active market over 90 working days, which is particularly sensitive for the valuation resulting from the model. Following the repayment of notes issued by subsidiaries to the Company which were linked to the value of Erdemir shares in 2019 as described in note 11.2, the unobservable volatility data from the movement of Erdemir shares will no longer impact the valuation. A 10% increase or decrease in Hera Ermac share prices would result in a 83% and 73% increase and decrease of the fair value of the call option at December 31, 2019, respectively.

Derivative financial liabilities classified as Level 3 relate to a pellet purchase agreement that contains a special payment that varies according to the price of steel in the United States domestic market ("domestic steel price"). The Company concluded that this payment feature was an embedded derivative not closely related to the host contract. ArcelorMittal establishes the fair valuation of the special payment by comparing the current forecasted domestic steel price to the projected domestic steel price at the inception of the contract. Observable input data includes third-party forecasted domestic steel prices. Unobservable inputs are used to measure fair value to the extent that relevant observable inputs are not available or not consistent with the Company's views on future prices and refer specifically to domestic steel prices beyond the timeframe of available third-party forecasts. A U.S. dollar change per metric ton in the price of hot rolled steel would result in a ten cents per metric ton change in the price of iron ore. Any significant increase in the steel price would result in a significant increase in fair value, and vice versa. As of December 31, 2019, the fair valuation of the pellet purchase agreement was based on the future average US domestic steel price of $566 per metric ton.

Derivative financial liabilities classified as Level 3 relate also to the put option granted to ISP in the context of the acquisition of ArcelorMittal Italia (see note 2.2.4). The option exercise price is the higher of a reference operating income projection and the net present value of ISP's initial €100 million equity contribution bearing interest at a contractually agreed rate at the put option exercise date. The fair value of the put option liability is sensitive to unobservable inputs such as ArcelorMittal Italia's future cash flow projections. Observable inputs include ISP's credit rating.

The following table summarizes the reconciliation of the fair value of the conversion option classified as Level 3 with respect to the put option granted to ISP , the call option on the 1,000 mandatory convertible bonds and the fair value of the special payment included in the pellet purchase agreement:

	Put option with ISP[1]	Call option on 1,000 mandatory convertible bonds	Special payment in pellet purchase agreement	Total
Balance as of December 31, 2017	—	984	(264)	720
Change in fair value	(124)	(501)	(304)	(929)
Balance as of December 31, 2018	(124)	483	(568)	(209)
Change in fair value	(1)	(356)	392	35
Balance as of December 31, 2019	(125)	127	(176)	(174)

1. The change in fair value in 2018 was recognized through the business combination (see note 2.2).

The fair value movement on Level 3 derivative instruments is recorded in the consolidated statements of operations and other comprehensive income. The decrease in the fair value of the call option on 1,000 mandatory convertible bonds is due to a decrease in the share price of China Oriental, which impacts the value of the notes in which Hera Ermac, a wholly-owned subsidiary, invested the bonds proceeds, and a repayment of notes of Hera Ermac linked to the value of the shares of Erdemir (see note 11.2). The decrease in the fair value of the special payment in pellet purchase agreement is due to a decrease in forecasted domestic steel prices.

6.1.6 Other non-derivative financial assets and liabilities

Other non-derivative financial assets and liabilities include cash and cash equivalents and restricted cash (see note 6.1.3), trade and certain other receivables (see note 4.3, 4.5 and 4.6), investments in equity instruments at FVOCI (see note 2.5), trade payables and certain other liabilities (see notes 4.7 and 4.8). These instruments are recognized initially at fair value when the Company becomes a party to the contractual provisions of the instrument. Non-derivative financial assets are derecognized if the Company's contractual rights to the cash flows from the financial instruments expire or if the Company transfers the financial instruments to another party without retaining control of substantially all risks and rewards of the instruments. Non-derivative financial liabilities are derecognized when they are extinguished (i.e. when the obligation specified in the contract is discharged, canceled or expired).

Impairment of financial assets

In relation to the impairment of financial assets, IFRS 9 requires an expected credit loss ("ECL") model. The ECL model requires the Group to account for expected credit losses and changes in those ECL at each reporting date to reflect changes in credit risk since initial recognition of the financial assets. In particular, IFRS 9 requires the Group to measure the loss allowance for a financial instrument at an amount equal to the lifetime ECL if the credit risk on that financial instrument has increased significantly since initial recognition.

All fair value movements for investments in equity instruments at FVOCI, including the difference between the acquisition cost and the current fair value, are recorded in OCI and are not reclassified to the consolidated statements of operations. Investments in equity instruments at FVOCI are exempt from the impairment test under IFRS 9 because the fair value of the investment is recorded in OCI and not recycled to profit and loss.

Financial assets are tested for ECLs annually or whenever changes in circumstances indicate that there is a change in credit risk. Any ECL is recognized in the consolidated statements of operations. An ECL related to financial assets is reversed if and to the extent there has been a change in the factors used to determine the recoverable amount. The loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined if no ECL had been recognized. Reversals of ECLs are recognized in net income except for investments in equity instruments at FVOCI, for which all fair value movements are recognized in OCI.

6.2 Financing costs - net

Financing costs - net recognized in the years ended December 31, 2019, 2018 and 2017 are as follows:

	Year ended December 31,		
	2019	2018	2017
Interest expense	(695)	(687)	(879)
Interest income	88	72	56
Change in fair value adjustment on call option on mandatory convertible bonds and pellet purchase agreement (note 6.1.5)	(320)	(572)	578
Accretion of defined benefit obligations and other long term liabilities	(405)	(349)	(353)
Net foreign exchange result	4	(235)	546
Other [1]	(324)	(439)	(823)
Total	(1,652)	(2,210)	(875)

1. Other mainly includes expenses related to true sale of receivables ("TSR") programs and bank fees. It also includes premiums and fees of 71 relating to the bonds early redeemed in 2019 (104 and 389 of premiums and fees relating to bonds early redeemed in 2018 and 2017, respectively). In 2017, other also includes expenses relating to the extension of the mandatory convertible bonds (see note 11.2) of 92.

6.3 Risk management policy

The Company's operations expose it to a variety of financial risks: interest rate risk, foreign exchange risk, liquidity risk and risks in fluctuations in prices of raw materials, freight, energy and emissions. The Company actively monitors and seeks to reduce volatility of these exposures through a diversity of financial instruments, where considered appropriate. The Company has formalized how it manages these risks within the Treasury and Financial Risk Management Policy, which has been approved by Management.

Capital management

The Company's objective when managing capital is to safeguard continuity, maintain a strong credit rating and healthy capital ratios to support its business and provide adequate return to shareholders through continuing growth.

The Company sets the amount of capital required on the basis of annual business and long-term operating plans which include capital and other strategic investments. The funding requirement is met through a combination of equity, bonds and other long-term and short-term borrowings.

The Company monitors capital using a gearing ratio, being the ratio of net debt as a percentage of total equity.

	December 31,	
	2019	2018
Total equity	40,483	44,108
Net debt (including nil and 67 cash and debt classified as held for sale as of December 31, 2019 and December 31, 2018 respectively)	9,345	10,196
Gearing	23.1%	23.1%

Interest rate risk

The Company is exposed to interest rate risk on short-term and long-term floating rate instruments and on refinancing of fixed rate debt. The Company's policy is to maintain a balance of fixed and floating interest rate borrowings, which is adjusted depending on the prevailing market interest rates and outlook. As at December 31, 2019, the long-term debt was comprised of 88% fixed rate debt and 12% variable rate debt (note 6.1.2). The Company utilizes certain instruments to manage interest rate risks. Interest rate instruments allow the Company to borrow long-term at fixed or variable rates, and to swap the rate of this debt either at inception or during the lifetime of the borrowing. The Company and its counterparties exchange, at predefined intervals, the difference between the agreed fixed rate and the variable rate, calculated on the basis of the notional amount of the swap. Similarly, swaps may be used for the exchange of variable rates against other variable rates.

Foreign exchange rate risk

The Company is exposed to changes in values arising from foreign exchange rate fluctuations generated by its operating activities. Because a substantial portion of ArcelorMittal's assets, liabilities, sales and earnings are denominated in currencies other than the U.S. dollar (its reporting currency), ArcelorMittal has an exposure to fluctuations and depreciation in the values of these currencies relative to the U.S. dollar. These currency fluctuations, especially the fluctuation of the value of the U.S. dollar relative to the euro, the Canadian dollar, Brazilian real, Polish Zloty, Kazakhstani tenge, South African rand and Ukrainian hryvnia, as well as fluctuations in the other countries' currencies in which ArcelorMittal has significant operations and/or sales, could have a material impact on its financial position, cash flows and results of operations.

ArcelorMittal faces transaction risk, where its businesses generate sales in one currency but incur costs relating to that revenue in a different currency. For example, ArcelorMittal's non-U.S. subsidiaries may purchase raw materials, including iron ore and coking coal, in U.S. dollars, but may sell finished steel products in other currencies. Consequently, an appreciation of the U.S. dollar will increase the cost of raw materials; thereby having a negative impact on the Company's operating margins, unless the Company is able to pass along the higher cost in the form of higher selling prices.

Following its Treasury and Financial Risk Management Policy, the Company hedges a portion of its net exposure to foreign exchange rates through forwards, options and swaps.

ArcelorMittal also faces foreign currency translation risk, which arises when ArcelorMittal translates the statements of operations of its subsidiaries, its corporate net debt (note 6.1.4) and other items denominated in currencies other than the U.S. dollar, for inclusion in the consolidated financial statements. The Company manages translation risk arising from its investments in subsidiaries by monitoring the currency mix of the consolidated statements of financial position. The Company may enter into derivative transactions to hedge the residual exposure (see "—Net investment hedge").

The Company also uses the derivative instruments, described above, at the corporate level to hedge debt recorded in foreign currency other than the functional currency or the balance sheet risk associated with certain monetary assets denominated in a foreign currency other than the functional currency.

In October 2018, the Company entered into hedging programs including non deliverable forwards and non deliverable options for a nominal amount of $5.9 billion in order to hedge the volatility between the Indian Rupee and U.S. dollar in relation to the acquisition of AMNS India. The hedging programs generated 360 gain (gross) recognized in the AMNS India joint venture (note 2.4.1).

Foreign currency sensitivity analysis

As of December 31, 2019, the Company is mainly subject to foreign exchange exposure relating to the euro, Brazilian real, Canadian dollar, Kazakhstani tenge, South African rand, Mexican peso, Polish zloty, Argentine peso and Ukranian hryvnia against the U.S. dollar resulting from its trade payables and receivables.

	December 31, 2019	
	Trade receivables	Trade payables
USD	810	5,179
EUR	1,391	4,901
BRL	491	566
CAD	34	357
KZT	60	186
ZAR	173	364
MXN	70	50
UAH	72	157
PLN	116	498
ARS	47	71
Other	305	285
Total	3,569	12,614

The sensitivity analysis carried out by the Company considers the effects on its trade receivables and trade payables of a 10% increase or decrease between the relevant foreign currencies and the U.S. dollar.

	10% increase		10% decrease	
	Trade receivables	Trade payables	Trade receivables	Trade payables
EUR	1,530	5,391	1,252	4,411
BRL	540	623	442	509
CAD	37	393	31	321
KZT	66	205	54	167
ZAR	190	400	156	328
MXN	77	55	63	45
UAH	79	173	65	141
PLN	128	548	104	448
ARS	52	78	42	64

The use of a 10% sensitivity rate is used when reporting foreign currency exposure internally to key management personnel and represents management’s assessment of the reasonably possible change in foreign exchange rates. The sensitivity analysis includes trade receivables and trade payables denominated in a currency other than the U.S. dollar and adjusts their translation at the period end for a 10% change in foreign currency rates. A positive number indicates an increase in profit, and a negative number a decrease in profit.

Hedge accounting policy

The Company determines the economic relationship between the hedged item and the hedging instrument by analyzing the critical terms of the hedge relationship. In case critical terms do not match and fair value changes in the hedging instrument cannot be expected to perfectly offset changes in the fair value of the hedged item, further qualitative analysis may be performed. Such analysis serves to establish whether the economic relationship is sufficiently strong to comply with the Company’s risk management policies.

The hedge ratio is set out in the Company's risk management strategy and may be individually tailored for each hedging program in the risk management objective. Hedge ratios below 100% would usually be applied on hedging of forecast exposures with the hedge ratio typically reducing where there is uncertainty due to long hedging tenors or volatility in the underlying exposure.

The most frequent sources of hedge ineffectiveness relate to changes in the hedged item (such as maturity, volume and pricing indices), basis spread and significant changes in the credit risk. Such sources are analyzed at hedge initiation and monitored throughout the life of a hedge.

Liquidity Risk

Liquidity risk is the risk that the Company may encounter difficulties in meeting its obligations associated with financial liabilities that are settled by delivering cash. ArcelorMittal Treasury is responsible for the Company's funding and liquidity management. ArcelorMittal’s principal sources of liquidity are cash generated from its operations, its credit lines at the corporate level and various working capital credit lines at the level of its operating subsidiaries. The Company actively manages its liquidity. Following the Company's Treasury and Financial Risk Management Policy, the levels of cash, credit lines and debt are closely monitored and appropriate actions are taken in order to comply with the covenant ratios, leverage, fixed/floating ratios, maturity profile and currency mix.

The contractual maturities of the below financial liabilities include estimated loan repayments, interest payments and settlement of derivatives, excluding any impact of netting agreements. The cash flows are calculated based on market data as of December 31, 2019, and as such are sensitive to movements in mainly foreign exchange rates and interest rates. The cash flows are non-discounted, except for derivative financial liabilities where the cash flows equal their fair values.

	December 31, 2019					
	Carrying amount	Contractual Cash Flow	2020	2021	from 2022 to 2024	After 2024
Non-derivative financial liabilities						
Bonds	(9,398)	(12,227)	(880)	(643)	(5,542)	(5,162)
Loans over 100	(1,968)	(2,405)	(534)	(453)	(1,014)	(404)
Trade and other payables	(12,614)	(12,619)	(12,619)	—	—	—
Other loans and lease	(2,974)	(3,257)	(1,886)	(297)	(528)	(546)
Total	(26,954)	(30,508)	(15,919)	(1,393)	(7,084)	(6,112)
Derivative financial liabilities						
Equity contracts (Put options)	(125)	(125)	(125)	—	—	—
Foreign exchange contracts	(90)	(90)	(49)	—	—	(41)
Other commodities contracts[1]	(331)	(331)	(134)	(76)	(103)	(18)
Total	(546)	(546)	(308)	(76)	(103)	(59)

1. Commodity contracts include base metals, freight, energy and emission rights.

	December 31, 2018					
	Carrying amount	Contractual Cash Flow	2019	2020	from 2021 to 2023	After 2023
Non-derivative financial liabilities						
Bonds	(7,807)	(10,277)	(1,200)	(2,166)	(3,898)	(3,013)
Loans over 100	(2,322)	(2,505)	(639)	(1,153)	(629)	(84)
Trade and other payables	(13,981)	(13,999)	(13,999)	—	—	—
Other loans	(2,354)	(2,456)	(1,783)	(228)	(310)	(135)
Total	(26,464)	(29,237)	(17,621)	(3,547)	(4,837)	(3,232)
Derivative financial liabilities						
Equity contracts (Put options)	(124)	(124)	—	—	(124)	—
Foreign exchange contracts	(158)	(158)	(52)	(41)	(3)	(62)
Other commodities contracts[1]	(616)	(616)	(138)	(148)	(217)	(113)
Total	(898)	(898)	(190)	(189)	(344)	(175)

1. Commodity contracts include base metals, freight, energy and emission rights.

Cash flow hedges

The following tables present the periods in which the derivatives designated as cash flows hedges are expected to mature:

	December 31, 2019					
	Assets/ (liabilities)	(Outflows)/inflows				
	Fair value	3 months and less	3-6 months	6-12 months	2021	After 2021
Foreign exchange contracts	46	67	(17)	(4)	—	—
Commodities	(275)	(12)	(27)	(40)	(47)	(149)
Emission rights	88	(4)	—	92	—	—
Total	(141)	51	(44)	48	(47)	(149)

	December 31, 2018					
	Assets/ (liabilities)	(Outflows)/inflows				
	Fair value	3 months and less	3-6 months	6-12 months	2020	After 2020
Foreign exchange contracts	329	329	4	—	(1)	(3)
Commodities[1]	(588)	(8)	(39)	(77)	(143)	(321)
Emission rights	317	—	—	206	111	—
Total	58	321	(35)	129	(33)	(324)

1. The commodities balance as of December 31, 2018 shown above has been revised to correct the prior period disclosure, increasing the liability balance of commodities by 568 for the special payment in the pellet purchase agreement described in note 6.1.5. The revision only impacted the amount disclosed above and the hedging instruments table below and otherwise had no impact on the Company's consolidated financial statements. The Company has evaluated the impact of the revision and determined that it did not have a material impact on any of its prior period annual consolidated financial statements.

Associated gains or losses that were recognized in other comprehensive income are reclassified from equity to the consolidated statements of operations in the same period during which the hedged forecasted cash flow affects the consolidated statements of operations. The following table presents the periods in which the realized and unrealized gains or losses on derivatives designated as cash flows hedges recognized in other comprehensive income, net of tax, are expected to impact the consolidated statements of operations:

					December 31, 2019	
	Cash flow reserve				(Expense)/income	
	Carrying amount	3 months and less	3-6 months	6-12 months	2021	After 2021
Foreign exchange contracts	13	9	1	3	—	—
Commodity contracts	(106)	(16)	(19)	(27)	(44)	—
Emission rights	310	72	73	145	16	4
Total	217	65	55	121	(28)	4

					December 31, 2018	
	Cash flow reserve				(Expense)/income	
	Carrying amount	3 months and less	3-6 months	6-12 months	2020	After 2020
Foreign exchange contracts	4	—	—	4	—	—
Commodity contracts	(390)	(34)	(32)	(59)	(115)	(150)
Emission rights	778	46	47	93	87	505
Total	392	12	15	38	(28)	355

The following tables summarize the effect of hedge accounting on ArcelorMittal's consolidated statement of financial position, statement of comprehensive income and statement of changes in equity.

			December 31, 2019	
Hedging Instruments	Nominal amount of the hedging instrument	Assets carrying amount	Liabilities carrying amount	Line item in the statement of financial position where the hedging instrument is located
Cash flow hedges				
Foreign exchange risk - Option/Forward contracts	5,207	80	(34)	Prepaid expenses and other current assets/ Accrued expenses and other liabilities
Price risk - Commodities forwards[1]	531	14	(93)	Prepaid expenses and other current assets/ Accrued expenses and other liabilities
Price risk - Commodities forwards[1]	721	—	(196)	Other assets/Other long-term obligations
Price risk - Emission rights forwards	559	104	(16)	Prepaid expenses and other current assets/ Accrued expenses and other liabilities
Total	—	198	(339)	

1. Including energy forwards

December 31, 2019

Hedging Instruments	Cash flow hedge reserve at December 31, 2018	Hedging gains or losses of the reporting period that were recognized in OCI	Gains or losses reclassification adjustment and hedge ineffectiveness	Basis adjustment	Line item in the statement of comprehensive income that includes the reclassification adjustment and hedge ineffectiveness	Cash flow hedge reserve at December 31, 2019
Cash flow hedges						
Foreign exchange risk - Option/Forward contracts	282	76	(4)	(323)	Sales	31
Price risk - Commodities forwards	(399)	272	21	—	Sales, Cost of sales	(106)
Price risk - Emission rights forwards	778	(32)	(436)	—	Cost of sales	310
Total	661	316	(419)	(323)		235

December 31, 2018

Hedging Instruments	Nominal amount of the hedging instrument	Assets carrying amount	Liabilities carrying amount	Line item in the statement of financial position where the hedging instrument is located
Cash flow hedges				
Foreign exchange risk - Option/ Forward contracts	7,465	332	—	Prepaid expenses and other current assets
Price risk - Commodities forwards	350	—	(124)	Accrued expenses and other liabilities
Price risk - Commodities forwards	491	—	(454)	Other long-term obligations
Price risk - Energy forwards	765	—	(9)	Other long-term obligations
Price risk - Emission rights forwards	1,091	205	—	Prepaid expenses and other current assets
Price risk - Emission rights forwards	79	112	—	Other assets
Total	**10,241**	**649**	**(587)**	

December 31, 2018

Hedging Instruments	Cash flow hedge reserve at December 31, 2017	Hedging gains or losses of the reporting period that were recognized in OCI	Gains or losses reclassification adjustment and hedge ineffectiveness	Basis adjustment	Line item in the statement of comprehensive income that includes the reclassification adjustment and hedge ineffectiveness	Cash flow hedge reserve at December 31, 2018
Cash flow hedges						
Foreign exchange risk - Option/Forward contracts	(141)	284	—	139	n/a	282
Price risk - Commodities forwards[1]	18	(543)	126	—	Sales, Cost of sales	(399)
Price risk - Emission rights forwards	84	694	—	—	n/a	778
Total	**(39)**	**435**	**126**	**139**		**661**

1. The price risk - commodities forward balance as of December 31, 2018 shown above has been revised to correct the prior period disclosure decreasing the Hedging gains or losses of the reporting period and the cash flow hedge reserve by 381 for the special payment in the pellet purchase agreement described in note 6.1.5. The revision only impacted the disclosed amount in the maturities table above and this hedge accounting table and otherwise had no impact on the Company's consolidated financial statements. The Company has evaluated the impact of the revision and determined that it did not have a material impact on any of its prior period annual consolidated financial statements.

Net investment hedge

In December 2014, the Company entered into euro/U.S. dollar cross currency swaps ("CCS") to hedge a euro denominated net investment in foreign operations amounting to €303 million, and designated them as a net investment hedge. The euro/U.S. dollar CCS with a notional of 375 were unwound on January 14, 2016. A deferred gain of 83, net of a deferred tax expense of 24, will be recycled to the consolidated statements of operations when the hedged assets are disposed of.

On May 27, 2015, the Company entered into additional euro/U.S. dollar CCS with a notional of 1,000 to hedge a euro denominated net investment in foreign operations amounting to €918 million, and designated them as a net investment hedge. As of December 31, 2019 and 2018, the euro/U.S. dollar CCS have a fair value loss of 41, net of a deferred tax of 12, and a fair value loss of 101, net of a deferred tax of 28, respectively. Fair value movements have been recorded in the consolidated statements of other comprehensive income. The fair value of the remaining CCS is included in other long-term obligations in the consolidated statements of financial position. The remaining CCS is categorized as Level 2. The euro/U.S. dollar CCS with a notional of 500 were unwound on July 31, 2019. A deferred loss of 16, will be recycled to the consolidated statements of operations when the hedged assets are disposed of.

In March 2018, the Company entered into additional euro/U.S. dollar CCS with a notional of 100 to hedge a euro denominated net investment in foreign operation amounting to €81 million, and designated them as a net investment hedge. The CCS was categorized as Level 2 and the fair value movements were recorded in the consolidated statements of other comprehensive income. The euro/U.S. dollar CCS with a notional of 100 was unwound on June 18, 2018. A deferred gain of 8 will be recycled to the consolidated statements of operations when the hedged assets are disposed of.

In April 2019, the Company entered into additional euro/U.S. dollar CCS with a notional of 200 to hedge a euro denominated net investment in foreign operation amounting to €178 million, and designated them as a net investment hedge. The CCS was categorized as Level 2 and the fair value movements were recorded in the consolidated statements of other comprehensive income. The euro/U.S. dollar CCS with a notional of 200 were unwound on November 26, 2019. A deferred gain of 11 will be recycled to the consolidated statements of operations when the hedged assets are disposed of.

As of April 1, 2018, the Company designated a portfolio of euro denominated debt (€6,922 million as of December 31, 2019) as a hedge of certain euro denominated investments (€8,070 million as of December 31, 2019) in order to mitigate the foreign currency risk arising from certain euro denominated subsidiaries net assets. The risk arises from the fluctuation of the euro/U.S dollar spot rate, which causes the amount of the net investments to vary. The euro denominated debt is designated as a hedging instrument for the change in the value of the net investments that is attributable to changes in the euro/U.S dollar spot rate. As of December 31, 2019, the Company recognized 109 foreign exchange gains arising on the translation of the euro denominated debt designated as a hedge of the euro denominated net investments in foreign operations in other comprehensive income within the foreign exchange translation reserve. The hedging instrument is categorized as Level 2.

Derivative hedging instruments in net investment hedges are as follows:

Derivatives	Notional amount	Date traded	Fair value at December 31, 2018	Change in fair value	Fair value as of December 31, 2019[1]
CCS 10Y	300	May 27, 2015	(39)	14	(25)
CCS 10Y	160	May 27, 2015	(21)	8	(13)
CCS 10Y	40	May 27, 2015	(6)	3	(3)
Total	500		(66)	25	(41)

1. The net investment hedges were fully effective. As such, the change in fair value is entirely recorded in other comprehensive income.

December 31, 2019

Hedging Instruments	Nominal amount of the hedging instrument	Assets carrying amount	Liabilities carrying amount	Line item in the statement of financial position where the hedging instrument is located	Change in value used for calculating hedge ineffectiveness for 2019	Line item in the statement of comprehensive income that includes the recognized hedge ineffectiveness	Foreign currency translation reserve
Net investment hedges							
Foreign exchange risk - Cross Currency Swap	500	—	(41)	Other long-term obligations	—	n/a	33
Foreign exchange risk - EUR debt	7,788	—	(7,777)	Short-term debt and current portion of long-term debt; long-term debt, net of current portion	—	n/a	567
Total	8,288	—	(7,818)		—		600

Derivatives	Notional amount	Date traded	Fair value at December 31, 2017	Change in fair value	Fair value as of December 31, 2018[1]
CCS 5Y	500	May 27, 2015	(64)	29	(35)
CCS 10Y	300	May 27, 2015	(56)	17	(39)
CCS 10Y	160	May 27, 2015	(30)	9	(21)
CCS 10Y	40	May 27, 2015	(7)	1	(6)
Total	1,000		(157)	56	(101)

1. The net investment hedges were fully effective. As such, the change in fair value is entirely recorded in other comprehensive income.

December 31, 2018

Hedging Instrument	Nominal amount of the hedging instrument	Assets carrying amount	Liabilities carrying amount	Line item in the statement of financial position in which the hedged item is located	Change in value used for calculating hedge ineffectiveness for 2018	Line item in the statement of comprehensive income that includes the recognized hedge ineffectiveness	Foreign currency translation reserve
Net investment hedge							
Foreign exchange risk - Cross Currency Swap	1,000	—	(101)	Other long-term obligations	—	n/a	28
Foreign exchange risk - EUR debt	5,931	—	(5,918)	Short-term debt and current portion of long-term debt; long-term debt, net of current portion	—	n/a	474
Total	6,931	—	(6,019)		—		502

Raw materials, freight, energy risks and emission rights

The Company is exposed to risks in fluctuations in prices of raw materials (including base metals such as zinc, nickel, aluminum, tin, copper and iron ore), freight and energy, both through the purchase of raw materials and through sales contracts. The Company uses financial instruments such as forward purchases or sales, options and swaps in order to manage the volatility of prices of certain raw materials, freight and energy.

Fair values of raw material, freight, energy and emission rights instruments categorized as Level 2 are as follows:

	December 31,	
	2019	2018
Base metals	(6)	(9)
Freight	7	—
Energy (oil, gas, electricity)	(92)	(5)
Emission rights	88	317
Total	(3)	303
Derivative assets associated with raw materials, energy, freight and emission rights	152	351
Derivative liabilities associated with raw materials, energy, freight and emission rights	(155)	(48)
Total	(3)	303

ArcelorMittal consumes large amounts of raw materials (the prices of which are related to the London Metals Exchange price index, the Steel Index and Platts Index), ocean freight (the price of which is related to a Baltic Exchange Index), and energy (the prices of which are mainly related to the New York Mercantile Exchange energy index (NYMEX), the European Energy Exchange (EEX) power indexes, the powernext gas indexes). As a general matter, ArcelorMittal is exposed to price volatility with respect to its purchases in the spot market and under its long-term supply contracts. In accordance with its risk management policy, ArcelorMittal hedges a part of its exposure related to raw materials procurements.

Emission rights

Pursuant to the application of the European Directive 2003/87/EC of October 13, 2003, as amended by the European Directive 2009/29/EC of April 23, 2009, establishing a scheme for emission allowance trading, the Company enters into certain types of derivatives (mainly forward transactions and options) in order to implement its management policy for associated risks. As of December 31, 2019 and 2018, the Company had a net notional position of 557 with a net positive fair value of 88 and a net notional position of 1,170 with a net positive fair value of 317, respectively.

Credit risk

The Company’s treasury department monitors various market data regarding the credit standings and overall reliability of the financial institutions for all countries where the Company’s subsidiaries operate. The choice of the financial institution for the financial transactions must be approved by the treasury department. Credit risk related to customers, customer credit terms and receivables are discussed in note 4.3.

Sensitivity analysis

Foreign currency sensitivity

The following tables detail the Company’s derivative financial instruments' sensitivity to a 10% strengthening and a 10% weakening in the U.S. dollar against the euro. A positive number indicates an increase in profit or loss and other equity, where a negative number indicates a decrease in profit or loss and other equity.

The sensitivity analysis includes the Company’s complete portfolio of foreign currency derivatives outstanding. The impact on the non €/$ derivatives reflects the estimated move of such currency pairs, when the U.S. dollar appreciates or depreciates 10% against the euro, based on computations of correlations in the foreign exchange markets in 2019 and 2018.

	December 31, 2019	
	Income	Other Equity
10% strengthening in U.S. dollar	(104)	325
10% weakening in U.S. dollar	113	(252)

	December 31, 2018	
	Income	Other Equity
10% strengthening in U.S. dollar	132	(422)
10% weakening in U.S. dollar	(148)	674

Cash flow sensitivity analysis for variable rate instruments

The following tables detail the Company's variable interest rate instruments' sensitivity. A change of 100 basis points ("bp") in interest rates during the period would have increased (decreased) profit or loss by the amounts presented below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant.

	December 31, 2019	
	Floating porting of net debt[1]	Interest Rate Swaps/ Forward Rate Agreements
100 bp increase	30	—
100 bp decrease	(30)	—

	December 31, 2018	
	Floating porting of net debt[1]	Interest Rate Swaps/ Forward Rate Agreements
100 bp increase	1	—
100 bp decrease	(1)	—

1. Please refer to note 6.1.4 for a description of net debt (including fixed and floating portion)

Base metals, energy, freight, emissions rights

The following tables detail the Company's sensitivity to a 10% increase and decrease in the price of the relevant base metals, energy, freight and emissions rights. The sensitivity analysis includes only outstanding, un-matured derivative instruments either held for trading at fair value through the consolidated statements of operations or designated in hedge accounting relationships.

	December 31, 2019	
	Income	Other Equity Cash Flow Hedging Reserves
+10% in prices		
Base Metals	2	15
Iron Ore	—	—
Freight	—	—
Emission rights	—	65
Energy	—	71
-10% in prices		
Base Metals	(2)	(15)
Iron Ore	—	—
Freight	—	—
Emission rights	—	(65)
Energy	—	(71)

	December 31, 2018	
	Income	Other Equity Cash Flow Hedging Reserves
+10% in prices		
Base Metals	(1)	19
Iron Ore	—	1
Freight	3	—
Emission rights	—	149
Energy	—	75
-10% in prices		
Base Metals	1	(19)
Iron Ore	—	(1)
Freight	(3)	—
Emission rights	—	(149)
Energy	—	(75)

NOTE 7: LEASES

As a lessee, the Company assesses if a contract is or contains a lease at inception of the contract. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company recognizes a right-of-use asset and a lease liability at the commencement date, except for short-term leases of twelve months or less and leases for which the underlying asset is of low value, which are expensed in the consolidated statement of operations on a straight-line basis over the lease term.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease, or, if not readily determinable, the incremental borrowing rate specific to the country, term and currency of the contract. Lease payments can include fixed payments, variable payments that depend on an index or rate known at the commencement date, as well as any extension or purchase options, if the Company is reasonably certain to exercise these options. The lease liability is subsequently measured at amortized cost using the effective interest method and remeasured with a corresponding adjustment to the related right-of-use asset when there is a change in future lease payments in case of renegotiation, changes of an index or rate or in case of reassessments of options.

The right-of-use asset comprises, at inception, the initial lease liability, any initial direct costs and, when applicable, the obligations to refurbish the asset, less any incentives granted by the lessors. The right-of-use asset is subsequently depreciated, on a straight-line basis, over the lease term or, if the lease transfers the ownership of the underlying asset to the Company at the end of the lease term or, if the cost of the right-of-use asset reflects that the lessee will exercise a purchase option, over the estimated useful life of the underlying asset. Right-of-use assets are also subject to testing for impairment if there is an indicator for impairment.

Variable lease payments not included in the measurement of the lease liabilities are expensed to the consolidated statement of operations in the period in which the events or conditions which trigger those payments occur.

In the statement of financial position, right-of-use assets and lease liabilities are classified, respectively, as part of property, plant and equipment and short-term/long-term debt.

Following the adoption of IFRS 16 "Leases" as described in note 1 on January 1, 2019, the Company recognized lease liabilities and right-of-use assets for operating lease contracts with fixed terms and future minimum lease payments as summarized in the following table:

Non-cancellable operating lease commitments as of December 31, 2018*	1,869
Recognition exemption for leases of low-value assets	(58)
Recognition exemption for short-term leases	(20)
Undiscounted operating lease commitments as of January 1, 2019	1,791
Effects of discounting using incremental borrowing rates (weighted average rate of 4.7%)	(632)
Lease liabilities related to assets held for sale	(23)
Additional lease liabilities as of January 1, 2019 from leases previously classified as operating leases in accordance with IAS 17	1,136

* As reported in the consolidated financial statements for the year ended December 31, 2018 - note 8.4

Following the application of the modified retrospective method at the date of implementation of IFRS 16 on January 1, 2019, whereby right-of-use assets of 1,405 were measured at an amount equal to the lease liabilities of 1,136, increased by 77 related to favorable terms of operating leases acquired as part of previous business combinations and 192 related to amounts prepaid for the right of use of land, both reclassified from intangible assets. There was no impact on deferred tax assets and deferred tax liabilities as the corresponding deferred tax assets and deferred tax liabilities attributable to the lease liabilities and right-of-use assets relate to income taxes levied by the same taxation authority within the same legal entity and were therefore offset.

For leases that were classified as finance leases applying IAS 17, the carrying amount of the right-of-use asset and the lease liability at the date of initial application is the carrying amount of the lease asset and lease liability immediately before that date measured applying IAS 17 on December 31, 2018. The carrying amount of finance lease assets and lease liabilities was 363 and 423, respectively as of December 31, 2018. Accordingly, the total right-of-use assets and lease liabilities as of January 1, 2019 were 1,768 and 1,559, respectively.

There were no impacts on retained earnings upon implementation of IFRS 16.

The Company's lease contracts relate to a variety of assets used in its operational and administrative activities through several units, such as land, buildings, vehicles, industrial machinery, logistic and commercial facilities and power generation facilities. There are no sale and lease back transactions and no restrictions or covenants are imposed by the Company's current effective lease contracts.

The lease liabilities were 1,127 as of December 31, 2019. The corresponding interest expense for the twelve months ended December 31, 2019, amounted to 98. The portion of the lease payments recognized as a reduction of the lease liabilities and as a cash outflow from financing activities amounted to 320 for the twelve months ended December 31, 2019.

The decrease in the total right-of-use assets and lease liabilities during the year ended December 31, 2019 included the decrease in right-of-use assets and lease liabilities by 390 and 400, respectively, due to the sale of a 50% controlling interest in Global Chartering to DryLog. See note 2.3.1.

The maturity analysis of the lease liabilities as of December 31, 2019, is as follows:

	1 year or less	2-3 years	4-5 years	Greater than 5 years	TOTAL
Lease liabilities (undiscounted)	279	369	209	513	1,370

The right-of-use assets as of December 31, 2019 and the depreciation and impairment charges for the twelve months ended December 31, 2019 amounted to 1,235 and 406, respectively, and are shown below by underlying class of asset:

	Carrying amount	Depreciation and impairment charges
Land, buildings and improvements	854	(118)
Machinery, equipment and others	381	(288)
Total	**1,235**	**(406)**

The additions to right-of-use assets amounted to 259 for the twelve months ended December 31, 2019.

The Company recognizes the expenses of short-term leases and leases of low-value assets on a straight-line basis over the lease term. The expenses related to short-term leases and leases of low-value assets were 165 and 68, respectively, for the twelve months ended December 31, 2019.

Expenses related to variable lease payments not included in the measurement of lease liabilities were 65 for the twelve months ended December 31, 2019. Such lease payments relate to rental fees that vary based on the actual level of activities or performance of the underlying leased assets such as a percentage of sales of the Company's goods through certain leased commercial warehouses and fixed rental fees per actual unit of output produced or transported by the leased assets.

An estimation of the future cash outflows to which the Company is potentially exposed in relation to those contracts involving variable lease payments, which are not reflected in the measurement of lease liabilities as of December 31, 2019, is as follows:

	1 year or less	2-3 years	4-5 years	Greater than 5 years	TOTAL
Potential variable lease payments	61	91	69	73	294

Also, some of the Company's lease contracts have extension and/or termination options as well as residual value guarantees whose amounts are not reflected in the measurement of the lease liabilities as of December 31, 2019. The potential addition/(reduction) in future cash outflows to which the Company is exposed in case such options are exercised or the guarantees required are as shown in the table below.

	1 year or less	2-3 years	4-5 years	Greater than 5 years	TOTAL
Potential extension options	1	8	13	16	38
Potential termination options	(2)	(2)	(1)	(1)	(6)
Potential residual value guarantees	1	1	1	—	3

Undiscounted amounts related to lease contracts not yet commenced and therefore not included in the recognized lease liabilities as of December 31, 2019, to which the Company is committed are described below:

	1 year or less	2-3 years	4-5 years	Greater than 5 years	TOTAL
Leases not yet commenced	2	8	8	13	31

There were neither income from subleasing right-of-use assets nor gains or losses from sales and leaseback for the twelve months ended December 31, 2019.

NOTE 8: PERSONNEL EXPENSES AND DEFERRED EMPLOYEE BENEFITS

8.1 Employees and key management personnel

As of December 31, 2019, 2018 and 2017, ArcelorMittal had approximately 191,000, 209,000 and 197,000 employees, respectively, and the total annual compensation of ArcelorMittal's employees in 2019, 2018 and 2017 was as follows:

	Year Ended December 31,		
Employee Information	2019	2018	2017
Wages and salaries	8,380	8,176	7,912
Defined benefits cost (see note 8.2)	201	264	265
Loss following new labor agreement in the U.S. (see note 8.2)	—	15	—
Other staff expenses	1,668	2,004	1,791
Total	10,249	10,459	9,968

The total annual compensation of ArcelorMittal's key management personnel, including its Board of Directors, expensed in 2019, 2018 and 2017 was as follows:

	Year Ended December 31,		
	2019	2018	2017
Base salary and directors fees	8	8	8
Short-term performance-related bonus	9	8	7
Post-employment benefits	1	1	1
Share-based payments	—	4	3

The fair value of the shares allocated based on Restricted Share Unit ("RSU") and Preference Share Unit ("PSU") plans to the ArcelorMittal's key management personnel was recorded as an expense in the consolidated statements of operations over the relevant vesting periods.

As of December 31, 2019, 2018 and 2017, ArcelorMittal did not have any outstanding loans or advances to members of its Board of Directors or key management personnel, and, as of December 31, 2019, 2018 and 2017, ArcelorMittal had not given any guarantees for the benefit of any member of its Board of Directors or key management personnel.

8.2 Deferred employee benefits

ArcelorMittal's operating subsidiaries sponsor different types of pension plans for their employees. Also, some of the operating subsidiaries offer other post-employment benefits, that are principally post-retirement healthcare plans. These benefits are broken down into defined contribution plans and defined benefit plans.

Defined contribution plans are those plans where ArcelorMittal pays fixed or determinable contributions to external life insurance or other funds for certain categories of employees. Contributions are paid in return for services rendered by the employees during the period. Contributions are expensed as incurred consistent with the recognition of wages and salaries.

Defined benefit plans are those plans that provide guaranteed benefits to certain categories of employees, either by way of contractual obligations or through a collective agreement. For defined benefit plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out each fiscal year.

The retirement benefit obligation recognized in the consolidated statements of financial position represents the present value of the defined benefit obligation less the fair value of plan assets. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation. Remeasurement arising from experience adjustments and changes in actuarial assumptions are charged or credited to other comprehensive income in the period in which they arise. Any asset resulting from this calculation is limited to the present value of available refunds and reductions in future contributions to the plan.

Current service cost, which is the increase of the present value of the defined benefit obligation resulting from the employee service in the current period, is recorded as an expense as part of cost of sales and selling, general and administrative expenses in the consolidated statements of operations. The net interest cost, which is the change during the period in the net defined benefit liability or asset that arises from the passage of time, is recognized as part of financing costs net in the consolidated statements of operations.

The Company recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs. The gain or loss on settlement comprises any resulting change in the fair value of plan assets and any change in the present value of the defined benefit obligation. Past service cost is the change in the present value of the defined benefit obligation resulting from a plan amendment or a curtailment. Past service cost is recognized immediately in the consolidated statements of operations in the period in which it arises.

Termination plans are those plans that primarily correspond to terminating an employee's contract following the decision of the employee before the normal retirement date. Liabilities for termination plans are recognized when the affected employees have formally been informed and when amounts owed have been determined using an appropriate actuarial calculation. Liabilities relating to the termination plans are calculated annually on the basis of the number of employees that have taken or contractually agreed to take early retirement and are discounted using an interest rate that corresponds to that of high quality bonds that have maturity dates similar to the terms of the Company's early retirement obligations. Provisions for social plans are recorded in connection with voluntary separation plans. Voluntary retirement plans primarily correspond to the practical implementation of social plans or are linked to collective agreements signed with certain categories of employees. The Company recognizes a liability and expense when it can no longer withdraw the offer or, if earlier, when it has a detailed formal plan which has been communicated to employees or their representatives.

Other long-term employee benefits include various plans that depend on the length of service, such as long service and sabbatical awards, disability benefits and long-term compensated absences such as sick leave. The amount recognized as a liability is the present value of benefit obligations at the consolidated statements of financial position date, and all changes in the provision (including actuarial gains and losses or past service costs) are recognized in the consolidated statements of operations in the period in which they arise.

The expense associated with the above pension plans and post-employment benefits, as well as the carrying amount of the related liability/asset on the consolidated statements of financial position are based on a number of assumptions and factors such as discount rates, expected rate of compensation increase, healthcare cost trend rates, mortality rates and retirement rates.

- Discount rates – The discount rate is based on several high quality corporate bond indexes and yield curves in the appropriate jurisdictions. In countries where there is no deep market in such bonds, the market rates on government bonds are used. Nominal interest rates vary worldwide due to exchange rates and local inflation rates.
- Rate of compensation increase – The rate of compensation increase reflects actual experience and the Company's long-term outlook, including contractually agreed wage rate increases for represented hourly employees.
- Healthcare cost trend rate – The healthcare cost trend rate is based on historical retiree cost data, near-term healthcare outlook, including appropriate cost control measures implemented by the Company, and industry benchmarks and surveys.
- Mortality and retirement rates – Mortality and retirement rates are based on actual and projected plan experience.

Statements of Financial Position

Total deferred employee benefits including pension or other post-employment benefits, are as follows:

	December 31,	
	2019	2018
Pension plan benefits	3,289	3,034
Other post-employment benefits and other long-term employee benefits ("OPEB")	3,792	3,600
Termination benefits	198	222
Defined benefit liabilities	7,279	6,856
Provisions for social plans (non-current)	64	126
Total	7,343	6,982

This note, including the table above, discloses the following benefit categories:

- pension plan benefits are pension plans and lump sum benefits that are classified under post employment benefits as required by IAS 19 which are not mandatory by law;
- other post employment and other long-term employee benefits, also referred to as, OPEB which includes all other post employment benefits as defined in IAS 19 (e.g. lump sum benefits which are mandatory by law, medical insurance and life insurance) together with all other long-term employee benefits as defined in IAS 19;
- termination benefits, which relate to provisions for long term termination benefits as defined in IAS 19 (e.g. early retirement benefits); and
- provisions for social plans (non-current) which relate to provisions for social plans in restructuring provisions as required by IAS 37.

The termination benefits mainly relate to European countries (Belgium, Spain, Germany and Luxembourg).

Pension plans

This section includes post employment benefits that are pension plan and lump sum benefits which are not mandatory by law. A summary of the significant defined benefit pension plans is as follows:

U.S.

ArcelorMittal USA's pension plan is a non-contributory defined benefit plan covering approximately 12% of its employees. Certain non-represented salaried employees hired before 2003 receive pension benefits which are determined under a "Cash Balance" formula as an account balance which grows with interest credits and allocations based on a percentage of pay. Most wage employees represented by a union hired before November 2005 receive a monthly benefit at retirement based on a fixed rate and years of service. These plans are closed to new participants.

Represented employees hired after November 2005 and employees at locations which were acquired from International Steel Group Inc. receive defined pension benefits through a multi-employer pension plan that is accounted for as a defined contribution plan, due to the limited information made available to each of the 485 (as of December 31, 2018) different participating employers. ArcelorMittal USA's labor agreement with the United Steelworkers ("USW") on September 1, 2018 increased the contributions to the multi-employer plan to $3.50 per contributory hour from $2.80. Changes to the defined pension plan under the new labor agreement, principally for a higher monthly benefit rate for certain periods of service, resulted in an expense of 25 recorded in cost of sales in the consolidated statements of operations in 2018.

Canada

The primary pension plans are those of ArcelorMittal Dofasco, AMMC and ArcelorMittal Long Products Canada.

The ArcelorMittal Dofasco pension plan is a hybrid plan providing the benefits of both a defined benefit and defined contribution pension plan. The defined contribution component is financed by both employer and employee contributions. The employer's defined contribution is based on a percentage of company profits. The defined benefit pension plan was closed for new hires on December 31, 2010 and replaced by a new defined contribution pension plan with contributions related to age, service and earnings.

At the end of 2012, ArcelorMittal Dofasco froze and capped benefits for the majority of its hourly and salaried employees who were still accruing service under the defined benefit plan and began transitioning these employees to the new defined contribution pension plan for future pension benefits.

The AMMC defined benefit plan provides salary related benefit for non-union employees and a flat dollar pension depending on an employee's length of service for union employees. This plan was closed for new non-union hires on December 31, 2009 and replaced by a defined contribution pension plan with contributions related to age and service. Effective January 1, 2015, AMMC implemented a plan to transition its non-union employees who were still benefiting under the defined benefit plan to a defined contribution pension plan. Transition dates can extend up to January 1, 2025 depending on the age and service of each member.

ArcelorMittal Long Products Canada sponsors several defined benefit and defined contribution pension plans for its various groups of employees, with most defined benefit plans closed to new entrants several years ago. The primary defined benefit pension plan sponsored by ArcelorMittal Long Products Canada provides certain unionized employees with a flat dollar pension depending on an employee's length of service.

ArcelorMittal Long Products Canada entered into a six-year collective labor agreement during the third quarter of 2014 with its Contrecoeur-West union group. The defined benefit plan was closed to new hires. A new defined contribution type arrangement was established for new hires.

Brazil

The primary defined benefit plans, financed through trust funds, have been closed to new entrants. Brazilian entities have all established defined contribution plans that are financed by employer and employee contributions. On December 28, 2018, the Brazilian Autarchy that oversees pension funds called PREVIC (Complementary Pension National Superintendence) approved a planned settlement of the major defined benefit plans. The transaction was completed in 2019 and reduced the defined benefit obligation by 169 and fair value of the plan asset by 143. The settlement gain of 26 was recognized in cost of sales and selling, general and administrative expenses.

Europe

Certain European operating subsidiaries maintain primarily unfunded defined benefit pension plans for a certain number of employees. Benefits are based on such employees' length of service and applicable pension table under the terms of individual agreements. Some of these unfunded plans have been closed to new entrants and replaced by defined contribution pension plans for active members financed by employer and employee contributions.

As from December 2015 new Belgian legislation modifies the minimum guaranteed rates of return applicable to Belgian defined contribution plans. For insured plans, the rates of 3.25% on employer contributions and 3.75% on employee contributions will continue to apply to the accumulated pre-2016 contributions. For contributions paid as from January 1, 2016, a new variable minimum guaranteed rate of return applies. From 2016 through 2019, the minimum guaranteed rate of return was 1.75% and this is also the best estimate for 2020. Due to the statutory minimum guaranteed return, Belgian defined contribution plans do not meet the definition of defined contribution plans under IFRS. Therefore, the Belgian defined contribution plans are classified as defined benefit plans.

Others

A very limited number of defined benefit plans are in place in other countries (such as South Africa, Mexico, Kazakhstan, Ukraine and Morocco).

On January 1, 2018, ArcelorMittal South Africa settled its defined benefit plan. This discontinued its participation in the fund and, therefore, ArcelorMittal South Africa no longer has any financial obligation to ensure the funding of the remaining plan. Accordingly, the related benefit obligation, the plan assets and unrecoverable surplus were derecognized from the 2018 consolidated statements of financial position. The only remaining pension plans for ArcelorMittal South Africa are defined contribution pension plans that are financed by employer and employee contributions.

The majority of the funded defined benefit pension plans described earlier provide benefit payments from trustee-administered funds. ArcelorMittal also sponsors a number of unfunded plans where the Company meets the benefit payment obligation as it falls due. Plan assets held in trusts are legally separated from the Company and are governed by local regulations and practice in each country, as is the nature of the relationship between the Company and the governing bodies and their composition. In general terms, governing bodies are required by law to act in the best interest of the plan members and are responsible for certain tasks related to the plan (e.g. setting the plan's investment policy).

In case of the funded pension plans, the investment positions are managed within an asset-liability matching ("ALM") framework that has been developed to achieve long-term investments that are in line with the obligations of the pension plans.

A long-term investment strategy has been set for ArcelorMittal’s major funded pension plans, with its asset allocation comprising of a mixture of equity securities, fixed income securities, real estate and other appropriate assets. This recognizes that different asset classes are likely to produce different long-term returns and some asset classes may be more volatile than others. The long-term investment strategy ensures, in particular, that investments are adequately diversified.

The following tables detail the reconciliation of defined benefit obligation (“DBO”), plan assets, irrecoverable surplus and statements of financial position.

	Year ended December 31, 2019					
	Total	United States	Canada	Brazil	Europe	Other
Change in benefit obligation						
Benefit obligation at beginning of the period	9,872	3,266	3,001	724	2,716	165
Current service cost	114	26	21	—	58	9
Interest cost on DBO	367	130	110	58	47	22
Past service cost - Plan amendments	4	—	—	2	2	—
Plan participants’ contribution	2	—	—	—	2	—
Settlements	(172)	—	—	(169)	(3)	—
Actuarial (gain) loss	1,001	342	277	121	176	85
Demographic assumptions	*16*	*2*	*43*	—	*(29)*	—
Financial assumptions	*949*	*334*	*213*	*138*	*209*	*55*
Experience adjustment	*36*	*6*	*21*	*(17)*	*(4)*	*30*
Benefits paid	(652)	(261)	(201)	(42)	(127)	(21)
Foreign currency exchange rate differences and other movements	93	2	152	(30)	(41)	10
Benefit obligation at end of the period	10,629	3,505	3,360	664	2,830	270
Change in plan assets						
Fair value of plan assets at beginning of the period	6,877	2,676	2,664	655	882	—
Interest income on plan assets	256	95	92	54	15	—
Return on plan assets greater than discount rate	808	360	305	79	64	—
Employer contribution	77	7	27	2	41	—
Plan participants’ contribution	2	—	—	—	2	—
Settlement	(146)	—	—	(143)	(3)	—
Benefits paid	(541)	(257)	(200)	(42)	(42)	—
Foreign currency exchange rate differences and other movements	62	—	133	(29)	(42)	—
Fair value of plan assets at end of the period	7,395	2,881	3,021	576	917	—
Present value of the wholly or partly funded obligation	(9,012)	(3,476)	(3,345)	(663)	(1,528)	—
Fair value of plan assets	7,395	2,881	3,021	576	917	—
Net present value of the wholly or partly funded obligation	(1,617)	(595)	(324)	(87)	(611)	—
Present value of the unfunded obligation	(1,617)	(29)	(15)	(1)	(1,302)	(270)
Prepaid due to unrecoverable surpluses	(30)	—	(25)	(2)	(3)	—
Net amount recognized	(3,264)	(624)	(364)	(90)	(1,916)	(270)
Net assets related to funded obligations	25	8	13	—	4	—
Recognized liabilities	(3,289)	(632)	(377)	(90)	(1,920)	(270)
Change in unrecoverable surplus						
Unrecoverable surplus at beginning of the period	(27)	—	(21)	(3)	(3)	—
Interest cost on unrecoverable surplus	(1)	—	(1)	—	—	—
Change in unrecoverable surplus in excess of interest	(1)	—	(2)	1	—	—
Exchange rates changes	(1)	—	(1)	—	—	—
Unrecoverable surplus at end of the period	(30)	—	(25)	(2)	(3)	—

(millions of U.S. dollars, except share and per share data)

	Year ended December 31, 2018					
	Total	United States	Canada	Brazil	Europe	Other
Change in benefit obligation						
Benefit obligation at beginning of the period	10,835	3,508	3,481	766	2,990	90
Current service cost	136	31	25	3	68	9
Interest cost on DBO	360	120	110	68	42	20
Past service cost - Plan amendments	25	25	—	—	—	—
Plan participants' contribution	3	—	1	—	2	—
Settlements	(76)	—	(61)	—	—	(15)
Actuarial (gain) loss	(290)	(159)	(72)	50	(104)	(5)
Demographic assumptions	*20*	*9*	*1*	*—*	*10*	*—*
Financial assumptions	*(311)*	*(163)*	*(75)*	*38*	*(92)*	*(19)*
Experience adjustment	*1*	*(5)*	*2*	*12*	*(22)*	*14*
Benefits paid	(671)	(259)	(203)	(48)	(144)	(17)
Termination benefits	6	—	—	—	6	—
Foreign currency exchange rate differences and other movements	(456)	—	(280)	(115)	(144)	83
Benefit obligation at end of the period	9,872	3,266	3,001	724	2,716	165
Change in plan assets						
Fair value of plan assets at beginning of the period	7,822	2,993	3,167	723	924	15
Interest income on plan assets	267	92	97	63	15	—
Return on plan assets greater/(less) than discount rate	(333)	(197)	(142)	20	(15)	1
Employer contribution	151	42	59	6	44	—
Plan participants' contribution	3	—	1	—	2	—
Settlements	(78)	—	(63)	—	—	(15)
Benefits paid	(550)	(254)	(203)	(48)	(45)	—
Foreign currency exchange rate differences and other movements	(405)	—	(252)	(109)	(43)	(1)
Fair value of plan assets at end of the period	6,877	2,676	2,664	655	882	—
Present value of the wholly or partly funded obligation	(8,537)	(3,238)	(2,988)	(723)	(1,500)	(88)
Fair value of plan assets	6,877	2,676	2,664	655	882	—
Net present value of the wholly or partly funded obligation	(1,660)	(562)	(324)	(68)	(618)	(88)
Present value of the unfunded obligation	(1,335)	(28)	(13)	(1)	(1,216)	(77)
Prepaid due to unrecoverable surpluses	(27)	—	(21)	(3)	(3)	—
Net amount recognized	(3,022)	(590)	(358)	(72)	(1,837)	(165)
Net assets related to funded obligations	12	—	9	—	3	—
Recognized liabilities	(3,034)	(590)	(367)	(72)	(1,840)	(165)
Change in unrecoverable surplus						
Unrecoverable surplus at beginning of the period	(34)	—	(23)	(3)	(6)	(2)
Interest cost on unrecoverable surplus	(1)	—	(1)	—	—	—
Change in unrecoverable surplus in excess of interest	6	—	2	(1)	3	2
Exchange rates changes	2	—	1	1	—	—
Unrecoverable surplus at end of the period	(27)	—	(21)	(3)	(3)	—

The following tables detail the components of net periodic pension cost:

	Year ended December 31, 2019					
Net periodic pension cost (benefit)	Total	United States	Canada	Brazil	Europe	Others
Current service cost	114	26	21	—	58	9
Past service cost - Plan amendments	4	—	—	2	2	—
Past service cost - Settlements	(26)	—	—	(26)	—	—
Net interest cost/(income) on net DB liability/(asset)	112	35	19	4	32	22
Total	204	61	40	(20)	92	31

	Year ended December 31, 2018					
Net periodic pension cost (benefit)	Total	United States	Canada	Brazil	Europe	Others
Current service cost	136	31	25	3	68	9
Past service cost - Plan amendments	25	25	—	—	—	—
Past service cost - Settlements	2	—	2	—	—	—
Cost of termination benefits	6	—	—	—	6	—
Net interest cost/(income) on net DB liability/(asset)	94	28	14	5	27	20
Total	263	84	41	8	101	29

	Year ended December 31, 2017					
Net periodic pension cost (benefit)	Total	United States	Canada	Brazil	Europe	Others
Current service cost	125	32	26	4	60	3
Past service cost - Plan amendments	14	—	13	—	1	—
Net interest cost/(income) on net DB liability/(asset)	106	48	13	4	31	10
Total	245	80	52	8	92	13

Other post-employment benefits and other long-term employee benefits ("OPEB")

This section includes post employment employees benefits that are not disclosed above (i.e. includes lump sum benefits which are mandatory by law, medical insurance and life insurance). In addition, this section includes all other long-term employee benefits.

ArcelorMittal's principal operating subsidiaries in the United States, Canada, Europe and certain other countries, provide other post-employment benefits and other long-term employee benefits, including medical benefits and life insurance benefits, work medals and retirement indemnity plans, to employees and retirees. Substantially all union-represented ArcelorMittal USA employees hired before June 2016 are covered under post-employment life insurance and medical benefit plans that require a level of cost sharing from retirees. The post-employment life insurance benefit formula used in the determination of post-employment benefit cost is primarily based on a specific amount for hourly employees. ArcelorMittal USA does not pre-fund most of these post-employment benefits.

ArcelorMittal's USA new labor agreement with the United Steelworkers ("USW") was ratified in 2018. This labor agreement is in effect until September 1, 2022. There were minor changes for OPEB in the new contract mainly related to healthcare post-employment premiums paid by participants. The changes resulted in a gain of 10 recorded in cost of sales in the consolidated statement of operations in 2018.

ArcelorMittal USA's labor contract requires payments into a Voluntary Employee Beneficiary Association ("VEBA") trust based on 5% of AMUSA's operating income. Contributions can also be withdrawn from the trust to reimburse the company for benefits paid above certain levels. In 2018 and 2019 withdrawals exceeded contributions. The Company has significant assets mostly in the VEBA post-employment benefit plan. These assets consist of 69% in fixed income and 31% in equities. The total fair value of the assets in the VEBA trust was 451 as of December 31, 2019.

(millions of U.S. dollars, except share and per share data)

Summary of changes in the other post-employment benefit obligation and changes in plan assets are as follows:

	Year ended December 31, 2019				
	Total	United States	Canada	Europe	Others
Change in benefit obligation					
Benefit obligation at beginning of the period	4,098	2,907	591	531	69
Current service cost	80	40	9	28	3
Interest cost on DBO	163	124	22	11	6
Plan participants' contribution	29	29	—	—	—
Actuarial (gain) loss	129	29	67	26	7
Demographic assumptions	*4*	*(11)*	*15*	—	—
Financial assumptions	*256*	*169*	*53*	*25*	*9*
Experience adjustment	*(131)*	*(129)*	*(1)*	*1*	*(2)*
Benefits paid	(242)	(170)	(31)	(37)	(4)
Foreign currency exchange rate differences and other movements	37	17	30	(13)	3
Benefit obligation at end of the period	4,294	2,976	688	546	84
Change in plan assets					
Fair value of plan assets at beginning of the period	498	491	—	7	—
Interest income on plan assets	20	20	—	—	—
Return on plan assets greater/(less) than discount rate	37	37	—	—	—
Employer contribution	(25)	(25)	—	—	—
Plan participants' contribution	29	29	—	—	—
Benefits paid	(57)	(56)	—	(1)	—
Fair value of plan assets at end of the period	502	496	—	6	—
Present value of the wholly or partly funded obligation	(575)	(531)	—	(44)	—
Fair value of plan assets	502	496	—	6	—
Net present value of the wholly or partly funded obligation	(73)	(35)	—	(38)	—
Present value of the unfunded obligation	(3,719)	(2,445)	(688)	(502)	(84)
Net amount recognized	(3,792)	(2,480)	(688)	(540)	(84)

	Year ended December 31, 2018				
	Total	United States	Canada	Europe	Others
Change in benefit obligation					
Benefit obligation at beginning of the period	4,686	3,269	679	579	159
Current service cost	85	49	10	25	1
Interest cost on DBO	155	120	21	12	2
Past service cost - Plan amendments	(13)	(10)	(1)	(2)	—
Past service cost - Curtailments	(2)	—	—	(2)	—
Plan participants' contribution	32	32	—	—	—
Actuarial (gain) loss	(395)	(365)	(32)	3	(1)
Demographic assumptions	*(11)*	*(14)*	*2*	*1*	*—*
Financial assumptions	*(320)*	*(285)*	*(24)*	*(8)*	*(3)*
Experience adjustment	*(64)*	*(66)*	*(10)*	*10*	*2*
Benefits paid	(266)	(188)	(34)	(41)	(3)
Foreign currency exchange rate differences and other movements	(184)	—	(52)	(43)	(89)
Benefit obligation at end of the period	4,098	2,907	591	531	69
Change in plan assets					
Fair value of plan assets at beginning of the period	546	538	—	8	—
Interest income on plan assets	17	17	—	—	—
Return on plan assets greater/(less) than discount rate	(33)	(32)	—	(1)	—
Employer contribution	(3)	(3)	—	—	—
Plan participants' contribution	32	32	—	—	—
Benefits paid	(63)	(61)	—	(2)	—
Foreign currency exchange rate differences and other movements	2	—	—	2	—
Fair value of plan assets at end of the period	498	491	—	7	—
Present value of the wholly or partly funded obligation	(589)	(528)	—	(61)	—
Fair value of plan assets	498	491	—	7	—
Net present value of the wholly or partly funded obligation	(91)	(37)	—	(54)	—
Present value of the unfunded obligation	(3,509)	(2,379)	(591)	(470)	(69)
Net amount recognized	(3,600)	(2,416)	(591)	(524)	(69)

The following tables detail the components of net periodic other post-employment cost:

	Year ended December 31, 2019				
Components of net periodic OPEB cost (benefit)	Total	United States	Canada	Europe	Others
Current service cost	80	40	9	28	3
Net interest cost/(income) on net DB liability/(asset)	143	104	22	11	6
Actuarial (gains)/losses recognized during the year	8	—	—	8	—
Total	231	144	31	47	9

	Year ended December 31, 2018				
Components of net periodic OPEB cost (benefit)	Total	United States	Canada	Europe	Others
Current service cost	85	49	10	25	1
Past service cost - Plan amendments	(13)	(10)	(1)	(2)	—
Past service cost - Curtailments	(2)	—	—	(2)	—
Net interest cost/(income) on net DB liability/(asset)	138	103	21	12	2
Actuarial (gains)/losses recognized during the year	7	—	—	7	—
Total	215	142	30	40	3

	Year ended December 31, 2017				
Components of net periodic OPEB cost (benefit)	Total	United States	Canada	Europe	Others
Current service cost	100	58	9	26	7
Past service cost - Plan amendments	4	—	1	2	1
Net interest cost/(income) on net DB liability/(asset)	204	159	23	11	11
Actuarial (gains)/losses recognized during the year	2	—	—	2	—
Total	310	217	33	41	19

The following tables detail where the expense is recognized in the consolidated statements of operations:

	Year ended December 31,		
	2019	2018	2017
Net periodic pension cost	204	263	245
Net periodic OPEB cost	231	215	310
Total	435	478	555
Cost of sales	142	212	220
Selling, general and administrative expenses	30	34	23
Financing costs - net	263	232	312
Total	435	478	555

Plan Assets

The weighted-average asset allocations for the funded defined benefit plans by asset category were as follows:

	Year ended December 31, 2019			
	United States	Canada	Brazil	Europe
Equity Securities	40%	44%	6%	2%
- Asset classes that have a quoted market price in an active market	*13%*	*34%*	*6%*	*2%*
- Asset classes that do not have a quoted market price in an active market	*27%*	*10%*	—	—
Fixed Income Securities (including cash)	43%	48%	88%	73%
- Asset classes that have a quoted market price in an active market	—	*42%*	*88%*	*73%*
- Asset classes that do not have a quoted market price in an active market	*43%*	*6%*	—	—
Real Estate	3%	6%	1%	—
- Asset classes that have a quoted market price in an active market	—	—	*1%*	—
- Asset classes that do not have a quoted market price in an active market	*3%*	*6%*	—	—
Other	14%	2%	5%	25%
- Asset classes that have a quoted market price in an active market	*5%*	—	*5%*	*5%*
- Asset classes that do not have a quoted market price in an active market	*9%*	*2%*	—	*20%* [1]
Total	100%	100%	100%	100%

	Year ended December 31, 2018			
	United States	Canada	Brazil	Europe
Equity Securities	35%	42%	—	3%
- Asset classes that have a quoted market price in an active market	12%	33%	—	3%
- Asset classes that do not have a quoted market price in an active market	23%	9%	—	—
Fixed Income Securities (including cash)	46%	50%	78%	72%
- Asset classes that have a quoted market price in an active market	—	44%	78%	67%
- Asset classes that do not have a quoted market price in an active market	46%	6%	—	5%
Real Estate	5%	6%	1%	—
- Asset classes that have a quoted market price in an active market	—	—	1%	—
- Asset classes that do not have a quoted market price in an active market	5%	6%	—	—
Other	14%	2%	21%	25%
- Asset classes that have a quoted market price in an active market	4%	2%	21%	4%
- Asset classes that do not have a quoted market price in an active market	10%	—	—	21%
Total	100%	100%	100%	100%

1. The percentage consists primarily of assets from insurance contracts in Belgium.

These assets do not include direct investments in ArcelorMittal stock or ArcelorMittal bonds.These assets may include ArcelorMittal shares or bonds held by mutual fund investments. The invested assets produced an actual return of 1,121 in 2019 and a loss of 82 in 2018.

The Finance and Retirement Committees of the Boards of Directors for the respective operating subsidiaries have general supervisory authority over the respective trust funds. These committees have established asset allocation targets for the period as described below. Asset managers are permitted some flexibility to vary the asset allocation from the long-term investment strategy within control ranges agreed upon.

	Year ended December 31, 2019			
	United States	Canada	Brazil	Europe
Equity Securities	38%	45%	6%	3%
Fixed Income Securities (including cash)	44%	48%	88%	72%
Real Estate	3%	6%	1%	—
Other	15%	1%	5%	25%[1]
Total	100%	100%	100%	100%

1. The percentage consists primarily of assets from insurance contracts in Belgium.

Assumptions used to determine benefit obligations at December 31,

	Pension Plans			Other Post-employment Benefits		
	2019	2018	2017	2019	2018	2017
Discount rate						
Range	1.00% - 10.50%	1.75% - 16.00%	1.50% - 15.00%	1.00% - 7.25%	1.75% - 9.50%	1.30% - 7.65%
Weighted average	2.90%	3.80%	3.45%	3.06%	3.98%	3.60%
Rate of compensation increase						
Range	1.90% - 10.00%	2.00% - 10.00%	1.80% - 9.00%	1.60% - 4.80%	2.00% - 4.80%	2.00% - 4.50%
Weighted average	2.80%	2.85%	2.81%	2.95%	3.24%	3.32%

	Other Post-employment Benefits		
	2019	2018	2017
Healthcare cost trend rate assumed			
Range	1.80% - 5.00%	1.80% - 8.00%	1.80% - 5.00%
Weighted average	4.42%	4.46%	4.48%

Cash contributions and maturity profile of the plans

In 2020, the Company expects its cash contributions to amount to 269 for pension plans, 153 for other post-employment benefits plans, 110 for defined contribution plans and 85 for United States multi-employer plans. Cash contributions to defined contribution plans and to United States multi-employer plans sponsored by the Company, were respectively 120 and 85 in 2019.

At December 31, 2019, the weighted average duration of the liabilities related to the pension and other post-employment benefits plans were 12 years (2018: 12 years) and 15 years (2018: 14 years), respectively.

Risks associated with defined benefit plans

Through its defined benefit pension plans and OPEB plans, ArcelorMittal is exposed to a number of risks, the most significant of which are detailed below:

Changes in bond yields

A decrease in corporate bond yields will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

Asset volatility

The plan liabilities are calculated using a discount rate set with reference to corporate bond yields; if plan assets underperform this yield, this will create a deficit. In most countries with funded plans, plan assets hold a significant portion of equities, which are expected to outperform corporate bonds in the long-term but contribute to volatility and risk in the short-term. As the plans mature, ArcelorMittal intends to reduce the level of investment risk by investing more in assets that better match the liabilities. However, ArcelorMittal believes that due to the long-term nature of the plan liabilities, a level of continuing equity investment is an appropriate element of a long-term strategy to manage the plans efficiently.

Life expectancy

Most plans provide benefits for the life of the covered members, so increases in life expectancy will result in an increase in the plans' benefit obligations.

Assumptions regarding future mortality rates have been set considering published statistics and, where possible, ArcelorMittal's own experience.

The current longevities at retirement underlying the values of the defined benefit obligation were approximately 22.

Healthcare cost trend rate

The majority of the OPEB plans' benefit obligations are linked to the change in the cost of various health care components. Future healthcare cost will vary based on several factors including price inflation, utilization rate, technology advances, cost shifting and cost containing mechanisms. A higher healthcare cost trend would lead to higher OPEB plan benefit obligations.

Sensitivity analysis

The following information illustrates the sensitivity to a change of the significant actuarial assumptions related to ArcelorMittal's pension plans (as of December 31, 2019, the defined benefit obligation for pension plans was 10,629):

	Effect on 2020 Pre-Tax Pension Expense (sum of service cost and interest cost)	Effect on December 31, 2019 DBO
Change in assumption		
100 basis points decrease in discount rate	(54)	1,321
100 basis points increase in discount rate	42	(1,081)
100 basis points decrease in rate of compensation	(13)	(178)
100 basis points increase in rate of compensation	14	180
1 year increase of the expected life of the beneficiaries	10	302

The following table illustrates the sensitivity to a change of the significant actuarial assumptions related to ArcelorMittal's OPEB plans (as of December 31, 2019 the defined benefit obligation for post-employment benefit plans was 4,294):

	Effect on 2020 Pre-Tax OPEB Expense (sum of service cost and interest cost)	Effect on December 31, 2019 DBO
Change in assumption		
100 basis points decrease in discount rate	(3)	682
100 basis points increase in discount rate	2	(536)
100 basis points decrease in healthcare cost trend rate	(29)	(450)
100 basis points increase in healthcare cost trend rate	39	566
1 year increase of the expected life of the beneficiaries	7	162

The above sensitivities reflect the effect of changing one assumption at a time. Actual economic factors and conditions often affect multiple assumptions simultaneously, and the effects of changes in key assumptions are not necessarily linear.

Multi-employer plans

ArcelorMittal participates in one material multi-employer pension plan in the United States. Under multi-employer plans, several participating employers make contributions into a pension plan. The assets of the plan are not limited to the participants of a particular employer. If an employer is unable to make required contributions to the plan, any unfunded obligations may be borne by the remaining employers. Additionally, if an employer withdraws from the plan, it may be required to pay an amount based on the underfunded status of the plan. As of December 31, 2018, which is the latest period for which information is available, the multi-employer pension plan had a total actuarial liability of 5,504 and assets with market value of 4,504 for a funded ratio of about 82%. ArcelorMittal represented approximately 31% of total contributions made to the plan in the past three years.

8.3 Share-based payments

ArcelorMittal issues equity-settled share-based payments to certain employees, including stock options, RSUs and PSUs. Equity-settled share-based payments are measured at fair value (excluding the effect of non market-based vesting conditions) at the grant date. The fair value determined at the grant date of the equity-settled share-based payments is expensed on a graded vesting basis over the vesting period, based on the Company's estimate of the shares that will eventually vest and adjusted for the effect of non market-based vesting conditions. For stock options, RSUs and PSUs, fair value is measured using the Black-Scholes-Merton pricing model and the market value of the shares at the grant date after deduction of dividend payments during the vesting period, respectively. Where the fair value calculation requires modeling of the Company's performance against other market index, fair value is measured using the Monte Carlo pricing model to estimate the forecasted target performance goal for the company and its peer companies. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioral considerations. In addition, the expected annualized volatility has been set by reference to the implied volatility of options available on ArcelorMittal shares in the open market, as well as, historical patterns of volatility. For the RSUs and PSUs, the fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight line method over the vesting period and adjusted for the effect of non market-based vesting conditions.

On May 22, 2017, ArcelorMittal completed the consolidation of each three existing shares in ArcelorMittal without

nominal value into one share without nominal value. As a result of this reverse stock split, the outstanding number of stock options, PSUs and RSUs per employee has been recast for prior periods.

Stock Option Plans

Prior to the May 2011 annual general meeting of shareholders ("AGM") adoption of the ArcelorMittal Equity Incentive Plan described below, ArcelorMittal's equity-based incentive plan took the form of a stock option plan known as the Global Stock Option Plan.

Under the terms of the ArcelorMittal Global Stock Option Plan 2009-2018 (which replaced the ArcelorMittal Shares plan that expired in 2009), ArcelorMittal may grant options to purchase common shares to senior management of ArcelorMittal and its associates for up to 100,000,000 (33,333,333 shares after reverse stock split) shares of common shares. The exercise price of each option equals not less than the fair market value of ArcelorMittal shares on the grant date, with a maximum term of 10 years. Options are granted at the discretion of ArcelorMittal's Appointments, Remuneration, Corporate Governance and Sustainability ("ARCGS") Committee, or its delegate. The options vest either ratably upon each of the first three anniversaries of the grant date, or, in total, upon the death, disability or retirement of the participant.

Grant date	Exercise prices (per option)
August 2010	$91.98

No options were granted during the years ended December 31, 2019, 2018, and 2017. The compensation expense recognized for stock option plans was nil for each of the years ended December 31, 2019, 2018 and 2017.

Option activity with respect to ArcelorMittal Shares and ArcelorMittal Global Stock Option Plan 2009-2018 is summarized below as of and for each of the years ended December 31, 2019, 2018 and 2017:

	Number of Options	Range of Exercise Prices (per option)	Weighted Average Exercise Price (per option)
Outstanding, December 31, 2016	4,682,534	63.42 – 235.32	153.19
Expired	(1,397,659)	63.42 – 235.32	170.40
Outstanding, December 31, 2017	3,284,875	63.42 – 235.32	145.86
Expired	(1,295,500)	63.42 – 235.32	215.77
Outstanding, December 31, 2018	1,989,375	91.98 – 109.14	100.33
Expired	(1,084,985)	91.98 – 109.14	107.29
Outstanding, December 31, 2019	904,390	91.98	91.98
Exercisable, December 31, 2017	3,284,875	63.42 – 235.32	145.86
Exercisable, December 31, 2018	1,989,375	91.98 – 109.14	100.33
Exercisable, December 31, 2019	904,390	91.98	91.98

The following table summarizes information about total stock options of the Company outstanding as of December 31, 2019:

			Options Outstanding	
Exercise Price (per option)	Number of options	Remaining contractual life (in years)	Options exercisable (number of options)	Maturity
91.98	904,390	0.59	904,390	August 3, 2020

Long-Term Incentives: Equity-Based Incentives (Share Unit Plans)

On May 10, 2011, the AGM approved the ArcelorMittal Equity Incentive Plan, a new equity-based incentive plan that replaced the Global Stock Option Plan. The ArcelorMittal Equity Incentive Plan is intended to align the interests of the Company's shareholders and eligible employees by allowing them to participate in the success of the Company. The ArcelorMittal Equity Incentive Plan provides for the grant of RSUs and PSUs to eligible Company employees (including the Executive Officers) and is designed to incentivize employees, improve the Company's long-term performance and retain key employees.

The maximum number of PSUs (and RSUs previously) available for grant during any given year is subject to the prior approval of the Company's shareholders at the AGM. The 2017 Cap for the number of PSUs that may be allocated to the CEO Office and other retention based grants below the CEO Office level was approved at the AGM on May 10, 2017 at a maximum of 3,000,000 shares. The 2018 Cap for the number of PSUs that may be allocated to the CEO Office and other retention based grants below the CEO Office level, was approved at the AGM on May 9, 2018 at a maximum of 1,500,000 shares. Conditions of the 2019 grant were as follows:

The 2019 Cap for the number of PSUs that may be allocated to the CEO Office and other performance based grants below the CEO Office level, was approved at the annual shareholders' meeting held on May 7, 2019 at a maximum of 2,500,000 shares.

ArcelorMittal Equity Incentive Plan

RSUs granted under the ArcelorMittal Equity Incentive Plan are designed to provide a retention incentive to eligible employees. RSUs are subject to "cliff vesting" after three years, with 100% of the grant vesting on the third anniversary of the grant contingent upon the continued active employment of the eligible employee within the Company.

The grant of PSUs under the ArcelorMittal Equity Incentive Plan aims to serve as an effective performance-enhancing scheme based on the employee's contribution to the eligible achievement of the Company's strategy. Awards in connection with PSUs are subject to the fulfillment of cumulative performance criteria (such as return on capital employed ("ROCE"), total shareholders return ("TSR"), earnings per share ("EPS") and gap to competition) over a three year period from the date of the PSU grant. The employees eligible to receive PSUs are a sub-set of the group of employees eligible to receive RSUs.

	CEO Office			Other Executive Officers	
2019 Grant	• PSUs with a three year performance period			• PSUs with a three year performance period	
	• Value at grant 100% of base salary for the CEO and the President and CFO				
	• Vesting conditions:			• Vesting conditions	
		Threshold	Target		Target
	TSR/EPS vs. peer group	100% median	≥120% median	ROCE	100% target 100% vesting
	TSR vs. S&P 500	Performance equal to Index	≥Performance equal to Index + 2% outperformance	Gap to competition (where applicable)	100% target 100% vesting
	Vesting percentage	50%	100%		

Awards made in previous financial years which have not yet reached the end of the vesting period

The Company's Long-Term Incentive Plan for senior management including Executive Officers follows the Company's strategy.

In 2016, in order to ensure achievement of the Action 2020 plan, ArcelorMittal made a special grant ("Special Grant") to qualifying employees (including the Executive Officers), instead of the standard grant. The value of the Special Grant at grant date is based generally on a specified percentage of the base salary depending on the position of the employee at grant date. The vesting is subject to continued active employment within the ArcelorMittal group and to yearly performance of ROCE targets and other strategic objectives within the business units.

The plans in 2018, 2017 and 2016 are summarized below:

2016 Special Grant

CEO Office

- PSUs with a five-year performance period, 50% vesting after three-year performance period and 50% after additional two-year performance period
- Performance criteria: 50% TSR (½ vs. S&P 500 and ½ vs. peer group) and 50% EPS vs. peer group
- Value at grant: 150% of base salary for the CEO and the President and CFO
- Vesting conditions:

	Threshold	Target
TSR/EPS vs. peer group	100% median	≥120% median
TSR vs. S&P 500	Performance equal to Index	≥Performance equal to Index + 2% outperformance
Vesting percentage	50%	100%

Other Executive Officers

- PSUs with a five-year performance period, 50% vesting after three-year performance period and 50% after additional two-year performance period
- Performance criteria: ROCE and Gap to competition in some areas
  one target grant: a share will vest if performance is met at target
  one overperformance grant: a share will vest if performance exceeds 120%
- Vesting conditions:

Performance	100%	≥120%
Target award vesting	100%	100%
Overperformance award (=20% of target award)	-	100%

2017 Grant

CEO Office

- PSUs with a three-year performance period
- Performance criteria: 50% TSR (½ vs. S&P 500 and ½ vs. peer group) and 50% EPS vs. peer group
- Value at grant: 100% of base salary for the CEO and the President and CFO
- Vesting conditions:

	Threshold	Target
TSR/EPS vs. peer group	100% median	≥120% median
TSR vs. S&P 500	Performance equal to Index	≥Performance equal to Index + 2% outperformance
Vesting percentage	50%	100%

Other Executive Officers

- PSUs with a three-year performance period
- Performance criteria: TSR and Gap to competition in some areas
- Vesting conditions:

	Threshold	Target
TSR vs. peer group	100% median 50% vesting	≥120% median 100% vesting
Gap to competition (where applicable)	-	100% target 100% vesting

2018 Grant

CEO Office

- PSUs with a three year performance period
- Value at grant 100% of base salary for the CEO and the President and CFO
- Vesting conditions:

	Threshold	Target
TSR/EPS vs. peer group	100% median	≥120% median
TSR vs. S&P 500	Performance equal to Index	≥Performance equal to Index + 2% outperformance
Vesting percentage	50%	100%

Other Executive Officers

- PSUs with a three year performance period
- Vesting conditions

	Target
ROCE	100% target 100% vesting
Gap to competition (where applicable)	100% target 100% vesting

The following table summarizes the Company's share unit plans outstanding as of December 31, 2019:

At Grant date						Number of shares issued as of December 31, 2019	
Grant date	Type of plan	Number of shares	Number of beneficiaries	Maturity	Fair value per share	Shares outstanding	Shares forfeited
December 16, 2019	PSU	1,760,350	517	January 1, 2023	18.57	1,760,350	—
December 16, 2019	CEO Office	172,517	2	January 1, 2023	14.89	172,517	—
December 20, 2018	PSU	1,358,750	524	January 1, 2022	21.31	1,298,550	60,200
December 20, 2018	CEO Office	134,861	2	January 1, 2022	16.58	134,861	—
December 20, 2017	PSU	1,081,447	527	January 1, 2021	18.42	958,082	123,365
December 20, 2017	CEO Office	90,084	2	January 1, 2021	22.85	90,084	—
June 30, 2016	PSU II	3,472,355	554	January 1, 2021	13.17	2,751,076	721,279
June 30, 2016	CEO PSU II	153,268	2	January 1, 2022	16.62	153,268	—
June 30, 2016	CEO PSU I	153,268	2	January 1, 2020	10.68	153,268	—
Total		8,376,900			$10.68 – $22.85	7,472,056	904,844

The compensation expense recognized for RSUs and PSUs was nil, 31 and 31 for the years ended December 31, 2019, 2018 and 2017.

Share unit plan activity is summarized below as of and for each year ended December 31, 2019, 2018 and 2017:

	RSUs		PSUs	
	Number of shares	Fair value per share	Number of shares	Fair value per share
Outstanding, December 31, 2016	650,254	21.00	8,039,494	15.08
Granted [1]	—	—	1,199,338	19.25
Exited	(303,550)	30.69	(204,855)	43.34
Forfeited	(40,699)	20.32	(437,141)	18.33
Outstanding, December 31, 2017	306,005	11.49	8,596,836	14.83
Granted [2]	—	—	1,577,865	21.32
Exited	(288,721)	11.49	(412,893)	28.98
Forfeited	(17,284)	11.49	(391,348)	16.41
Outstanding, December 31, 2018	—	—	9,370,460	15.34
Granted [3]	—	—	2,018,176	17.96
Exited	—	—	(2,677,011)	13.49
Forfeited	—	—	(1,239,569)	14.25
Outstanding, December 31, 2019	—	—	7,472,056	16.76

1. Including 27,807 over-performance shares granted for the targets achievement of the PSU grant September 27, 2013.
2. Including 56,606 over-performance shares granted for the targets achievement of the PSU grant September 17, 2014 and 27,648 of the GMB PSU grant June 30, 2015.
3. Including 85,309 over-performance shares granted for the targets achievement of the PSU grant December 18, 2015.

NOTE 9: PROVISIONS, CONTINGENCIES AND COMMITMENTS

ArcelorMittal recognizes provisions for liabilities and probable losses that have been incurred when it has a present legal or constructive obligation as a result of past events, it is probable that the Company will be required to settle the obligation and a reliable estimate of the amount of the obligation can be made. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognized as a financing cost. Future operating expenses or losses are excluded from recognition as provisions as they do not meet the definition of a liability. Contingent assets and contingent liabilities are excluded from recognition in the consolidated statements of financial position.

Provisions for onerous contracts are recorded in the consolidated statements of operations when it becomes known that the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received. Assets dedicated to the onerous contracts are tested for impairment before recognizing a separate provision for the onerous contract.

Provisions for restructuring are recognized when and only when a detailed formal plan exists and a valid expectation in those affected by the restructuring has been raised, by starting to implement the plan or announcing its main features.

ArcelorMittal records asset retirement obligations ("ARO") initially at the fair value of the legal or constructive obligation in the period in which it is incurred and capitalizes the ARO by increasing the carrying amount of the related non-current asset. The fair value of the obligation is determined as the discounted value of the expected future cash flows. The liability is accreted to its present value through net financing cost and the capitalized cost is depreciated in accordance with the Company's depreciation policies for property, plant and equipment. Subsequently, when reliably measurable, ARO is recorded on the consolidated statements of financial position increasing the cost of the asset and the fair value of the related obligation. Foreign exchange gains or losses on AROs denominated in foreign currencies are recorded in the consolidated statements of operations.

ArcelorMittal is subject to changing and increasingly stringent environmental laws and regulations concerning air emissions, water discharges and waste disposal, as well as certain remediation activities that involve the clean-up of soil and groundwater. ArcelorMittal is currently engaged in the investigation and remediation of environmental contamination at a number of its facilities. Most of these are legacy obligations arising from acquisitions.

Environmental costs that relate to current operations or to an existing condition caused by past operations, and which do not contribute to future revenue generation or cost reduction, are expensed. Liabilities are recorded when environmental assessments and/or remedial efforts are probable and the cost can be reliably estimated based on ongoing engineering studies, discussions with the environmental authorities and other assumptions relevant to the nature and extent of the remediation that may be required. The ultimate cost to ArcelorMittal is dependent upon factors beyond its control such as the scope and methodology of the remedial action requirements to be established by environmental and public health authorities, new laws or government regulations, rapidly changing technology and the outcome of any potential related litigation. Environmental liabilities are discounted if the aggregate amount of the obligation and the amount and timing of the cash payments are fixed or reliably determinable.

The estimates of loss contingencies for environmental matters and other contingencies are based on various judgments and assumptions including the likelihood, nature, magnitude and timing of assessment, remediation and/or monitoring activities and the probable cost of these activities. In some cases, judgments and assumptions are made relating to the obligation or willingness and ability of third parties to bear a proportionate or allocated share of cost of these activities, including third parties who sold assets to ArcelorMittal or purchased assets from it subject to environmental liabilities. ArcelorMittal also considers, among other things, the activity to date at particular sites, information obtained through consultation with applicable regulatory authorities and third-party consultants and contractors and its historical experience with other circumstances judged to be comparable. Due to the numerous variables associated with these judgments and assumptions, and the effects of changes in governmental regulation and environmental technologies, both the precision and reliability of the resulting estimates of the related contingencies are subject to substantial uncertainties. As estimated costs to remediate change, the Company will reduce or increase the recorded liabilities through write backs or additional provisions in the consolidated statements of operations. ArcelorMittal does not expect these environmental issues to affect the utilization of its plants, now or in the future.

ArcelorMittal is currently and may in the future be involved in litigation, arbitration or other legal proceedings. Provisions related to legal and arbitration proceedings are recorded in accordance with the principles described above.

Most of these claims involve highly complex issues. Often these issues are subject to substantial uncertainties and, therefore, the probability of loss and an estimation of damages are difficult to ascertain. Consequently, ArcelorMittal may be unable to make a reliable estimate of the expected financial effect that will result from ultimate resolution of the proceeding. In those cases, ArcelorMittal has disclosed information with respect to the nature of the contingency. ArcelorMittal has not accrued a provision for the potential outcome of these cases.

For cases in which the Company was able to make a reliable estimate of the expected loss or range of probable loss and has accrued a provision for such loss, it believes that publication of this information on a case-by-case basis would seriously prejudice the Company's position in the ongoing legal proceedings or in any related settlement discussions. Accordingly, in these cases, the Company has disclosed information with respect to the nature of the contingency, but has not disclosed its estimate of the range of potential loss.

In the cases in which quantifiable fines and penalties have been assessed, the Company has indicated the amount of such fine or penalty or the amount of provision accrued that is the estimate of the probable loss.

These assessments can involve a series of complex judgments about future events and can rely heavily on estimates and assumptions. The assessments are based on estimates and assumptions that have been deemed reasonable by management. The Company believes that the aggregate provisions recorded for the above matters are adequate based upon currently available information. However, given the inherent uncertainties related to these cases and in estimating contingent liabilities, the Company could, in the future, incur judgments that have a material adverse effect on its results of operations in any particular period. The Company considers it highly unlikely, however, that any such judgments could have a material adverse effect on its liquidity or financial condition.

9.1 Provisions overview

	Balance at December 31, 2018	Additions[1]	Deductions/ Payments	Effects of foreign exchange and other movements	Balance at December 31, 2019
Environmental (see note 9.3)	1,228	97	(95)	(156) [2]	1,074
Emission rights (see text below)	—	481	—	3	484
Asset retirement obligations (see note 9.3)	422	28	(10)	38	478
Site restoration	141	3	(5)	(3)	136
Staff related obligations	201	65	(64)	(17)	185
Voluntary separation plans	38	30	(13)	(8)	47
Litigation and other (see note 9.3)	369	65	(91)	(31)	312
Tax claims	120	5	(14)	(30)	81
Other legal claims	249	60	(77)	(1)	231
Commercial agreements and onerous contracts	34	29	(16)	(1)	46
Other	101	148	(30)	10	229
	2,534	946	(324)	(165)	2,991
Short-term provisions	539				516
Long-term provisions	1,995				2,475
	2,534				2,991

	Balance at December 31, 2017	Additions[1]	Deductions/ Payments	Effects of foreign exchange and other movements	Balance at December 31, 2018
Environmental (see note 9.3)	815	24	(90)	479 [2]	1,228
Asset retirement obligations (see note 9.3)	427	26	(11)	(20)	422
Site restoration	40	117	(13)	(3)	141
Staff related obligations	183	75	(46)	(11)	201
Voluntary separation plans	79	3	(56)	12	38
Litigation and other (see note 9.3)	328	79	(76)	38	369
Tax claims	126	13	(14)	(5)	120
Other legal claims	202	66	(62)	43	249
Commercial agreements and onerous contracts	24	14	(20)	16	34
Other	126	19	(32)	(12)	101
	2,022	357	(344)	499	2,534
Short-term provisions	410				539
Long-term provisions	1,612				1,995
	2,022				2,534

1. Additions exclude provisions reversed or utilized during the same year.
2. Other movements primarily relate to the provisions in connection with environmental remediation obligations in Italy (see note 9.3).

As described in note 6.1.5, the Company uses derivative financial instruments to manage its exposure to fluctuations in prices of emission rights allowances. The expense associated with the provision above was offset by recycling of hedging reserves in 2019 and will be largely offset again in 2020. See note 6.3 for the details of the cash flow hedging in place for emission rights. The Company also receives indirect compensation through rebates on its energy tariffs.

There are uncertainties regarding the timing and amount of the provisions above. Changes in underlying facts and circumstances for each provision could result in differences in the amounts provided for and the actual outflows. In general, provisions are presented on a non-discounted basis due to the uncertainties regarding the timing or the short period of their expected consumption.

Environmental provisions have been estimated based on internal and third-party estimates of contaminations, available remediation technology, and environmental regulations. Estimates are subject to revision as further information develops or circumstances change.

Provisions for site restoration are related to costs in connection with the dismantling of site facilities, mainly in France. In the fourth quarter of 2018, the agreement between ArcelorMittal and the French government regarding a six year idling period of the Florange liquid phase expired. The Company will proceed with the definitive closure of the facility and recorded accordingly provisions of 113 as of December 31, 2019 and December 31, 2018 for the dismantling of the facility.

Provisions for staff related obligations primarily concern the United States and Brazil and are related to various employees' compensation.

Provisions for voluntary separation plans primarily concern plans in Spain, Belgium and the United States which are expected to be settled within one year.

Provisions for litigation include losses relating to present legal obligations that are considered to be probable. Further detail regarding legal matters is provided in note 9.3.

Provisions for commercial agreements and onerous contracts concern primarily onerous contracts recognized in the United States and Brazil.

Additions in other provisions include 126 related to the indemnification arrangement between the Company and Global Chartering (see note 2.3.1). Other provisions comprise as well technical warranties and guarantees.

9.2 Other long-term obligations

	Balance at December 31,	
	2019	2018
Derivative financial instruments (see note 6.1.5)	238	708
Payable from acquisition of financial assets	1,340	1,506
Unfavorable contracts	203	217
Income tax payable	251	184
Other	486	404
Total	2,518	3,019

Derivative financial instruments included 138 and 454 as of December 31, 2019 and 2018, respectively, relating to the pellet purchase agreement that contains a special payment in the U.S. (see note 6.1.5). As of December 31, 2018, derivative financial instruments also included 124 relating to the fair value of the put option granted to ISP in the framework of the acquisition of ArcelorMittal Italia (see note 2.2.4) which was reclassified to current liabilities as of December 31, 2019 (see note 4.8).

As of December 31, 2019 and 2018, payable from acquisition of financial assets included 1,032 and 1,245, respectively, relating to the non-current portion of the consideration payable with respect to the acquisition of ArcelorMittal Italia and 265 and 253, respectively, relating to the financial liability with respect to the acquisition of AMSF (see note 2.2.4).

Unfavorable contracts of 203 and 217 as of December 31, 2019 and 2018, respectively, mainly related to AMSF (see note 2.2.4).

As of December 31, 2019, income tax payable mainly related to income tax contingencies (including unasserted claims) and withholding tax.

9.3 Environmental liabilities, asset retirement obligations and legal proceedings

Environmental Liabilities

ArcelorMittal's operations are subject to a broad range of laws and regulations relating to the protection of human health and the environment at its multiple locations and operating subsidiaries. As of December 31, 2019, excluding asset retirement obligations, ArcelorMittal had established provisions of 1,074 for environmental remedial activities and liabilities. The provisions for all operations by geographic area were 772 in Europe, 136 in the United States, 127 in South Africa and 39 in Canada. In addition, ArcelorMittal and the previous owners of its facilities have expended substantial amounts to achieve or maintain ongoing compliance with applicable environmental laws and regulations. ArcelorMittal expects to continue to expend resources in this respect in the future.

United States

ArcelorMittal's operations in the United States have environmental provisions of 136 (exclusive of asset retirement obligations) to address existing environmental liabilities, of which 12 is expected to be spent in 2020. The environmental provisions principally relate to the investigation, monitoring and remediation of soil and groundwater at ArcelorMittal's current and former facilities. ArcelorMittal USA continues to have significant environmental provisions relating to investigation and remediation at Indiana Harbor, Lackawanna, and its closed coal mining operations in southwestern Pennsylvania. ArcelorMittal USA's environmental provisions also include 36, with anticipated spending of 2 during 2020, to specifically address the removal and disposal of asbestos-containing materials and polychlorinated biphenyls ("PCBs").

All of ArcelorMittal's major operating and former operating sites in the United States are or may be subject to a corrective action program or other laws and regulations relating to environmental remediation, including projects relating to the reclamation of industrial properties. In some cases, soil or groundwater contamination requiring remediation is present at both currently operating and historical sites where ArcelorMittal has a continuing obligation. In other cases, ArcelorMittal USA is required to conduct studies to determine the extent of contamination, if any, that exists at these sites.

ArcelorMittal USA's Indiana Harbor facility was party to a lawsuit filed by the United States Environmental Protection Agency (the "EPA") under the United States Resource Conservation and Recovery Act ("RCRA"). An ArcelorMittal USA predecessor company entered into a Consent Decree, which, among other things, requires facility-wide RCRA Corrective Action and sediment assessment and remediation in the adjacent Indiana Harbor Ship Canal. ArcelorMittal USA entered into a Consent Decree Amendment defining the objectives for limited sediment assessment and remediation of a small portion of the Indiana Harbor Ship Canal. The provisions for environmental liabilities include 8 for such sediment assessment and remediation, and 4 for RCRA Corrective Action at the Indiana Harbor facility itself. Remediation ultimately may be necessary for other contamination that may be present at Indiana Harbor, but the potential costs of any such remediation cannot yet be reasonably estimated at this time.

An approximately 489-acre portion of ArcelorMittal USA's properties in Lackawanna, New York is subject to Resource Conservation and Recovery Act RCRA Corrective Action. RCRA Corrective Action requires the Company to complete a Facilities Assessment ("RFA"), a Facility Investigation ("RFI"), and a Corrective Measures Study ("CMS"). The New York State Department of Environmental Conservation ("NYDEC") and the US EPA Region 2 approved the RFA and RFI. ArcelorMittal USA has completed implementation of Interim Measures at eleven of the most significant former solid waste management locations including installation and operation of a ground water treatment system, dredging of a local waterway known as Smokes Creek, and containment of certain onsite wastes at a historic onsite landfill. The CMS was performed by ArcelorMittal USA under a Consent Order with the NYDEC. The CMS assessed the need for additional remedial actions and recommended post- closure activities at 20 additional solid waste management locations on the site. The CMS was completed and accepted as final in 2019 by NYDEC. The NYDEC is currently preparing a draft Remedial Action Plan that selects final comprehensive measures subject to comments from the public and ArcelorMittal USA. ArcelorMittal USA's provisions for environmental liabilities include 31 for anticipated remediation and post-remediation activities at this site. The provisioned amount is based upon remedial measures recommended in the CMS, including excavation and consolidation of contaminated soil and fill into an on-site containment facilities, as well as expansion and continued operation of groundwater pump and treatment systems.

ArcelorMittal USA is required to prevent acid mine drainage from discharging to surface waters at its closed mining operations in southwestern Pennsylvania. ArcelorMittal USA entered into a revised Consent Order and Agreement outlining a schedule for implementation of capital improvements and requiring the establishment of a treatment trust, estimated by the PaDEP to be the net present value of all future treatment cost. ArcelorMittal USA has been funding the treatment trust, which reached the target value in 2017. This target value is based on average spending over the last three years. ArcelorMittal can be reimbursed from the fund for the continuing cost of treatment of acid mine drainage, which was done during

2019 for the prior year (2018 operating costs). The trust had a market value of 49 as of December 31, 2019. ArcelorMittal USA's provisions for environmental liabilities include 33 for this matter.

In 2011, the United States EPA Region V issued Notices of Violations ("NOVs") to Indiana Harbor, Burns Harbor and Cleveland alleging operational noncompliance based primarily on self-reported Title V permit concerns. A comprehensive Settlement was reached with the United States EPA and affected state agencies involving all NOVs which is anticipated to encompass self-reported non-compliance through September 30, 2018. This settlement was finalized by the parties and awaits issuance from the federal court in the Northern District of Indiana. The settlement will include payment of penalties and injunctive relief. Liabilities associated with this comprehensive settlement are estimated at 7.

Europe

Environmental provisions for ArcelorMittal's operations in Europe total 772 and are mainly related to the investigation and remediation of environmental contamination at current and former operating sites in France (72), Belgium (230), Luxembourg (43), Poland (27), Germany (26), Italy (366) and Spain (8). This investigation and remediation work relates to various matters such as decontamination of water discharges, waste disposal, cleaning water ponds and remediation activities that involve the clean-up of soil and groundwater. These provisions also relate to human health protection measures such as fire prevention and additional contamination prevention measures to comply with local health and safety regulations.

France

In France, there is an environmental provision of 72, principally relating to the remediation of former sites, including several coke plants, and the capping and monitoring of landfills or basins previously used for residues and secondary material.

The remediation of the coke plants concerns mainly the Thionville, Moyeuvre Grande, Homecourt, Hagondange and Micheville sites, and is related to treatment of soil and groundwater. At Thionville coke plant, the remediation process is ongoing. At Moyeuvre-Petite, the operation of covering the sludge basins is underway. ArcelorMittal is responsible for closure and final rehabilitation of the rest of the site, that is to say the former Conroy and Pérotin slag-heaps, from which the administrative procedure for cessation of activity is underway. The year 2020 will be devoted in particular to the development of the detailed remediation project. At other sites, ArcelorMittal France is responsible for monitoring the concentration of organic compound and heavy metals in soil and groundwater. Following the official closure at the end of 2018 of the liquid phase in Florange, ArcelorMittal France has started the studies to dismantle the site and recorded a site restoration provision of 113 related to such activity (see note 9.1).

ArcelorMittal France has an environmental provision that principally relates to the remediation and improvement of storage of secondary materials, the disposal of waste at different ponds and landfills and an action plan for removing asbestos from the installations and mandatory financial guarantees to cover risks of major accident hazard or for gasholders and waste storage. Most of the provision relates to the stocking areas at the Dunkirk site that will need to be restored to comply with local law and to the mothballing of the liquid phase in Florange, including study and surveillance of soil and water to prevent environmental damage, treatment and elimination of waste and financial guarantees demanded by Public Authorities. The environmental provisions also include treatment of slag dumps at Florange and Dunkirk sites as well as removal and disposal of asbestos-containing material at the Dunkirk and Mardyck sites.

ArcelorMittal France also has an environmental provision that principally relates to the remediation and improvement of storage of secondary materials, the disposal of waste at different ponds and landfills: the stocking areas at the Dunkirk site need to be restored to comply with local law.

Industeel France has an environmental provision that principally relates to ground remediation at the Le Creusot site and to the rehabilitation of waste disposal areas at the Châteauneuf site.

Belgium

In Belgium, there is an environmental provision of 230 of which the most significant elements are legal site remediation obligations linked to the closure of the primary installations at ArcelorMittal Belgium (Liège). The provisions also concern the external recovery and disposal of waste, residues or by-products that cannot be recovered internally on the ArcelorMittal Gent and Liège sites and the removal and disposal of asbestos-containing material.

Luxembourg

In Luxembourg, there is an environmental provision of 43, which relates to the post-closure monitoring and remediation of former production sites, waste disposal areas, slag deposits and mining sites.

In 2007, ArcelorMittal Luxembourg sold the former Ehlerange slag deposit (93 hectares) to the State of Luxembourg. ArcelorMittal Luxembourg is contractually liable to clean the site and move approximately 400,000 cubic meters of material to other sites. ArcelorMittal Luxembourg also has an environmental provision to secure, stabilize and conduct waterproofing treatment on mining galleries and entrances and various dumping areas in

Mondercange, Differdange and Dommeldange. In addition, ArcelorMittal Luxembourg has secured the disposal of laddle slag, sludge and certain other residues coming from different sites at the Differdange dump for a total volume of 1,400,000 cubic meters until mid 2023. A provision of 35 covers these obligations.

ArcelorMittal Belval and Differdange has an environmental provision of 8 to clean historical landfills in order to meet the requirements of the Luxembourg Environment Administration and to cover dismantling and soil cleaning costs of the former PRIMOREC installation.

Poland

ArcelorMittal Poland S.A.'s environmental provision of 27 mainly relates to the obligation to reclaim a landfill site and to dispose of the residues which cannot be internally recycled or externally recovered. The provision also concerns the storage and disposal of iron-bearing sludge which cannot be reused in the manufacturing process under the new environmental law; waste storage time cannot exceed 1 year.

Germany

In Germany, the environmental provision of 26 essentially relates to ArcelorMittal Bremen's post-closure obligations mainly established for soil remediation, groundwater treatment and monitoring at the Prosper coke plant in Bottrop.

Italy

In Italy, ArcelorMittal Italia has environmental provisions of 366.

A provision of 155 relates to remediation activities to be carried out in the site of Taranto derived from obligations on the previous operator that have been transferred to ArcelorMittal Italia through the environmental permit, the most significant elements being the waterproofing of certain areas to confine historical pollution, the removal of historical accumulation of process materials mainly consisting of blast furnace ("BF") and basic oxygen furnace ("BOF") dusts and sludges and scales, an action plan for the removal and disposal of asbestos-containing materials present on site, the dismantling of several installations no longer in operation, the dredging of the discharge channel and disposal of the sludge removed, the decontamination of high depth groundwater in the primary yards area and the capping of an exhausted landfill.

Provisions of 211 are allocated to the implementation of preventive measures, permanent safety measures and clean up measures in relation to historical pollution of soil and groundwater, not derived from obligations in the environmental permit, but that ArcelorMittal Italia undertook to implement as a contractual obligation vis-a-vis the previous operator.

Spain

In Spain, ArcelorMittal España has environmental provisions of 8 due to obligations of sealing landfills basically located in the Asturias site and post-closure obligations in accordance with national legislation. These obligations include the collection and treatment of leachates that can be generated during the operational phase and a period of 30 years after the closure.

South Africa

AMSA has environmental provisions of 127 to be used over 16 years, mainly relating to environmental remediation obligations attributable to historical or legacy settling/ evaporation dams and waste disposal activities. An important determinant in the final timing of the remediation work relates to the obtaining of the necessary environmental authorizations.

A provision of 42 relates to the decommissioned Pretoria Works site. This site is in a state of partial decommissioning and rehabilitation with one coke battery and a small-sections rolling facility still in operation. AMSA transformed this old plant into an industrial hub for light industry since the late 1990s. Particular effort is directed to landfill sites, with sales of slag from legacy disposal sites to vendors in the construction industry continuing unabated, but other remediation works continued at a slow pace as remediation actions for these sites are long-term in nature due to a complex legal process that needs to be followed with authorities and surrounding landowners.

The Vanderbijlpark Works site, the main flat carbon steel operation of AMSA, contains a number of legacy facilities and areas requiring remediation. The remediation entails the implementation of rehabilitation and decontamination measures of waste disposal sites, waste water dams, ground water and historically contaminated open areas. 19 of the provision is allocated to this site.

The Newcastle Works site is the main long carbon steel operation of AMSA. A provision of 21 is allocated to this site. As with all operating sites of AMSA, the above retirement and remediation actions dovetail with numerous large capital expenditure projects dedicated to environmental management. In the case of the Newcastle site, the major current environmental capital project is for air quality improvements.

A provision of 38 relates to the environmental rehabilitation of the Thabazimbi Mine. AMSA holds an environmental trust which holds investments for a value of 25 that will be used for rehabilitation purposes.

The remainder of the obligation of 7 relates to Vereeniging site for the historical pollution that needs to be remediated at waste disposal sites, waste water dams and groundwater aquifers.

Canada

In Canada, ArcelorMittal Dofasco has an environmental provision of 39 for the expected cost of remediating toxic sediment located in the Company's East Boatslip site, of which 11 is expected to be spent in 2020. ArcelorMittal Long Products Canada has an environmental provision of 2 for future disposal of sludge left in ponds after the flat mills closure at Contrecoeur.

Asset Retirement Obligations ("AROs")

AROs arise from legal requirements and represent management's best estimate of the present value of the costs that will be required to retire plant and equipment or to restore a site at the end of its useful life. As of December 31, 2019, ArcelorMittal had established provisions for asset retirement obligations of 478, including mainly 59 for Ukraine, 148 for Canada, 87 for the United States, 63 for Mexico, 14 for Belgium, 38 for Germany, 18 for South Africa, 12 for Brazil, 13 for Kazakhstan and 22 for Liberia.

The AROs in Ukraine are legal obligations for site rehabilitation at the iron ore mining site in Kryvyi Rih, upon closure of the mine pursuant to its restoration plan.

The AROs in Canada are legal obligations for site restoration and dismantling of the facilities near the mining sites in Mont-Wright and Fire Lake, and the accumulation area of mineral substances at the facility of Port-Cartier in Quebec, upon closure of the mines pursuant to the restoring plan of the mines.

The AROs in the United States principally relate to mine closure costs of the Hibbing and Minorca iron ore mines and Princeton coal mines.

The AROs in Mexico relate to the restoration costs following the closure of the Las Truchas, El Volcan and the joint operation of Pena Colorada iron ore mines.

In Belgium, the AROs are to cover the demolition costs for primary facilities at the Liège site.

In Germany, AROs principally relate to the Hamburg site, which operates on leased land with the contractual obligation to remove all buildings and other facilities upon the termination of the lease, and to the Prosper coke plant in Bottrop for filling the basin, restoring the layer and stabilizing the shoreline at the harbor.

The AROs in South Africa are for the Pretoria, Vanderbijlpark, Saldanha, Newcastle as well as the Coke and Chemical sites, and relate to the closure and clean-up of the plant associated with decommissioned tank farms, tar plants, chemical stores, railway lines, pipelines and defunct infrastructure.

In Brazil, the AROs relate to legal obligations to clean and restore the mining areas of Serra Azul and Andrade, both located in the State of Minas Gerais. The related provisions are expected to be settled in 2024 and 2029, respectively.

In Kazakhstan, the AROs relate to the restoration obligations of the iron ore and coal mines.

In Liberia, the AROs relate to iron ore mine and associated infrastructure and mine related environmental damage and compensation. They cover the closure and rehabilitation plan under both the current operating phase and the not yet completed Phase 2 expansion project.

Tax Claims

ArcelorMittal is a party to various tax claims. As of December 31, 2019, ArcelorMittal had recorded long term obligations related to income tax contingencies of 72 (see note 9.2) and provisions for other tax claims in the aggregate of 81 in respect of which it considers the risk of loss to be probable. Set out below is a summary description of the tax claims (i) in respect of which ArcelorMittal had recorded a provision as of December 31, 2019, (ii) that constitute a contingent liability, (iii) that were resolved in 2019 or (iv) that were resolved and had a financial impact in 2018 or 2017, in each case involving amounts deemed material by ArcelorMittal. The Company is vigorously defending against the pending claims discussed below.

Brazil

In 2003, the Federal Revenue Service granted ArcelorMittal Brasil (through its predecessor company, then known as CST) a tax benefit for certain investments. ArcelorMittal Brasil had received certificates from SUDENE, the former Agency for the Development of the Northeast Region of Brazil, confirming ArcelorMittal Brasil's entitlement to this benefit. In September 2004, ArcelorMittal Brasil was notified of the annulment of these certificates. ArcelorMittal Brasil has pursued its right to this tax benefit through the courts against both ADENE, the successor to SUDENE, and against the Federal Revenue Service. The Federal Revenue Service issued a tax assessment in this regard for 451 in December 2007. In December 2008, the administrative tribunal of the first instance upheld the amount of the assessment. ArcelorMittal Brasil appealed to the administrative tribunal of the second instance, and, on August 8, 2012, the administrative tribunal of the second instance found in favor of ArcelorMittal Brasil invalidating the tax assessment, thereby ending this case except for 6, which is still pending a final decision. On April 16, 2011, ArcelorMittal Brasil received a further tax assessment for the periods of March, June and September 2007, which, taking into account interest and currency fluctuations,

amounted to 163 as of December 31, 2018. In October 2011, the administrative tribunal of the first instance upheld the tax assessment received by ArcelorMittal Brasil on April 16, 2011, but decided that no penalty (amounting to 77 at that time) was due. Both parties have filed an appeal with the administrative tribunal of the second instance. In February 2018, the administrative tribunal of the second instance found in favor of ArcelorMittal Brasil and, in June 2018, the Federal Revenue Service filed an appeal with the administrative tribunal of the third instance. In January 2019, the administrative tribunal of the third instance found in favor of ArcelorMittal Brasil. No further appeal was filed by the Federal Revenue Service within the time limit so the case is closed definitively in favor of ArcelorMittal Brasil.

In 2011, ArcelorMittal Brasil (at the time SOL Coqueria Tubarão S.A.) received 21 separate tax assessments from the Revenue Service of the State of Espirito Santo for ICMS (a value-added tax) in an amount which totaled 31 relating to a tax incentive (INVEST) it used. The dispute concerns the definition of fixed assets. In August 2015, the administrative tribunal of the first instance upheld the 21 separate tax assessments. In September 2015, ArcelorMittal Brasil filed appeals with respect to each of the administrative tribunal's decisions. As of December 31, 2018, there were final unfavorable decisions at the administrative tribunal level in 15 of the 21 cases, each of which ArcelorMittal Brasil has appealed to the judicial instance. In March 2018, the administrative tribunal of the third instance found in favor of ArcelorMittal Brasil sending the six other cases back to the administrative tribunal of the second instance. After the administrative tribunal of the second instance issued a partially favorable ruling on these six cases in December 2019, related only to the recognition of the limitation period of May 2005, a further appeal to the administrative tribunal of the third instance will be filed.

In 2011, ArcelorMittal Brasil received a tax assessment for corporate income tax (known as IRPJ) and social contributions on net profits (known as CSL) in relation to (i) the amortization of goodwill on the acquisition of Mendes Júnior Siderurgia (for the 2006 and 2007 fiscal years), (ii) the amortization of goodwill arising from the mandatory tender offer (MTO) made by ArcelorMittal to minority shareholders of Arcelor Brasil following the two-step merger of Arcelor and Mittal Steel N.V. (for the 2007 tax year), (iii) expenses related to pre-export financing used to finance the MTO, which were deemed by the tax authorities to be unnecessary for ArcelorMittal Brasil since the expenses were incurred to buy shares of its own company and (iv) CSL over profits of controlled companies in Argentina and Costa Rica. The amount claimed totals 518. On January 31, 2014, the administrative tribunal of the first instance found in partial favor of ArcelorMittal Brasil, reducing the penalty component of the assessment from, according to ArcelorMittal Brasil's calculations, 266 to 141 (as calculated at the time of the assessment), while upholding the remainder of the assessment. The Federal Revenue Service has appealed the administrative tribunal's decision to reduce the amount of the original penalty. ArcelorMittal Brasil has also appealed the administrative tribunal's decision to uphold the tax authority's assessment (including the revised penalty component). In September 2017, the administrative tribunal of the second instance found largely in favor of the Federal Revenue Service. In January 2018, ArcelorMittal Brasil filed a motion for clarification of this decision. In February 2018, the motion for clarification was rejected and, in March 2018, an appeal was filed to the administrative tribunal of the third instance.

In 2013, ArcelorMittal Brasil received a tax assessment in relation to the 2008-2010 tax years for IRPJ and CSL in relation to (i) the amortization of goodwill on the acquisition of Mendes Júnior Siderurgia, Dedini Siderurgia and CST, (ii) the amortization of goodwill arising from the MTO made by ArcelorMittal to minority shareholders of Arcelor Brasil following the two-step merger of Arcelor and Mittal Steel N.V. and (iii) CSL and IRPJ over profits of controlled companies in Argentina, Costa Rica, Venezuela and the Netherlands. The amount claimed totals 456. In October 2014, the administrative tribunal of the first instance found in favor of the Federal Revenue Service and ArcelorMittal Brasil filed its appeal in November 2014. In September 2017, the administrative tribunal of the second instance found in favor of the Federal Revenue Service. ArcelorMittal Brasil filed a motion for clarification with respect to this decision, which was denied, and thereafter filed an appeal to the administrative tribunal of the third instance.

In April 2016, ArcelorMittal Brasil received a tax assessment in relation to (i) the amortization of goodwill resulting from Mittal Steel's MTO to the minority shareholders of Arcelor Brasil following Mittal Steel's merger with Arcelor in 2007 and (ii) the amortization of goodwill resulting from ArcelorMittal Brasil's acquisition of CST in 2008. While the assessment, if upheld, would not result in a cash payment as ArcelorMittal Brasil did not have any tax liability for the fiscal years in question (2011 and 2012), it would result in the write-off of 239 of ArcelorMittal Brasil's net operating loss carryforwards and as a result could have an effect on net income over time. In May 2016, ArcelorMittal Brasil filed its defense, which was not accepted at the first administrative instance. On March 10, 2017, ArcelorMittal Brasil filed an appeal to the second administrative instance, which was rejected in May 2019. ArcelorMittal Brasil filed a motion for clarification which was denied in November 2019 and thereafter filed an appeal to the administrative tribunal of the third instance.

In December 2018, ArcelorMittal Brasil received a tax assessment of 151with respect to the 2013-2014 tax years, principally in relation to the amortization of goodwill resulting from Mittal Steel's MTO to the minority shareholders of Arcelor Brasil following Mittal Steel's merger with Arcelor in 2007. In January 2019, ArcelorMittal Brasil filed a defense in

the first administrative instance, which issued an unfavorable decision in June 2019. An appeal to the second administrative instance was filed in July 2019.

In 2013, ArcelorMittal Brasil filed a lawsuit against the Federal Revenue Service disputing the basis of calculation of a tax called *additional freight for the renewal of the Brazilian Merchant Navy* ("AFRMM"), amounting to 65. The dispute is related to the inclusion of the unloading and land transport costs of the imported goods after landing to calculate AFRMM. In June 2013, ArcelorMittal Brasil obtained a preliminary decision allowing the Company not to pay such amount until a final decision was rendered. In February 2017, ArcelorMittal Brasil obtained a favorable decision at the judicial first instance which was upheld by the Federal Court of Appeals in February 2019. In July 2019, the Federal Revenue Service filed appeals with the Superior Court of Justice and the Supreme Court. In November 2018, a related tax assessment was received from the Federal Revenue Service claiming 22 as a penalty for alleged failure to comply with formal requirements in the import declarations delivered by the Company in the years 2013-2018, which were the subject matter of the preliminary decision of June 2013. In December 2018, ArcelorMittal Brasil presented its defense in the first administrative instance, which in June 2019 decided in ArcelorMittal Brasil's favor. This decision is subject to appeal. A further related tax assessment was received in September 2018 from the Federal Revenue Service claiming 0.3 as a penalty for alleged failure to comply with formal requirements in the import declarations delivered by the Company in the period between September and November 2013. In October 2018 ArcelorMittal Brasil presented its defense in the first administrative instance, and a decision is pending.

For over 20 years, ArcelorMittal Brasil has been challenging the basis of the calculation of the Brazilian COFINS and PIS social security taxes (specifically, whether Brazilian VAT may be deducted from the base amount on which the COFINS and PIS taxes are calculated). In March 2017, the Supreme Court decided a separate case, not involving ArcelorMittal Brasil, on the same subject in favor of the relevant taxpayers. Such separate Supreme Court decision, is of binding precedential value with respect to all similar cases, including those of ArcelorMittal Brasil. In July 2018, the second judicial instance found in favor of ArcelorMittal Brasil after applying the Supreme Court's precedent. In December 2018, the Federal Revenue Service brought an appeal of the second judicial instance's decision to the Supreme Court. In June 2019, the Federal Revenue Service's appeal was dismissed in a final and unappealable decision in favor of ArcelorMittal Brasil.

In the period from 2014 to 2018, ArcelorMittal Brasil received six tax assessments from the Federal Revenue Service in the amount of 52 disputing its use of credits for PIS and COFINS social security taxes in 2010, 2011 and 2013. The dispute relates to the concept of production inputs in the context of these taxes. In the first case, the administrative tribunal of the first instance found partially in favor of ArcelorMittal Brasil. The decision was upheld in the administrative tribunal of the second instance and ArcelorMittal Brasil filed an appeal to the administrative tribunal of the third instance which ruled partially in favor of ArcelorMittal Brasil in May 2019. In January 2020, the case was sent back to the Federal Revenue which is verifying the extent of the administrative tribunal of the third instance's decision in order to proceed with the write-off of amounts due. The remaining amount (yet to be defined) will be discussed in the judicial level. In the second case, the administrative tribunal of the first instance found partially in favor of ArcelorMittal Brasil and an appeal has been filed to the administrative tribunal of the second instance. In the third case, the administrative tribunal of the first instance upheld the tax assessment, and ArcelorMittal Brasil appealed to the administrative tribunal of the second instance. In the fourth and fifth cases, ArcelorMittal Brasil has filed its defenses to the administrative tribunal of the first instance. In the sixth case, the administrative tribunal of the first instance upheld the tax assessment, and ArcelorMittal Brasil appealed to the administrative tribunal of the second instance. In March, 2018, the Superior Court decided a leading case, not involving ArcelorMittal Brasil, that established that the restrictive concept of inputs adopted by the tax authorities is illegal and that credits over inputs must be accepted on the basis of the criteria of essentiality or relevance towards the production process of each taxpayer. In September 2018, the Federal Union published an internal orientation for its attorneys, expressing a restrictive view of the Superior Court's decision and determining that each individual case would be analyzed in order to decide whether the items are essential or not. In that sense, ArcelorMittal Brasil's cases will be submitted for review by the Federal Union Attorney's office before further decisions are taken.

In May 2014, ArcelorMittal Comercializadora de Energia received a tax assessment from the state of Minas Gerais alleging that the Company did not correctly calculate tax credits on interstate sales of electricity from February 2012 to December 2013. The amount claimed totals 41. ArcelorMittal Comercializadora de Energia filed its defense in June 2014. Following an unfavorable administrative decision in November 2014, ArcelorMittal filed an appeal in December 2014. In March 2015, there was a further unfavorable decision at the second administrative level. Following the conclusion of this proceeding at the administrative level, the Company received the tax enforcement notice in December 2015 and filed its defense in February 2016. In April 2016, ArcelorMittal Comercializadora de Energia received an additional tax assessment in the amount, of 58, after taking account of a reduction of fines mentioned below regarding the same matter, for infractions which allegedly occurred during the 2014 to 2015 period, and filed its defense in May 2016. In

May 2017, there was a further unfavorable decision at the second administrative level in respect of the tax assessment received in April 2016. In June 2017, ArcelorMittal Comercializadora de Energia filed an appeal to the second administrative instance. This appeal was rejected in August 2017. In October and November 2017, the Company appealed in relation to both tax assessments to the judicial instance. In November 2017, the Company received a notice from the tax authority informing it of the reduction of the fines element by 18, due to the retroactive application of a new law. In February 2019, due to the retrospective application of a new law, a reduction of the fine element of 9 was finalized in the first case.

In the period from May to July 2015, ArcelorMittal Brasil received nine tax assessments from the state of Rio Grande do Sul alleging that the Company, through its branches in that state, had not made advance payments of ICMS on sales in that state covering the period from May 2010 to April 2015. The amount claimed totals 88. The administrative tribunal of the first instance upheld the tax assessments in each of the nine cases, and ArcelorMittal Brasil appealed each of the administrative tribunal's decisions. Each case was decided unfavorably to ArcelorMittal Brasil at the administrative tribunal of the second instance, and ArcelorMittal Brasil has appealed the cases to the judicial instance.

On May 17, 2016, ArcelorMittal Brasil received a tax assessment from the state of Santa Catarina in the amount of 138 alleging that it had used improper methods to calculate the amount of its ICMS credits. ArcelorMittal Brasil filed its defense in July 2016. In December 2016, ArcelorMittal Brasil received an unfavorable decision at the first administrative level, in respect of which it filed an appeal. In March 2018, the administrative tribunal of the second instance found against ArcelorMittal Brasil and, in April 2018, ArcelorMittal Brasil filed an appeal to the administrative tribunal of the third instance. In December 2019, the tax assessment was upheld by the administrative tribunal of the third instance. In January 2020, ArcelorMittal Brasil filed a motion for clarification.

Mexico

In 2015, the Mexican Tax Administration Service issued a tax assessment to ArcelorMittal Mexico, alleging that ArcelorMittal Mexico owes 182 with respect to 2008, principally due to improper interest deductions relating to certain loans, and unpaid corporate income tax for interest payments that the tax authority has categorized as dividends. In November 2015, ArcelorMittal Mexico filed an administrative appeal in respect of this assessment, which was dismissed by the tax authority. In November 2017, ArcelorMittal Mexico filed an annulment complaint before a Federal Administrative and Tax Justice Court, which has not been determined.

With respect to 2007 and 2009, the Mexican Tax Administration Service also challenged the interest deduction related to the aforementioned loans and issued tax assessments to ArcelorMittal Mexico for 23 and 28, respectively. In November 2018, a Federal Administrative and Tax Justice Court ruled against the annulment complaint filed by ArcelorMittal Mexico in relation to the 2007 tax assessment and in December 2018, ArcelorMittal Mexico filed a constitutional claim before the Collegiate Tribunal For Administrative Matters, which was rejected in June 2019. A review appeal was filed in July 2019 and rejected in August 2019. An extraordinary appeal of constitutional review was filed against this decision in September 2019 before the Supreme Court of Justice for consideration. In November 2019, the Court dismissed the extraordinary appeal of constitutional review confirming the earlier decision in favor of the tax authorities, although this decision has not yet been officially notified. No further appeal is possible. With respect to the 2009 tax assessment, in November 2016 ArcelorMittal Mexico filed an administrative appeal before the Administrative Authority on Federal Tax Matters, which has not been decided.

In 2013, the Mexican Tax Administration Service issued a tax assessment to ArcelorMittal Las Truchas, alleging that ArcelorMittal Las Truchas owes 87 in respect of (i) non-payment of withholding tax on capitalized interest, (ii) non-deduction of accrued interest regarding certain loans, and (iii) reduction of the taxable basis of assets in 2007. In 2015, ArcelorMittal Las Truchas filed an administrative appeal in respect of the aforementioned assessment, which the tax authority dismissed. In October 2015, ArcelorMittal Las Truchas filed an annulment complaint before the Federal Administrative and Tax Justice Court, which ruled partially in favor of ArcelorMittal Las Truchas in October 2018. The tax authority filed an application for judicial review in January 2019. ArcelorMittal Las Truchas also filed a nullity lawsuit to challenge the ruling in respect of items (ii) and (iii).

In October 2018, the Mexican Tax Administration Service issued a tax assessment to ArcelorMittal Las Truchas, alleging that ArcelorMittal Las Truchas owes 92 with respect to 2013 due to: (i) improper interest deductions relating to certain loans and (ii) non-deduction of advanced rent payments. In November 2018, ArcelorMittal Las Truchas filed an administrative appeal before the Administrative Authority on Federal Tax Matters, which was partially rejected in June 2019 and is being appealed.

Ukraine

In October 2019, ArcelorMittal Kryvyi Rih received a tax order from Ukrainian tax authorities covering the findings of a tax audit for the period from 2015 through the first quarter of 2019 which claimed the Company owes additional taxes of 313 for that period. ArcelorMittal Kryvyi Rih appealed this order to the tax authorities resulting in a significant reduction of the amounts claimed. In January 2020, ArcelorMittal

Kryvyi Rih filed 3 legal actions with the Kyiv District Administrative Court seeking to cancel the remaining additional charges amounting to 145.

Competition/Antitrust Claims

ArcelorMittal is a party to various competition/antitrust claims. As of December 31, 2019, ArcelorMittal had not recorded any provisions in respect of such claims. Set out below is a summary description of competition/antitrust claims (i) that constitute a contingent liability, (ii) that were resolved in 2019 or (iii) that were resolved and had a financial impact in 2018 or 2017, in each case involving amounts deemed material by ArcelorMittal. The Company is vigorously defending against each of the pending claims discussed below.

Brazil

In September 2000, two construction trade organizations filed a complaint with Brazil's Administrative Council for Economic Defense ("CADE") against three long steel producers, including ArcelorMittal Brasil. The complaint alleged that these producers colluded to raise prices in the Brazilian rebar market, thereby violating applicable antitrust laws. In September 2005, CADE issued its final decision against ArcelorMittal Brasil, imposing a fine of 61. ArcelorMittal Brasil appealed the decision to the Brazilian Federal Court. In September 2006, ArcelorMittal Brasil offered a guarantee letter and obtained an injunction to suspend enforcement of this decision pending the court's judgment. In September 2017, the Court found against ArcelorMittal Brasil. In October 2017, ArcelorMittal Brasil filed a motion for clarification of this decision, which was dismissed. In December 2017, ArcelorMittal Brasil filed an appeal to the second judicial instance.

There is also a related class action commenced by the Federal Public Prosecutor of the state of Minas Gerais against ArcelorMittal Brasil for damages in an amount of 65 based on the alleged violations investigated by CADE.

A further related lawsuit was commenced in February 2011 by four units of Sinduscons, a civil construction trade organization, in federal court in Brasilia against, *inter alia*, ArcelorMittal Brasil claiming damages based on an alleged cartel in the rebar market as investigated by CADE and as noted above.

Germany

In the first half of 2016, the German Federal Cartel Office carried out unannounced investigations of ArcelorMittal Ruhrort GmbH and ArcelorMittal Commercial Long Deutschland GmbH following alleged breaches of antitrust rules. ArcelorMittal Ruhrort GmbH and ArcelorMittal Commercial Long Deutschland GmbH cooperated with the German Federal Cartel Office in its investigation and, in July 2018, as a result of a settlement process, the Company and the Federal Cartel Office reached agreement as to a 146 fine to be paid by ArcelorMittal Commercial Long Deutschland GmbH. The fine was paid in August 2018 ending the investigation as concerns the ArcelorMittal entities.

In August 2017, the German Federal Cartel Office carried out unannounced investigations of ArcelorMittal Bremen, ArcelorMittal Eisenhüttenstadt GmbH and ArcelorMittal Berlin Holding GmbH principally relating to alleged breaches of antitrust rules concerning (i) an agreement between flat steel producers regarding extras from June 2006 - March 2016 (ii) impermissible exchanges of sensitive information between competitors from 1986 - 2016 and (iii) an agreement to continue market and price structures introduced by the European Coal and Steel Community from 2002-2016. In February 2020,the German Federal Cartel Office notified the said companies of the formal closure of the investigation with no action being taken.

Other Legal Claims

ArcelorMittal is a party to various other legal claims. As of December 31, 2019, ArcelorMittal had recorded provisions of 231 for other legal claims in respect of which it considers the risk of loss to be probable. Set out below is a summary description of the other legal claims (i) in respect of which ArcelorMittal had recorded a provision as of December 31, 2019, (ii) that constitute a contingent liability, (iii) that were resolved in 2019, or (iv) that were resolved and had a financial impact in 2018 or 2017, in each case involving amounts deemed material by ArcelorMittal. The Company is vigorously defending against each of the claims discussed below that remain pending.

Argentina

Over the course of 2007 to 2018, the Argentinian Customs Office Authority ("Aduana") notified Acindar, the Company's Argentinian subsidiary, of certain inquiries that it was conducting with respect to prices declared by Acindar related to iron ore imports. The Customs Office Authority was seeking to determine whether Acindar incorrectly declared prices for iron ore imports from several different Brazilian suppliers and from ArcelorMittal Sourcing originally on 39 different claims concerning several shipments made between 2002 and 2014. The investigations are subject to the administrative procedures of the Customs Office Authority and are at different procedural stages depending on the filing date of the investigation. In March 2018, the Customs Office Authority issued a general instruction that orders customs to withdraw current claims related to the difference between import prices in Argentina and export prices of iron ore when exiting Brazil, which has led to a reduction in the number of claims and amounts claimed against Acindar. As of January 2020, the aggregate amount claimed by the Customs Office Authority in respect of all iron ore shipments is 93 in 19 different cases. Of these 19 cases, 4 are still in the administrative branch of the Customs Office Authority and the other 15 cases, in which the administrative branch of the Customs Office Authority ruled against Acindar, have been appealed to the Argentinian National Fiscal Court.

Brazil

In 2015, the SINDIMETAL (employees' union) filed a lawsuit against ArcelorMittal Brasil to annul all the collective labor agreements related to 12-hour work shifts. In 2018, at the Labor Court of Vitória/ES, the case was dismissed. SINDIMETAL subsequently appealed to the Regional Labor Court of Appeals, which in 2019 reversed the ruling of the first judicial instance and ordered the payment of overtime wages, based on the argument that the 12-hour working day was unconstitutional. In September 2019, ArcelorMittal Brasil filed an appeal with the Superior Labor Court on the grounds of (i) the constitutionality of collective labor agreements; (ii) ArcelorMittal Brasil was obliged to maintain the 12-hour work shift in the period between November 2011 and November 2012 by another judicial decision; and (iii) the Supreme Court has ordered the suspension of legal proceedings in which there is a discussion about the validity of collective labor agreements due to a pending decision in a case not involving ArcelorMittal Brasil with binding precedential value on similar cases. This decision impacts a group of approximately 2,500 employees.

In April 2017, a shareholder in Siderúrgica Três Lagoas ("SITREL"), commenced an arbitration against Votorantim Siderurgia S.A. (which subsequently merged into ArcelorMittal Brasil) and SITREL with the Center for Arbitration and Mediation of the Chamber of Commerce Brazil-Canada (CAM-CCBC). The dispute concerns a provision in SITREL's joint venture agreement relating to the formula used to determine the selling price for steel billets supplied by ArcelorMittal Brasil to SITREL from January 2013 onwards. The shareholder has alleged that the steel billets were overpriced and is seeking compensation for overpaid amounts on both a retrospective and prospective basis, with the initial amount claimed totalling 42. The case is currently at a pre-hearing stage, where evidence is being collected. In November 2019, an expert report on accounting questions was presented and an expert report concerning economic questions is pending conclusion.

Canada

In April 2011, a proceeding was commenced before the Ontario (Canada) Superior Court of Justice under the Ontario Class Proceedings Act, 1992, against ArcelorMittal, Baffinland, and certain other parties relating to the January 2011 take-over of Baffinland by ArcelorMittal, Nunavut Iron Ore Holdings and 1843208 Ontario Inc. The action alleges that the tender offer document contained certain misrepresentations and seeks damages in an aggregate amount of 764 (CAD 1 billion) or rescission of the transfer of the Baffinland securities by members of a class comprised of all Baffinland securities holders who tendered their Baffinland securities, and whose securities were taken up, in connection with the take-over between September 22, 2010 and February 17, 2011, or otherwise disposed of their Baffinland securities on or after January 14, 2011. The class certification hearings were held in January 2018, and the court certified the class in a decision dated May 18, 2018. The court also certified the statutory circular misrepresentation, insider trading, unjust enrichment and oppression claims. The court included in the class persons who tendered their Baffinland securities to the take-over bid and, for purposes of the oppression claims only, persons who sold their Baffinland securities in the secondary market after January 13, 2011. The court excluded from the class those persons who disposed of their Baffinland securities pursuant to a court ordered plan of arrangement. In June 2019, the parties entered into a settlement agreement in which the defendants agreed to pay 5 (CAD 6.5 million) to the class subject to the approval of the court. The settlement contained a threshold for opt outs which, if exceeded, gave any of the defendants the right to terminate the settlement. The settlement was approved by the Ontario Court in September 2019 and, following the expiry of the period for any appeal, is now final.

Italy

In January 2010, ArcelorMittal received notice of a claim filed by Finmasi S.p.A. relating to a memorandum of agreement ("MoA") entered into between ArcelorMittal Distribution Services France ("AMDSF") and Finmasi in 2008. The MoA provided that AMDSF would acquire certain of Finmasi's businesses for an amount not to exceed 104, subject to the satisfaction of certain conditions precedent,

which, in AMDSF's view, were not fulfilled. Finmasi sued for (i) enforcement of the MoA, (ii) damages of 16 to 27 or (iii) recovery costs plus quantum damages for Finmasi's alleged lost opportunity to sell to another buyer. In September 2011, the court rejected Finmasi's claims other than its second claim. The court appointed an expert to determine the quantum of damages. In May 2013, the expert's report was issued and valued the quantum of damages in the range of 42 to 67. ArcelorMittal appealed the decision on the merits. In May 2014, the Court of Appeal issued a decision rejecting ArcelorMittal's appeal. On June 20, 2014, ArcelorMittal filed an appeal of the Court of Appeal's judgment with the Italian Court of Cassation. On April 11, 2018, the Court of Cassation rejected the appeal on the merits and upheld the Court of Appeal's decision. On December 18, 2014, the Court of Milan issued a decision on the quantum of the damages and valued the quantum of damages in the sum of 27 plus interest. In June 2015, both parties served appeals of the decision on the quantum, with ArcelorMittal also seeking the suspension of the enforceability of the decision. On July 1, 2015, Finmasi formally notified AMDSF the declaration of enforcement of the decision of December 18, 2014. On July 28, 2015, AMDSF filed an appeal against such declaration with the Court of Appeal of Reims in France. At a hearing on December 1, 2015, the Italian Court of Appeal accepted the suspension of the enforcement of the decision of December 18, 2014, following the agreement of AMDSF to provide a guarantee for its value. In March 2016, on the joint application of the parties, the Court of Appeal of Reims ordered the suspension of the proceedings. On July 19, 2018, the Court of Appeal upheld the Court of Milan's decision on quantum dated December 18, 2014. In September 2018, ArcelorMittal filed an appeal to the Court of Cassation. In January 2019, Finmasi called on the AMDSF guarantee issued in the context of the enforcement proceedings that were suspended in 2015.

On November 4, 2019, after the law adopted by the Italian Parliament which removed the legal protection necessary for AM InvestCo to implement its environmental plan without the risk of criminal liability became effective, AM InvestCo sent to the former Ilva business' legal representatives (i.e. the commissioners in Ilva's extraordinary administration insolvency procedure, the "Commissioners") a notice to withdraw from, or terminate, the agreement for the lease and subsequent conditional purchase of the former Ilva business and certain of its subsidiaries. On November 5, 2019, AM InvestCo served the Commissioners with a writ of summons to, *inter alia*, ascertain and declare the lawfulness and validity of its withdrawal and termination of the agreement. The Civil Court of Milan scheduled the first hearing for May 6, 2020. On November 15, 2019, the Commissioners filed suit in the same court seeking an injunction to prevent AM InvestCo's withdrawal from, and termination of, the agreement and require AM InvestCo to stop the implementation of its plan to suspend the operations and to continue the maintenance and operation of the leased business units. The Commissioners also requested that the court require AM InvestCo to pay 1,123 (€1 billion) in the event that it fails to comply with an adverse decision on the Commissioners' application for interim injunctions. Moreover, following a complaint filed by the Commissioners, in mid-November 2019 prosecutors in Milan and Taranto opened investigations into potential violations of numerous criminal laws. The hearing to discuss the Commissioners' application for interim measures was originally set for November 27, 2019, pending which AM InvestCo suspended the implementation of its plan to suspend the operations at ArcelorMittal Italia. At the hearing, the court granted the request by the Commissioners and AM InvestCo for postponement (to December 20, 2019) in order to allow the development of ongoing negotiations, on the basis that AM InvestCo assure the maintenance of the normal functioning of the plants and guarantee production continuity pending such negotiations. On December 20, 2019, ArcelorMittal announced that AM InvestCo had signed a non-binding agreement with the Commissioners that forms a basis to continue negotiations on a new industrial plan for ArcelorMittal Italia, and in light thereof, the Civil Court of Milan granted the parties' request to further postpone the hearing until February 7, 2020 and on that date until March 6, 2020. Under the agreement, AM InvestCo has posted a performance bond of 101 (€90 million). ArcelorMittal expects to continue to consolidate ArcelorMittal Italia, as it has retained power over the relevant activities and continues to be exposed to the losses incurred by the subsidiary, unless and until the control of the assets is transferred to the Commissioners or other changes in power or exposure to variable returns occur. ArcelorMittal continues to monitor its risk of criminal liability pending the implementation of its environmental plan for ArcelorMittal Italia and, at this time, is unable to assess the likelihood of any proceedings or the amount of any potential ensuing liability.

On February 27, 2020, the Mayor of Taranto adopted an order addressed to ArcelorMittal Italia and Ilva related to certain emissions events that appear to have occurred in August 2019 and February 22 and 23, 2020 and that allegedly concern the Taranto plant. The order requires ArcelorMittal Italia to identify the responsible installations within 30 days, to eliminate any anomalies at such installations causing such emission events within 60 days or, if necessary, to shut down certain installations related to such emissions events. The Mayor of Taranto also alleges that it did not receive adequate responses from the Italian Ministry of the Environment with respect to such emissions events. ArcelorMittal Italia considers the order to be unfounded and will appeal it. Following the order, the Ministry of the Environment requested additional information from the Mayor of Taranto about the events (including the type of emissions and how the events can be connected to the Taranto plant) and has also requested information from certain other industrial companies in Taranto, as to any

anomalies, accidents or events that may have occurred on February 22 and 23, 2020. ArcelorMittal Italia is preparing its responses to the request for information from the Ministry of the Environment, which will also be provided to the Mayor of Taranto.

Luxembourg

In June 2012, the Company received writs of summons in respect of claims made by 59 former employees of ArcelorMittal Luxembourg. The claimants allege that they are owed compensation based on the complementary pension scheme that went into effect in Luxembourg in January 2000. The aggregate amount claimed by such former employees (bearing in mind that other former employees may bring similar claims) is 66. Given the similarities in the claims, the parties agreed to limit the pending proceedings to four test claims. In April 2013, the Esch-sur-Alzette labor court rejected two of these test claims. The relevant plaintiffs are appealing these decisions. In November 2013, the Luxembourg city labor court rejected the two other test claims, which are also being appealed.

France

Certain subsidiaries of the ArcelorMittal group are parties to proceedings, dating from 2010, against Engie and Engie Thermique France which claim damages in the amount of 162 or alternatively 153 for an alleged wrongful termination of a contract for the transformation of steel production gas into electricity. The ArcelorMittal subsidiaries have filed a counterclaim in the amount of 137. The contract had been entered into in 2006 for a term of 20 years. ArcelorMittal Méditerranée terminated it in July 2010 on the basis that Engie was solely responsible for the delay in the commissioning of the power plant (which suffered from significant malfunctions) constructed for the transformation of steel production gas into electricity. Engie claims that ArcelorMittal was in breach of the contract at the time of the termination due to certain alleged issues with the furnishing and quality of its steel production gas, and therefore unable to terminate the contract based on the sole breaches of Engie. The case was heard before the Commercial Court of Nanterre. In November 2019, the Appeals Court of Versailles determined (having been asked to decide whether a decision by the Commercial Court of Nanterre was in fact an official, formal judgment) that the earlier decision of the Commercial Court of Nanterre was the official first instance decision of the court. As a result, ArcelorMittal is ordered to pay damages of 3 plus interest. The decision is subject to appeal.

Retired and current employees of certain French subsidiaries of the former Arcelor have initiated lawsuits to obtain compensation for asbestos exposure in excess of the amounts paid by French social security (“Social Security”). Asbestos claims in France initially are made by way of a declaration of a work-related illness by the claimant to the Social Security authorities resulting in an investigation and a level of compensation paid by Social Security. Once the Social Security authorities recognize the work-related illness, the claimant, depending on the circumstances, can also file an action for inexcusable negligence (*faute inexcusable*) to obtain additional compensation from the company before a special tribunal. Where procedural errors are made by Social Security, it is required to assume full payment of damages awarded to the claimants. Due to fewer procedural errors made by Social Security, changes in the regulations and, consequently, fewer rejected cases, ArcelorMittal has been required to pay some amounts in damages since 2011.

The number of claims outstanding for asbestos exposure at December 31, 2019 was 337 as compared to 367 at December 31, 2018. The range of amounts claimed for the year ended December 31, 2019 was $35,000 to $745,000. The aggregate costs and settlements for the year ended December 31, 2019 were 7.77, of which 0.15 represented legal fees and 7.6 represented damages paid to the claimant. The aggregate costs and settlements for the year ended December 31, 2018 were 7.67, of which 0.27 represented legal fees and 7.4 represented damages paid to the claimant.

Minority Shareholder Claims Regarding the Exchange Ratio in the Second-Step Merger of ArcelorMittal into Arcelor

ArcelorMittal is the company that results from the acquisition of Arcelor by Mittal Steel N.V. in 2006 and a subsequent two-step merger between Mittal Steel and ArcelorMittal and then ArcelorMittal and Arcelor. Following completion of this merger process, several former minority shareholders of Arcelor or their representatives brought legal proceedings regarding the exchange ratio applied in the second-step merger between ArcelorMittal and Arcelor and the merger process as a whole.

ArcelorMittal believes that the allegations made and claims brought by such minority shareholders are without merit and that the exchange ratio and merger process complied with the requirements of applicable law, were consistent with previous guidance on the principles that would be used to determine the exchange ratio in the second-step merger and that the merger exchange ratio was relevant and reasonable to shareholders of both merged entities.

Set out below is a summary of ongoing matters in this regard. Several other claims brought before other courts and regulators were dismissed and are definitively closed.

On January 8, 2008, ArcelorMittal received a writ of summons on behalf of four hedge fund shareholders of Arcelor to appear before the civil court of Luxembourg. The summons was also served on all natural persons sitting on the Board of Directors of ArcelorMittal at the time of the merger and on the Significant Shareholder. The plaintiffs

alleged in particular that, based on Mittal Steel's and Arcelor's disclosure and public statements, investors had a legitimate expectation that the exchange ratio in the second-step merger would be the same as that of the secondary exchange offer component of Mittal Steel's June 2006 tender offer for Arcelor (i.e., 11 Mittal Steel shares for 7 Arcelor shares), and that the second-step merger did not comply with certain provisions of Luxembourg company law. They claimed, *inter alia*, the cancellation of certain resolutions (of the Board of Directors and of the Shareholders meeting) in connection with the merger, the grant of additional shares, or damages in an amount of 216. By judgment dated November 30, 2011, the Luxembourg civil court declared all of the plaintiffs' claims inadmissible and dismissed them. The judgment was appealed in May 2012. By judgment dated February 15, 2017, the Luxembourg Court of Appeal declared all but one of the plaintiffs' claims inadmissible, remanded the proceedings on the merits to the lower court with respect to the admissible claimant and dismissed all other claims. In June 2017, the plaintiffs filed an appeal of this decision to the Court of Cassation. The Court of Cassation confirmed the Court of Appeal's judgment on May 18, 2018. The proceedings remain pending before the lower court with the admissible claimant who claims *inter alia*, the cancellation of certain resolutions (of the Board of Directors and of the Shareholders meeting) in connection with the merger, the grant of additional shares, or damages in an amount of 25.

On May 15, 2012, ArcelorMittal received a writ of summons on behalf of Association Actionnaires d'Arcelor ("AAA"), a French association of former minority shareholders of Arcelor, to appear before the civil court of Paris. In such writ of summons, AAA claimed (on grounds similar to those in the Luxembourg proceedings summarized above) *inter alia* damages in a nominal amount and reserved the right to seek additional remedies including the cancellation of the merger. The proceedings before the civil court of Paris have been stayed, pursuant to a ruling of such court on July 4, 2013, pending a preparatory investigation (*instruction préparatoire*) by a criminal judge magistrate (*juge d'instruction*) triggered by the complaints (*plainte avec constitution de partie civile*) of AAA and several hedge funds (who quantified their total alleged damages at 282), including those who filed the claims before the Luxembourg courts described (and quantified) above. The dismissal of charges (non-lieu) ending the preparatory investigation became final in March 2018.

9.4 Commitments

	December 31,	
	2019	2018
Purchase commitments	19,697	24,594
Guarantees, pledges and other collateral	7,815	5,527
Non-cancellable operating leases*	—	1,869
Capital expenditure commitments	448	697
Other commitments	3,201	3,516
Total	31,161	36,203

*As a result of the adoption of IFRS 16 "Leases" as of January 1, 2019, the Company has recognized right–of–use assets and lease liabilities related to non–cancellable operating leases. See notes 1 and 7.

Purchase commitments

Purchase commitments consist primarily of major agreements for procuring iron ore, coking coal, coke and hot metal. The Company also has a number of agreements for electricity, industrial and natural gas, scrap and freight. In addition to those purchase commitments disclosed above, the Company enters into purchasing contracts as part of its normal operations which have minimum volume requirements but for which there are no take-or-pay or penalty clauses included in the contract. The Company does not believe these contracts have an adverse effect on its liquidity position.

Purchase commitments include commitments given to associates for 592 and 405 as of December 31, 2019 and 2018, respectively. Purchase commitments include commitments given to joint ventures for 1,521 and 2,246 as of December 31, 2019 and 2018, respectively. Commitments given to joint ventures related to purchase of output from Tameh decreased from 1,489 as of December 31, 2018 to 852 as of December 31, 2019 mainly as a result of the sale of ArcelorMittal Ostrava a.s. (see note 2.3.1). Commitments given to joint ventures also include purchase commitments of 649 and 711 related to Enerfos as of December 31, 2019 and 2018, respectively.

Guarantees, pledges and other collateral

Guarantees related to financial debt and credit lines given on behalf of third parties were 158 and 235 as of December 31, 2019 and 2018, respectively. Additionally, nil

and 7 were related to guarantees given on behalf of associates as of December 31, 2019 and 2018, respectively and guarantees of 3,836 and 1,079 were given on behalf of joint ventures as of December 31, 2019 and 2018, respectively. Guarantees given on behalf of joint ventures include 288 and 348 for the guarantees issued on behalf of Calvert and 346 and 397 for the guarantees issued on behalf of ArcelorMittal Tubular Products Al Jubail ("Al Jubail") as of December 31, 2019 and 2018, respectively. The increase in guarantees given on behalf of joint ventures includes 2,571 with respect to the AMNS India joint venture (see note 2.4.1) and 232 (net of 50% counter guarantee from Prime Shipping Investments Limited, an affiliate of DryLog) in relation to outstanding lease liabilities for vessels operated by Global Chartering (see note 2.3.1.). Due to the failure of other shareholders to provide requisite equity funding by December 31, 2018, the Company's joint venture Al Jubail's indebtedness became technically in default as of such date. As of December 31, 2019, the technical default remains pending completion of formalities as the joint venture completed the conditions necessary to clear the default, including the capital increase, prior to year end. ArcelorMittal's guarantee of such indebtedness has not been called by the lenders, and ArcelorMittal does not currently expect it to be called. The technical default relates only to the indebtedness of the joint venture and is not expected to affect the availability or maturity of any borrowings of ArcelorMittal.

As of December 31, 2019, pledges and other collateral mainly relate to (i) mortgages entered into by the Company's operating subsidiaries and (ii) inventories and receivables pledged to secure the South African Rand revolving borrowing base finance facility for the amount drawn of 81 and ceded bank accounts to secure environmental obligations, true sale of receivables programs and the revolving borrowing base finance facility in South Africa of 64. Pledges of property, plant and equipment were 155 and 225 as of December 31, 2019 and 2018, respectively. Other sureties, first demand guarantees, letters of credit, pledges and other collateral included 356 and 380 of commitments given on behalf of associates as of December 31, 2019 and 2018, respectively and 293 and 154 of commitments given on behalf of joint ventures as of December 31, 2019 and 2018, respectively.

In addition, other sureties, first demand guarantees, letters of credit, pledges and other collateral include 504 as of December 31, 2019 in relation to the Company's share of the obligation to deliver the follow-on funding for AMNS India in accordance with the second amended joint venture formation agreement.

Other sureties, first demand guarantees, letters of credit, pledges and other collateral included 567 as of December 31, 2018 in relation to a performance guarantee provided by the Company for the execution of the AMNS India resolution plan. The performance guarantee terminated on December 31, 2019.

Capital expenditure commitments

Capital expenditure commitments mainly relate to commitments associated with investments in expansion and improvement projects by various subsidiaries.

In 2016, AMSA committed to an investment program in connection with the competition commission settlement. The remaining capital expenditure commitment was 139 and 171 as of December 31, 2019 and 2018, respectively.

Capital expenditure commitments also include 250 and 413 as of December 31, 2019 and 2018, respectively, for the 1,000 three-year investment program at the Company's Mexican operations announced in 2017, which is focused on building ArcelorMittal Mexico's downstream capabilities. The main investment will be the construction of a new hot strip mill with capacity of approximately 2.5 million tonnes.

Other commitments

Other commitments given comprise mainly commitments incurred for gas supply to electricity suppliers.

As of September 21, 2018 an Environmental Commitment Agreement ("ECA") has been executed between ArcelorMittal Brasil, local government and the Brazilian environmental authorities. ArcelorMittal Brasil committed to carry out, over the next 5 years, a series of environmental operational and capital investments with the aim to reduce atmospheric emissions from the Company's Tubarão site. To comply with the ECA requirements, ArcelorMittal Brasil may need to acquire new equipment and change some of its current operating methods and processes. The underlying costs to implement those investments are still being estimated by ArcelorMittal Brasil and the outcome of this estimate could be material. The non-compliance with ECA would lead to fines amounting to a maximum of 26as of December 31, 2019 and 2018.

As of December 31, 2019, capital expenditure commitments relating to the Ilva acquisition include 1,311 industrial capital expenditure commitments over a remaining six-year period focused on blast furnaces, steel shops and finishing lines (1,439 as of December 31, 2018) and 688 environmental capital expenditure commitments (917 as of December 31, 2018).

Commitments to sell

In addition to the commitments presented above, the Company has firm commitments to sell for which it also has firm commitments to purchase included in purchase commitments for 215 and 201 as of December 31, 2019 and 2018, respectively, and mainly related to natural gas and electricity.

NOTE 10: INCOME TAXES

The current tax payable (recoverable) is based on taxable profit (loss) for the year. Taxable profit differs from profit as reported in the consolidated statements of operations because it excludes items of income or expense that are taxable or deductible in other years or are never taxable or deductible. The Company's current income tax expense (benefit) is calculated using tax rates that have been enacted or substantively enacted as of the date of the consolidated statements of financial position.

Tax is charged or credited to the consolidated statements of operations, except when it relates to items charged or credited to other comprehensive income or directly to equity, in which case the tax is recognized in other comprehensive income or in equity.

Deferred tax is recognized on differences between the carrying amounts of assets and liabilities, in the consolidated financial statements and the corresponding tax basis used in the computation of taxable profit, and is accounted for using the statements of financial position liability method. Deferred tax liabilities are generally recognized for all taxable temporary differences, and deferred tax assets are generally recognized for all deductible temporary differences and net operating loss carry forwards to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such assets and liabilities are not recognized if the taxable temporary difference arises from the initial recognition of non-deductible goodwill or if the differences arise from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the profit reported in the consolidated statements of operations.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, except if the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognized to the extent that it is probable that there will be sufficient taxable profits against which the benefits of the temporary differences can be utilized and are expected to reverse in the foreseeable future.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted at the consolidated statements of financial position date. The measurement of deferred tax assets and liabilities reflects the tax consequences that would result from the manner in which the Company expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities.

The carrying amount of deferred tax assets is reviewed at each consolidated statements of financial position date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to enable all or part of the asset to be recovered. The Company reviews the deferred tax assets in the different jurisdictions in which it operates to assess the possibility of realizing such assets based on projected taxable profit, the expected timing of the reversals of existing temporary differences, the carry forward period of temporary differences and tax losses carried forward and the implementation of planning strategies. Due to the numerous variables associated with these judgments and assumptions, both the precision and reliability of the resulting estimates of the deferred tax assets are subject to substantial uncertainties. In case a history of recent losses is present, the Company considers whether convincing other evidence exists, such as the character of (historical) losses and planning opportunities, to support the deferred tax assets recognition.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities, when they relate to income taxes levied by the same taxation authority and when the Company intends to settle its current tax assets and liabilities on a net basis.

Uncertain (income) tax positions are periodically assessed by the Company based on management's best judgment given any changes in the facts, circumstances and information available and applicable tax laws. When it is probable that the tax authorities will not accept the position taken, the Group establishes provisions based on the most likely amount of the liability (recovery) or weighted average of various possible outcomes to reflect the effect of the uncertainty in determining the related taxable profit (tax loss), tax bases, unused tax losses, unused tax credits or tax rates, to the extent that a reliable estimate can be made.

10.1 Income tax expense (benefit)

The components of income tax expense (benefit) are summarized as follows:

	Year Ended December 31,		
	2019	2018	2017
Total current tax expense	786	928	583
Total deferred tax benefit	(327)	(1,277)	(151)
Total income tax expense (benefit)	459	(349)	432

The following table reconciles the expected tax expense (benefit) at the statutory rates applicable in the countries where the Company operates to the total income tax expense (benefit) as calculated:

	Year Ended December 31,		
	2019	2018	2017
Net income (loss) (including non-controlling interests)	(2,391)	5,330	4,575
Income tax expense (benefit)	459	(349)	432
Income (loss) before tax	(1,932)	4,981	5,007
Tax expense (benefit) at the statutory rates applicable to profits (losses) in the countries[1]	(468)	1,043	1,407
Permanent items	(993)	(421)	(522)
Rate changes	340	—	(94)
Net change in measurement of deferred tax assets	1,201	(1,301)	(281)
Tax effects of foreign currency translation	14	(47)	(157)
Tax credits	(9)	(17)	(66)
Other taxes	160	151	90
Others	214	243	55
Income tax expense (benefit)	459	(349)	432

1. Tax expense (benefit) at the statutory rates is based on income (loss) before tax excluding income (loss) from investments in associates and joint ventures.

ArcelorMittal's consolidated income tax expense (benefit) is affected by the income tax laws and regulations in effect in the various countries in which it operates and the pre-tax results of its subsidiaries in each of these countries, which can change from year to year. ArcelorMittal operates in jurisdictions, mainly in Eastern Europe and Asia, which have a structurally lower corporate income tax rate than the statutory tax rate as enacted in Luxembourg (24.94%), as well as in jurisdictions, mainly in Brazil and Mexico, which have a structurally higher corporate income tax rate.

Permanent items

	Year Ended December 31,		
	2019	2018	2017
Tax deductible write-downs on shares and receivables	(922)	(498)	(652)
Juros sobre o Capital Próprio ("JSCP")	(32)	(73)	(4)
Non taxable gain on bargain purchase	—	(60)	—
Taxable income (tax loss) of AMTFS	(8)	47	(34)
Taxable dividends	11	—	65
Other permanent items	(42)	163	103
Total permanent items	(993)	(421)	(522)

Tax deductible (taxable reversals of) write-downs on shares and receivables: in connection with the Company's impairment test for goodwill and property, plant and equipment ("PP&E"), the recoverability of the carrying amounts of investments in shares and intragroup receivables is also reviewed annually, resulting in tax deductible write-downs, or taxable reversals of previously recorded write-downs, of the values of loans and shares of consolidated subsidiaries in Luxembourg.

Juros sobre o Capital Próprio ("JSCP"): Corporate taxpayers in Brazil, which distribute a dividend can benefit from a tax deduction corresponding to an amount of interest calculated as a yield on capital. The deduction is determined as the lower of the interest as calculated by application of the Brazilian long term interest rate on the opening balance of capital and reserves, and 50% of the income for the year or accumulated profits from the previous year. For accounting purposes, this distribution of interest on capital is regarded as a dividend

distribution, while for Brazilian tax purposes it is regarded as tax deductible interest.

Non taxable gain on bargain purchase: in 2018 ArcelorMittal recognized a 209 gain on bargain purchase upon acquisition of ArcelorMittal Italia (see note 2.2.4).

Taxable income of AMTFS: ArcelorMittal Treasury Financial Services S.à r.l. (“AMTFS”), a subsidiary of ArcelorMittal Treasury Americas LLC (“AMTAUS”), is a limited liability company organized under the laws of Luxembourg subject to taxation in Luxembourg on its worldwide income. AMTFS has filed an election to be treated as a disregarded entity for United States federal income tax purposes.

Taxable dividends: the dividends received from some of the ArcelorMittal subsidiaries are subject to tax in the receiving countries with the corresponding (foreign) tax credits available.

Rate changes

The 2019 tax expense from rate changes of 340 is mainly due to the impact of the decrease in the future income tax rate on deferred tax assets in Luxembourg.

The 2017 tax benefit from rate changes of (94) is mainly due to the impact of the decrease in the future income tax rate on deferred tax liabilities in Belgium (60), France (31), Argentina and USA.

Net change in measurement of deferred tax assets

The 2019 net change in measurement of deferred tax assets of 1,201 mainly consists of non-recognition of deferred tax assets on write-downs of the value of shares of consolidated subsidiaries in Luxembourg and other non-recognition and derecognition of deferred tax assets in certain tax jurisdictions, partially offset by an additional recognition of deferred tax assets of previous years of 0.6 billion due to increase in projections of future taxable income in Luxembourg driven primarily by the lower external borrowing costs.

The 2018 net change in measurement of deferred tax assets of (1,301) primarily consists of tax benefit of (1,842) due to additional recognition of deferred tax assets for losses and other deductible temporary differences of previous years, and a tax expense of 541 due to non-recognition and derecognition of other deferred tax assets in other tax jurisdictions. In 2018, the Company recognized 1.3 billion of previously unrecognized deferred tax assets relating to the ArcelorMittal S.A. tax integration in Luxembourg. The recognition in Luxembourg includes a 0.8 billion increase in projections of future taxable income in Luxembourg driven primarily by the higher operational and financial income, and 0.6 billion effect of the elimination of the current USD exposure of Luxembourgish deferred tax assets denominated in euro.

The 2017 net change in measurement of deferred tax assets of (281) primarily consists of tax expense of 652 due to the unrecognized part of deferred tax assets on write-downs of the value of shares and loans of consolidated subsidiaries in Luxembourg, tax expense of 364 due to non-recognition and derecognition of other deferred tax assets in other tax jurisdictions, partially offset by additional recognition of deferred tax assets for losses and other deductible temporary differences of previous years of (1,297). In 2017, the Company recognized 1.1 billion of previously unrecognized deferred tax assets relating to the ArcelorMittal S.A. tax integration in Luxembourg. The recognition in Luxembourg includes a 0.3 billion increase in projections of future taxable income in Luxembourg driven primarily by the improved market conditions of the steel industry and higher financial income mainly from further reduction in the forecasted interest expense following improved credit rating.

Tax effects of foreign currency translation

The tax effects of foreign currency translation of 14, (47) and (157) at December 31, 2019, 2018 and 2017 respectively, refer mainly to deferred tax assets and liabilities of certain entities with a different functional currency than the currency applied for tax filing purposes. The 2018 effect is impacted by the elimination of the currency exposure on the deferred tax assets in ArcelorMittal parent company following the change in the currency denomination of the tax losses. In 2017, the effects are mainly due to the depreciation of the U.S. dollar against the euro.

Tax credits

The tax credits are mainly attributable to the Company’s operating subsidiaries in Brazil, Mexico and Spain. They relate to credits claimed on foreign investments, credits for research and development and tax sparing credits.

Other taxes

Other taxes mainly include withholding taxes on dividends, services, royalties and interests as well as mining duties in Canada and Mexico, state tax and Base Erosion and Anti-Abuse Tax ("BEAT") in the United States, and Cotisation sur la Valeur Ajoutée des Entreprises ("CVAE") in France.

Others

	Year Ended December 31,		
	2019	2018	2017
Tax contingencies/settlements	225	183	7
Prior period taxes	(20)	21	(7)
Others	9	39	55
Total	214	243	55

In 2019 and 2018, tax contingencies/settlements consist of uncertain tax positions (see note 10.3) respectively for 225, mainly related to North America and ACIS countries, and 183, mainly related to Europe.

10.2 Income tax recorded directly in equity and/or other comprehensive income

	Year Ended December 31,		
	2019	2018	2017
Recognized in other comprehensive income on:			
Deferred tax expense (benefit)			
Gain (loss) on derivative financial instruments	(244)	380	(77)
Recognized actuarial gain (loss)	32	(228)	(42)
Foreign currency translation adjustments	(35)	(106)	(90)
	(247)	46	(209)
Recognized directly in equity on:			
Deferred tax expense (benefit)			
Others	—	—	9
Total	(247)	46	(200)

10.3 Uncertain tax positions

The Company operates in multiple jurisdictions with complex legal and tax regulatory environments. In certain of these jurisdictions, ArcelorMittal has taken income tax positions that management believes are supportable and are intended to withstand challenge by tax authorities. Some of these positions are inherently uncertain and include those relating to transfer pricing matters and the interpretation of income tax laws applied in complex transactions. The Company periodically reassesses its tax positions. Changes to the financial statement recognition, measurement, and disclosure of tax positions are based on management's best judgment given any changes in the facts, circumstances, information available and applicable tax laws. Considering all available information and the history of resolving income tax uncertainties, the Company believes that the ultimate resolution of such matters will not have a material effect on the Company's financial position, statements of operations or cash flows (see note 9).

10.4 Deferred tax assets and liabilities

The origin of the deferred tax assets and liabilities is as follows:

	Assets		Liabilities		Net	
	2019	2018	2019	2018	2019	2018
Intangible assets	22	29	(720)	(744)	(698)	(715)
Property, plant and equipment	177	271	(4,445)	(5,098)	(4,268)	(4,827)
Inventories	261	286	(209)	(251)	52	35
Financial instruments	47	124	(98)	(424)	(51)	(300)
Other assets	157	460	(408)	(572)	(251)	(112)
Provisions	1,350	1,728	(243)	(512)	1,107	1,216
Other liabilities	469	461	(70)	(331)	399	130
Tax losses and other tax benefits carried forward	9,984	10,384	—	—	9,984	10,384
Tax credits carried forward	76	104	—	—	76	104
Untaxed reserves	—	—	(1)	(2)	(1)	(2)
Deferred tax assets / (liabilities)	12,543	13,847	(6,194)	(7,934)	6,349	5,913
Deferred tax assets					8,680	8,287
Deferred tax liabilities					(2,331)	(2,374)

The deferred tax assets recognized by the Company as of December 31, 2019 are analyzed as follows:

	Gross amount	Total deferred tax assets	Recognized deferred tax assets	Unrecognized deferred tax assets
Tax losses and other tax benefits carried forward	105,937	26,504	9,984	16,520
Tax credits carried forward	693	693	76	617
Other temporary differences	15,793	3,799	2,483	1,316
Total		30,996	12,543	18,453

The deferred tax assets recognized by the Company as of December 31, 2018 are analyzed as follows:

	Gross amount	Total deferred tax assets	Recognized deferred tax assets	Unrecognized deferred tax assets
Tax losses and other tax benefits carried forward	110,769	28,642	10,384	18,258
Tax credits carried forward	722	722	104	618
Other temporary differences	16,923	4,117	3,359	758
Total		33,481	13,847	19,634

As of December 31, 2019, the majority of the deferred tax assets not recognized relates to tax losses carried forward attributable to various subsidiaries located in different jurisdictions (primarily Germany, Luxembourg, Spain, South Africa and the United States) with different statutory tax rates. As of each reporting date, ArcelorMittal considers existing evidence, both positive and negative, including the earnings history and results of recent operations, reversals of deferred tax liabilities, projected future taxable income, and planning strategies, that could impact the view with regard to future realization of these deferred tax assets.

The amount of the total deferred tax assets is the aggregate amount of the various deferred tax assets recognized and unrecognized at the various subsidiaries and not the result of a computation with a given blended rate. The utilization of tax losses carried forward is restricted to the taxable income of the subsidiary or tax consolidation group to which it belongs. The utilization of tax losses carried forward may also be restricted by the character of the income, expiration dates and limitations on the yearly use of tax losses against taxable income.

As at December 31, 2019 the total amount of accumulated tax losses in Luxembourg with respect to the ArcelorMittal S.A. tax integration amounted to approximately 83.3 billion, of which 34.8 billion is considered realizable, resulting in the recognition of 8.7 billion of deferred tax assets at the applicable income tax rate in Luxembourg. As at December 31, 2018, the total amount of accumulated tax losses in Luxembourg with respect to the main tax consolidation amounted to approximately 80.6 billion, of this amount 34.1 billion was considered realizable, resulting in the recognition of 8.9 billion of deferred tax assets at the applicable income tax rate in Luxembourg. Under the Luxembourg tax legislation, tax losses generated before

2017 can be carried forward indefinitely and are not subject to any specific yearly loss utilization limitations. The tax losses carried forward relate primarily to tax deductible write-down charges taken on investments in shares of consolidated subsidiaries recorded by certain of ArcelorMittal's holding companies in Luxembourg. Of the total tax losses carried forward, 21.6 billion may be subject to recapture in the future if the write-downs that caused them are reversed creating taxable income unless the Company converts them to permanent through sales or other organizational restructuring activities.

The Company believes that it is probable that sufficient future taxable profits will be generated to support the recognized deferred tax asset for tax losses carried forward in Luxembourg. As part of its recoverability assessment the Company has taken into account (i) its most recent forecast approved by management and the Board of Directors, (ii) the likelihood that the factors that have contributed to past losses in Luxembourg will not recur, (iii) the fact that ArcelorMittal in Luxembourg is the main provider of funding to the Company's consolidated subsidiaries, leading to significant amounts of taxable interest income, (iv) the expected lower interest expenses in Luxembourg driven by the targeted reduction of the Group net debt level in the short-term, (v) the industrial franchise agreement ("IFA") whereby ArcelorMittal S.A. licenses its business model for manufacturing, processing and distributing steel to group subsidiaries, and (vi) other significant and reliable sources of operational income earned from ArcelorMittal's European and worldwide operating subsidiaries for centralized distribution and procurement activities performed in Luxembourg. In performing the assessment, the Company estimates at which point in time its earnings projections are no longer reliable, and thus taxable profits are no longer probable. Accordingly, the Company has established consistent forecast periods for its different income streams for estimating probable future taxable profits, against which the unused tax losses can be utilized in Luxembourg.

At December 31, 2019, based upon the level of historical taxable income and projections for future taxable income over the periods in which the deductible temporary differences are anticipated to reverse, management believes it is probable that ArcelorMittal will realize the benefits of the deferred tax assets of 8.7 billion recognized. The amount of future taxable income required to be generated by ArcelorMittal's subsidiaries to utilize the deferred tax assets of 8.7 billion is at least 34.8 billion. Historically, the Company has been able to generate sufficient taxable income and believes that it will generate sufficient levels of taxable income in the coming years to allow the Company to utilize tax benefits associated with tax losses carried forward and other deferred tax assets that have been recognized in its consolidated financial statements.

For the period ended December 31, 2019, ArcelorMittal recorded approximately 79 (December 31, 2018: 80) of deferred income tax liabilities in respect of deferred taxation that would arise if temporary differences on investments in subsidiaries, associates and interests in joint ventures were to be realized in the foreseeable future. No deferred tax liability has been recognized in respect of other temporary differences on investments in subsidiaries, associates and interests in joint ventures because the Company is able to control the timing of the reversal of the temporary difference and it is probable that such differences will not reverse in the foreseeable future. The amount of these unrecognized deferred tax liabilities is approximately 899.

10.5 Tax losses, tax credits and other tax benefits carried forward

At December 31, 2019, the Company had total estimated tax losses carried forward and other tax benefits of 105.9 billion.

This includes net operating losses and other tax benefits of 8.5 billion primarily related to subsidiaries in Basque Country in Spain, Liberia, Luxembourg, Mexico and the United States, which expire as follows:

Year expiring	Recognized	Unrecognized	Total
2020	25	144	169
2021	3	656	659
2022	2	659	661
2023	6	469	475
2024	3	212	215
2025 - 2039	354	5,934	6,288
Total	393	8,074	8,467

The remaining tax losses carried forward and other tax benefits for an amount of 97.4 billion (of which 39 billion are recognized and 58.4 billion are unrecognized) are carried forward for unlimited period of time and primarily relate to the Company's operations in France, Germany, Luxembourg, Spain and South Africa.

At December 31, 2019, the Company also had total estimated tax credits carried forward of 693.

Such amount includes tax credits of 610 (of which 26 recognized and 584 unrecognized) and primarily attributable to subsidiaries in Basque Country in Spain which expire as follows:

Year expiring	Recognized	Unrecognized	Total
2020	—	3	3
2021	—	2	2
2022	—	2	2
2023	—	1	1
2024	—	1	1
2025 - 2039	26	575	601
Total	26	584	610

The remaining tax credits for an amount of 83 (of which 50 are recognized and 33 are unrecognized) are indefinite and primarily attributable to the Company's operations in Brazil and Spain.

Tax losses, tax credits and other tax benefits carried forward are denominated in the currency of the countries in which the respective subsidiaries are located and operate, except for Luxembourg where the tax losses are mainly denominated in U.S. dollar. Fluctuations in currency exchange rates could reduce the U.S. dollar equivalent value of these tax losses carried forward in future years.

NOTE 11: EQUITY

11.1 Share details

On May 22, 2017, ArcelorMittal completed the consolidation of each three existing shares in ArcelorMittal without nominal value into one share without nominal value. As a result of this reverse stock split, the number of issued shares decreased from 3,065,710,869 to 1,021,903,623.

The Company's shares consist of the following:

	December 31, 2017	Movement in year	December 31, 2018	Movement in year	December 31, 2019
Issued shares	1,021,903,623	—	1,021,903,623	—	1,021,903,623
Treasury shares	(1,986,836)	(6,348,529)	(8,335,365)	(1,488,837)	(9,824,202)
Total outstanding shares	1,019,916,787	(6,348,529)	1,013,568,258	(1,488,837)	1,012,079,421

The number of issued shares were 1,021,903,623 at December 31, 2017, 2018 and 2019.

Authorized shares

At the Extraordinary General Meeting held on May 10, 2017, the shareholders approved a reverse stock split and an increase of the authorized share capital to €345 million. Following this approval, on May 22, 2017 ArcelorMittal completed the consolidation of each three existing shares in ArcelorMittal without nominal value into one share without nominal value. As a result, the authorized share capital increased with a decrease in representative shares from €337 million represented by 3,372,281,956 ordinary shares without nominal value as of December 31, 2016 to €345 million represented by 1,151,576,921 ordinary shares without nominal value.

At the Extraordinary General Meeting of shareholders held on May 16, 2018, the shareholders approved the change of currency of the Company's share capital from euro to U.S. dollar. Following this approval, the authorized share capital amounts to 411 represented by 1,151,576,921 ordinary shares without nominal value. As a result of this change, the issued share capital amounted to 364 as of December 31, 2018, based on the exchange rate published by the European Central Bank on May 15, 2018. The difference was transferred to additional paid-in capital. There was no change in the aggregate number of shares issued and fully paid up which continued to amount to 1,021,903,623.

The number of authorized shares were 1,151,576,921 at December 31, 2017, 2018 and 2019.

Share buyback

On March 26, 2018, ArcelorMittal completed a share buyback program under the authorization given at the annual general meeting of shareholders held on May 5, 2015. ArcelorMittal repurchased 7 million shares for a total

value of €184 million (226) at an average price per share of €26.34 (equivalent to $32.36).

On February 15, 2019, ArcelorMittal completed a share buyback program and repurchased 4 million shares for a total value of €80 million (90) at an average price per share of €19.89 (equivalent to $22.42).

The shares acquired through the buyback program are recognized as treasury shares.

Treasury shares

ArcelorMittal held, indirectly and directly, 9.8 million and 8.3 million treasury shares as of December 31, 2019 and December 31, 2018, respectively.

11.2 Equity instruments and hybrid instruments

Mandatory convertible bonds

On December 28, 2009, the Company issued through Hera Ermac, a wholly-owned subsidiary, 750 unsecured and unsubordinated bonds mandatorily convertible into preferred shares of such subsidiary. The bonds were placed privately with a Luxembourg affiliate of Crédit Agricole (formerly Calyon) and are not listed. The Company has the option to call the mandatory convertible bonds until 10 business days before the maturity date. Hera Ermac invested the proceeds of the bonds issuance and an equity contribution by the Company in notes issued by subsidiaries of the Company linked to the values of shares of Erdemir and China Oriental. On April 20, 2011, the Company signed an agreement for an extension of the conversion date of the mandatory convertible bonds to January 31, 2013. On September 27, 2011, the Company increased the mandatory convertible bonds from 750 to 1,000. The Company further extended the conversion date for the mandatory convertible bonds in 2012, 2014, 2015 (resulting in the extinguishment and recognition of a new compound instrument), 2016 and the latest on December 14, 2017.

On December 14, 2017, the conversion date of the 1,000 mandatory convertible bonds was extended from January 31, 2018 to January 29, 2021. The other main features of the mandatory convertible bonds remained unchanged. The Company determined that this transaction led to the extinguishment of the existing compound instrument and the recognition of a new compound instrument including non-controlling interests for 797 (net of cumulative tax and fees) and other liabilities for 184. The derecognition of the previous instrument and the recognition at fair value of the new instrument resulted in a 92 expense included in financing costs-net in the consolidated statement of operations and a 83 decrease in non-controlling interests.

On March 29, 2019 and December 18, 2019, the Company repaid notes issued by subsidiaries which were linked to the value of the shares of Erdemir. As of December 31, 2019, the remaining notes were linked to the value of the shares of China Oriental (see note 6.1.5).

11.3 Earnings per common share

Basic earnings per common share is computed by dividing net income (loss) by the weighted average number of common shares outstanding during the year. Net income (loss) attributable to ordinary shareholders takes into consideration dividend rights of preferred shareholders such as holders of subordinated perpetual capital securities. Diluted earnings per share is computed by dividing income (loss) available to equity holders by the weighted average number of common shares plus potential common shares from share unit plans and outstanding stock options whenever the conversion results in a dilutive effect.

On May 22, 2017, ArcelorMittal completed the consolidation of each three existing shares in ArcelorMittal without nominal value into one share without nominal value.

The following table provides the numerators and a reconciliation of the denominators used in calculating basic and diluted earnings per common share for the years ended December 31, 2019, 2018 and 2017.

	Year Ended December 31,		
	2019	2018	2017
Net income (loss) attributable to equity holders of the parent	(2,454)	5,149	4,568
Weighted average common shares outstanding (in millions) for the purposes of basic earnings per share	1,013	1,015	1,020
Incremental shares from assumed conversion of restricted share units and performance share units (in millions)	—	6	4
Weighted average common shares outstanding (in millions) for the purposes of diluted earnings per share	1,013	1,021	1,024

For the purpose of calculating earnings per common share, diluted weighted average common shares outstanding excludes 7 million potential common shares from share unit plans for the year ended December 31, 2019 and 1 million, 2 million and 3 million potential common shares from stock options outstanding for the years ended December 31, 2019, 2018 and 2017, respectively, because such share unit plans and stock options are anti-dilutive.

11.4 Dividends

Calculations to determine the amounts available for dividends are based on ArcelorMittal's financial statements ("ArcelorMittal S.A.") which are prepared in accordance with IFRS, as endorsed by the European Union. ArcelorMittal S.A. has no significant manufacturing operations of its own and generates its profit mostly from financing activities and the management fees/industrial franchise agreements with Group Companies. Accordingly, it can only pay dividends or distributions to the extent it is entitled to receive cash dividend distributions from its subsidiaries' recognized gains, profit generated by its own activities, from the sale of its assets or share premiums from the issuance of common shares. Dividends are declared in U.S. dollars and are payable in either U.S. dollars or in euros.

Description	Approved by	Dividend per share (in $)	Payout date	Total (in millions of $)
Dividend for financial year 2016	Annual general shareholders' meeting on May 4, 2017	—	—	—
Dividend for financial year 2017	Annual general shareholders' meeting on May 9, 2018	0.10	June 13, 2018	101
Dividend for financial year 2018	Annual general shareholders' meeting on May 7, 2019	0.20	June 13, 2019	203

On May 7, 2019 at the annual general meeting of shareholders, the shareholders approved the Company's dividend of $0.20 per share. The dividend amounted to 204 (203 net of dividends paid to subsidiaries holding treasury shares), and was paid on June 13, 2019.

Given the resilient cash flow and progress towards the Company's net debt target, the Board proposed a base dividend of $0.30 per share for 2020 (in respect of 2019) which will be proposed to the shareholders at the annual general meeting of shareholders' on May 5, 2020.

11.5 Non-controlling interests

11.5.1 Non-wholly owned subsidiaries that have material non-controlling interests

The tables below provide a list of the subsidiaries which include significant non-controlling interests at December 31, 2019 and 2018 and for the years ended December 31, 2019, 2018 and 2017.

Name of Subsidiary	Country of incorporation and operation	% of non-controlling interests and non-controlling voting rights at December 31, 2019	% of non-controlling interests and non-controlling voting rights at December 31, 2018	Net income (loss) attributable to non-controlling interests for the year ended December 31, 2019	Non-controlling interests at December 31, 2019	Net income (loss) attributable to non-controlling interests for the year ended December 31, 2018	Non-controlling interests at December 31, 2018	Net income (loss) attributable to non-controlling interests for the year ended December 31, 2017
AMSA	South Africa	30.78%	30.78%	(98)	74	29	170	(124)
Sonasid[1]	Morocco	67.57%	67.57%	—	103	2	107	3
ArcelorMittal Kryvyi Rih	Ukraine	4.87%	4.87%	(5)	185	15	182	10
Belgo Bekaert Arames ("BBA")	Brazil	45.00%	45.00%	28	141	28	136	25
Hera Ermac[2]	Luxembourg	—	—	—	801	—	797	—
AMMC	Canada	15.00%	15.00%	114	486	91	484	91
Arceo	Belgium	62.86%	62.86%	3	154	4	158	4
ArcelorMittal Liberia Ltd	Liberia	15.00%	15.00%	18	(250)	(2)	(268)	(11)
Other				3	268	14	256	9
Total				63	1,962	181	2,022	7

1. Sonasid - ArcelorMittal holds a controlling stake of 50% in Nouvelles Sidérurgies Industrielles. ArcelorMittal controls Nouvelles Sidérurgies Industrielles on the basis of a shareholders' agreement which includes deadlock arrangements in favor of the Company. Nouvelles Sidérurgies Industrielles holds a 64.86% stake in Sonasid. The total non-controlling interests in Sonasid of 67.57% are the result of ArcelorMittal's indirect ownership percentage in Sonasid of 32.43% through its controlling stake in Nouvelles Sidérurgies Industrielles.
2. Hera Ermac - The non-controlling interests correspond to the equity component of the mandatory convertible bonds maturing on January 29, 2021 (see note 11.2)

The tables below provide summarized statements of financial position for the above-mentioned subsidiaries as of December 31, 2019 and 2018 and summarized statements of operations and summarized statements of cash flows for the years ended December 31, 2019, 2018 and 2017.

Summarized statements of financial position

	December 31, 2019							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Current assets	997	188	1,557	225	905	1,434	129	155
Non-current assets	618	102	3,530	148	1,193	3,083	122	123
Total assets	1,615	290	5,087	373	2,098	4,517	251	278
Current liabilities	907	101	1,130	98	298	457	1	1,739
Non-current liabilities	468	39	446	14	76	591	1	46
Net assets	240	150	3,511	261	1,724	3,469	249	(1,507)

(millions of U.S. dollars, except share and per share data)

Summarized statements of operations

	December 31, 2019							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Revenue	2,864	366	2,420	761	—	2,655	—	257
Net income (loss)	(319)	(1)	(100)	63	144	766	5	115
Total comprehensive income (loss)	(312)	—	(141)	64	144	761	5	115

Summarized statements of cash flows

	December 31, 2019							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Net cash provided by / (used in) operating activities	(35)	9	163	76	857	1,045	9	84
Net cash provided by / (used in) investing activities	(79)	(5)	(270)	(12)	(114)	(332)	17	(18)
Net cash provided by / (used in) financing activities	97	(6)	68	(62)	(743)	(683)	(7)	(65)
Impact of currency movements on cash	5	—	8	—	—	—	—	—
Cash and cash equivalents:								
At the beginning of the year	72	55	73	11	—	180	27	—
At the end of the year	60	53	42	13	—	210	46	1
Dividend to non-controlling interests	—	(4)	—	(18)	—	(102)	(5)	—

Summarized statements of financial position

	December 31, 2018							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Current assets	1,307	194	1,408	240	251	1,144	93	113
Non-current assets	672	100	2,947	158	2,492	3,113	166	114
Total assets	1,979	294	4,355	398	2,743	4,257	259	227
Current liabilities	1,056	106	535	109	84	331	2	1,816
Non-current liabilities	372	34	308	28	335	539	1	41
Net assets	551	154	3,512	261	2,324	3,387	256	(1,630)

Summarized statements of operations

	December 31, 2018							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Revenue	3,440	396	2,497	771	—	2,396	—	132
Net income (loss)	95	4	340	59	(555)	636	6	(12)
Total comprehensive income (loss)	(40)	5	331	62	(555)	642	6	(12)

Summarized statements of cash flows

	December 31, 2018							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Net cash provided by / (used in) operating activities	69	22	313	47	38	735	10	(18)
Net cash provided by / (used in) investing activities	132	(5)	(346)	(14)	(38)	(134)	14	(29)
Net cash provided by / (used in) financing activities	(260)	—	50	(27)	—	(579)	(9)	47
Impact of currency movements on cash	(10)	—	(4)	—	—	—	(1)	—
Cash and cash equivalents:								
At the beginning of the year	141	38	60	5	—	158	13	—
At the end of the year	72	55	73	11	—	180	27	—
Dividend to non-controlling interests	—	—	—	(18)	—	(87)	(7)	—

Summarized statements of operations

	December 31, 2017							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Revenue	2,926	371	2,486	698	—	1,943	—	56
Net income (loss)	(403)	6	209	52	1,130	617	6	(71)
Total comprehensive income (loss)	(421)	4	210	52	1,130	613	6	(71)

Summarized statements of cash flows

	December 31, 2017							
	AMSA	Sonasid	AM Kryvyi Rih	BBA	Hera Ermac	AMMC	Arceo	AM Liberia
Net cash provided by / (used in) operating activities	(119)	(7)	194	63	(12)	947	10	(69)
Net cash provided by / (used in) investing activities	(193)	(3)	(234)	(9)	12	(301)	3	(63)
Net cash provided by / (used in) financing activities	330	(4)	—	(61)	—	(656)	(8)	132
Impact of currency movements on cash	13	1	(2)	—	—	—	1	—
Cash and cash equivalents:								
At the beginning of the year	110	51	102	12	—	168	7	—
At the end of the year	141	38	60	5	—	158	13	—
Dividend to non-controlling interests	—	(2)	—	(26)	—	(98)	(5)	—

11.5.2 Transactions with non-controlling interests

Acquisitions of non-controlling interests, which do not result in a change of control, are accounted for as transactions with owners in their capacity as owners and therefore no goodwill is recognized as a result of such transactions. In such circumstances, the carrying amounts of the controlling and non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiary. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the parent.

Transactions with non-controlling interests in 2018 were as follows:

On November 9, 2018, ArcelorMittal completed the acquisition of Marcegaglia's 15% non-controlling interest in AM InvestCo and 11% non-controlling interest in BRE.M.A Warmwalz GmbH & Co. KG for a 28 and 40 consideration, respectively. The Company recorded a decrease of 55 directly in equity.

Transactions with non-controlling interests include also the mandatory convertible bonds (see note 11.2).

NOTE 12: RELATED PARTIES

The related parties of the Group are predominately subsidiaries, joint operations, joint ventures, associates and key management personnel (see note 8.1) of the Group. Transactions between the parent company, its subsidiaries and joint operations are eliminated on consolidation and are not disclosed in this note. Related parties include the Significant Shareholder, which is a trust of which Mr. Lakshmi N. Mittal, Mrs. Usha Mittal and their children are the beneficiaries and which owns 37.4% of ArcelorMittal's ordinary shares.

Transactions with related parties of the Company mainly relate to sales and purchases of raw materials and steel products and were as follows:

12.1 Sales and trade receivables

		Year Ended December 31,			December 31,	
				Sales	Trade receivables	
Related parties and their subsidiaries where applicable	Category	2019	2018	2017	2019	2018
Calvert	Joint Venture	2,518	2,207	2,030	5	33
Gonvarri Steel Industries [1]	Associate	1,728	2,022	1,666	42	78
ArcelorMittal CLN Distribuzione Italia S.r.l.	Joint Venture	483	511	472	57	38
Borçelik	Joint Venture	474	536	426	20	20
Bamesa	Associate	365	383	397	32	27
I/N Kote L.P.	Joint Venture	321	329	321	2	10
C.L.N. Coils Lamiere Nastri S.p.A.	Associate	247	265	233	10	6
AM RZK	Joint Venture	225	136	235	13	5
Aperam Société Anonyme ("Aperam")	Other	172	278	262	16	29
Tuper S.A.	Joint Venture	147	155	154	43	45
Tameh	Joint Venture	109	110	67	8	4
WDI [2]	Associate	105	148	127	1	1
Al Jubail	Joint Venture	25	115	66	—	1
Macsteel [3]	Other	—	470	521	—	2
Other		523	594	526	49	67
Total		7,442	8,259	7,503	298	366

1. Gonvarri Steel Industries includes ArcelorMittal Gonvarri Brasil Productos Siderúrgicos which is a joint venture.
2. WDI includes Westfälische Drahtindustrie Verwaltungsgesellschaft mbH & Co. KG and Westfälische Drahtindustrie GmbH.
3. Macsteel was sold on October 31, 2018.

12.2 Purchases and trade payables

		Year Ended December 31,			December 31,	
				Purchases		Trade payables
Related parties and their subsidiaries where applicable	Category	2019	2018	2017	2019	2018
Tameh	Joint Venture	273	344	286	22	2
Calvert	Joint Venture	127	107	65	41	23
CFL Cargo S.A.	Associate	63	59	60	17	9
Al Jubail	Joint Venture	53	42	2	4	22
Exeltium S.A.S.	Associate	52	54	53	—	—
Sitrel	Joint Venture	49	41	—	1	3
Aperam	Other	47	85	94	7	6
Baycoat Limited Partnership	Joint Venture	47	43	42	8	5
Gonvarri Steel Industries [1]	Associate	22	35	19	15	31
Baffinland [2]	Associate	16	28	142	1	16
Other		343	278	270	135	84
Total		1,092	1,116	1,033	251	201

1. Gonvarri Steel Industries includes ArcelorMittal Gonvarri Brasil Productos Siderúrgicos which is a joint venture.
2. Baffinland was classified as an associate as of October 31, 2017 (see note 2).

12.3 Other transactions with related parties

At December 31, 2019, subsequent to the ArcelorMittal's sale of a 50% controlling interest in Global Chartering to DryLog (see note 2.3.1), the Company signed a 10 year freight contract with Global Chartering, whereby ArcelorMittal agreed to provide cargo up to 16.8 million tonnes annually for shipping, representing 80% of the current capacity of Global Chartering. As of December 31, 2019, the Company also had an outstanding short-term loan of 127 granted to Global Chartering, which is expected to be repaid following the sale-and-lease back of three vessels owned by Global Chartering.

At December 31, 2019, the shareholder loans granted by the Company to Al Jubail, with various maturity dates, had a carrying value of 109 (see note 2.4.3).

As of December 3, 2014, ArcelorMittal Calvert LLC signed a member capital expenditure loan agreement with the joint venture Calvert and as of December 31, 2019, the loans amounted to 162 including accrued interest. The loans bear interest from 3% to 4.77% and have various maturity dates ranging from less than 1 to 25 years.

On November 8, 2019, Baffinland entered into an agreement with a bank to finance up to 6 million tonnes at 78% of the value of the iron ore produced and hauled to the port of Milne Inlet by Baffinland up to a limit of 450. ArcelorMittal's shared operator rights terminated on June 30, 2018 and the Company retained marketing rights until December 31, 2019. ArcelorMittal is working with Nunavut Iron Ore and Baffinland on this transition of the marketing activities.

Following the Indian Supreme Court ruling dated October 4, 2018, ArcelorMittal completed a series of payments to the financial creditors of KSS Petron to clear overdue debts (see note 4.6). AMNS India has the right to enforce the KSS Petron debt on behalf of the Company for an outstanding amount of 136 as of December 31, 2019.

NOTE 13: PRINCIPAL ACCOUNTANT FEES AND SERVICES

Deloitte Audit S.à r.l. acted as the principal independent registered public accounting firm for ArcelorMittal for the fiscal years ended December 31, 2019 and 2018. Set forth below is a breakdown of fees for services rendered in 2019 and 2018.

Audit Fees. Audit fees in 2019 and 2018 included 25.5 and 26.7, respectively, for the audits of financial statements, and 0.4 and 0.5 in 2019 and 2018, respectively, for regulatory filings.

Audit-Related Fees. Audit-related fees in 2019 and 2018 were 1.0 and 0.9, respectively. Audit-related fees include fees for agreed upon procedures for various transactions or reports.

Tax Fees. Fees relating to tax planning, advice and compliance in 2019 and 2018 were 0.3 and 0.4, respectively.

All Other Fees. Fees in 2019 and 2018 for all other services were 0.1 and 0.2, respectively. All other fees relate to services not included in the first three categories.

To the Shareholders of
ArcelorMittal Société Anonyme
24-26, Boulevard d'Avranches
L-1160 Luxembourg
Grand Duchy of Luxembourg

REPORT OF THE RÉVISEUR D'ENTREPRISES AGRÉÉ

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of ArcelorMittal and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as at December 31, 2019, and the consolidated statement of operations, other comprehensive income, changes in equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at December 31, 2019, and of its consolidated financial performance and of its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union.

Basis for Opinion

We conducted our audit in accordance with the EU Regulation N° 537/2014, the Law of July 23, 2016 on the audit profession (Law of July 23, 2016) and with International Standards on Auditing (ISAs) as adopted for Luxembourg by the "Commission de Surveillance du Secteur Financier" (CSSF). Our responsibilities under the EU Regulation N° 537/2014, the Law of July 23, 2016 and ISAs as adopted for Luxembourg by the CSSF are further described in the "Responsibilities of the "Réviseur d'Entreprises Agréé" for the Audit of the Consolidated Financial Statements" section of our report. We are also independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) as adopted for Luxembourg by the CSSF together with the ethical requirements that are relevant to our audit of the consolidated financial statements, and have fulfilled our other ethical responsibilities under those ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to Notes 1 and 7 to the consolidated financial statements, which describes that effective January 1, 2019, the Group adopted IFRS 16 *Leases* using the modified retrospective transition approach. Our opinion is not qualified in respect of this matter.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of the audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of Goodwill and Property, Plant and Equipment - Refer to Note 5 to the Consolidated Financial Statements

Key Audit Matter Description

The Group's evaluation of goodwill for impairment at the group of cash-generating units ("GCGU") level, and property, plant and equipment ("PP&E") as part of the relevant cash-generating unit ("CGU"), involves a comparison of the recoverable amount of each GCGU or CGU to its carrying amount. Recoverable amount is defined as the higher of fair value less costs of disposal and the value-in-use for each GCGU or CGU. The Group primarily used a discounted cash flow approach to determine the recoverable amounts, which required management to make significant assumptions related to estimates of future cash flows.

Valuation of Goodwill and Property, Plant and Equipment

The goodwill balances of the two GCGUs with the lowest excess of estimated recoverable amount over carrying value as of December 31, 2019 were NAFTA at $2,233 million and ACIS at $973 million. There was no impairment of goodwill recorded as of and for the year ended December 31, 2019.

The PP&E balance of the Group as of December 31, 2019 was $36,231 million. Impairment charges relating to PP&E amounted to $1,927 million for the year ended December 31, 2019, and mainly related to the impairment of PP&E of the ArcelorMittal USA CGU of $1,300 million due to a downward revision of selling prices.

Key assumptions that had a significant impact on the Group's cash flow forecasts included selling prices and volume of shipments. Changes in these assumptions could have a significant impact on the estimates of future cash flows, and subsequently the recoverable amount of a GCGU or CGU.

Given the significant judgments made by management to estimate the recoverable amounts of the relevant GCGUs and CGUs, performing audit procedures to evaluate the reasonableness of management's estimates related to selling prices and volume of shipments, specifically due to the sensitivity of these key assumptions, required a high degree of auditor judgment and an increased extent of effort.

Valuation of Property, Plant & Equipment of ArcelorMittal Italia

On November 1, 2018, the Group acquired Ilva S.p.A and certain of its subsidiaries ("ILVA"), subsequently renamed ArcelorMittal Italia, by means of a lease agreement with obligation to purchase. On November 4, 2019, the Group notified ILVA's Commissioners of intent to withdraw from, or terminate, the lease purchase agreement.

Following the termination notice, the Group continued to maintain control over the leased business. On December 20, 2019, the Group and ILVA's Commissioners signed a non-binding agreement forming a basis to continue negotiating a new industrial plan for ILVA, which has not been finalized as of the date of this report.

The Group determined that ArcelorMittal Italia represented a separate CGU as of December 31, 2019 and used a discounted cash flow approach to determine the recoverable amount of ArcelorMittal Italia CGU, which requires management to make significant assumptions related to estimates of future cash flows.

The discount rate was a key assumption, which reflected the level of uncertainty associated with the ongoing negotiations. Changes in this discount rate could have a significant impact on the determination of the recoverable amount of ArcelorMittal Italia CGU.

The PP&E balance of ArcelorMittal Italia was $1,477 million as of December 31, 2019 and there was no impairment of PP&E recorded for ArcelorMittal Italia as of and for the year ended December 31, 2019.

Auditing management's judgment regarding the determination that ArcelorMittal Italia represented a separate CGU and whether the judgment complied with the requirements of IFRSs required an increased extent of effort. Further, given the significant judgments made by management to estimate the recoverable amount of ArcelorMittal Italia's PP&E, specifically related to the impact of lease termination notice and the ongoing negotiations with the ILVA Commissioners, performing audit procedures to evaluate the reasonableness of management's estimates related to the discount rate required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists.

How the Key Audit Matter Was Addressed in the Audit

Our audit procedures related to the GCGU and CGU assessment, selling prices, volume of shipments and discount rate used by management to estimate future cash flows of the GCGUs and CGUs included the following, among others:

- We tested the effectiveness of internal controls over management's valuation methodology and assumptions used, and estimates of future cash flows, including controls over the determination of the recoverable amount of the GCGUs and CGUs.
- We evaluated management's ability to reasonably estimate future cash flows by comparing actual results to management's historical forecasts.
- We evaluated the reasonableness of management's cash flow forecasts by considering macroeconomic conditions, internal communications of management and the Board of Directors and holding discussions with relevant personnel.
- We evaluated the impact of any changes in management's cash flow forecasts from October 1, 2019, the annual measurement date for testing impairment of goodwill, to December 31, 2019.

- For ArcelorMittal Italia, in addition to the above, our procedures included:
  - we evaluated the impact of the termination notice on the determination of the CGUs as of December 31, 2019.
  - we considered the terms of the lease purchase agreement and the Group's communications with legal counsel, ILVA's Commissioners, and other key stakeholders involved in the negotiations.
  - with the assistance of our fair value specialists, we evaluated the reasonableness of the discount rate by:
    - evaluating the reasonableness of the methodology used and the underlying source information used in the Group's calculation of the discount rate.
    - testing the mathematical accuracy of the calculation.
    - developing an independent range of estimates and comparing the discount rate selected by management to our range.

Valuation of Deferred Tax Assets - Refer to Note 10.4 to the Consolidated Financial Statements

Key Audit Matter Description

ArcelorMittal S.A. (parent company) has deferred tax assets primarily related to tax losses carried forward. Under current tax law in Luxembourg, tax losses accumulated before January 1, 2017 do not expire and are recoverable against future taxable income. The valuation of deferred tax assets requires management to make significant estimates related to the future taxable income to be derived from entities within the Luxembourg tax integration and, as a result, the amounts of deferred tax assets expected to be realized by ArcelorMittal S.A. Further, the assessment of the likelihood of future taxable profits being available, specifically the length of the forecast periods also requires significant management judgment.

The Group recognized deferred tax assets amounting to $8,680 million as of December 31, 2019. Given the complexity of management's valuation process, auditing management's estimates of future taxable income and the determination of whether it is more likely than not that the deferred tax assets will be realized involved a high degree of auditor judgment and an increased extent of effort, including the need to involve our tax specialists.

How the Key Audit Matter Was Addressed in the Audit

Our audit procedures related to estimates of future taxable income and determination of whether it is more likely than not that the deferred tax assets will be realized included the following, among others:

- We tested the effectiveness of internal controls over management's valuation of deferred tax assets, including the controls over the assessment of the likelihood of future taxable profits being available and the length of the forecast periods.
- With the assistance of our tax specialists knowledgeable in Luxembourg-specific and international tax planning matters, we evaluated whether management's estimates of future taxable income were consistent with available evidence related to management's assessment of the likelihood of future taxable profits being available and the length of the forecast periods.
- We evaluated management's ability to estimate future taxable income by comparing actual results to management's historical forecasts, and considered the results in evaluating the current-year estimated future taxable income.
- We evaluated management's proposed tax planning strategies, potential tax implications of material current year or future planned transactions (acquisitions, divestitures, finance and shareholding restructuring) and the related impact on management's determination of the forecast periods and amounts of deferred tax assets recognized.

Other information

The Board of Directors is responsible for the other information. The other information comprises the information stated in the consolidated management report and the Corporate Governance Statement, and further information on the risks that the Group is exposed to and details on the Group's Mining business, but does not include the consolidated financial statements and our report of the "Réviseur d'Entreprises Agréé" thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report this fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors for the Consolidated Financial Statements

The Board of Directors is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with IFRSs as adopted by the European Union, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Responsibilities of the "Réviseur d'Entreprises Agréé" for the Audit of the Consolidated Financial Statements

The objectives of our audit are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a report of the "Réviseur d'Entreprises Agréé" that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the EU Regulation N° 537/2014, the Law of July 23, 2016 and with ISAs as adopted for Luxembourg by the CSSF will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the EU Regulation N° 537/2014, the Law of July 23, 2016 and with ISAs as adopted for Luxembourg by the CSSF, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.
- Conclude on the appropriateness of Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our report of the "Réviseur d'Entreprises Agréé" to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our report of the "Réviseur d'Entreprises Agréé". However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities and business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter.

Report on Other Legal and Regulatory Requirements

We have been appointed as "Réviseur d'Entreprises Agréé" by the General Meeting of the Shareholders on May 7, 2019 and the duration of our uninterrupted engagement, including previous renewals and reappointments, is 13 years.

The consolidated management report, which is the responsibility of the Board of Directors, is consistent with the consolidated financial statements and has been prepared in accordance with applicable legal requirements.

The Corporate Governance Statement is included in the consolidated management report. The information required by Article 68ter paragraph (1) letters c) and d) of the Law of December 19, 2002 on the commercial and companies register and on the accounting records and annual accounts of undertakings, as amended, is consistent with the consolidated financial statements and has been prepared in accordance with applicable legal requirements.

We confirm that the audit opinion is consistent with the additional report to the audit committee.

We confirm that the prohibited non-audit services referred to in the EU Regulation N° 537/2014 were not provided and that we remained independent of the Group in conducting the audit.

For Deloitte Audit,
Société à responsabilité limitée
Cabinet de Révision Agréé

Olivier Lefèvre, *Réviseur d'Entreprises Agréé*
Partner

March 3, 2020
20, Boulevard de Kockelscheuer
L-1821 Luxembourg

The following pages do not form part of the Company's financial statements. These pages contain further information on the risks that ArcelorMittal is exposed to and further details on the Company's Mining business.

Risks related to the global economy and the mining and steel industry

ArcelorMittal's business, financial condition, results of operations, reputation or prospects could be materially and adversely affected by one or more of the risks and uncertainties described below.

Risks related to the global economy and the mining and steel industry

Prolonged low steel and (to a lesser extent) iron ore prices would likely have an adverse effect on ArcelorMittal's results of operations.

As an integrated producer of steel and iron ore, ArcelorMittal's results of operations are sensitive to the market prices of steel and iron ore in its markets and globally. The impact of market steel prices on its results is direct while the impact of market iron ore prices is both direct, as ArcelorMittal sells iron ore on the market to third parties (in which case it benefits from higher iron ore market prices), and indirect as iron ore is a principal raw material used in steel production and fluctuations in its market price are typically and eventually (with the timing dependent on steel market conditions) passed through to steel prices (with any lags in passing on higher prices "squeezing" steel margins, as discussed below). Steel and iron ore prices are affected by supply and demand trends and inventory cycles. In terms of demand, steel and iron ore prices are sensitive to trends in cyclical industries, such as the automotive, construction, appliance, machinery, equipment and transportation industries, which are significant markets for ArcelorMittal's products. More generally, steel and iron ore prices are sensitive to macroeconomic fluctuations in the global economy which are impacted by many factors ranging from trade and geopolitical tensions to global and regional monetary policy. In the past, substantial price decreases during periods of economic weakness have not always been offset by commensurate price increases during periods of economic strength. In addition, as further discussed below, excess supply relative to demand for steel in local markets generally results in increased exports and drives down global prices. In terms of inventory, steel stocking and destocking cycles affect apparent demand for steel and hence steel prices and steel producers' profitability. For example, steel distributors may accumulate substantial steel inventories in periods of low prices and, in periods of rising real demand for steel from end-users, steel distributors may sell steel from inventory (destock), thereby delaying the effective implementation of steel price increases. Conversely, steel price decreases can sometimes develop their own momentum, as customers adopt a "wait and see" attitude and destock in the expectation of further price decreases.

As a result of these factors, steel and iron ore prices have come under pressure at various points in recent periods. For example, in 2015, both steel and iron ore prices recorded historical lows, which led to significant declines in ArcelorMittal's revenues and operating income for 2015. Moreover, the particularly sharp decline in steel prices in the second half of 2015 triggered inventory related losses of $1.3 billion, and the significant decline in iron ore and coal prices led to a $3.4 billion impairment of mining assets and goodwill in the fourth quarter of 2015. More recently, in 2019, steel market conditions deteriorated significantly as a result of a negative price-cost effect due to a decline in steel prices (lower demand in Europe and the U.S., higher imports in Europe and additional domestic supply and the effect of customer destocking in the U.S.) and higher raw material costs (particularly in iron ore due to supply-side developments in Brazil and Australia). As a result, ArcelorMittal's steel segments recorded significantly lower operating income, including charges of $0.8 billion primarily related to inventory and impairment charges of $1.9 billion in 2019.

Steel and iron ore price trends are difficult to predict, particularly in the current geopolitical and economic environment. For example, while the imposition of tariffs in the United States and Europe at a rate of 25% supported local market steel prices in 2018, further tariffs on a widening list of imported products and retaliatory protectionist measures by other countries may have a significant negative impact on global trade and ultimately economic growth, steel demand and steel and iron ore prices. Management currently considers it likely that, while stabilization is possible, steel prices will not increase substantially in 2020, given expectations regarding economic conditions and demand. A scenario of prolonged low steel and (to a lesser extent or if simultaneous) iron ore prices, including as a result of negative geopolitical or macroeconomic trends, would have a material adverse effect on ArcelorMittal's results of operations and financial condition.

Volatility in the supply and prices of raw materials, energy and transportation, and volatility in steel prices or mismatches between steel prices and raw material prices could adversely affect ArcelorMittal's results of operations.

The prices of steel, iron ore, coking coal and scrap have been highly volatile in recent years. Volatility in steel and raw material prices can result from many factors including: trends in demand for iron ore in the steel industry itself, and particularly from Chinese steel producers (as the largest group of producers); industry structural factors (including the oligopolistic nature of the seaborne iron ore industry and the fragmented nature of the steel industry); the expectation or imposition of corrective trade measures such as tariffs; massive stocking and destocking activities (sudden drops in prices can lead end-users to delay orders pushing prices down further); speculation; new laws or regulations; changes in the supply of iron ore, in particular due to new

mines coming into operation; business continuity of suppliers; changes in pricing models or contract arrangements; expansion projects of suppliers; worldwide production, including interruptions thereof by suppliers; capacity-utilization rates; accidents or other similar events at suppliers' premises or along the supply chain as occurred in 2019; wars, natural disasters, public health epidemics (such as the outbreak of the coronavirus epidemic in early 2020, which is likely to decelerate expected growth in China's steel demand in 2020 and has already impacted steel and iron ore prices), political disruption and other similar events; fluctuations in exchange rates; the bargaining power of raw material suppliers and the availability and cost of transportation. For further information, see "Key factors affecting results of operations-Raw materials."

As a producer and seller of steel, the Company is directly exposed to fluctuations in the market price for steel, iron ore, coking coal and other raw materials, energy and transportation. In particular, steel production consumes substantial amounts of raw materials including iron ore, coking coal and coke, and the production of direct reduced iron, the production of steel in EAFs and the re-heating of steel involve the use of significant amounts of energy, making steel companies dependent on the price of and their reliable access to supplies of raw materials and energy. Although ArcelorMittal has substantial sources of iron ore and coal from its own mines (the Company's self-sufficiency rates were 52% for iron ore and 12% for PCI and coal in 2019), it nevertheless remains exposed to volatility in the supply and price of iron ore and coking coal given that it obtains a significant portion of such raw materials under supply contracts from third parties.

Furthermore, while steel and raw material (in particular iron ore and coking coal) price trends have historically been correlated, a lack of correlation or an abnormal lag in the corollary relationship between raw material and steel prices may also occur and result in a "price-cost effect" in the steel industry. ArcelorMittal has experienced negative price-cost effects (or "squeezes") at various points in recent years including in 2019 and may continue to do so. In some of ArcelorMittal's segments, in particular Europe and NAFTA, there are several months between raw material purchases and sales of steel products incorporating those materials, rendering them particularly susceptible to price-cost effect. For example, coking coal sourced from Australia takes several weeks to reach Europe (e.g. ~4 weeks sailing time, plus loading/unloading time at ports), creating a structural lag. Sudden spikes in raw materials, such as coking coal, have occurred in the past and may occur in the future. Because ArcelorMittal sources a substantial portion of its raw materials through long-term contracts with quarterly (or more frequent) formula-based or negotiated price adjustments and as a steel producer sells a substantial part of its steel products at spot prices, it faces the risk of adverse differentials between its own production costs, which are affected by global raw materials and scrap prices, on the one hand, and trends for steel prices in regional markets, on the other hand. In 2019, the significant decline in steel prices (due to lower demand and higher imports, among other things) and significant increase of iron ore prices among other trends due in part to supply shocks following the collapse of the Brumadinho dam owned by Vale in Brazil and a heavy cyclone season in Australia weighed heavily on the profitability of the Company's steel business.

Another area of exposure to price volatility is transportation. Freight costs (i.e., shipping) are an important component of ArcelorMittal's cost of goods sold. In particular, if freight costs were to increase before iron ore or steel prices, this would directly and mechanically weigh on ArcelorMittal's profitability (although it would make imports less competitive).

Excess capacity and oversupply in the steel industry and in the iron ore mining industry have in the past and may continue in the future to weigh on the profitability of steel producers, including ArcelorMittal.

The steel industry is affected by global and regional production capacity and fluctuations in steel imports and exports, which are themselves affected by the existence and amounts of tariffs and customer stocking and destocking cycles. The steel industry has historically suffered from structural overcapacity globally, and the current global steelmaking capacity exceeds the current global consumption of steel. This overcapacity is affected by global macroeconomic trends and amplified during periods of global or regional economic weakness due to weaker global or regional demand. In particular, China is both the largest global steel consumer and the largest global steel producer by a large margin, and the balance between its domestic production and consumption has been an important factor influencing global steel prices in recent years, such as in 2015, when Chinese domestic steel demand weakened resulting in a surge in Chinese steel exports. While the structural imbalance between Chinese supply and demand has been reduced by capacity eliminations in recent years, less strict capacity constraints and capacity creep may result in increasing overcapacity. In addition, a significant increase in Chinese capacity and/or a significant decrease in Chinese demand could lead to a renewed flood of Chinese steel exports. In the long-term, Chinese steel demand is expected to decline, as the economy slows, the need for large infrastructure projects wanes and pace of urbanization moderates. In addition, other developing markets (such as Brazil, Russia and Ukraine) continue to show structural overcapacity after experiencing decreased domestic demand as a result of weakening economic conditions, and developed Asia continues to exhibit overcapacity and the need to export significant volumes. Regional steel markets are also vulnerable at times of economic crisis in countries with

significant steelmaking capacity. One such example is Turkey where a currency crisis caused domestic demand to decline sharply during the second half of 2018 and led to an increase in exports, particularly long steel products. The European steel market is particularly sensitive to decreases in demand as well as supply spikes from imports due to remaining structural overcapacity. For example, in response to a weak demand environment in Europe in the first half of 2019, the Company announced that it would temporarily reduce its European steelmaking capacity with total annualized production cuts of 4.2 million tonnes. Should demand not improve and/or exports be curtailed and/or supply increased, European steel market conditions could remain weak against the backdrop of continued structural overcapacity. Finally, in the United States, improved economic conditions and pricing support from the Section 232 tariffs led to new capacity being built and previously idled capacity being re-opened during 2018. However, apparent steel consumption for flat products ("ASC") declined by over 4% in 2019, due not only to a downturn in real steel consumption ("RSC") but also significant destocking at both stockists and end-users. The reduction in inventories was amplified by steel prices falling from high levels, meaning stockists reduced purchases to rebuild stocks at lower prices. Such was the impact of destocking that changes in inventories directly accounted for over 50% of the decline in flat products apparent demand in the United States and for almost 50% in the EU 28 last year. Although the Company expects ASC to grow in 2020, as it becomes more closely aligned to RSC, there is a continued risk of further weakness in underlying real demand which may affect the Company's deliveries and profitability.

The overcapacity of steel production in the developing world and in China in particular has weighed on global steel prices at times over the past decade, as exports have surged to Europe and NAFTA, ArcelorMittal's principal markets, often at low prices that may be at or below the cost of production, depressing steel prices in regional markets world-wide. See "Unfair trade practices, import tariffs and/or barriers to free trade could negatively affect steel prices and ArcelorMittal's results of operations in various markets." If global demand continues to weaken, the effects of such a phenomenon could increase.

Finally, excess iron ore supply coupled with decreased demand in iron ore consuming industries, such as steel, led to a prolonged depression of iron ore prices at various points in recent years, for example in 2015, which in turn weighed on steel prices as iron ore is a principal raw material in steelmaking. While the iron ore supply/demand balance has been more favorable more recently and iron ore prices have been strong in 2019, no assurance can be given that it will not deteriorate again, particularly if Chinese steel demand declines or worldwide capacity increases due to new construction or the restart of production. A renewed phase of steel and iron ore oversupply would likely have a material adverse effect on ArcelorMittal's results of operations and financial condition.

Unfair trade practices, import tariffs and/or barriers to free trade could negatively affect steel prices and ArcelorMittal's results of operations in various markets.

ArcelorMittal is exposed to the effects of "dumping" and other unfair trade and pricing practices by competitors. Moreover, government subsidies to the steel industry remain widespread in certain countries, particularly those with centrally-controlled economies such as China. In periods of lower global demand for steel, there is an increased risk of additional volumes of unfairly-traded steel exports into various markets, including North America and Europe and other markets such as South Africa, in which ArcelorMittal produces and sells its products. Such imports have had and could in the future have the effect of further reducing prices and demand for ArcelorMittal's products.

An increase in exports of low-cost steel products from developing countries, along with a lack of effective remedial trade policies, could depress steel prices in various markets globally, including in ArcelorMittal's key markets. Conversely, ArcelorMittal is exposed to the effects of import tariffs, other trade barriers and protectionist policies more generally due to the global nature of its operations. Various countries have instituted, and may institute import tariffs and barriers that could, depending on the nature of the measures adopted, adversely affect ArcelorMittal's business by limiting the Company's access to or competitiveness in steel markets. While such protectionist measures can help the producers in the adopting country, they may be ineffective, raise the risk of exports being directed to markets where no such measures are in place or are less dissuasive and/or result in retaliatory measures. For example, the adoption of steel and aluminum tariffs in the United States in March 2018 under "Section 232" led to a surge of steel imports in other markets and consequently provoked retaliatory safeguard measures by other countries, including the European Union, Canada and Mexico. With regard to ArcelorMittal in particular, the positive effect of the Section 232 tariffs in the United States in 2018 on its U.S. sales was partially offset by the negative effects on ArcelorMittal's exports from Canada and Mexico into the United States. While on May 17, 2019, the United States, Canada and Mexico reached an agreement to remove the 25% tariffs on aluminum and steel products, it remains unclear what impact these and other protectionist measures (including additional European import quotas adopted in August 2019) will have and whether they will be effective in increasing or maintaining steel prices in the adopting country or countries or adversely impact global macroeconomic conditions.

In February 2019, President Trump received from the U.S. Department of Commerce the findings of another Section 232 investigation into whether imported vehicles pose a

national security threat to the United States. On May 15, 2019, the Trump administration announced its intention to defer a decision on whether to impose tariffs on cars and auto parts by up to six months, but no such decision has yet been taken. The imposition of such tariffs could weigh significantly on U.S. demand for imported vehicles (particularly from Europe) and could therefore impact demand for steel from European auto manufacturers who are among ArcelorMittal Europe's principal clients. The overall adverse impact on ArcelorMittal would depend in part on the extent to which this decrease in demand is offset by an increase in demand from U.S. auto manufacturer clients (who would benefit from the protectionist tariffs) as well as from ones based in Canada and Mexico, all of which would benefit ArcelorMittal's NAFTA operations.

More generally, the current state of trade relations globally with trade disputes leading to the imposition of tariffs and then retaliatory measures, as seen in the recent period in various markets (U.S./China, U.S./Europe, etc.) has and could continue to directly (in the case of tariffs) or indirectly (in the case of economic growth generally) have a significant adverse effect on demand for and the price of steel and hence on ArcelorMittal's results of operations and financial condition.

Developments in the competitive environment in the steel industry could have an adverse effect on ArcelorMittal's competitive position and hence its business, financial condition, results of operations or prospects.

The markets in which steel companies operate are highly competitive. Competition—in the form of established producers expanding in new markets, smaller producers increasing production in anticipation of demand increases or amid recoveries, or exporters selling excess capacity from markets such as China—could cause ArcelorMittal to lose market share, increase expenditures or reduce pricing. For example, in NAFTA, competition in the form of significant new U.S. mini-mill capacity could impact pricing and in the CIS, as regional competitors improve operational efficiency and increase capacity, ArcelorMittal's market share may be affected. Any of these developments could have a material adverse effect on its business, financial condition, results of operations or prospects.

Competition from other materials and alternative steel based technologies could reduce market prices and demand for steel products and thereby reduce ArcelorMittal's cash flows and profitability.

In many applications, steel competes with other materials that may be used as substitutes, such as aluminum, concrete, composites, glass, plastic and wood. In particular, as a result of increasingly stringent regulatory requirements, as well as developments in alternative materials, designers, engineers and industrial manufacturers, especially those in the automotive industry have increased their use of lighter weight and alternative materials, such as aluminum and plastics in their products.

In the automotive area, ArcelorMittal has introduced new advanced high-strength steel products, such as Usibor® 2000, Ductibor® 1000 and Fortiform® a new 3rd generation advanced high strength steel for cold stamping, new engineering S-in motion® projects and a dedicated electric iCARe® range to respond to the shift toward electric cars. In the construction area, ArcelorMittal has launched Steligence®, a unique holistic commercial approach to serve this market with a complete set of products, services and solutions. See "Business overview—Competitive strengths—Research and development" Despite these product innovations, a loss of market share to substitute materials, increased government regulatory initiatives favoring the use of alternative materials, as well as the development of additional new substitutes for steel products could significantly reduce market prices and demand for steel products and thereby reduce ArcelorMittal's cash flows and profitability.

In addition, new technologies such as carbon free steelmaking or additive manufacturing could result in a loss of market share if competitors develop and deploy this kind of technology before ArcelorMittal.

Risks related to ArcelorMittal's operations

ArcelorMittal's level of profitability and cash flow currently is and, depending on market and operating conditions, may in the future be, substantially affected by its ability to reduce costs and improve operating efficiency.

The steel industry has historically been cyclical, periodically experiencing difficult operating conditions. In light of this, ArcelorMittal has historically and increasingly in recent periods, taken initiatives to reduce its costs and increase its operating efficiency. These initiatives have included various asset optimization and other programs throughout the Company. The most recent of these programs is the Action 2020 plan announced in February 2016 that includes, among other aspects, several efficiency improvement initiatives, the next phase of the Transformation Plan that was announced in March 2019 aiming for further gains through 2023, driven by digitalization, positioning the Company to increase the performance gap compared to competitors in Europe for flat carbon and additional cost improvement plans announced in February 2020. While the Company has partially implemented the Action 2020 plan across all segments, continued implementation of cost saving and efficiency improvement initiatives is subject to operational challenges and limitations. For example, the volume gains achieved in 2017 were reversed in 2018 due to operational disruptions. Failure to implement fully such initiatives would prevent the attainment of announced

profitability or cash flow improvement targets, and more generally could have a material adverse effect on the Company's profitability and cash flow.

ArcelorMittal has incurred and may incur in the future operating costs when production capacity is idled or increased costs to resume production at idled facilities.

ArcelorMittal's decisions about which facilities to operate and at which levels are made based upon customers' orders for products as well as the capabilities and cost performance of the Company's facilities. Considering temporary or structural overcapacity in the current market situation, production operations are concentrated at several plant locations and certain facilities are idled in response to customer demand, although operating costs are still incurred at such idled facilities. When idled facilities are restarted, ArcelorMittal incurs costs to replenish raw material inventories, prepare the previously idled facilities for operation, perform the required repair and maintenance activities and prepare employees to return to work safely and resume production responsibilities. Such costs could have an adverse effect on its results of operations or financial condition. See "Business Overview—Key transactions and events in 2019" for information about production cuts.

ArcelorMittal could experience labor disputes that may disrupt its operations and its relationships with its customers and its ability to rationalize operations and reduce labor costs in certain markets may be limited in practice or encounter implementation difficulties.

A majority of the employees of ArcelorMittal and of its contractors are represented by labor unions and are covered by collective bargaining or similar agreements, which are subject to periodic renegotiation. Strikes or work stoppages could occur prior to, or during, negotiations preceding new collective bargaining agreements, during wage and benefits negotiations or during other periods for other reasons, in particular in connection with any announced intentions to adapt the footprint. ArcelorMittal may experience strikes and work stoppages at various facilities. Prolonged strikes or work stoppages, which may increase in their severity and frequency, may have an adverse effect on the operations and financial results of ArcelorMittal. The risk of strikes and work stoppages is particularly acute during collective bargaining agreement negotiations. For example, in March 2019, industrial action was initiated in South Africa by NUMSA, the largest union operating at ArcelorMittal South Africa. They demanded the insourcing and/or the equalization of the remuneration and benefits of the employees of a service provider to ArcelorMittal South Africa, which led to a two-month strike from March to May 2019.

Faced with temporary or structural overcapacity in various markets, particularly developed ones, ArcelorMittal has in the past sought and may in the future seek to rationalize operations through temporary or permanent idling and/or closure of plants. For example, on May 6, 2019 and May 29, 2019, ArcelorMittal announced a series of temporary production cuts in steelmaking operations in Europe, totaling 4.2 million tonnes in annualized production for 2019. These initiatives have in the past and may in the future lead to protracted labor disputes and political controversy. In a depressed economic environment in South Africa, ArcelorMittal South Africa initiated a Business Transformation project in 2018 and a strategic workforce planning process that started in January 2019 and led to the announcement of a workforce reorganization and reduction in July 2019. As a result, ArcelorMittal South Africa engaged in consultations with employee representatives which concluded in November 2019. In addition, ArcelorMittal South Africa announced in November 2019 its intention to cease operations at Saldanha which led to a consultation process with employee representatives that concluded on January 7, 2020.

Disruptions to ArcelorMittal's manufacturing processes caused for example by equipment failures, natural disasters or extreme weather events could adversely affect its operations, customer service levels and financial results.

Steel manufacturing processes are dependent on critical steel-making equipment, such as furnaces, continuous casters, rolling mills and electrical equipment (such as transformers), and such equipment may incur downtime as a result of unanticipated failures or other events, such as fires, explosions, furnace breakdowns or as a result of natural disasters or severe weather conditions. ArcelorMittal's manufacturing plants have experienced, and may in the future experience, plant shutdowns or periods of reduced production as a result of such equipment failures or other events, one example being the collapse of the oxygen and nitrogen pipelines in November 2018 at ArcelorMittal Temirtau or the fire in a conveyor belt of the coke plant in ArcelorMittal Asturias in Aviles in October 2018. An electrical failure in the third quarter of 2019 resulted in a temporary stoppage of the concentrator at AMMC, impacting iron ore production. To the extent that lost production as a result of such a disruption cannot be compensated for by unaffected facilities, such disruptions could have an adverse effect on ArcelorMittal's operations, customer service levels and results of operations.

In addition, natural disasters and severe weather conditions could lead to significant damage at ArcelorMittal's production facilities and general infrastructure. For example, ArcelorMittal Mexico's production facilities located in Lázaro Cárdenas, Michoacán, Mexico are located in or close to areas prone to earthquakes. The Lázaro Cárdenas area has, in addition, been subject to a number of tsunamis in the past. The site of the joint venture AM/NS Calvert ("Calvert") in the United States is located in an area subject to tornados and hurricanes. ArcelorMittal also has assets in locations subject to bush fires, specifically in Kazakhstan and South Africa, and to Arctic freeze. More generally, changing weather patterns and climatic conditions in recent years, possibly due to the phenomenon of global warming, have added to the unpredictability and frequency of natural disasters.

For example, on July 10, 2019 an extreme storm disabled a crane that unloads from ships iron ore used in the blast furnaces at the Taranto plant in Italy, causing a fatality and subsequently affecting a portion of its raw material supply. Severe weather conditions can also affect ArcelorMittal's operations in particular due to the long supply chain for certain of its operations and the location of certain operations in areas subject to harsh winter conditions (i.e., the Great Lakes Region, Canada and Kazakhstan) or areas that are susceptible to droughts (i.e., South Africa, Brazil). Flooding has also affected ArcelorMittal's operations, including at ArcelorMittal Asturias in Aviles, Spain in June 2018 and in Liberia in the third quarter of 2018, when heavy rains during the wet season caused handling and logistic constraints that impacted shipment volumes. Damage to ArcelorMittal production facilities due to natural disasters and severe weather conditions could, to the extent that lost production cannot be compensated for by unaffected facilities, adversely affect its business, results of operations or financial condition.

ArcelorMittal's insurance policies provide limited coverage, potentially leaving it uninsured against some business risks.

The occurrence of an event that is uninsurable or not fully insured could have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects. ArcelorMittal maintains insurance on property and equipment in amounts believed to be consistent with industry practices, but it is not fully insured against all such risks. ArcelorMittal's insurance policies cover physical loss or damage to its property and equipment on a reinstatement basis as arising from a number of specified risks and certain consequential losses, including business interruption arising from the occurrence of an insured event under the policies. Under ArcelorMittal's property and equipment policies, damages and losses caused by certain natural disasters, such as earthquakes, floods and windstorms, are also covered.

ArcelorMittal also purchases worldwide third-party public and product liability insurance coverage for all of its subsidiaries. Various other types of insurance are also maintained, such as comprehensive construction and contractor insurance for its greenfield and major capital expenditures projects, directors and officers liability, transport, and charterers' liability, as well as other customary policies such as car insurance, travel assistance and medical insurance.

In addition, ArcelorMittal maintains trade credit insurance on receivables from selected customers, subject to limits that it believes are consistent with those in the industry, in order to protect it against the risk of non-payment due to customers' insolvency or other causes. Not all of ArcelorMittal's customers are or can be insured, and even when insurance is available, it may not fully cover the exposure.

Notwithstanding the insurance coverage that ArcelorMittal and its subsidiaries carry, the occurrence of an event that causes losses in excess of limits specified under the relevant policy, or losses arising from events not covered by insurance policies, could materially harm ArcelorMittal's financial condition and future operating results.

ArcelorMittal's reputation and business could be materially harmed as a result of data breaches, data theft, unauthorized access or successful hacking.

ArcelorMittal's operations depend on the secure and reliable performance of its information technology systems. An increasing number of companies, including ArcelorMittal, have recently experienced intrusion attempts or even breaches of their information technology security, some of which have involved sophisticated and highly targeted attacks on their computer networks. ArcelorMittal's corporate website was the target of a hacking attack in January 2012, which brought the website down for several days, and phishing, ransomware and virus attacks have been increasing in more recent years through 2019, with WannaCry impacting the Company in March 2018. Implementation of digitalization, Industry 4.0 and Cloud computing result in new risks with increasing threats to ArcelorMittal's operations and systems.

Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target, the Company may be unable to anticipate these techniques or to implement in a timely manner effective and efficient countermeasures.

If unauthorized parties attempt or manage to bring down the Company's website or force access into its information technology systems, they may be able to misappropriate confidential information, cause interruptions in the Company's operations, damage its computers or process control systems or otherwise damage its reputation and

business. In such circumstances, the Company could be held liable or be subject to regulatory or other actions for breaching confidentiality and personal data protection rules. Any compromise of the security of the Company's information technology systems could result in a loss of confidence in the Company's security measures and subject it to litigation, civil or criminal penalties, and adverse publicity that could adversely affect its reputation, financial condition and results of operations.

Risks related to ArcelorMittal's Mining activities

ArcelorMittal's mining operations are subject to risks associated with mining activities.

ArcelorMittal's mining operations are subject to the hazards and risks usually associated with the exploration, development and production of natural resources, any of which could result in production shortfalls or damage to persons or property. In particular, the hazards associated with open-pit mining operations include, among others:

- flooding of the open pit;
- collapse of the open-pit wall;
- accidents associated with the operation of large open-pit mining and rock transportation equipment;
- accidents associated with the preparation and ignition of large-scale open-pit blasting operations;
- production disruptions or difficulties associated with mining in extreme weather conditions;
- hazards associated with the disposal of mineralized waste water, such as groundwater and waterway contamination; and
- collapse of tailings ponds dams or dams.

Hazards associated with underground mining operations, of which ArcelorMittal has several, include, among others:

- underground fires and explosions, including those caused by flammable gas;
- gas and coal outbursts;
- cave-ins or falls of ground;
- discharges of gases and toxic chemicals;
- flooding;
- sinkhole formation and ground subsidence; and
- blasting, removing, and processing material from an underground mine.

ArcelorMittal is exposed to all of these hazards. The occurrence of any of the events listed above could delay production, increase production costs and result in death or injury to persons, damage to property and liability for ArcelorMittal, some or all of which may not be covered by insurance, as well as substantially harm ArcelorMittal's reputation, both as a company focused on ensuring the health and safety of its employees and more generally.

ArcelorMittal's reserve estimates may materially differ from mineral quantities that it may be able to actually recover; ArcelorMittal's estimates of mine life may prove inaccurate; and market price fluctuations and changes in operating and capital costs may render certain ore reserves uneconomical to mine.

ArcelorMittal's reported reserves are estimated quantities of the ore and metallurgical coal that it has determined can be economically mined and processed under present and anticipated conditions to extract their mineral content. There are numerous uncertainties inherent in estimating quantities of reserves and in projecting potential future rates of mineral production, including factors beyond ArcelorMittal's control. The process of estimating reserves involves estimating deposits of minerals that cannot be measured in an exact manner, and the accuracy of any reserve estimate is a function of the quality of available data, engineering and geological interpretation and judgment. As a result, no assurance can be given that the estimated amounts of ore or coal will be recovered or that it will be recovered at the anticipated rates. Estimates may vary, and results of mining and production subsequent to the date of an estimate may lead to revisions of estimates. Reserve estimates and estimates of mine life may require revisions based on actual market conditions, production experience and other factors. Fluctuations in the market prices of minerals and metals, reduced recovery rates or increased operating and capital costs due to inflation, exchange rates, mining duties, changes in regulatory requirements or other factors may render proven and probable reserves uneconomic to exploit and may ultimately result in a revision of reserves. In particular, a prolonged period of low prices or other indicators could lead to a review of the Group's reserves. Such review would reflect the Company's view based on estimates, assumptions and judgments and could result in a reduction in the Group's reported reserves. The Group's reserve estimates do not exceed the quantities that the Company estimates could be extracted economically if future prices were at similar levels to the average contracted price for the previous three years. As a result, if the average contracted prices decline in the subsequent period, including sharply (given the historical volatility and wide swings in iron ore prices), the Company's estimates of its reserves at year-end may decline.

In addition, substantial time and expenditures are required to:

- establish mineral reserves through drilling;

- determine appropriate mining and metallurgical processes for optimizing the recovery of saleable product from iron ore and coal reserves;
- obtain environmental and other licenses or securing surface rights with local communities;
- construct mining and processing facilities and the infrastructure required for greenfield properties;
- extract the saleable products from the mined iron ore or coal; and
- maintain the appropriate blend of ore to ensure the final product qualities expected by the customer are achieved.

If a project proves not to be economically feasible by the time ArcelorMittal is able to exploit it, ArcelorMittal may incur substantial losses and be obliged to recognize impairments. In addition, potential changes or complications involving metallurgical and other technological processes that arise during the life of a project may result in delays and cost overruns that may render the project not economically feasible.

ArcelorMittal faces rising extraction costs over time as reserves deplete.

Reserves are gradually depleted in the ordinary course of a given mining operation. As mining progresses, distances to the primary crusher and to waste deposits become longer, pits become steeper and underground operations become deeper. As a result, ArcelorMittal usually experiences rising unit extraction costs over time with respect to each of its mines.

Risks related to ArcelorMittal's planned acquisitions and investments

ArcelorMittal has grown through acquisitions and may continue to do so. Failure to manage external growth and difficulties completing planned acquisitions or integrating acquired companies could harm ArcelorMittal's future results of operations, financial condition and prospects.

The Company was formed and subsequently grew through mergers and acquisitions. After curtailing its large-scale M&A activity for several years following the 2008 financial crisis, it has made several large acquisitions in recent years, including its acquisition (via a joint venture) of Calvert in 2014, its acquisitions of Votorantim S.A.'s long steel business (renamed ArcelorMittal Sul Fluminense "AMSF") and Ilva renamed ArcelorMittal Italia (via a long-term lease) in 2018 and Essar Steel India Limited ("ESIL") renamed AMNS India Limited ("AMNS India") via a joint venture in 2019.

To the extent ArcelorMittal continues to pursue significant acquisitions, financing of such acquisitions may (depending on the structure) result in increased debt, leverage and gearing. Acquisitions also entail increased operating costs, as well as greater allocation of management resources away from daily operations. Managing acquisitions requires the continued development of ArcelorMittal's financial and management information control systems, the integration of acquired assets with existing operations, the adoption of manufacturing best practices, handling any labor disruptions that may arise, attracting and retaining qualified management and personnel (particularly to work at more remote sites where there is a shortage of skilled personnel) as well as the continued training and supervision of such personnel, and the ability to manage the risks and liabilities associated with the acquired businesses. Failure to manage acquisitions could have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects.

ArcelorMittal may fail to implement its strategy with respect to ArcelorMittal Italia or encounter difficulties and incur further losses in connection with its integration.

The Company has encountered and may continue to encounter difficulties in integrating ArcelorMittal Italia or in implementing its strategy with respect to ArcelorMittal Italia. In particular, pursuant to the initial agreement for the lease and subsequent conditional purchase of the business and subject to the ongoing negotiations discussed below, ArcelorMittal is implementing a major improvements project involving substantial capital expenditures designed to bring ArcelorMittal Italia up to and beyond EU environmental standards, to improve the operational performance of its assets, to rebuild client confidence and to integrate personnel and apply the Company's best practices and expertise. There is no guarantee that the Company will be successful in implementing its strategy or in realizing the expected benefits of this project in full or at all. Delays and cost overruns in the execution of the project are possible for various reasons, including the unexpected legal, regulatory and operational developments encountered in 2019. Any such delays are particularly costly as ArcelorMittal Italia has been and remains loss-making since its consolidation in ArcelorMittal's results in November 2018, particularly in light of the recent and current market environment.

On November 4, 2019, AM InvestCo Italy S.p.A ("AM InvestCo") sent to the Commissioners governing the insolvency procedures of the former business units of ArcelorMittal Italia (the "Commissioners") a notice to withdraw from or terminate the agreement. AM InvestCo's decision to withdraw from or terminate the agreement was based, among others, on provisions of the agreement that allow withdrawal in the event that a new law affects AM InvestCo's environmental plan for the Taranto plant in such a way that materially impairs the ability of AM InvestCo to

operate the plant or implement its industrial plan; these provisions were triggered following the Italian Parliament's removal, on November 3, 2019, of the legal protection necessary for AM InvestCo to implement its environmental plan without risk of criminal liability. In response, the Commissioners filed suit in Milan seeking an injunction to prevent AM InvestCo's withdrawal and termination of the agreement. The parties have subsequently agreed to postpone the hearing pending ongoing negotiations and, in the meantime, ArcelorMittal has continued the operations at ArcelorMittal Italia. No assurance can be given as to the outcome of these negotiations or when an agreement will be reached, if at all. Failure to reach an agreement would likely lead to the continuation of the currently stayed litigation proceedings (and, potentially, a criminal investigation that had been launched) and could result in ArcelorMittal's continued exposure to or obligations in respect of ArcelorMittal Italia which has been loss-making since its consolidation by ArcelorMittal and the payment of substantial damages by AM InvestCo or criminal charges against AM InvestCo and its officers and directors. See "Business Overview—Key transactions and events in 2019" and note 9.3 to the consolidated financial statements for additional information.

ArcelorMittal faces risks associated with its acquisition, via a joint venture, of AMNS India.

As discussed in "Business Overview—Key transactions and events in 2019," ArcelorMittal acquired, via a Luxembourg based joint venture with Nippon Steel Corporation ("NSC"), AMNS India on December 16, 2019 in a bankruptcy resolution process. The joint venture's proposal, set out in a resolution plan (the "Resolution Plan") that detailed among other things the amount to be paid to existing creditors and towards capital infusion (totaling $7.1 billion and including $417 million of guaranteed working capital adjustment) and the improvements and related capital expenditures (totaling $2.6 billion) to be made over the medium-term, was approved by the Indian Supreme Court on November 15, 2019. In connection with the execution of the Resolution Plan, the Company provided a $0.6 billion performance guarantee which terminated on December 31, 2019.

The implementation of the Resolution Plan subjects ArcelorMittal to various risks. On the operational front, the industrial project to turnaround AMNS India and further improve operational profitability is large-scale and ambitious. While ArcelorMittal has substantial experience in turnaround situations, the scale of this one is particularly large and it is the Company's inaugural large-scale acquisition in India, an emerging market. In addition, AMNS India's assets do not include certain assets that are ancillary to the steel plant, such as the slurry pipeline, power plants and port facilities and certain mines. The joint venture partners are assessing various options to secure the availability of such assets, including additional acquisitions that would likely be financed in a manner similar to that of the AMNS India acquisition and subject the Company to similar risks. Capital expenditure in excess of budgeted amounts, delays and difficulties in achieving commercial objectives therefore cannot be ruled out. The risks in this respect are compounded to an extent by the fact that AMNS India is emerging from bankruptcy (meaning, among other things, that maintenance capital expenditures were deferred) and is owned and operated by a joint venture with attendant risks around strategic alignment, potential discord and deadlock. On the financial front ArcelorMittal is exposed to the extent of its guarantee of any amounts drawn by the joint venture under the bridge financing pending the implementation of long-term financing and up to its pro rata share of the joint venture's debt when the final funding will be in place. ArcelorMittal and NSC financed the joint venture for the acquisition of AMNS India through an initial combination of partnership equity of $2,253 million and debt of $3,679 million, including $2,204 million drawn (and guaranteed by ArcelorMittal) under a $7 billion term facility agreement (or "bridge financing") by AMNS Luxembourg Holding S.A. ("AMNS Luxembourg"), the parent company of the joint venture, which was outstanding on December 31, 2019 (see note 6.1.2 to the consolidated financial statements) and $1,475 million shareholder loan from NSC. On February 10, 2020, in order to complete the $840 million follow-on equity funding of AMNS India, NSC provided a $325 million shareholder loan and an additional $475 million was drawn under the bridge financing by AMNS Luxembourg (and guaranteed by the Company). The outstanding amount under the bridge financing as of such date was $3,046 million.

ArcelorMittal's greenfield, brownfield and other investment projects are subject to financing, execution and completion risks.

The Company has announced a number of greenfield or brownfield development projects, in addition to ArcelorMittal Italia and AMNS India, as well as other significant investment projects which are capital intensive. See "Capital expenditure projects—Updates on previously announced investment projects" for further information on projects the Company has announced. To the extent these projects go forward, they would entail substantial capital expenditures, and their timely completion and successful operation may be affected by factors beyond the control of ArcelorMittal. These factors include receiving financing on reasonable terms, obtaining or renewing required regulatory approvals and licenses, securing and maintaining adequate property rights to land and mineral resources, local opposition to land acquisition or project development, managing relationships with or obtaining consents from other shareholders, revision of economic viability projections, demand for the Company's products, local environmental or health-related conditions, and general economic conditions. Any of these factors may cause the Company to delay, modify or forego some or all aspects of its development projects. For investment projects that the Company expects to fund primarily through internal sources, these sources may prove insufficient depending on the amount of internally generated cash flows and other uses of cash, and the Company may need to choose between incurring external financing or foregoing the investment. The Company cannot guarantee that it will be able to execute its greenfield, brownfield or other investment projects, and to the extent that they proceed, that it will be able to complete them on schedule, within budget, or achieve an adequate return on its investment. Conversely, should the Company decide to postpone or cancel development projects, it could incur various negative consequences such as litigation or impairment charges.

ArcelorMittal faces risks associated with its investments in joint ventures and associates.

ArcelorMittal has investments in various joint ventures and associates. See note 2.4 to ArcelorMittal's consolidated financial statements. Joint ventures and associates may be controlled and managed by joint venture or controlling partners that may not fully comply with ArcelorMittal's standards, controls and procedures, including ArcelorMittal's health, safety, environment and community standards, which could lead to higher costs, reduced production or environmental, health and safety incidents or accidents, which could adversely affect ArcelorMittal's results and reputation. Joint ventures are also subject to the risk of dead-lock and/or coordination issues affecting the implementation of strategy.

In addition, certain of these joint ventures and associates are currently experiencing, or may in the future experience, difficult operating conditions and/or incur losses. Difficult operating conditions in joint ventures and associates in which ArcelorMittal has invested may expose it to loss of its investment, requirements for additional investments or calls on guarantees. For example, ArcelorMittal's joint venture Al Jubail's financial situation has been negatively impacted by a slower than expected ramp-up of operations and required further funding in 2018 and 2019 and may require additional funding in the future. ArcelorMittal has provided shareholder loans to assist with funding and additional equity funding from the other partners was completed in the fourth quarter of 2019. ArcelorMittal's loans and receivables to the joint venture were $131 million at December 31, 2019. The Company has also guaranteed $346 million of Al Jubail's external debt (including shareholder loan). Due to the failure of other shareholders to provide requisite equity funding by December 31, 2018, the joint venture's indebtedness became technically in default as of such date. ArcelorMittal's guarantee of such indebtedness has not been called by the lenders, and ArcelorMittal does not currently expect it to be called. As of December 31, 2019, the technical default remains pending completion of formalities even though the joint venture completed the conditions necessary to clear the default, including the capital increase, prior to year end. The technical default relates only to the indebtedness of the joint venture and is not expected to affect the availability or maturity of any borrowings of ArcelorMittal. As of December 31, 2019, ArcelorMittal had given $3.8 billion in guarantees on behalf of associates and joint ventures including $2.6 billion issued on behalf of AMNS India ($3.1 billion in February 2020 following the completion of the follow-on funding), $288 million issued on behalf of Calvert and the above mentioned Al Jubail guarantee. See notes 2.4.1, 2.4.2 and 9.4 to ArcelorMittal's consolidated financial statements.

ArcelorMittal's investments in joint ventures and associates may also result in impairments. For example, in May 2018, the Company announced the sale of its 50% shareholding in its joint venture investment in Macsteel Holdings Luxembourg S.à r.l and recorded an impairment of $132 million to adjust the carrying amount of the investment to the expected sale proceeds. As of December 31, 2019, ArcelorMittal's investments accounted for under the equity method had a book value of $6.5 billion, including AMNS India ($1.5 billion), DHS Group ($965 million), China Oriental ($999 million), Gonvarri ($547 million), Calvert ($575 million) and Baffinland ($348 million).

Risks related to ArcelorMittal's financial position and organizational structure

Changes in assumptions underlying the carrying value of certain assets, including as a result of adverse market conditions, could result in the impairment of such assets, including intangible assets such as goodwill.

At each reporting date, in accordance with the Company's accounting policy described in note 5.3 to ArcelorMittal's consolidated financial statements, ArcelorMittal reviews the carrying amounts of its tangible and intangible assets (goodwill is reviewed annually or whenever changes in circumstances indicate that the carrying amount may not be recoverable) to determine whether there is any indication that the carrying amount of those assets may not be recoverable through continuing use. If any such indication exists, the recoverable amount of the asset (or cash generating unit) is reviewed in order to determine the amount of the impairment, if any.

If certain of management's estimates change during a given period, such as the discount rate, capital expenditures, expected changes to average selling prices, growth rates, shipments and direct costs, the estimate of the recoverable amount of goodwill or the asset could fall significantly and result in impairment. While impairment does not affect reported cash flows, the decrease of the estimated recoverable amount and the related non-cash charge in the consolidated statements of operations could have a material adverse effect on ArcelorMittal's results of operations. For example, in 2017, the Company recorded impairment charges as a result of the annual impairment test of $160 million related to tangible assets in the ACIS segment. In 2019, the Company recognized $1.3 billion of impairments on the fixed assets of AcerlorMittal USA ($600 million in the first half and $700 million in the second half) and a $75 million in impairment at ArcelorMittal South Africa following downward revisions of cash flow projections. The Company also recognizes impairment in connection with intended sales, when the carrying amount of the disposal group is higher than the fair value less cost to sell. In this context, the Company recognized a total impairment charge of $994 million (including $888 million in connection with the intended sale of the ArcelorMittal Italia remedies and $86 million in relation to the sale of the Votorantim remedies) in 2018 and additional impairment of $497 million in 2019 related to the remedy asset sales for the ArcelorMittal Italia acquisition. Following these impairment charges, substantial amounts of goodwill, tangible and intangible assets remain recorded on the Company's balance sheet. As of December 31, 2019, the Company's balance sheet included $5.1 billion of goodwill. As of the same date, the Company's balance sheet also included $6.0 billion and $3.8 billion of tangible assets and $2.2 billion and $1.0 billion of goodwill for NAFTA and ACIS, respectively. No assurance can be given as to the absence of significant further impairment losses in future periods, particularly if market conditions deteriorate. In particular, changes in the key assumptions (sales volumes, prices and discount rates) utilized in the impairment test would cause an additional impairment loss to be recognized in respect of the NAFTA and ACIS segments.

ArcelorMittal has a substantial amount of indebtedness, which could make it more difficult or expensive to refinance its maturing debt, incur new debt and/or flexibly manage its business and the market's perception of ArcelorMittal's leverage may affect its share price.

As of December 31, 2019, ArcelorMittal had total debt outstanding of $14.3 billion, including $2.9 billion of short-term indebtedness (including payables to banks and the current portion of long-term debt) and $11.5 billion of long-term indebtedness. As of December 31, 2019, ArcelorMittal had $5.0 billion of cash and cash equivalents, including restricted cash of $0.1 billion, and $5.5 billion available to be drawn under existing credit facilities. The Company also relies on its true sale of receivables programs ($4.4 billion of trade receivables sold and outstanding at December 31, 2019), as a way to manage its working capital cycle.

An increase in ArcelorMittal's level of debt outstanding could have adverse consequences, including impairing its ability to obtain additional financing for working capital, capital expenditures, acquisitions or general corporate purposes, and limiting its flexibility to adjust to changing market conditions or withstand competitive pressures, resulting in greater vulnerability to a downturn in general economic conditions. Substantial increases in the Company's gearing could affect its ability to, and the conditions under which it might, access financial markets to refinance maturing debt on acceptable terms. ArcelorMittal's access to financial markets for refinancing also depends on the conditions in the global capital and credit markets, which are volatile.

Moreover, ArcelorMittal could, in order to increase its financial flexibility and strengthen its balance sheet, implement capital raising measures such as equity offerings (as was done in May 2009, January 2013 and April 2016), which could (depending on how they are structured) dilute the interests of existing shareholders or require them to invest further funds to avoid such dilution. In addition, ArcelorMittal has undertaken and may undertake further asset disposals in order to reduce debt. For example, ArcelorMittal announced in August 2019 that it has identified opportunities to unlock up to $2 billion in value from its asset portfolio over the next two years. These asset disposals are subject to execution risk and may fail to materialize, and the proceeds received from such disposals may not reflect values that management believes are achievable and/or cause substantial accounting losses (particularly if the disposals are done in difficult market conditions). In addition, to the extent that the asset disposals include the sale of all or part of core assets (including through an increase in the share of non-controlling interests), this could reduce ArcelorMittal's consolidated cash flows and/or the economic interest of ArcelorMittal shareholders in such assets, which may be cash-generative and profitable ones.

In addition, credit rating agencies could downgrade ArcelorMittal's ratings either due to factors specific to ArcelorMittal, a prolonged cyclical downturn in the steel industry and mining industries, macroeconomic trends (such as global or regional recessions) or trends in credit and capital markets more generally, and any future downgrades could lead to an increase in its cost of borrowing. The margin under ArcelorMittal's principal credit facilities and certain of its outstanding bonds is subject to adjustment in the event of a change in its long-term credit ratings, and downgrades that occurred in 2012 and 2015 resulted in increased interest expense. In October 2019, S&P Global Ratings changed the outlook of ArcelorMittal's long-term issuer credit rating from stable to negative while affirming its rating of BBB-; S&P cited as the basis for its change deteriorating conditions in the European steel market and the effects of recent and proposed acquisitions as weighing heavily on ArcelorMittal's profitability and credit metrics in 2019, and noted that a downgrade could be triggered by further deteriorated credit metrics resulting, among other things, from prolonged very weak steel market conditions and inability to deleverage. In November 2019, Moody's Investors Service and Fitch Ratings also changed the outlook of ArcelorMittal's long-term issuer credit rating from stable to negative while Moody's affirmed its rating of Baa3 and Fitch affirmed its rating of BBB; Moody's cited the Group's sharp earnings decline this year in the context of sluggish end-market demand and deteriorating steel spreads, and noted that a downgrade could be triggered by further deteriorated credit metrics resulting, among other things, from longer than anticipated market weakness leaving the group's-initiated self-help measures insufficient to restore credit metrics. Fitch cited worsening steel market conditions amid decreasing industrial production, weak automotive demand, trade tensions and pressures from elevated raw material costs and lower steel prices leading to a squeeze of ArcelorMittal's margins as the basis for its change, and noted that a downgrade could be triggered by further deteriorated credit metrics resulting, among other things, from the Group's failure to carry out planned debt reduction measures due to large debt-funded mergers and acquisitions activity, aggressive capital expenditures or increased shareholder distributions.

ArcelorMittal's principal credit facilities contain restrictive covenants. These covenants limit, inter alia, encumbrances on the assets of ArcelorMittal and its subsidiaries, the ability of ArcelorMittal's subsidiaries to incur debt and the ability of ArcelorMittal and its subsidiaries to dispose of assets in certain circumstances. ArcelorMittal's principal credit facilities also include the following financial covenant: ArcelorMittal must ensure that the "Leverage Ratio", being the ratio of "Consolidated Total Net Borrowings" (consolidated total borrowings less consolidated cash and cash equivalents) to "Consolidated EBITDA" (the consolidated net pre-taxation profits of the ArcelorMittal group for a Measurement Period, subject to certain adjustments as defined in the facilities), at the end of each "Measurement Period" (each period of 12 months ending on the last day of a financial half-year or a financial year of ArcelorMittal), is not greater than a ratio of 4.25 to one. As of December 31, 2019, the Company was in compliance with the Leverage Ratio.

These restrictive and financial covenants could limit ArcelorMittal's operating and financial flexibility. Failure to comply with any covenant would enable the lenders to accelerate ArcelorMittal's repayment obligations. Moreover, ArcelorMittal's debt facilities have provisions whereby certain events relating to other borrowers within the ArcelorMittal group could, under certain circumstances, lead to acceleration of debt repayment under the credit facilities. Any invocation of these cross-acceleration clauses could cause some or all of the other debt to accelerate, creating liquidity pressures. In addition, the mere market perception of a potential breach of any financial covenant could have a negative impact on ArcelorMittal's ability to refinance its indebtedness on acceptable conditions.

Furthermore, some of ArcelorMittal's debt is subject to floating rates of interest and thereby exposes ArcelorMittal to interest rate risk (i.e., if interest rates rise, ArcelorMittal's debt service obligations on its floating rate indebtedness would increase). Depending on market conditions, ArcelorMittal from time to time uses interest-rate swaps or other financial instruments to hedge a portion of its interest rate exposure either from fixed to floating or from floating to fixed. ArcelorMittal had exposure to 88% of its long-term debt at fixed interest rates and 12% at floating rates as of December 31, 2019.

In addition to the foregoing specific risks relating to ArcelorMittal's indebtedness, its share price is affected by the markets' perception of its leverage. Announcements relating to growth or expansion initiatives, depending in part on their financing structure, could affect this perception and hence weigh on ArcelorMittal's share price.

For further information on ArcelorMittal's indebtedness see "Key indicators—Liquidity and capital resources" and note 6.1.2 to the consolidated financial statements.

ArcelorMittal's ability to fully utilize its recognized deferred tax assets depends on its profitability and future cash flows.

At December 31, 2019, ArcelorMittal had $8.7 billion recorded as deferred tax assets on its consolidated statement of financial position, of which $0.6 billion was recorded in 2019 and $1.4 billion was recorded in 2018 primarily due to the expectation of higher future profits mainly in Luxembourg, including the impact of the share capital conversion in 2018. Following the approval of the extraordinary general meeting held on May 16, 2018 to change the share capital of ArcelorMittal S.A. from euro to U.S. dollar, the parent company files consolidated tax returns in U.S. dollars for the main Luxembourg tax integration going forward, and the related euro denominated tax losses and deferred tax asset were translated into U.S. dollars effective as of January 1, 2018. The deferred tax assets can be utilized only if, and only to the extent that, ArcelorMittal's operating subsidiaries generate adequate levels of taxable income in future periods to offset the tax loss carry forwards and reverse the temporary differences prior to expiration. At December 31, 2019, the amount of future income required to recover ArcelorMittal's deferred tax assets of $8.7 billion was at least $34 billion at certain operating subsidiaries.

ArcelorMittal's ability to generate taxable income is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond its control. If ArcelorMittal generates lower taxable income than the amount it has assumed in determining its deferred tax assets, then the value of deferred tax assets will be reduced. In addition, assumptions regarding the future recoverability of deferred tax assets depend on management's estimates of future taxable income in accordance with the tax laws applicable to ArcelorMittal's subsidiaries in the countries in which they operate. If in the course of its assessments management determines that the carrying amount of any of its deferred tax assets may not be recoverable pursuant to such prevailing tax laws, the recoverable amount of such deferred tax assets may be impaired.

Underfunding of pension and other post-retirement benefit plans at some of ArcelorMittal's operating subsidiaries could require the Company to make substantial cash contributions to pension plans or to pay for employee healthcare, which may reduce the cash available for ArcelorMittal's business.

ArcelorMittal's principal operating subsidiaries in Brazil, Canada, Europe, South Africa and the United States provide defined benefit pension and other post-retirement benefit plans to their employees. Some of these plans are currently underfunded, see note 8.2 to ArcelorMittal's consolidated financial statements for the total value of plan assets and any deficit.

ArcelorMittal's funding obligations depend upon future asset performance, which is tied to equity and debt markets to a substantial extent, the level of interest rates used to discount future liabilities, actuarial assumptions and experience, benefit plan changes and government regulation. Because of the large number of variables that determine pension funding requirements, which are difficult to predict, as well as any legislative action, future cash funding requirements for ArcelorMittal's pension plans and other post-employment benefit plans could be significantly higher than current estimates. Increases in the general life expectancy assumption have contributed to increases in the defined benefit obligation. ArcelorMittal also makes contributions to a multi-employer pension plan in the U.S. (the Steelworkers Pension Trust) for which it is one of the largest employers. If the other contributors were to default on their obligations, ArcelorMittal would become liable for the plan. In these circumstances, funding requirements could have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects.

ArcelorMittal's results of operations could be affected by fluctuations in foreign exchange rates, particularly the euro to U.S. dollar exchange rate, as well as by exchange controls imposed by governmental authorities in the countries where it operates.

ArcelorMittal operates and sells products globally and as a result, its business, financial condition, results of operations or prospects could be adversely affected by fluctuations in exchange rates. A substantial portion of ArcelorMittal's assets, liabilities, operating costs, sales and earnings are denominated in currencies other than the U.S. dollar (ArcelorMittal's reporting currency). Accordingly, its results of operations are subject to translation risk (i.e., the USD value of the revenues and profits generated in other currencies and its debt denominated in other currencies) and transaction risk (i.e., a mismatch between the currency of costs and revenues). Foreign exchange gains for the year ended December 31, 2019 were $4.0 million, while foreign exchange losses for the year ended December 31, 2018 were $235 million. The losses in 2018 were primarily related to the effect of the depreciation of the U.S. dollar against the euro on the Company's euro denominated debt in the first quarter of 2018. As of April 1, 2018, the Company's statement of operations no longer includes foreign exchange exposure on the euro denominated debt following the designation of the euro denominated debt as a hedge of certain euro denominated net investments in foreign operations. See note 6.3 to ArcelorMittal's consolidated financial statements.

Moreover, ArcelorMittal operates in several countries whose currencies are, or have in the past been, subject to limitations imposed by those countries' central banks, or which have experienced sudden and significant devaluations. In emerging countries where ArcelorMittal has

operations and/or generates substantial revenue, such as Argentina, Brazil, Venezuela, Kazakhstan and Ukraine, the risk of significant currency devaluation is high. For example, the Argentinian peso substantially depreciated during the third quarter of 2018 versus the U.S dollar. and the three-year cumulative inflation rate has exceeded 100% causing Argentina to be now considered as a hyperinflationary economy. The peso continued to depreciate significantly in 2019 and, in September 2019, the Argentine government enacted a series of currency controls which require central bank permission to exchange pesos for foreign currency and make transfers abroad in response to the economic situation.

Currency devaluations, the imposition of new exchange controls or other similar restrictions on currency convertibility, or the tightening of existing controls in the countries in which ArcelorMittal operates could adversely affect its business, financial condition, results of operations or prospects. See “Impact of exchange rate movement”.

The Significant Shareholder has the ability to exercise significant influence over the outcome of shareholder votes.

As of December 31, 2019, a trust (HSBC Trustee (C.I.) Limited, as trustee), of which Mr. Lakshmi N. Mittal, Mrs. Usha Mittal and their children are the beneficiaries (referred to as the "Significant Shareholder"), beneficially owned (within the meaning of Rule 13d-3 under the Securities Exchange Act of 1934, as amended) shares amounting (when aggregated with ordinary shares of ArcelorMittal and options to acquire ordinary shares held directly by Mr. and Mrs. Mittal) to 382,277,751 shares, representing 37.41% of ArcelorMittal’s outstanding shares. As a result, the Significant Shareholder has the ability to significantly influence the decisions adopted at the ArcelorMittal general meetings of shareholders, including matters involving mergers or other business combinations, the acquisition or disposition of assets, issuances of equity and the incurrence of indebtedness. The Significant Shareholder also has the ability to significantly influence a change of control of ArcelorMittal. For further information on the Company’s major shareholders, see “Major shareholders and related party transactions—Major shareholders”.

The loss or diminution of the services of the Chairman of the Board of Directors and Chief Executive Officer of ArcelorMittal could have an adverse effect on its business and prospects.

The Chairman of the Board of Directors and Chief Executive Officer of ArcelorMittal, Mr. Lakshmi N. Mittal, has for over 30 years contributed significantly to shaping and implementing the business strategy of Mittal Steel and subsequently ArcelorMittal. His strategic vision was instrumental in the creation of the world’s largest and most global steel group. The loss or any diminution of the services of the Chairman of the Board of Directors and Chief Executive Officer could have an adverse effect on ArcelorMittal’s business and prospects. ArcelorMittal does not maintain key person life insurance on its Chairman of the Board of Directors and Chief Executive Officer.

ArcelorMittal is a holding company that depends on the earnings and cash flows of its operating subsidiaries, which may not be sufficient to meet future operational needs or for shareholder distributions, and loss-making subsidiaries may drain cash flow necessary for such needs or distributions.

As a holding company, ArcelorMittal is dependent on the earnings and cash flows of, and dividends and distributions from, its operating subsidiaries to pay expenses, meet its debt service obligations, pay any cash dividends or distributions on its ordinary shares or conduct share buy-backs. Significant cash or cash equivalent balances may be held from time to time at the Company’s international subsidiaries, including in particular those in France and the United States, where the Company maintains cash management systems under which most of its cash and cash equivalents are centralized, and in Brazil, Canada, Kazakhstan, South Africa and Ukraine. Some of these operating subsidiaries have debt outstanding or are subject to acquisition agreements that impose restrictions on such operating subsidiaries’ ability to pay dividends, but such restrictions are not significant in the context of ArcelorMittal’s overall liquidity. These subsidiaries may also experience operating difficulties that impact their cash flows. For example, ArcelorMittal South Africa has been experiencing significant difficulties in recent years. In order to decrease its significant outstanding debt, in January 2016, ArcelorMittal South Africa conducted a rights offering entirely underwritten by ArcelorMittal that resulted, via the repayment of an intragroup loan of R3.2 billion (R4.2 billion or $0.3 billion outstanding as of December 31, 2019 following an increase in the fourth quarter of 2019) and an additional cash injection by ArcelorMittal of R0.5 billion, in ArcelorMittal’s shareholding in ArcelorMittal South Africa increasing from 52% to 71%. For additional information on current ownership, see note 2.2.1 to the consolidated financial statements.

Repatriation of funds from operating subsidiaries may also be affected by tax and foreign exchange policies in place from time to time in the various countries where the Company operates, though none of these policies are currently significant in the context of ArcelorMittal’s overall liquidity. Under the laws of Luxembourg, ArcelorMittal will be able to pay dividends or distributions through income from industrial franchise fees or to the extent that it is entitled to receive cash dividend distributions from its subsidiaries, recognize gains from the sale of its assets or record share premium from the issuance of shares.

If the earnings and cash flows of its operating subsidiaries are substantially reduced, ArcelorMittal may not be in a position to meet its operational needs or to make shareholder distributions in line with announced proposals.

Legal and regulatory risks

ArcelorMittal is subject to strict environmental, health and safety laws and regulations that could give rise to a significant increase in costs and liabilities.

ArcelorMittal is subject to a broad range of environmental, health and safety laws and regulations in each of the jurisdictions in which it operates. These laws and regulations impose increasingly stringent standards regarding general health and safety, air emissions, wastewater storage, treatment and discharges, the use, handling and transportation of hazardous, toxic or dangerous materials, waste disposal practices and the remediation of environmental contamination, and health and safety matters, among other things. The costs of complying with, and the imposition of liabilities pursuant to these laws and regulations can be significant, and compliance with new and more stringent obligations may require additional capital expenditures or modifications in operating practices. Failure to comply can result in civil and or criminal penalties being imposed, the suspension of permits, requirements to curtail or suspend operations and lawsuits by third parties.

Despite ArcelorMittal's efforts to comply with environmental, health and safety laws and regulations, and monitor and reduce accidents at its facilities, health, safety and environmental incidents or accidents do occur, some of which may result in costs and liabilities and negatively impact the Company's reputation or the operations of the affected facility. Such accidents could include explosions or gas leaks, fires or collapses in underground mining operations, vehicular accidents, and other accidents involving mobile equipment, or exposure to radioactive or other potentially hazardous, toxic or dangerous materials, which could have significant adverse consequences for the Company's workers and facilities, as well as the environment. Such accidents could lead to production stoppages, loss of key personnel, the loss of key assets, or put at risk employees (and those of sub-contractors and suppliers) or persons living near affected sites.

ArcelorMittal also incurs costs and liabilities associated with the assessment and remediation of contaminated sites, and in its mining activities, those resulting from tailings and sludge disposal, effluent management, and rehabilitation of land disturbed during mining processes. In addition to the impact on current facilities and operations, environmental remediation obligations can give rise to substantial liabilities in respect of divested assets and past activities. This may also be the case for acquisitions when liabilities for past acts or omissions are not adequately reflected in the terms and price of the acquisition. ArcelorMittal could become subject to further remediation obligations in the future, as additional contamination is discovered or cleanup standards become more stringent.

ArcelorMittal could become subject to unidentified liabilities in the future, such as those relating to uncontrolled tailings breaches or other future events or to underestimated emissions of polluting substances. For example, the failure of a tailings ponds dam at ArcelorMittal's mines could cause significant damage, including death, injury and environmental harm. While the Company carries out assessments of its facilities, it cannot guarantee that failures or breaches of a tailings ponds dam will not occur in the future. In February 2019, the Company decided as a precautionary measure to implement its plan to evacuate the community situated downstream of its dormant Serra Azul tailing dam with a 5.8Mm^3 tailings volume in Brazil. The decision was based on an updated site-based assessment following recent incidents in the Brazilian mining sector pending further testing and implementation of any necessary mitigation measures. In August 2019, ArcelorMittal Burns Harbor experienced a failure at the pump station for the blast furnace process water recycle system, which is believed to have contributed to the reported exceedances of Ammonia-N and cyanide at two outfalls and impacted aquatic wildlife near those outfalls. See Business overview—Sustainable development—Management Theme #4: Environment—Responsible water use".

ArcelorMittal's operations may also be located in areas where individuals or communities could regard its activities as having a detrimental effect on their natural environment and conditions of life. Any actions taken by such individuals or communities in response to such concerns could compromise ArcelorMittal's profitability or, in extreme cases, the viability of an operation or the development of new activities in the relevant region or country.

For further information, see note 9.3 to ArcelorMittal's consolidated financial statements.

Laws and regulations restricting emissions of greenhouse gases could force ArcelorMittal to incur increased capital and operating costs and could have a material adverse effect on ArcelorMittal's results of operations, financial condition and reputation.

Compliance with new and more stringent environmental obligations relating to greenhouse gas emissions may require additional capital expenditures or modifications in operating practices, as well as additional reporting obligations. The integrated steel process involves carbon and creates carbon dioxide ("CO_2"), which distinguishes integrated steel producers from mini-mills and many other industries where CO_2 generation is primarily linked to energy use. The EU has established greenhouse gas regulations and has revised its emission trading system for

the period after 2020 in a manner that may require ArcelorMittal to incur additional costs to acquire emissions allowances. Delegated regulations in this regard are expected. Other jurisdictions have also started to enact similar regulations, including South Africa, where a CO_2 tax system was introduced in 2019 and in Kazakhstan, where the Emission Trading Scheme restarted operation on January 1, 2018 with new trading procedures and allocation methods supported by an online platform for monitoring, reporting and verifying emission sources and greenhouse gases (GHG).

In the United States, reporting of greenhouse gas emissions from certain large sources has been required since 2011. Although the current administration is seeking to delay further regulation of greenhouse gas emissions at the federal level, emissions trading regimes and other initiatives are continuing to be pursued in various states. Other regulations have been implemented in Argentina, Ukraine and Canada and additional measures may be enacted in the future in other jurisdictions, further increasing the complexity of compliance with environmental laws and regulations.

Following the international agreement reached by the United Nations Framework Convention on Climate Change in December 2015 with the aim to implement the necessary drivers to achieve drastic reductions of carbon emissions (the "Paris Agreement"), the environmental regulatory system has become more complex worldwide and the Company has taken steps to reduce its emission footprint, which in 2018 totaled approximately 203 million tonnes through various research and development initiatives. Whether in the form of a national or international cap-and-trade emissions permit system, a carbon tax or acquisition of emission rights at market prices, emissions controls, reporting requirements, or other regulatory initiatives, such environmental regulations could have a negative effect on ArcelorMittal's production levels, income and cash flows. These laws could also negatively affect the Company's suppliers and customers, which could translate into higher costs and lower sales. In particular, the EU Commission's decision to further reduce the allocation of CO_2 emission rights to companies could negatively impact the global steel industry, as the amount of such rights is currently at the edge of covering technically achievable operating conditions. CO_2 emissions regulations have already resulted in increased costs in Europe, and ArcelorMittal expects costs will continue to increase with the implementation of Phase IV of the European Union's Emission Trading Scheme ("ETS") starting in 2021.

Furthermore, many developing nations have not yet instituted significant greenhouse gas regulations, and the Paris Agreement specifically recognizes that greenhouse gas emissions will peak later in developing countries. As the Intended Nationally Determined Contributions ("INDC") for developing nations under the Paris Agreement may be less stringent than for developed nations in light of different national circumstances, ArcelorMittal may be at a competitive disadvantage relative to steelmakers having more or all of their production in developing countries. Depending on the extent of the difference between the requirements in developed regions (such as Europe) and developing regions (such as China or the CIS), this competitive disadvantage could be severe and render production in the developed region structurally unprofitable. High carbon costs in combination with weakening demand, rising imports, high energy costs and high iron ore prices was one of the factors underlying the Company's decision to implement production cuts in Europe in 2019. To address the resulting competitive disadvantage compared to imports, which is expected to increase in the future absent government intervention, the Company has lobbied the European Commission to introduce a carbon border adjustment to the safeguard measures on steel imports in order to ensure that imports into Europe face the same carbon costs as producers in Europe.

In addition, as regulators and investors increasingly focus on climate change issues, the Company is exposed to the risk of frameworks and regulations being adopted that are ill-adapted to its operations. For example, the most established framework for carbon pricing and emissions trading schemes is currently the European Union's ETS discussed above. As mentioned above, the Company has highlighted the importance that a carbon border adjustment be included in this system in order to avoid competitive distortions such as European steel becoming overpriced due to European carbon policy, prompting the market to outsource its steel from other regions where carbon is less expensive. With respect to investors, the European Commission has presented a package of measures to implement key actions with respect to its sustainable finance plan, including a proposed regulation to create a unified classification system ("taxonomy") on what can be considered an environmentally sustainable economic activity, as a step in the efforts to channel investments into sustainable activities. If the metrics adopted in the taxonomy are not appropriate for the Company or if investors begin to view investments in steel and mining as undesirable, it may become more difficult and/or more expensive for the Company to obtain financing. While the Company has taken significant steps and continues to adapt its operations in light of climate change and the need for sustainability, such steps may not be in line with future frameworks or regulations or market views of investment suitability.

For further information on environmental laws and regulations and how they affect the Company's operations, see note 9.3 to ArcelorMittal's consolidated financial statements.

The income tax liability of ArcelorMittal may substantially increase if the tax laws and regulations in countries in which it operates change or become subject to adverse interpretations or inconsistent enforcement.

Taxes payable by companies in many of the countries in which ArcelorMittal operates are substantial and include value-added tax, excise duties, profit taxes, payroll-related taxes, property taxes, mining taxes and other taxes. Tax laws and regulations in some of these countries may be subject to frequent change, varying interpretation and inconsistent enforcement. Ineffective tax collection systems and national or local government budget requirements may increase the likelihood of the imposition of arbitrary or onerous taxes and penalties, which could have a material adverse effect on ArcelorMittal's financial condition and results of operations. In addition to the usual tax burden imposed on taxpayers, these conditions create uncertainty as to the tax implications of various business decisions. This uncertainty could expose ArcelorMittal to significant fines and penalties and to enforcement measures despite its best efforts at compliance, and could result in a greater than expected tax burden. See note 10 to ArcelorMittal's consolidated financial statements.

In addition, many of the jurisdictions in which ArcelorMittal operates have adopted transfer pricing legislation. If tax authorities impose significant additional tax liabilities as a result of transfer pricing adjustments, it could have a material adverse effect on ArcelorMittal's financial condition and results of operations.

It is possible that tax authorities in the countries in which ArcelorMittal operates will introduce additional revenue raising measures. The introduction of any such provisions may affect the overall tax efficiency of ArcelorMittal and may result in significant additional taxes becoming payable. Any such additional tax exposure could have a material adverse effect on the Company's financial condition and results of operations.

ArcelorMittal may face a significant increase in its income taxes if tax rates increase or the tax laws or regulations in the jurisdictions in which it operates, or treaties between those jurisdictions, are modified in an adverse manner. This may adversely affect ArcelorMittal's cash flows, liquidity and ability to pay dividends.

ArcelorMittal is subject to economic policy, political, social and legal risks and uncertainties in the emerging markets in which it operates or proposes to operate, and these uncertainties may have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects.

ArcelorMittal operates, or proposes to operate, in a large number of emerging markets. In recent years, many of these countries have implemented measures aimed at improving the business environment and providing a stable platform for economic development. ArcelorMittal's business strategy has been developed partly on the assumption that this modernization, restructuring and upgrading of the business climate and physical infrastructure will continue, but this cannot be guaranteed. Any slowdown in the development of these economies could have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects, as could insufficient investment by government agencies or the private sector in physical infrastructure. For example, the failure of a country to develop reliable electricity and natural gas supplies and networks, and any resulting shortages or rationing, could lead to disruptions in ArcelorMittal's production.

Moreover, some of the countries in which ArcelorMittal operates have been undergoing substantial political transformations from centrally-controlled command economies to market-oriented systems or from authoritarian regimes to democratically-elected governments and vice-versa. Political, economic and legal reforms necessary to complete such transformation may not progress sufficiently. On occasion, ethnic, religious, historical and other divisions have given rise to tensions and, in certain cases, wide-scale civil disturbances and military conflict. The political systems in these countries are vulnerable to their populations' dissatisfaction with their government, reforms or the lack thereof, social and ethnic unrest and changes in governmental policies, any of which could have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects and its ability to continue to do business in these countries. For example, in Ukraine, political unrest and intermittent combats between the Ukrainian army and pro-Russian rebels in the Donbass region have occurred since Russia's purported annexation of Crimea in March 2014. In addition, certain of ArcelorMittal's operations are also located in areas where acute drug-related violence (including executions and kidnappings of non-gang civilians) occurs and the largest drug cartels operate, such as the states of Michoacan, Sinaloa and Sonora in Mexico.

Certain emerging markets where ArcelorMittal has operations have experienced or are experiencing particularly difficult operating conditions. Brazil, for example, is emerging from a period of severe recession and political uncertainty. South Africa entered a recession in the second quarter of 2018, and prior to this recession, the South African steel and mining industries have been subject to a challenging operating environment characterized by lower local demand, increased cheap imports and higher costs, resulting in losses in recent years for ArcelorMittal South Africa. Many emerging markets are also at risk of economic crises (be it external debt, currency, domestic corporate, household or public debt crises) usually brought on by an

economic or political shock which can exacerbate existing domestic structural imbalances. Crises in Argentina and Turkey in 2018/19 were examples and had negative impacts on the Company's core markets in Brazil and the EU, respectively. Other countries at risk of further economic crises include, for example, South Africa (in relation to its public debt), Ukraine (in relation to its external debt) and to a lesser extent India (in relation to its public debt).

In addition, epidemics may affect ArcelorMittal's operations in certain regions. For example, ArcelorMittal operates in Liberia, which underwent an Ebola virus disease epidemic in 2014 and 2015. This affected ArcelorMittal's operations and projects in Liberia. There can be no assurance that other epidemics, including the recent outbreak of the coronavirus in China, will not adversely affect ArcelorMittal's ongoing operations, production targets and expansion plans, if any, in other markets in which it operates.

In addition, the legal systems in some of the countries in which ArcelorMittal operates remain less than fully developed, particularly with respect to the independence of the judiciary, property rights, the protection of foreign investment and bankruptcy proceedings, generally resulting in a lower level of legal certainty or security for foreign investment than in more developed countries. ArcelorMittal may encounter difficulties in enforcing court judgments or arbitral awards in some countries in which it operates because, among other reasons, those countries may not be parties to treaties that recognize the mutual enforcement of court judgments. Assets in certain countries where ArcelorMittal operates could also be at risk of expropriation or nationalization, and compensation for such assets may be below fair value. For example, the Venezuelan government has implemented a number of selective nationalizations of companies operating in the country to date. Although ArcelorMittal believes that the long-term growth potential in emerging markets is strong, and intends them to be the focus of the majority of its near-term growth capital expenditures, legal obstacles could have a material adverse effect on the implementation of ArcelorMittal's growth plans and its operations in such countries.

ArcelorMittal is subject to an extensive, complex and evolving regulatory framework which may expose it and its subsidiaries, joint ventures and associates to investigations by governmental authorities, litigation and fines, in relation, among other things, to antitrust and compliance matters. The resolution of such matters could negatively affect the Company's profitability and cash flows in a particular period or harm its reputation.

ArcelorMittal's business encompasses multiple jurisdictions and complex regulatory frameworks, including in relation to antitrust, and economic sanctions, anti-corruption and anti-money laundering matters. Laws and regulations in these areas are complex and constantly evolving and enforcement of them continues to increase. ArcelorMittal may as a result become subject to increasing limitations on its business activities and to the risk of fines or other sanctions for non-compliance. As a result of its position in the steel industry and its historical growth through acquisitions, ArcelorMittal could be subject to governmental investigations and lawsuits by private parties based on antitrust laws. These could require significant expenditures and result in liabilities or governmental orders that could have a material adverse effect on ArcelorMittal's business, operating results, financial condition and prospects. ArcelorMittal and certain of its subsidiaries are currently under investigation by governmental entities in several countries, and are named as defendants in a number of lawsuits relating to various antitrust matters. See note 9.3 to ArcelorMittal's consolidated financial statements. Antitrust proceedings, investigations and follow-on claims involving ArcelorMittal subsidiaries are also currently pending in various countries including Brazil and Germany. Because of the fact-intensive nature of the issues involved and the inherent uncertainty of such litigation and investigations, the nature of the resolutions of such proceedings are difficult to forecast but negative outcomes are possible. An adverse ruling in the proceedings described above or in other similar proceedings in the future could subject ArcelorMittal to substantial administrative penalties and/or civil damages.

ArcelorMittal's governance and compliance processes, which include the review of internal controls over financial reporting as well as a Code of Business Conduct and other rules and protocols for the conduct of business, may not prevent breaches of laws and regulations or internal policies relating to compliance matters at ArcelorMittal or its subsidiaries, as well as to instances of non-compliant behavior by its employees, contractors or other agents. This risk is also present at ArcelorMittal's joint ventures and associates where ArcelorMittal has a non-controlling stake and does not control governance practices or accounting and reporting procedures. Unfavorable outcomes in current and potential future litigation and investigations relating to anti-trust and compliance matters could reduce ArcelorMittal's liquidity and negatively affect its profitability, cash flows, results of operations and financial condition, as well as harm its reputation.

ArcelorMittal is currently and in the future may be subject to legal proceedings or product liability claims, the resolution of which could negatively affect the Company's profitability and cash flows in a particular period.

ArcelorMittal's profitability or cash flows in a particular period could be affected by adverse rulings in current and future legal proceedings against the Company. See note 9.3 to ArcelorMittal's consolidated financial statements.

In addition, ArcelorMittal sells products to major manufacturers engaged in manufacturing and selling a wide range of end products, including products used in certain

safety-critical applications, such as, for example, pipes used in gas or oil pipelines and in automotive applications. ArcelorMittal also from time to time offers advice to these manufacturers. There could be significant consequential damages resulting from the use of or defects in such products. While ArcelorMittal has a limited amount of product liability insurance coverage, a major claim for damages related to ArcelorMittal products sold and, as the case may be, advice given in connection with such products, could leave ArcelorMittal uninsured against a portion or the entirety of such an award and materially harm its financial condition and future operating results.

Changes to global data privacy laws and cross-border personal data transfer requirements could adversely affect ArcelorMittal's business and operations.

ArcelorMittal's business depends on the transfer of data between its affiliated entities, to and from its business partners, and with third-party service providers, which may be subject to global data privacy laws and cross-border transfer restrictions. While ArcelorMittal takes steps to comply with these legal requirements, the volatility and changes to the applicability of those laws, as well as evolving standards and judicial and regulatory interpretations of such laws may impact ArcelorMittal's ability to effectively transfer data across borders in support of its business operations and lead to possible administrative, civil, or criminal liability, as well as reputational harm to the Company and its employees. ArcelorMittal has taken actions necessary to comply with the European Union's General Data Protection Regulation ("GDPR"), which became enforceable in May 2018. The GDPR creates a range of compliance obligations for subject companies and increases financial penalties for non-compliance. Other countries in which ArcelorMittal operates or has a presence such as Brazil, India and South Africa have or are in the process of adopting similar legislation for the protection of personal information. Ensuring compliance will require investments to improve business processes, IT solutions and security solutions. The costs of compliance with GDPR and similar legislation for the protection of personal data and the potential for fines and penalties in the event of a breach of these laws may have an adverse effect on ArcelorMittal's business and operations.

U.S. investors may have difficulty enforcing civil liabilities against ArcelorMittal and its directors and senior management.

ArcelorMittal is incorporated under the laws of the Grand Duchy of Luxembourg with its principal executive offices and corporate headquarters in Luxembourg. The majority of ArcelorMittal's directors and senior management are residents of jurisdictions outside of the United States. The majority of ArcelorMittal's assets and the assets of these persons are located outside the United States. As a result, U.S. investors may find it difficult to effect service of process within the United States upon ArcelorMittal or these persons or to enforce outside the United States judgments obtained against ArcelorMittal or these persons in U.S. courts, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. Likewise, it may also be difficult for an investor to enforce in U.S. courts judgments obtained against ArcelorMittal or these persons in courts in jurisdictions outside the United States, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. It may also be difficult for a U.S. investor to bring an original action in a Luxembourg court predicated upon the civil liability provisions of the U.S. federal securities laws against ArcelorMittal's directors and senior management and non-U.S. experts named in this annual report.

Mining

ArcelorMittal's mining segment has production facilities in North and South America, Europe, Africa and CIS. The following table provides an overview by type of facility of ArcelorMittal's principal mining operations.

Unit	Country	Locations	ArcelorMittal Interest (%)	Type of Mine	Product
Iron Ore					
ArcelorMittal Mines and Infrastructure Canada	Canada	Mt Wright, Fire Lake and Port Cartier, Qc	85.0	Iron Ore Mine (open pit), pellet plant, railway and port	Concentrate and pellets
Minorca Mines	USA	Virginia, MN	100.0	Iron Ore Mine (open pit)	Pellets
Hibbing Taconite Mines	USA	Hibbing, MN	62.3	Iron Ore Mine (open pit)	Pellets
ArcelorMittal Mexico (excluding Peña Colorada)	Mexico	Sonora, Sinaloa and Michoacán	100.0	Iron Ore Mine (open pit)	Concentrate, lump and fines
ArcelorMittal Mexico Peña Colorada	Mexico	Minatitlán	50.0	Iron Ore Mine (open pit)	Concentrate and pellets
ArcelorMittal Brasil Andrade Mine	Brazil	State of Minas Gerais	100.0	Iron Ore Mine (open pit)	Fines
ArcelorMittal Mineração Serra Azul	Brazil	State of Minas Gerais	100.0	Iron Ore Mine (open pit)	Lump and fines
ArcelorMittal Prijedor	Bosnia and Herzegovina	Prijedor	51.0	Iron Ore Mine (open pit)	Concentrate and lump
ArcelorMittal Kryvyi Rih	Ukraine	Kryvyi Rih	95.1	Iron Ore Mine (open pit and underground)	Concentrate, lump and sinter feed
ArcelorMittal Temirtau	Kazakhstan	Lisakovsk, Kentobe, Atasu, Atansore	100.0	Iron Ore Mine (open pit and underground)	Concentrate, lump and fines
ArcelorMittal Liberia	Liberia	Yekepa	85.0	Iron Ore Mine (open pit)	Fines
Coal					
ArcelorMittal Princeton	USA	McDowell, WV, Tazewell, VA	100.0	Coal Mine (surface and underground)	Coking and PCI coal
ArcelorMittal Temirtau	Kazakhstan	Karaganda	100.0	Coal Mine (underground)	Coking coal and thermal coal

Iron ore

ArcelorMittal Mines and Infrastructure Canada

ArcelorMittal Mines and Infrastructure Canada (AMMC) is a major Canadian producer of iron ore concentrate and several types of pellets. It holds mineral rights over 33,069 hectares of land in the province of Québec, Canada. ArcelorMittal Mines and Infrastructure Canada operates the Mont-Wright Mine and concentrator near Fermont in northeastern Québec. Mont-Wright is located 416 kilometers north of the port of Port-Cartier, the site of the pelletizing plant and shipping terminal on the north shore of the Gulf of St. Lawrence, and approximately 1,000 kilometers northeast of Montreal. A private railway connects the mine and concentrator with Port-Cartier. The railway and the port are owned and operated by the infrastructure operations of AMMC. The Mont-Wright mine and the town of Fermont are connected by Highway 389 to Baie Comeau on the North Shore of the Gulf of St. Lawrence, a distance of 570 kilometers. ArcelorMittal Mines and Infrastructure Canada owns mineral rights to iron ore deposits in Fire Lake and Mont Reed. Fire Lake, which is located approximately 53 kilometers south of Mont-Wright, dispatched approximately 15.5 million tonnes of crude ore by rail to the Mont-Wright concentrator in 2019. The Mont Reed deposit is currently not mined. In addition, ArcelorMittal Mines and Infrastructure Canada holds surface rights over the land on which the Mont-Wright and Port Cartier installations are located, with the exception of a small area which remains the property of the Quebec Government but in no way compromises the mineral rights. The property began operating in 1976.

The expiration dates of the mining leases range from 2025 to 2033. According to the Quebec Mining Act, a mining lease is renewable for at least three periods of ten years, provided the lessee has performed mining operations for at least two years in the previous ten years of the lease.

The Mont-Wright and Fire Lake mines are part of the highly-folded and metamorphosed southwestern branch of the Labrador Trough. The most important rock type in the area is the specular hematite iron formation forming wide, massive deposits that often form the crest of high ridges extending for many kilometers in the Quebec-Labrador area.

The Mont-Wright operation consists of open pit mines and a concentrator. The ore is crushed in two gyratory crushers and the concentrator operates with seven lines of three stage spiral classifiers and horizontal filters. The mining complex and infrastructure has a production capacity of approximately 26 million tonnes of concentrate per year. The Port-Cartier pellet plant produces acid and flux pellets that operate six ball mills, ten balling discs and two induration furnaces. The pelletizing plant has a capacity of 10 million tonnes of pellets per year. The pelletizing plant produced 9.9 million tonnes of pellets in addition to 13.9 million tonnes of concentrate in 2019.

Electric power for Mont-Wright and the town of Fermont is supplied by Hydro-Quebec via a 157 kilometer line. In the event of an emergency, the Hart Jaune Power plant, also connected to the Hydro-Quebec grid, can supply sufficient power to maintain the operations of the essential processing facilities.

ArcelorMittal USA Iron Ore Mines

ArcelorMittal USA operates an iron ore mine through its wholly-owned subsidiary ArcelorMittal Minorca and owns a majority stake in Hibbing Taconite Company, which is managed by ArcelorMittal USA since August 12, 2019 (previously managed by Cleveland Cliffs Inc).

ArcelorMittal Minorca holds the mineral rights on more than 2,800 acres necessary to mine the stated reserves. Minorca's owned/leased lands increased to approximately 17,478 acres, which includes 4,039 acres of leased land and takes into account the purchase of 160 acres of land in Meadowlands, MN for construction of wetlands as required by the State of Minnesota. The operations are located approximately three kilometers north of the town of Virginia in the northeast of Minnesota, which are accessible by road and rail. The Minorca Mine controls through leases all the mineral and surface rights needed to mine and process its estimated 2019 iron ore reserves. The expiration dates of the mining leases range from 2035 to 2056. ArcelorMittal Minorca operates a concentrating and pelletizing facility, along with two open pit iron ore mines - Laurentian, and East Pits - located 12 kilometers from the processing facilities. The processing operations consist of a crushing facility, a three-line concentration facility and a single-line straight grate pelletizing plant. The Minorca pelletizing facility produced 2.8 million metric tonnes of taconite pellets in 2019. Pellets are transported by rail to ports on Lake Superior. Lake vessels are used to transport the pellets to Indiana Harbor. The Minorca taconite plant was constructed and operated by Inland Steel from 1977 until 1998 when it was purchased by then ISPAT International, a predecessor company of ArcelorMittal.

The Hibbing Taconite Company owns 30,561 acres and holds mineral rights over 7,465 acres through mineral leases, which are located mainly within the City of Hibbing with a processing facility located five kilometers north of the town center in the northeast of Minnesota and which is accessible by road and rail. The Hibbing operations are jointly owned by subsidiaries of ArcelorMittal USA (62.3%), Cleveland-Cliffs Inc. (23.0%) and U.S. Steel (14.7%), with ArcelorMittal USA as the managing agent of the mine and processing facilities. The Hibbing Taconite Company, through leases, controls the mineral and surface rights needed to mine and process its estimated iron ore reserves. The expiration dates of the mining leases range from 2022 to 2056. These leases can be renewed through negotiations with the mineral owners, though no obligations to renew exist for the mineral owners. The operations consist of open pit mining, crushing, concentrating and pelletizing. The finished pellets are then transported by rail to the port of Allouez at Superior, Wisconsin, a distance of 130 kilometers, and then over the Great Lakes by lake vessels to ArcelorMittal's integrated steelmaking plants, principally Burns Harbor. The Hibbing Taconite Company began operating in the third quarter of 1976. The mine produced 7.5 million wet metric tonnes of taconite pellets for 2019, of which approximately 4.7 million wet metric tonnes were ArcelorMittal's share.

Both the Minorca and Hibbing mines are located in the Mesabi iron range where iron ore has been extracted for over 100 years. The ore bodies are within the Biwabik Iron Formation, a series of shallow dipping Precambrian sedimentary rocks known as taconite with a total thickness in excess of 200 meters and running for approximately 200 kilometers. Although the first deposits mined in the Mesabi iron range consisted of oxidized hematite ores, production was shortened in the mid-1950 to low grade magnetic taconite ores. The processing of this ore involves a series of grinding and magnetic separation stages to remove the magnetite from the silica. Natural gas and electric power constitute the main sources of energy for both Minorca and Hibbing. The electric power is provided by the Minnesota Power company.

ArcelorMittal Mexico Mining Assets

ArcelorMittal Mexico operates three iron ore mines in Mexico, the San Jose and Las Truchas mines, and, through a joint operation with Ternium S.A., the Peña Colorada mine. In 2019, the El Volcan mine was closed and ArcelorMittal continues to operate certain of the El Volcan facilities with material coming from the San Jose mine.

Peña Colorada

Consorcio Minero Benito Juarez Peña Colorada, S.A. de C.V. (Peña Colorada), operating since 1974, holds mineral rights over 99,188 acres located at about 60 kilometers by highway to the northeast of the port city of Manzanillo, in the province of Minatitlán in the northwestern part of the State of Colima, Mexico. ArcelorMittal owns 50% of Peña Colorada Ltd., and Ternium S.A. owns the other 50% of the company. The Peña Colorada mine receives electrical power from the Comisión Federal de Electricidad (CFE), which is a state-owned company that serves customers across the entire country.

Peña Colorada operates an open pit mine as well as a concentrating facility and a two-line pelletizing facility. The beneficiation plant is located at the mine, whereas the pelletizing plant is located in Manzanillo. Major processing facilities include a primary crusher, a dry cobbing plant, two autogenous mills, three horizontal and two vertical ball mills and several stages of magnetic separation. The concentrate is sent as a pulp through a pipeline from the mineral processing plant to pelletizing facilities.

Government concessions are granted by the Mexican federal government for a period of 50 years and are renewable. The expiration dates of the current mining concessions range from 2021 to 2062.

The Peña Colorada pelletizing facility produced 3.6 million tonnes of pellets and 0.3 million tonnes of concentrate in 2019. Both magnetite concentrate and iron ore pellets are shipped from Manzanillo to ArcelorMittal Mexico, as well as to Ternium's steel plants, by ship and by rail.

Peña Colorada is a complex polyphase iron ore deposit. The iron mineralization at Peña Colorada consists of banded to massive concentrations of magnetite within breccia zones and results from several magmatic, metamorphic and hydrothermal mineralization stages with associated skarns, dykes and late faults sectioning the entire deposit.

El Volcan

ArcelorMittal holds mineral rights over 1,053 hectares which previously supported its El Volcan operations located approximately 68 kilometers northwest of the city of Obregon and 250 kilometers from the Guaymas port facility in the state of Sonora, Mexico. The El Volcan operations controlled all of the mineral rights and surface rights needed to mine and process iron ore during 2019 although the mine stopped production in April 2019 due to depletion of reserves. Until it was terminated, ArcelorMittal operated a concentrating facility along with an open pit mine and a pre-concentration facility at the mine site, which was accessible by a 90-kilometer road from the city of Obregon, where the concentrator is located. Since the closing of El Volcan mine, ArcelorMittal operates plant and port facilities with material coming from San Jose mine.

Government concessions are granted by the Mexican federal government for a period of 50 years and are renewable. The expiration dates of the current mining concessions range from 2055 to 2061. The El Volcan mine concession was bought from the Sonora provincial government in 2004, followed by exploration of the property in 2005. The development of the mine started in 2007. Mining operations were halted during the 2008-2009 global economic crisis and on several occasions due to structural problems in the crushing facilities. Operations resumed without interruption from 2010 until October 2015. In the fourth quarter of 2015, the El Volcan operations were temporarily suspended due to weak market conditions. The El Volcan operations resumed in the first quarter of 2017 as a result of revised mine plan in light of improved price conditions.

The pre-concentration facilities at the El Volcan mine, before the mine was closed in March 2019 due to depletion of reserves, included one primary crusher, one secondary crusher, a dry cobbing high intensity magnetic pulley and three tertiary crushers. Until closing of the mine, mine exploitation and crushing operations and all transport activities were performed by contractors. While operational, the mines used two Caterpillar 3516B electric generators in continuous operation, with one generator operating 24 hours per day at an average consumption of 540 kilowatt hours while the second generator was on standby. Before the reserves were depleted, the total concentrate production in 2019 was 0.3 million tonnes.

The facilities that are continuing to be used with materials from the San Jose mines include the concentration plant and port installations. The concentration plant includes two ball mills on line, a magnetic separation circuit, flotation systems, a belt conveyor filter and a disposal area for tails. The major port installations include a tippler for railroad cars, a conveyor, transfer towers and two ship loading systems. The concentrate and port operations are operated with ArcelorMittal's own resources with San Jose material being fed into the Volcan plant. The concentrate is transported by rail to the Pacific port of Guaymas and then shipped to the steel plant in Lázaro Cárdenas. The concentration facility uses electric power from the national grid.

The exploitation of the San José mine began in 1946 and was handled by multiple owners until 2019, when ArcelorMittal secured a lease agreement and initiated mining and pre-concentration in the same year. ArcelorMittal secured the mineral rights to the San José operations and has a land lease agreement for both the land and the San José facilities, which is in place for a period of 3 years from March 22, 2019 to March 21, 2022.

The San José mine is part of a broad geological formation, where there are several metasomatic iron deposits produced by hydrothermal replacement at various spots within the Sinaloa State.

The San Jose facilities are located approximately 40 kilometers from Culiacán City, in the south of the Sinaloa State, being accessible by Highway 15, a paved 4-lane highway heading south toward Mazatlan. The mine is open pit and exploitation, as well as crushing operations and all transport activities are performed by contractors. Electrical power is supplied by the regional grid. The pre-concentration facilities at the mine include one primary crusher, one secondary crusher, a dry cobbling high-intensity magnetic pulley and one tertiary crusher.

The pre-concentrate produced is transported by truck to the Quila railroad station for loading and is then sent to the El Volcan Concentration plant owned by ArcelorMittal. The concentrate produced is then transported by rail to the Pacific port of Guaymas to be shipped to the steel plant in Lázaro Cardenas. In 2019, San José produced 0.5 million tonnes of concentrate.

Las Truchas

ArcelorMittal now holds mineral rights over 54,177 hectares in Mexico. The Las Truchas mine is located approximately 27 kilometres southeast of the town of Lázaro Cárdenas in the State of Michoacán, Mexico. The Las Truchas operations are accessible by public highway and control all the mineral rights needed to mine and process its estimated 2019 iron ore reserves. Part of the surface rights needed to mine and process the 2018 iron ore reserves expired and have since been re-negotiated. An extension of 10 years has been agreed and the executed agreement will expire in May 2029.

Government concessions are granted by the Mexican federal government for a period of 50 years and are renewable. The expiration dates of the current mining concessions range from 2044 to 2059.

The Las Truchas mine is an integrated iron ore operation. It began operating in 1976 as a government enterprise (Sicartsa), and its mining activities consist of an open pit mine exploitation, crushing, dry cobbing preconcentrate and concentration plant. The aggregate 2019 production of concentrate and lumps totaled 1.4 million tonnes. The concentrator includes one primary crusher, two secondary crushers and three tertiary crushers, two ball mill and two bar mill and two wet magnetic separation circuits. The electrical energy supplier for the Las Truchas mine is the state-owned power company, Comisión Federal de Electricidad (CFE). The concentrated ore is pumped from the mine site through a 26-kilometer slurry pipeline to the steel plant facility in Lázaro Cárdenas.

The Las Truchas deposits consist of massive concentrations of magnetite of irregular morphology. The main Las Truchas deposits occur along about seven kilometers long and about two kilometers wide. The Las Truchas mineral deposits have been classified as hydrothermal deposits, which may have originated from injections of late stage-plutonic-activity through older sedimentary rocks. The mineralization of the Las Truchas iron deposits occurs in disseminated and irregular massive concentrations of magnetite within metamorphic rocks and skarns. The mineralization also occurs as fillings of faults, breccia zones, and fractures.

ArcelorMittal Brasil - Andrade Mine

ArcelorMittal Brasil holds mineral rights of over 2,421 hectares located in the Iron Quadrangle (Quadrilátero Ferrífero), in the Andrade Mine area, a widely-explored and mined region located approximately 80 kilometers east of Belo Horizonte in the Minas Gerais State of Brazil. ArcelorMittal's operations control all of the mineral rights and surface rights needed to mine and process its estimated 2019 iron ore reserves, dominated by directly shippable hematite ore. In addition to the open pit mine, ArcelorMittal operates a crushing and screening facility. Feed ore is transported to Monlevade plant through a private railway line. Power is mostly generated from hydroelectric power plants and supplied by Companhia Energética de Minas Gerais (CEMIG), a publicly traded company controlled by the Government of the State of Minas Gerais.

Companhia Siderúrgica Belgo-Mineira ("CSBM") initiated mining operations at the property in 1944 in order to facilitate the supply of ore to its steel plant in João Monlevade. The mine was managed by CSBM until the end of 2004. In January 2005, Vale signed a leasing agreement with CSBM for management and operation. In December 2005, CSBM changed its name to Arcelor Brasil S.A. which was then merged in August 2007 into Belgo Siderurgia S.A. The latter then changed its name to ArcelorMittal Brasil S.A. In November 2009, Vale returned the Andrade mine to ArcelorMittal Brasil S.A. In 2019, the Andrade mine produced1.5 million tonnes of sinter feed. An increase of the crushing and screening facility production capacity to 3.5 million tonnes per year of sinter feed was completed in 2012. In 2013, a cross road was built in order to improve shipments to the local Brazilian market. In 2018 Andrade started implementing a concentration plant that will enable concentrating Itabirite and mixing it with the hematite. This will improve the quality of the sinter feed to Monlevade Plant, have a positive impact on costs and increase its life span by 16 years. This project started production in early 2020.

ArcelorMittal Brasil - Serra Azul Mine

ArcelorMittal Brasil holds mineral rights over the central and east claims of the Serra Azul deposit over 375 hectares,

located approximately 50 kilometers southwest of the town of Belo Horizonte in the Minas Gerais State of Brazil and accessible by public highway. ArcelorMittal's operations control all of the mineral rights and surface rights needed to mine and process its estimated 2019 iron ore reserves. ArcelorMittal operates an open pit mine and a concentrating facility. The mine site is accessible by 80 kilometers of public highway from Belo Horizonte.

In addition to the open pit mine, processing operations consist of a crushing facility and a three-line concentration facility including screening, magnetic separation, spirals separators and jigging. Production is transported either by truck for local clients of lump, or by truck to two railway terminals located 35 and 50 kilometers, respectively, from the mine site for selling to local clients of sinter feed or for export through third-party port facilities located in the Rio de Janeiro State. Production is shipped mainly to local Brazilian market including the ArcelorMittal Brasil integrated plants. CEMIG supplies power through a 13,800 volt line from Mateus Leme, located 20 kilometers from the mine. The electricity is locally transformed into 380 volts by six transformers spread around the operation. Minas Itatiauçu (MIL) initiated mining operations at the property in 1946. In 2007, London Mining Brazil Mineração Ltda (London Mining) purchased the mineral rights from MIL. Following the acquisition of the property from London Mining, ArcelorMittal has operated the mine since 2008. In the same year, London Mining Brazil Mineração Ltda was merged into London Mining Participações Ltda, which changed its corporate name to ArcelorMittal Mineração Serra Azul. In April 2016, ArcelorMittal Mineração Serra Azul was merged into ArcelorMittal Brasil. In 2019, ArcelorMittal Brasil - Serra Azul Mine produced 0.9 million tonnes of lumps and concentrate.

In February 2019, the Company decided to implement the evacuation plan related to its dormant Serra Azul tailing dam in Brazil, evacuating the community situated downstream to the dam as a precautionary measure based on an updated stability report following incidents in the Brazilian mining sector in order to undertake further testing and implement any necessary mitigation measures.

Both the Andrade and Serra Azul mines are located in the Iron Quadrangle (Quadrilátero Ferrífero), a widely-explored and mined region. The mineralization occurs as Itabirites, banded hematite-silica rocks, with varying weathering degrees. While the Serra Azul ore reserve estimates are constituted of rich friable Itabirites requiring some beneficiation, the Andrade ore reserve estimates are dominated by directly shippable hematite ore. As from 2020 Andrade will enable concentrating Itabirite and hematite fines as described above.

ArcelorMittal Prijedor

ArcelorMittal Prijedor, based in Bosnia and Herzegovina near Prijedor, is an iron ore mining operation in which ArcelorMittal owns 51%. ArcelorMittal Prijedor holds mineral rights over approximately 2,000 hectares, with the current concession signed in 2018 for a period of 6 years. The mine was formed in 2004 as a joint venture between ArcelorMittal and a local mining company that held the mining rights previously, Iron Ore Mines Ljubija. From a historical perspective, industrial iron ore mining in the area of the mine was first established by an Austrian mining company in 1916. The mines were nationalized in the 1950s and were then owned by the Iron Ore Mines Ljubija until 2004.

The ore is excavated at the open pit Buvac of the Omarska mine and processed in the processing plant. The processing plant involves processes of crushing, screening, gravity separation, magnetic separation and filtration. The plant is close to the mine site and crude ore is transported to the plant through a conveyor. Power is supplied from the national grid through a local power distribution company. The mine is in close proximity to public roads and a state railway, which is used for transporting the final product to the customer. Additionally, ArcelorMittal Prijedor operates a limestone quarry, from which the output is used for filling of the roads in the mine.

The Omarska deposit is composed of two ore bodies: Jezero and Buvac.

Since 2011, only the Buvac pit is in operation. It formed within a carboniferous clastic and carbonate sediments. The genesis of this deposit is attributed to hydrothermal replacement and syn-sedimentary process. The ore body is mainly composed of limonite-goethite mineralization, which was formed during weathering oxydization of the primary siderite bodies.

The Omarska deposit, to which Buvac ore body is pertaining, was originally comprised out of three ore bodies: Jezero, Buvac and a small ore body known as Mamuze. Ore reserves from Jezero and Mamuze have already been fully excavated.

In 2019, ArcelorMittal Prijedor produced and dispatched 1.4 million tonnes of final product, iron ore concentrate. The mine supplies iron ore concentrate to ArcelorMittal's steel plant, ArcelorMittal Zenica, based approximately 250 kilometers from Prijedor in central Bosnia.

ArcelorMittal Kryvyi Rih

ArcelorMittal Kryvyi Rih ("AMKR") holds mineral rights over 1,383 hectares to support its operations located roughly within the borders of the city of Kryvyi Rih, 150 kilometers southwest of Dnipro, Ukraine. AMKR's operations control all of the mineral rights and surface rights needed to mine and process its estimated 2019 iron ore reserves. AMKR

operates a concentrating facility, along with two open pit sites and one underground iron ore mine. The iron ore deposits are located within the southern part of the Krivorozhsky iron-ore basin. Access to the mines is via public roads, which are connected by a paved highway to Dnipro. The area is well served by rail. Power is supplied by the Ukraine energy market and is generated from a mix of nuclear, hydro, renewables and coal-fired power stations. AMKR's iron ore material base is represented by ferruginous quartzite of Novokryvorizke and Valyavkinske deposits being mined through two open pits: #2-bis and #3 and a high-grade iron ore of Kirova deposit which is processed into lump and sinter ore. In 2019, actual production was at the level of 9.8 million tonnes of concentrate and 0.8 million tonnes of sinter feed. Operations began at the Kryvyi Rih open cast in 1959 and at the Kryvyi Rih underground mine in 1933. ArcelorMittal acquired the operations in 2005.

The expiration of the agreements on the subsoil use conditions and the subsoil use permits range from 2021 for underground mine to 2038 for open pits, while the expiration of the land lease agreements ranges from 2060 to 2061.

The iron ore extracted from the Kryvyi Rih open cast is first processed at the mine site through primary crushing. After initial processing, the product is loaded on a rail-loading facility and transported to the concentrator. The concentrator production process includes crushing, grinding, classification, magnetic separation and filtering. The iron ore extracted from the Kryvyi Rih's underground mine by a modified sub-level caving method is crushed on surface and transported by rail to the steel plant. The main consumer of the sinter and concentrate products is the ArcelorMittal Kryvyi Rih steel plant, with some concentrate being shipped to other ArcelorMittal affiliates in Eastern Europe, as well as to third parties. The iron mineralization is hosted by early Proterozoic rocks containing seven altered ferruginous quartzite strata with shale layers. The major iron ore bearing units in the open pit mines have carbonate-silicate-magnetite composition. In addition, oxidized quartzite is mined simultaneously with primary ore but cannot be processed at present and is stored separately for future possible processing. Only the magnetite mineralization is included in the 2019 open pit iron ore reserve estimates. The underground mine is hosted by a ferruginous quartzite with martite and jaspilite.

Lisakovsk, Kentobe, Atasu, Atansore (Temirtau Iron Ore)

ArcelorMittal Temirtau has four iron ore mining operations in Kazakhstan. The mines are Lisakovsk, Kentobe, Atasu and Atansore. Transport of ore from these mines to the ArcelorMittal steel plant is by railway. ArcelorMittal Termitau's operations control all of the mineral rights and surface rights needed to mine and process its estimated 2019 iron ore reserves.

Lisakovsk is an open pit operation located in northwest Kazakhstan about 1,100 kilometers from Temirtau, with production of 0.9million tonnes of concentrate in 2019. The mine was initially commissioned in 1969 and was acquired in 2000. The existing subsoil agreement expires in 2020 and the process to renew the agreement is ongoing. The production process comprises crushing, screening, grinding, wet jigging and wet magnetic separation. The iron mineralization at Lisakovsk occurs as oolite containing mainly hygogoethite and goethite. The phosphorous content in the mineralization limits its utilization in the steel-making process. At Lisakovsk, natural gas is supplied by KazTransGazAimak JSC and transmitted through the local grid. Electric power for the other facilities is supplied by Promsnab Astana LLP.

Kentobe is an open pit operation, initially started in 1983 and acquired in 2002, located about 300 kilometers southeast of Temirtau, with production of 0.4 million tonnes of concentrate in 2019. Clearance for extension of the existing subsoil agreement until the end of 2026 was given by Kazakhstan Ministry of innovation and development and the addendum was signed on November 23, 2017. Ore processing is performed by crushing and dry magnetic separation, producing coarse concentrate. The Kentobe mine is located in the Balkhash metallogenic province hosting numerous volcanic, sedimentary and hydrothermal deposits. The mineralization at Kentobe includes two types of iron ore: oxidized and primary magnetite. The magnetite mineralization constitutes all the 2019 estimated ore reserves. Electric power is supplied to the Kentobe operations by Karaganda Energosbyt LLP.

Atasu is an underground mine operation located about 400 kilometers south/southwest from Temirtau with production of 0.9 million tonnes of lump and fines in 2019. The mine began operating in 1956 with open pit exploitation of near surface reserves. Surface operations ended in 1980. Underground operations commenced in 1976. The mining lease was obtained in 2003. The existing subsoil agreement expires at the end of 2026. Processing comprises of crushing and wet jigging. The Atasu mine is hosted by the West Karazhal deposit, which is a primary hematite ore with associated manganese mineralization. Studies have indicated that the deposit could have a sedimentary-volcanogenic origin caused by underwater hydrothermal activity. The mine receives electric power from the ABB Energo LLP.

Atansore is an open pit operation located about 500 kilometers northeast of Temirtau with production of 0.6 million tonnes of concentrate in 2019. The mining lease was obtained in 2004. The existing subsoil agreement expires at the end of 2029. The Atansor deposit is located within skarn zones related to a volcanic intrusion that can be traced for more than 1.5 kilometers. The mineralization includes both martitic oxidized ore and primary magnetite ore. Ore processing is performed by crushing and dry magnetic

separation. At the Atansore operations, electric power is provided from the Kokshetauenergo center LLP.

ArcelorMittal Liberia

ArcelorMittal Liberia Holdings Limited ("AMLH"), through its agent (and subsidiary) ArcelorMittal Liberia Limited ("AML"), has been mining 'direct shipping ore, or DSO' from the Mt. Tokadeh and Mt. Gangra deposits in northern Nimba, Liberia since June 2011. AML signed a Mineral Development Agreement ("MDA") in 2005 with the Government of Liberia ("GOL") that is valid for 25 years and renewable for an additional 25-year period. The MDA covers 51,651.5 hectares, and is located approximately 300 kilometers northeast of Monrovia, Liberia. Three deposits within the MDA are grouped under the name "Western Range Project", which includes the Mt. Tokadeh, Mt. Gangra and Mt Yuelliton deposits. In addition to the rights to explore and mine iron ore, the GOL has granted the right to develop, use, operate and maintain the Buchanan to Yekepa railroad and the Buchanan port. A phased approach has been taken to establish the final project configuration. Currently only high grade ore reserves of oxidized iron ore (DSO) are mined. This ore only requires crushing and screening to make it suitable for export. The materials-handling operation consists of stockyards at both the mine and port areas, linked by a 250-kilometer single track railway running from Tokadeh to the port of Buchanan. Production in 2019 was at 4.4 million tonnes, focused on the Atlantic markets. The power for the current Liberia DSO operations was previously obtained from on-site diesel based power generation. In 2019, the Company finished constructing a powerline in order to switch to a cleaner grid supply (mix of hydropower and gas). From early 2019, the mine has commenced partial reliance on the grid power supply but continues to use partial diesel gensets to prevent disruption to production.

Planning and construction of the project were commenced in 1960 by a group of Swedish companies, which ultimately became the Liberian American-Swedish Minerals Company ("LAMCO"), and production commenced on the Nimba deposit in 1963. Production reached a peak of 12 million metric tonnes in 1974 but subsequently declined due to market conditions. Production started at Mt. Tokadeh in 1985 to extend the life of the Nimba ore bodies to 1992 when operations ceased due to the Liberian civil war. In 2005, Mittal Steel won a bid to resume operations and signed the MDA with the GOL. Rehabilitation work on the railway started in 2008 and, in June 2011, ArcelorMittal started mining operations at Tokadeh, followed by a first shipment of iron ore in September 2011.

The Nimba Itabirites is a 250 to 450 meter thick recrystallized iron formation. Although the iron deposits at Mt. Tokadeh, Mt. Gangra and Mt Yuelliton fit the general definition of Itabirite as laminated metamorphosed oxide-facies iron formation, they are of lower iron grade than the ore previously mined at Mount Nimba. Tropical weather effects have caused the decomposition of the rock forming minerals resulting in enrichment in the iron content that is sufficient to support a DSO operation.

Coal

ArcelorMittal Princeton

The ArcelorMittal Princeton ("AMP") properties are located in McDowell County, West Virginia and Tazewell County, Virginia, approximately 30 miles west of the city of Princeton, West Virginia, where AMP's corporate office is located. AMP was created in 2008 when the Mid-Vol Coal Group and the Concept Mining Group were integrated. The properties are located in the Pocahontas Coalfields of the Central Appalachian Coal Basin. The Carboniferous age coal deposits are situated in the Pottsville Group, New River and Pocahontas Formations. The rock strata, including the coal deposits, are sedimentary rocks formed by alluvial, fluvial and deltaic sediments deposited in a shallow, subsiding basin. The most common rock types are various types of sandstone and shale, with the coal deposits typically in multiple seams in relatively thin coal beds, one to five feet thick. The property has a long history of coal mining, mostly by predecessors in title to AMP. Significant underground mining of some of the deeper coal seams on the properties have occurred, notably the Pocahontas seams nos. 3 and 4, along with the no. 11 seam. In addition, a substantial amount of the thicker coal outcrops has been contour mined previously, providing access for highwall mining and on-bench storage of excess spoil from future surface mining. The properties consist of two operating areas: the Low Vol operations to the north and the Mid Vol operations to the south. 138kV high-voltage power lines deliver power to the company's new 138/13kV substation where transformers reduce voltage for specific equipment requirements.

The Low Vol operations are located in McDowell County, West Virginia, near the communities of Northfork, Keystone, Eckman, Gary, and Welch. The Eckman Coal Preparation Plant and Dan's Branch Loadout are also located there, as well as the following underground mines: XMV Mine Nos. 35, 39, and 43. XMV Mine No. 32 was sold in 2017, and No. 42 was mined out and closed in 2018. The Red Hawk surface mine and Berwind Loadout finished primary reclamation in 2018. Nearby surface operations include Easter Ridge, Mill Branch and Blue Eagle, producing coal from the upper portion of the Pocahontas Formation in seams 9-14.

The Mid Vol operations are in southeastern McDowell County, West Virginia and northwestern Tazewell County, Virginia. The nearest communities are Horsepen and Abbs Valley, Virginia as well as Anawalt, West Virginia.

All mid-vol coal production is from the surface operations of Virginia Point, Low Group and Stateline. The Roadfork Loadout is located there, providing a separate shipping point for the mid-vol metallurgical coal, as well as the oxidized (non-metallurgical) coal for the steam and PCI markets. The Red Hawk surface mine and Berwind Loadout in this area finished primary reclamation in 2018.

There are three active leases across the AMP operations which cover approximately 50% of the annual production. One of these expires in 2025 and can be renewed at the sole option of ArcelorMittal. The other two expire in 2027 and can continue to be extended until all merchantable coal is mined, subject to an amendment agreement being executed. The remaining 50% of the annual production is covered by land that is owned by Imperial Resources (an AMP entity)

The combined production of the mines in 2019 was 2.0 million tonnes of washed and direct shippable coal.

ArcelorMittal Temirtau (Karaganda Coal Mines)

ArcelorMittal Temirtau has eight underground coal mines and two coal preparation plants (CPP “Vostochnaya” and Temirtau Washery-2). In 1996 the mines entered into the structure of Ispat-Karmet JSC, Coal Division (now ArcelorMittal Temirtau JSC, Coal Division). The coal mines of ArcelorMittal Temirtau are located in the Karaganda Coal Basin. The basin is more than 3,000 square kilometers and was formed by strata of Upper Devonian and Carbonic ages, Mesozoic and Cainozoic formations. Due to structural peculiarities, the coal basin is divided into three geology-based mining areas: Karagandinskiy, Sherubay-Nurinskiy and Tentekskiy.

The mines are located in an area with well-developed infrastructure around the regional center of Karaganda city. Within a distance of 10 to 60 kilometers are the following satellite towns: Shakhtinsk, Saran and Abay, as well as Shakhan and Aktas. All mines are connected to the main railway, and coal is transported by railway to the coal wash plants and power stations.

The Kostenko mine merged with the neighboring Stakhanovskaya mine in 1998. The field of Kostenko mine falls within the Oktyabrskiy district of Karaganda city.

The Kuzembaeva mine was established in 1959. Later in 1998, 50-letiya SSSR mine was merged with Kuzembaeva mine. The eastern part of the mine borders with Karaganda City.

The Saranskaya mine began operations in 1955. It merged with the Sokurskaya mine in mid-1997 and the Aktasskaya mine in 1998. Karaganda City is located approximately 12 kilometers to the northeast.

The Abayskaya mine began operations in 1961. In 1996, it was merged with the Kalinina mine. Karaganda City is located approximately 25 kilometers to the northeast.

The Kazakhstanskaya mine began operations in 1969. Karaganda City is located approximately 40 kilometers to the northeast. The railway station at MPS-Karabas is located approximately 30 kilometers to the southeast.

The Lenina mine was put in operation in 1964 and was subsequently merged with Naklonnaya no. 1/2 mine in 1968. Karaganda City, located 50 kilometers to the northeast. The railway station MPS-Karabas is located 38 kilometers to the southeast.

The Shakhtinskaya mine began operations in 1973. Karaganda City is located approximately 35 kilometers to the northeast.

The Tentekskaya mine began operations in 1979. Karaganda City is located approximately 40 kilometers to the northeast. The railway station MPS-Karabas is located approximately 39 kilometers to the southeast.

The Kostenko, Kuzembaeva, Saranskaya, Abayskaya, Kazakhstanskaya, Lenina, Shakhtinskaya and Tentekskaya mines, together with the Vostochnaya wash plant, receive energy from the high-voltage transmission lines of Karaganda.

The subsoil use contract and license (all coal mines in Temirtau) will be valid until January 21, 2022. The process of renewal has already commenced. Total area under mineral rights is 28,816 hectares.

The mines produce primarily coking coal used in steel-making at ArcelorMittal Temirtau as well as thermal coal for ArcelorMittal Temirtau’s power plants. For beneficiation of coking coal, two washeries are operated. Surplus coal concentrate is supplied to ArcelorMittal Kryvyi Rih in Ukraine, and to external customers in Russia and China. In 2019, the Karaganda Coal Mines produced 3.5 million tonnes of metallurgical coal concentrate and approximately 3.0 million tonnes was consumed by the Temirtau steel operations.

Capital expenditure projects

The Company’s capital expenditures were $3.6 billion, $3.3 billion and $2.8 billion for the years ended December 31, 2019, 2018 and 2017, respectively. The following tables summarize the Company’s principal investment projects involving significant capital expenditure completed in 2019 and those that are currently ongoing. In 2020, capital expenditures are expected to be approximately $3.2 billion. ArcelorMittal expects to fund these capital expenditures primarily through internal sources. See "Liquidity and capital resources-Sources and uses of cash-Net cash used in investing activities” and note 3.1 to the consolidated

financial statements for further information, including capital expenditures by segment.

Completed projects in most recent quarters

Region	Site	Project	Capacity / particulars	Actual completion	Note #
Europe	Sosnowiec (Poland)	Modernization of Wire Rod Mill	Upgrade rolling technology improving the mix of HAV products and increase volume by 90 thousand tonnes	4Q 2019	
ACIS	ArcelorMittal Kryvyi Rih (Ukraine)	New LF&CC 3	Facilities upgrade to switch from ingot to continuous caster route. Additional billets of 145 thousand tonnes over ingot route through yield increase	2Q 2019	

Ongoing Projects*

Region	Site	Project	Capacity / particulars	Forecast completion	Note #
ACIS	ArcelorMittal Kryvyi Rih (Ukraine)	New LF&CC 2	Facilities upgrade to switch from ingot to continuous caster route. Additional billets of 145 thousand tonnes over ingot route through yield increase	2020	
NAFTA	Mexico	New Hot Strip Mill	Production capacity of 2.5 million tonnes per year	2,021	1
NAFTA	ArcelorMittal Dofasco (Canada)	Hot Strip Mill Modernization	Replace existing three end of life coilers with two states of the art coilers and new runout tables.	2021	2
NAFTA	Burns Harbor (US)	New walking beam Furnaces	Two new walking beam reheat furnaces bringing benefits on productivity, quality and operational cost	2,021	
Brazil	ArcelorMittal Vega	Expansion project	Increase hot dipped / cold rolled coil capacity and construction of a new 700 thousand tonnes continuous annealing line (CAL) and continuous galvanizing line (CGL) combiline	2,022	3
Brazil	Juiz de Fora	Melt shop expansion	Increase in melt shop capacity by 0.2 million tonnes/year	On hold	4
Brazil	Monlevade	Sinter plant, blast furnace and melt shop	Increase in liquid steel capacity by 1.2 million tonnes/year; Sinter feed capacity of 2.3 million tonnes/year	On hold	4
Mining	Liberia	Phase 2 expansion project	Increase production capacity to 15 million tonnes/year	Under review	5

* Ongoing projects refer to projects for which construction has begun (excluding various projects that are under development), even if such projects have been placed on hold pending improved operating conditions.

1. On September 28, 2017, ArcelorMittal announced a major $1 billion, investment program at its Mexican operations, which is focused on building ArcelorMittal Mexico's downstream capabilities, sustaining the competitiveness of its mining operations and modernizing its existing asset base. The program is designed to enable ArcelorMittal Mexico to meet the anticipated increased demand requirements from domestic customers, realize in full ArcelorMittal Mexico's production capacity of 5.3 million tonnes and significantly enhance the proportion of higher added-value products in its product mix, in-line with the Company's Action 2020 plan. The main investment will be the construction of a new hot strip mill. Upon completion, the project will enable ArcelorMittal Mexico to produce approximately 2.5 million tonnes of flat rolled steel, approximately 1.8 million tonnes of long steel and the remainder made up of semi-finished slabs. Coils from the new hot strip mill will be supplied to domestic, non-auto, general industry customers. The hot strip mill project commenced late in the fourth quarter of 2017 and is expected to be completed in 2021.
2. Investment in ArcelorMittal Dofasco (Canada) to modernize the hot strip mill. The project is to install two new state of the art coilers and runout tables to replace three end of life coilers. The strip cooling system will be upgraded and include innovative power cooling technology to improve product capability. The project is expected to be completed in 2021.
3. In August 2018, ArcelorMittal announced the resumption of the Vega Do Sul expansion to provide an additional 700 thousand tonnes of cold-rolled annealed and galvanized capacity to serve the growing domestic market. The three-year, $0.3 billion investment program to increase rolling capacity with construction of a new continuous annealing line and CGL combiline (and the option to add an approximately 100 thousand tonnes organic coating line to serve construction and appliance segments), and upon completion, will strengthen ArcelorMittal's position in the fast growing automotive and industry markets through Advanced High Strength Steel products. The investments will look to facilitate a wide range of products and applications whilst further optimizing current ArcelorMittal Vega facilities to maximize site capacity and its competitiveness, considering comprehensive digital and automation technology. Project completion is expected at the end of 2022.

4. Although the Monlevade wire rod expansion project and Juiz de Fora rebar expansion were completed in 2015, both the melt shop expansion (in Juiz de Fora) and the sinter plant, blast furnace and meltshop (in Monlevade) projects are currently on hold and are expected to be completed upon Brazil domestic market recovery.
5. ArcelorMittal had previously announced a Phase 2 project that envisaged the construction of 15 million tonnes of concentrate sinter fines capacity and associated infrastructure. The Phase 2 project was initially delayed due to the declaration of force majeure by contractors in August 2014 due to the Ebola virus outbreak in West Africa, and then reassessed following rapid iron ore price declines over the ensuing period. ArcelorMittal Liberia is now undertaking the engineering phase of a feasibility study to identify the optimal concentration solution for utilizing the resources at Tokadeh. ArcelorMittal Liberia has completed the detailed feasibility study to identify an optimal concentration solution for utilizing resources at Tokadeh and other deposits and is working on the final investment submission.

Updates on previously announced investment projects

In addition to the significant investment projects presented in the above table, the Company had previously announced several large investment projects. The status of certain of such projects as of the date of this annual report are described below. While the Company continues to study certain of its key previously announced investment projects summarized below, no assurance can be given that they will proceed.

India greenfield projects. The Company explored investment opportunities in India and in June 2010, entered into a memorandum of understanding with authorities in the state of Karnataka in South India that envisaged the construction of a six million tonne steel plant with a captive 750 megawatt power plant, representing a potential aggregate investment of $6.5 billion. The Company completed all the necessary formalities for acquiring the land by signing and executing a lease cum sale agreement for 2643.25 acres of land on December 26, 2018 and the project is currently under review.

Baffinland (Canada). In March 2011, ArcelorMittal acquired 70% of Baffinland Iron Mines Corp. (“Baffinland”), with Nunavut Iron Ore Inc. (“Nunavut Iron Ore”) owning the remaining 30%. In February 2013, ArcelorMittal and Nunavut Iron Ore entered into a joint arrangement and equalized their shareholdings at 50/50. ArcelorMittal retained operator and marketing rights and, in consideration for its increased shareholding, Nunavut Iron Ore assumed certain project funding obligations. Subsequently, following capital increases subscribed only by Nunavut Iron Ore, ArcelorMittal’s shareholding has decreased to 25.7% as of December 31, 2019. The project began commercial production in 2016.

Baffinland also has approved Phase 3 of the project, which involves the construction of a railway to replace the existing truck-haul operation for transport of iron ore from Mary River to Milne Inlet, as well as expansion of mining, crushing and screening operations and port shiploading capacity. The initial plan of Phase 3 to increase production capacity to 12 million tonnes per year has been further increased on December 13, 2019 to 18 million tonnes per annum. As a result, Baffinland has budgeted approximately $1,385 million of capital expenditures for Phase 3, which will be funded with operating cash flows, additional equity and new debt. Nunavut Iron Ore contributed $450 million of equity funding for Phase 3 and, on December 13, 2019, it committed to provide an additional $125 million. ArcelorMittal had an option to provide up to $85 million of equity funding for Phase 3 which expired on March 31, 2019. A new option to provide $85.3 million in equity funding, exercisable by ArcelorMittal by no later than March 31, 2021 was agreed on December 13, 2019. ArcelorMittal had an option to convert preference shares by October 31, 2017 but this was not exercised, contributing to the subsequent dilution of ArcelorMittal’s shareholding. If Nunavut Iron Ore or other parties fund further phases, it would result in further dilution of ArcelorMittal’s shareholding. Since August 2016, ArcelorMittal and Nunavut Iron Ore shared operator rights for Baffinland’s operations. ArcelorMittal's shared operator rights terminated on June 30, 2018 and the Company retained marketing rights until December 31, 2019. ArcelorMittal is working with Nunavut Iron Ore and Baffinland on this transition of the marketing activities.

Investment projects relating to ArcelorMittal Italia and AMNS India are described in "Key transactions and events in 2019".

Reserves and Resources (iron ore and coal)

Introduction

ArcelorMittal has both iron ore and metallurgical coal reserves. The Company’s iron ore mining operations are located in the United States, Canada, Mexico, Brazil, Liberia, Bosnia, Ukraine and Kazakhstan. The Company’s metallurgical coal mining operations are located in the United States and Kazakhstan.

The estimates of proven and probable mineral reserves and mineral resources at the Company’s mines and projects and the estimates of the mine life included in this annual report have been prepared by ArcelorMittal experienced engineers and geologists,with the exception of the Las Truchas mine in 2018 and the Las Truchas and San Jose mines in 2019 (consolidated as Mexico, excluding Peña Colorada in the tables below) where the mineral reserve estimates were prepared by Gustavson Associates and Ukraine open pit (ArcelorMittal Kryvyi Rih Open Pit), where mineral reserve estimates considering full life of mine design were prepared by KAI Ltd.

The reserves and the mineral resource estimates have been prepared in accordance with the Canadian Institute of Mining and Metallurgy (CIM) Best Practice Guidelines and Standard Definitions for Canadian National Instrument 43-101 (for all its operations and projects), under which:

- Reserves are the part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination.

- Proven reserves are reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling; and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.
- Probable reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.
- The mineral resource estimates constitute the part of a mineral deposit that have the potential to be economically and legally extracted or produced at the time of the resource determination. The potential for economic viability is established through high level and conceptual engineering studies.
- A 'measured mineral resource' is that part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
- An 'indicated mineral resource' is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
- An 'inferred mineral resource' is that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling, and reasonably assumed but not verified geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

In the CIS, ArcelorMittal has conducted in-house and independent reconciliations of ore reserve estimate classifications based on SEC Industry Guide 7, CIM Guidelines for NI 43-101 and standards used by the State Committee on Reserves, known as the GKZ, or its national equivalent, in the former Soviet Union countries. The GKZ, or its national equivalent, constitutes the legal framework for ore reserve reporting in former Soviet Union countries, where ArcelorMittal operates mines. Based on these reconciliations, ArcelorMittal's mineral reserves have been estimated by applying mine planning, technical and economic assessments defined as categories A, B and C1 according to the GKZ standards. In general, provided Industry Guide 7's economic criteria are met (which is the case here), Category A+B is equivalent to "proven" and C1 is equivalent to "probable" reserves.

The mineral reserve and mineral resource estimates are updated annually in order to reflect new geological information and current mine plan and business strategies. The Company's reserve estimates are of in-place material after adjustments for mining depletion and mining losses and recoveries, with no adjustments made for metal losses due to processing. The mineral resource estimates are reported exclusive of reserves (i.e. are in addition to ore reserve estimates) and are of in-situ wet metric tonnage material prior to adjustments for mining recovery and mining dilution factors.

For a description of risks relating to reserves and resource estimates, see the risk factor entitled 'ArcelorMittal's reserve and resource estimates may materially differ from mineral quantities that it may be able to actually recover; ArcelorMittal's estimates of mine life may prove inaccurate; and market price fluctuations and changes in operating and capital costs may render certain ore reserves uneconomical to mine.

The demonstration of economic viability is established through the application of a life of mine plan for each operation or project providing a positive net present value on a cash-forward looking basis, considering the entire value chain. Economic viability is demonstrated using forecasts of operating and capital costs based on historical performance, with forward adjustments based on planned process improvements, changes in production volumes and in fixed and variable proportions of costs, and forecasted fluctuations in costs of raw material, supplies, energy and wages.

Detailed independent verifications of the methods and procedures used are conducted on a regular basis by external consultants and mineral reserves are reviewed on a rotating basis. In 2019, SRK Consulting (UK) Limited conducted the independent audit of the mineral reserve

estimates for ArcelorMittal Kazakhstan's iron ore open pit and underground operations confirming the accuracy of the 2018 iron ore estimates. SRK Consulting (UK) Limited also conducted the review of the current life of mine plan being used as a basis for the 2019 coal mineral reserves estimates for ArcelorMittal Kazakhstan's Karaganda coal operations. Recommendations made by SRK Consulting (UK) Limited in relation to the mineral reserves estimate for 2019 are being implemented by ArcelorMittal and confirmation of reserves will be completed in 2020 in a timely manner following implementation of recommendations. Furthermore, in 2019, the compilation of mineral reserve estimates for ArcelorMittal Ukraine's open pit (ArcelorMittal Kryvyi Rih Open Pit), considering full life of mine design, were prepared by KAI with support from ArcelorMittal's local team, and figures were independently reviewed by SRK Consulting (Canada) Inc. Improvement actions were proposed and will be implemented during 2020 with the support of SRK Consulting (Canada) Inc.

In 2018, iron ore mineral reserve estimates for ArcelorMittal's properties Fire Lake and Mount Wright in Canada (AMMC) were independently audited by SRK Consulting (Canada) Inc, and no material changes to the 2018 iron ore reserve estimates were recommended. Improvement points were proposed and addressed during 2019 with the support of SRK Consulting (Canada) Inc. This is reflected in the 2019 year-end reserve estimates. Following the recommendation in 2018, in 2019 SRK Consulting (Canada) Inc. conducted pit optimization and strategic mine planning, designed ultimate pits and phases, and assisted in developing a long-term production schedule with up to date technical and economical parameters with respect to AMMC's 2019 iron ore mineral reserve estimates. A second independent consultant Breton, Banville and Associates (BBA) conducted a review of the overall work performed by SRK Consulting (Canada) Inc., further detailed it and confirmed increased iron ore mineral reserves for Canada in 2019.

ArcelorMittal owns less than 100% of certain mining operations; mineral reserve and resource estimates have not been adjusted to reflect ownership interests and therefore reflect 100% of mineral reserves of each mine. Please see the table below for ArcelorMittal’s ownership interest in each mine. All of the reserves presented are estimates at December 31, 2019 (unless otherwise stated).

Mine life is derived from the life of mine plans and corresponds to the duration of the mine production scheduled from mineral reserve estimates only.

The Company’s mineral leases are of sufficient duration (or convey a legal right to renew for sufficient duration) to enable all ore reserves on the leased properties to be mined in accordance with current production schedules. The Company’s mineral reserves may include areas where some additional approvals remain outstanding but where, based on the technical investigations the Company carries out as part of its mine planning process and its knowledge and experience of the approvals process, the Company expects that such approvals will be obtained as part of the normal course of business and within the timeframe required by the current life of mine schedule.

The reported iron ore and coal reserves contained in this annual report do not exceed the quantities that the Company estimates could be extracted economically if future prices were at similar levels to the average contracted price for the three years ended December 31, 2019. The average iron ore spot reference price for the last three years (2017-2019) was $78.24 per tonne (delivered to China, Qingdao 62% Fe US $ per tonne, Metal Bulletin). For the same period, the average coal spot reference price was $190.20 per tonne (Premium HCC FOB Aus, Metal Bulletin).The Company establishes optimum design and future operating cut-off grade based on its forecast of commodity prices and operating and sustaining capital costs. The cut-off grade varies from operation to operation and during the life of each operation in order to optimize cash flow, return on investments and the sustainability of the mining operations. Such sustainability in turn depends on expected future operating and capital costs. The reserve base can vary from year to year due to the revision of mine plans in response to market and operational conditions, in particular market price. See the risk factor entitled “ArcelorMittal’s reserve estimates may materially differ from mineral quantities that it may be able to actually recover; ArcelorMittal’s estimates of mine life may prove inaccurate; and market price fluctuations and changes in operating and capital costs may render certain ore reserves uneconomical to mine”.

Tonnage and grade estimates are reported as ‘Run of Mine’. Tonnage is reported on a wet metric basis.

Iron ore reserve and resource estimates

The table below details ArcelorMittal’s estimated iron ore reserves as of December 31, 2019. The classification of the iron ore reserve estimates as proven or probable reflects the variability in the mineralization at the selected cut-off grade, the mining selectivity and the production rate and ability of the operation to blend the different ore types that may occur within each deposit. At ArcelorMittal mining operations, proven iron ore reserve estimates are typically based on drill hole spacing ranging from 25m x 25m to 100m x 100m, and probable iron ore reserve estimates are based on drill hole spacing ranging from 50m x 50m to 300m x 300m. Inferred mineral resource estimates are based on drill hole spacing ranging from 100m x 100m to 500m x 500m.

	As of December 31, 2019						As of December 31, 2018	
	Proven Ore Reserves		Probable Ore Reserves		Total Ore Reserves		Total Ore Reserves	
	Millions of Tonnes	% Fe	Millions of Tonnes	% Fe	Millions of Tonnes	% Fe	Millions of Tonnes	% Fe
Canada	2,154	29.5	251	29.4	2,405	29.5	2,114	30.1
Minorca - USA	123	23.6	7	25.3	130	23.7	101	23.5
Hibbing - USA	106	19.8	25	19.6	131	19.8	159	19.6
Mexico (Excluding Peña Colorada)	9	36.6	107	30.7	116	31.2	124	32.4
Peña Colorada - Mexico	97	21.8	104	21.3	201	21.5	211	21.5
Brazil	52	55.5	41	49.4	93	52.8	95	53.0
Liberia	6	52.2	474	47.8	480	47.9	484	48.0
Bosnia	6	48.5	6	45.6	12	47.0	14	46.1
Ukraine open pit	71	33.6	538	34.5	609	34.4	129	33.5
Ukraine Underground	8	54.4	19	54.4	27	54.4	28	54.4
Kazakhstan open pit	2	37.8	120	39.3	122	39.3	260	39.4
Kazakhstan Underground	1	42.0	21	45.4	22	45.2	23	45.4
Total					4,348	32.4	3,742	33.1

	As at December 31, 2019				As at December 31, 2018			
	Measured & Indicated resources		Inferred resources		Measured & Indicated resources		Inferred resources	
Business units	Million tonnes	% Fe	Million tonnes	% Fe	Million tonnes	% Fe	Million tonnes	% Fe
Canada	3,731	29.3	1,889	29.1	3,857	29.0	1,877	29.1
Minorca - USA	669	22.5	21	20.9	339	22.3	7	22.2
Hibbing - USA	146	19.9	5	18.1	146	19.9	5	18.1
Mexico (Excluding Pena Colorada)	86	34.0	21	36.4	156	34.6	73	34.2
Pena Colorada - Mexico	151	25.1	—	16.7	165	24.1	1	16.5
Brazil	635	41.3	140	36.7	451	43.2	50	40.9
Liberia	45	43.6	2,211	38.8	45	43.6	2,211	38.8
Bosnia	—	31.4	—	41.7	—	31.2	1	39.1
Ukraine Open Pit	741	30.1	62	30.0	384	31.0	19	34.2
Ukraine Underground	38	56.8	25	55.4	38	56.8	25	55.4
Kazakhstan Open Pit	969	34.6	5	48.0	828	33.8	5	48.0
Kazakhstan Underground	451	51.3	30	48.5	451	51.3	30	45.9
Total	7,662	31.7	4,409	34.5	6,860	31.8	4,304	34.6

Note: the resources are exclusive of reserves.

Supplemental information on iron ore operations

The table below provides supplemental information on the producing mines.

Operations/Projects	% Ownership	In Operation Since	2019 Run of Mine Production (Million Tonnes)*	2019 Saleable Production (Million Tonnes)[1]*	Estimated Mine Life (Years)[2]
Canada	85	1976	66.4	23.8	34
Minorca - USA	100	1977	8.5	2.8	15
Hibbing - USA	62	1976	28.4	7.5	6
Mexico (Excluding Peña Colorada)	100	1976	7.1	2.2	17
Peña Colorada - Mexico	50	1974	7.9	3.9	13
Brazil	100	1944	3.2	2.3	43
Liberia	85	2011	4.3	4.4	23
Bosnia	51	2008	1.9	1.5	8
Ukraine Open Pit	95	1959	23.6	9.8	26
Ukraine Underground	95	1933	0.9	0.9	29
Kazakhstan Open Pit	100	1976	3.2	1.9	50
Kazakhstan Underground	100	1956	1.7	0.9	10

1. Saleable production is constituted of a mix of direct shipping ore, concentrate, pellet feed and pellet products which have an iron content of approximately 64% to 66%. Exceptions in 2019 included the shipping of ore produced in Bosnia, Ukraine Underground and the Kazakhstan mines which have an iron content ranging between approximately 50% to 60% and are solely for internal use at ArcelorMittal's regional steel plants. The direct shipping ore produced from Liberia had an average iron content of approximately 62% in 2019 while the sinter fines produced for external customers in Brazil from the Serra Azul operations averaged approximately 63% and the lumps averaged 54%.
2. The estimated mine life reported in this table corresponds to the duration of the production schedule of each operation based on the 2019 year-end iron ore reserve estimates only. The production varies for each operation during the mine life and as a result the mine life is not the total reserve tonnage divided by the 2019 production. ArcelorMittal believes that the life of these operations will be maintained as exploration and engineering studies confirm the economic potential of the additional mineralization already known to exist in the vicinity of these iron ore reserve estimates.

* Represents 100% of production.

Changes in iron ore mineral reserve estimates: 2019 versus 2018

The Company's iron ore mineral reserve estimates had a net increase of 606 million metric tonnes of Run of Mine and a 0.7% decrease in iron ore content between December 31, 2018 and 2019. This increase in reserves includes an addition of 903 million metric tonnes, mainly attributed to new interpretations and life of mine design at Ukraine open pit, Canada and Minorca - USA. However, this was partially offset by a downgrade of 141 million tonnes mainly attributable to Kazakhstan open pit operations and 157 million tonnes of mining depletion during 2019.

Changes in measured and indicated iron ore mineral resource estimates

The 2019 measured and indicated mineral resource estimates had a net increase between December 31, 2018 and 2019 of 802 million tonnes.

The increase was mainly due to an upgrade of 330 million tonnes for Minorca - USA as a result of the re-evaluation of the mineral resource, 184 million tonnes for Brazil, Serra Azul mine as a result of a new modeling and estimation of mineral resources, 357 million tonnes for Ukraine's Open Pit as a result of the new modeling and estimation of mineral resources and 141 million tonnes for Kazakhstan's Open Pit as a result of a downgrade from Probable reserves to Measured resources. However, this increased tonnage was partially offset by a downgrade for Canada and Mexico due to more conservative estimate of mineral resources considering reasonable prospects for economic extraction.

Changes in inferred iron ore mineral resource estimates

The 2019 inferred mineral resource estimates had a net increase between December 31, 2018 and 2019 of 105 million tonnes.

The increase was mainly due to an upgrade of 133 million tonnes for Brazil and for Ukraine's Open Pit as a result of a new modeling and estimation of mineral resources. However, this increased tonnage was partially offset by a downgrade of 52 million tonnes for Mexico, due to re-estimation of mineral resources.

Metallurgical Coal Reserve and resource Estimates

The table below details ArcelorMittal's estimated metallurgical coal reserves as of December 31, 2019. The classification of coal reserve estimates as proven or probable reflects the variability in the coal seams thickness and quality, the mining selectivity and the planned production rate for each deposit. Proven coal reserve estimates are based on drill hole spacing ranging from 50m x 50m to 500m x 500m, and probable coal reserve estimates are based on drill hole spacing ranging from 100m x100m to 1,000m x 1,000m.

	As of December 31, 2019									As of December 31, 2018	
	Proven Coal Reserves		Probable Coal Reserves		Total Coal Reserves					Total Coal Reserves	
	ROM Millions of Tonnes	Wet Recoverable Million Tonnes	ROM Millions of Tonnes	Wet Recoverable Million Tonnes	ROM Millions of Tonnes	Wet Recoverable Million Tonnes	Ash (%)	Sulfur (%)	Volatile (%)	Millions of Tonnes	Wet Recoverable Million Tonnes
Princeton - USA	66	42	24	10	90	52	5	0.7	18	94	56
Karaganda - Kazakhstan	9	4	101	46	110	50	35	0.6	29	110	54
Total					200	102	19	0.6	23	204	110

The Ash (%), Sulfur (%) and Volatile (%) for Princeton - USA shown in the table above are the in-situ coal qualities, whereas the Ash (%), Sulfur (%) and Volatile (%) for Karaganda - Kazakhstan are Run of Mine coal qualities.

	As at December 31, 2019				As at December 31, 2018			
	Measured & Indicated Resources		Inferred Resources		Measured & Indicated Resources		Inferred Resources	
Business Units	ROM Mt	Recoverable Mt	ROM Mt	Recoverable Mt	ROM Mt	Recoverable Mt	ROM Mt	Recoverable Mt
Kazakhstan Open Pit	116	51	5	2	114	50	5	2
Kazakhstan Underground	661	330	44	22	669	334	44	22
Total	777	381	49	24	783	384	49	24

Note: the resources are exclusive of reserves.

The table below provides supplemental information on the producing mines.

Operations/Projects	% Ownership	In Operation Since	2019 Run of Mine Production (Million Tonnes)	2019 Wet Recoverable production (Million Tonnes)	Estimated Mine Life (Years)[1]
Princeton - USA	100	1995	3.6	2.0	33
Karaganda - Kazakhstan	100	1934	9.6	3.5	10

1. The estimated mine life reported in this table corresponds to the duration of the production schedule of each operation based on the 2019 year-end metallurgical coal reserve estimates only. The production varies for each operation during the mine life and as a result the mine life is not the total reserve tonnage divided by the 2019 production. ArcelorMittal believes that the life of these operations will be significantly expanded as exploration and engineering studies confirm the economic potential of the additional mineralization already known to exist in the vicinity of these estimated coal reserves.

Changes in Metallurgical Coal Reserve Estimates: 2019 versus 2018

The Company's metallurgical coal reserve estimates had a net decrease of 4 million tonnes of Run of Mine coal between December 31, 2018 and 2019. This decrease includes the mining depletion of 14 million tonnes. However, this was offset by an increase of 10 million tonnes in Princeton - USA, primarily due to a reinterpretation of modifying factors and extension of life of mine by one year at Karaganda - Kazakhstan coal operations. The reporting of recoverable coal reserves from Kazakhstan excludes the recoverable coal which in theory could be used for metallurgical applications, but which in practice is sold and used as thermal coal by ArcelorMittal at its steel plant facilities.

Changes in measured and indicated coal resource estimates

The measured and indicated resources for the Kazakhstan coal operations are shown exclusive of reserves. The reporting of recoverable measured and indicated coal resources in Kazakhstan excludes the recoverable coal used as thermal coal by ArcelorMittal at its steel plant facilities.

The Company's coal resources estimates had a net decrease of 6 million tonnes of Run of Mine coal between December 31, 2018 and 2019. This decrease is mainly due to non-reserve extraction during mining operation in 2019.

Cautionary note concerning reserve and resource estimates: With regards to ArcelorMittal's reported resources, investors are cautioned not to assume that any or all of ArcelorMittal's mineral deposits that constitute either 'measured mineral resources', 'indicated mineral resources' or 'inferred mineral resources' (calculated in accordance with the CIM guidelines for Canadian National Instrument 43-101) will ever be converted into reserves. There is a reasonable level of uncertainty as to the existence of 'inferred mineral resources' and their economic and legal feasibility, and it should not be assumed that any or all of an 'inferred mineral resource' will ever be upgraded to a higher category