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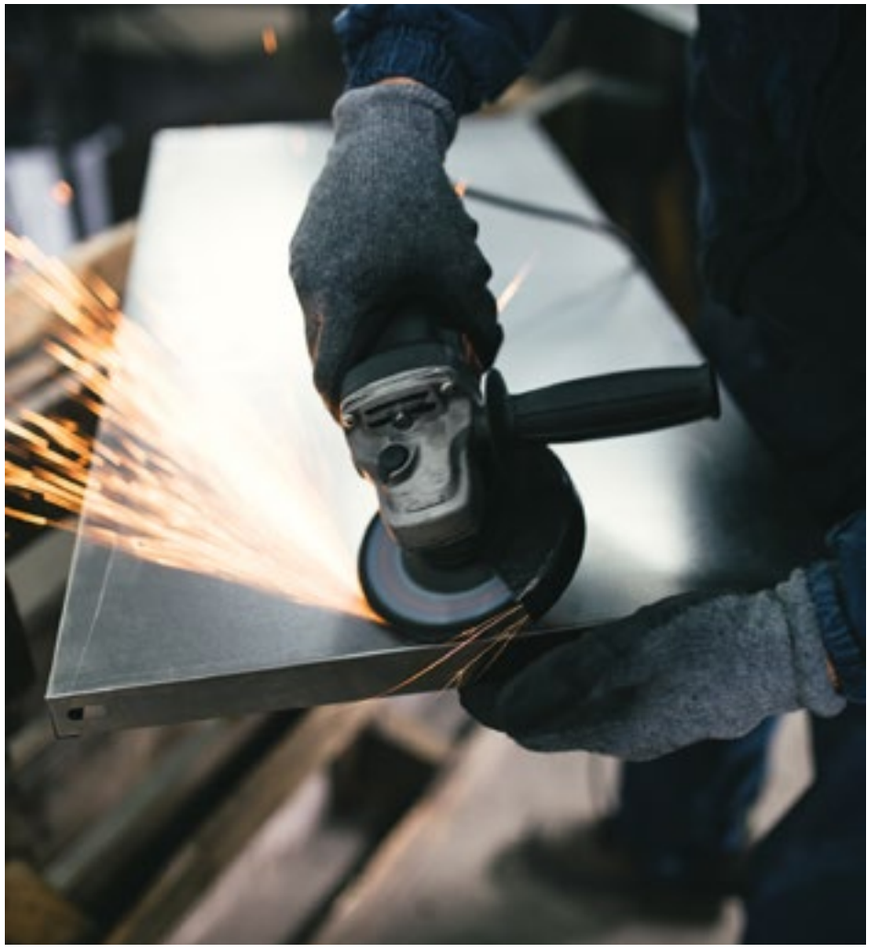
Overview of the Steel and Iron Ore Market

Deloitte CIS Research Centre

Moscow, 2H 2018

Contents



Foreword

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We are pleased to present you with the full version of our analytical report. This is the second issue of this report published in 2018, and offers a snapshot of the updated data for 2017, intermediate data for 1H 2018, and outlooks for 2019.

The key findings of our research will be published by leading Russian media outlets.

This research has been conducted annually since 2015 with the aim of providing a comprehensive study on the steel industry.

Please feel free to contact us if you have any questions regarding this report.

Key topics:

- Overview of the global steel and iron ore market
- Overview of the Russian steel and iron ore market
- Russian steel industry – temperature check

Key findings

According to the World Steel Association, global steel production and consumption growth continued in 2017, albeit not as rapidly as before:

- Steel output grew by 3.8 percent to 1,690 million tonnes;
- Steel consumption grew by 5.1 percent to 1,693 million tonnes.

Over the first seven months of 2018, global steel output reached 1,036 million tonnes, up 5.2 percent from the same period in 2017.

However, steel production is expected to slow down in 2H 2018. The EIU forecasts global steel production to increase by 4.3 percent in 2018. Next year, interest rate hikes will prevent inventories from growing and will dampen steel demand. Hence, in 2019, steel output is forecast to grow by a mere 0.5 percent.

In 2017, global steel consumption increased mainly due to the stable economic growth worldwide. However, according to the EIU, the robust start of 2018 is likely to be followed by moderate performance in 2H 2018 due to slower industrial growth in China, particularly in the construction sector. Overall, the global steel consumption growth is set to slow down to 2.8 percent in 2018. In 2019, interest rate hikes, lending restrictions in China and cyclical slowdown in the automotive industry in the developed markets is likely to negatively affect the global demand for steel. In 2019, steel consumption is likely to grow at a slower rate, to reach 1.3 percent year-on-year.

The current trade policy also creates risks for the forecasts. In the event that the US trade tariffs are alleviated by numerous exceptions, the forecast should be modified in accordance with new conditions. Alternatively, should the EU trade tariffs be tightened in early 2019, EU production and prices are likely to go up as a result, which may affect global prices. Also, China's policy (reduction of statutory working days at coal mines in 2016 and shutdown of induction furnaces in 2017) has had a significant impact on global prices in the past two years. More changes should not be ruled out in China's policy in the steel industry in 2018–2019.

In 2017, Russia was ranked as the fifth largest steel producer globally. In 2017, Russia's steel production slightly increased to 71.3 million tonnes (up 1 percent year-on-year). In January–June 2018, Russian companies produced 35.9 million tonnes and increased the output by 1.3 percent year-on-year.

Based on 1H 2018 results, NLMK was the top Russian steel producer in output terms (8.6 million tonnes).

In 1H 2018, the year-on-year growth rate of Russian exports of basic steel products in monetary terms amounted to 7 percent for rolled products and 106 percent for tube products.

In 1H 2018, Russian imports of rolled products increased in monetary terms by 2 percent year-on-year, while imports of tube products fell by 10 percent year-on year.

Overview of the global steel and iron ore market

Production output trends

EIU experts revised downwards the estimates of the 2017 global steel output from 5.5 percent to 3.8 percent in accordance with the full-year statistical data released by the World Steel Association (WSA). Nevertheless, faster production growth seen in 2H 2017 and spurred on by profit growth in steel companies continued in 1H 2018. In January–July 2018, global steel production rose by 5.2 percent year-on-year (by 6.4 percent in China). However, steel production is expected to slow down in 2H 2018. The EIU forecasts global steel production to increase by 4.3 percent in 2018. Next year, interest rate hikes will prevent stocks from growing and dampen steel demand. Hence, in 2019, steel output is forecasted to grow by a mere 0.5 percent.

Figure 1. Global steel output

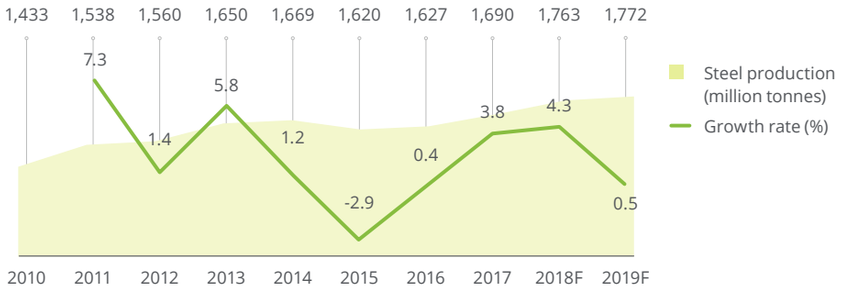
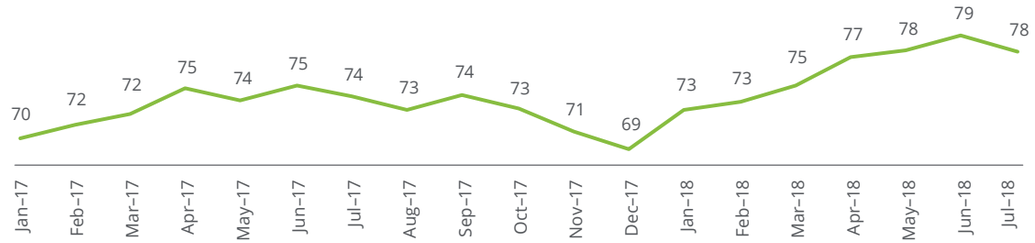


Figure 2. Global capacity utilisation, 2017–2018 (%)



Source: World Steel Association, EIU forecast

Asia

In 2017, steel output in Asia increased by 4.5 percent owing to the launch of new mills in Vietnam and India, as well as lower Chinese exports, which allowed other producers to recover their market positions.

EIU experts expect the regional production to increase by 4.2 percent in 2018, given that China's exports are likely to remain relatively low. In 2019, the steel output growth in the region is set to be moderate (around 1.5 percent), as the region's GDP is expected to slightly decrease year on year.

In 2017, the Indian steelmaking industry grew by 6.2 percent year on year, due to an increase in new capacity and reduction of inventories. In 2018, steel output in India is likely to increase by 5 percent, replacing Japan as the world's second largest steel producer.

Production output trends

Figure 3. Steel output (million tonnes)

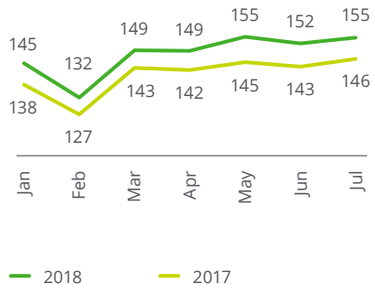
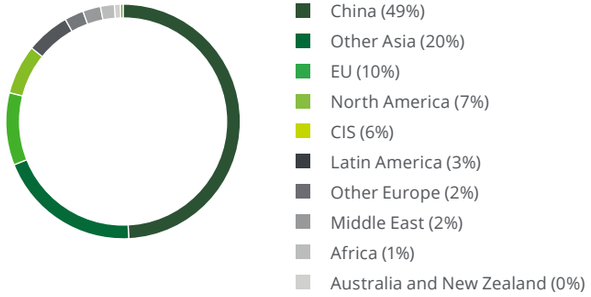


Figure 4. Global steel output by region (%, 2017)



Source: World Steel Association, EIU forecast

North America

In March 2018, the US Government imposed a 25 percent tariff on all steel imports. Canada, Mexico, the EU, South Korea, Australia, Argentina and Brazil, all of which account for more than 50 percent of US steel imports, received temporary exemptions that expired on 1 June, which means that these economies are being affected by the US tariffs now. Mexico and Canada responded by imposing their own duties (on 1 June and 1 July, respectively). These countries also extended the area for the application of these duties by imposing non-steel tariffs. In the short term, tariffs result in high uncertainty around the supply chain. However, the EIU's base case scenario does not provide for the imposition of tariffs on steel imports from the above-mentioned countries in the long term.

The US steel output started to grow after the imposition of duties. In March 2018, US Steel announced the restart of Granite City Works' two blast furnaces in June and October, respectively. In July 2018, Liberty Steel Georgetown restarted a wire-rod mill with a capacity of 700,000 tonnes per annum. At the same time, JSW Steel acquired Acero Junction and plans to restart an electric arc furnace with a capacity of a 1.6 million tonnes per annum in autumn 2018. Other producers are likely to increase the capacity utilization too in light of the growing steel prices in the US and steel companies' margins.

However, in 2018, the effect of steel tariffs will be limited to a reduction of idle capacities currently accounting for 5 percent of the total US steel output. The new plants are not likely to be launched before 2022, given the volume of investments required for commissioning new capacity and the average project implementation period (3–4 years). Hence, US steel prices are set to remain at least 25 percent above the global level.

In 2017, NAFTA's total steel output increased by 4.7 percent year on year driven by the launch of new plants in the US and Mexico, as well as higher utilization rates. According to the EIU, the regional steel production is set to grow by 4.5 percent year on year in 2018.

European Union

On 19 July 2018, the European Union imposed provisional safeguard measures with regard to imports of 26 categories of steel products. The aim was to protect the domestic market from low price import products after the US steel and aluminum tariff hikes. The safeguard measures are expected to remain in force for 200 days. The 25 percent tariffs will be imposed only after the imports exceed the average level for the past three years. Hence, this move does not represent an abrupt tightening of demand and supply in Europe, as the annual quota for most products amounts to 10 percent of the 2017 import level.

The quotas may be extended after the initial 200-day period. European steel mills are likely to benefit from potential extension, which would lead to higher demand, while tighter tariffs would result in higher prices. EIU experts believe that the quotas would be extended as they are, and expect the steel output to increase by 3.2 percent in 2018 versus 3.9 percent in 2017.

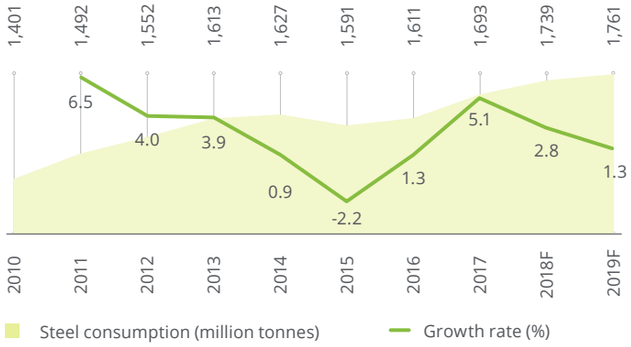
The EU's economic growth remains stable while the import restrictions would allow European plants to increase their market shares. The only cloud on the horizon could be lower demand for wire rods in Algeria. In 2018, the Algerian government may attempt to restrict EU imports in a move to protect the local steel industry. There are several alternative markets for the EU's wire rod mills, but their output may still fall in the segment, given Section 232 Tariffs imposed by the US.

Consumption trends

In 2017, global steel consumption increased by approximately 5.1 percent on the back of the stable performance of the global economy. However, according to the EIU, the robust start of 2018 is likely to be followed by moderate performance in 2H 2018 due to slower industrial growth in China, particularly in the construction sector. Overall, global steel consumption is likely to fall to 2.8 percent in 2018, affected by China's trends, albeit accompanied by resilient demand growth in the EU and NAFTA markets.

In 2019, interest rate hikes, lending restrictions in China and a cyclical slowdown in the automotive industry in developed markets is likely to negatively affect the global demand for steel. Despite the ongoing growth of most developed economies, steel consumption is likely to grow at a slower rate in 2019 and reach 1.3 percent year on year.

Figure 5. Global steel consumption



Source: World Steel Association, EIU forecast

North America

According to the AISI, the US accounts for 75 percent of steel consumption in North America, with 43 percent of those steel products consumed by the construction industry.

President Trump's Administration announced intentions to make significant investments in the infrastructure, which is likely to support steel consumption in the US. However, these government expenditures are not likely to materialize, given the draft US tax bill passed in December 2017, which would result in a USD 1.5 trillion decrease in the US budget's revenue over the next decade. The automotive sector accounts for 27 percent of the demand for steel in the US and faces difficulties given the ongoing aluminum substitution and high-strength alloy development. Another threat to long-term demand for steel comes from electric cars due to advances in technology and a longer useful life that tends to reduce the need to replace cars.

Following the imposition of a 25 percent tariff on steel imports in the US in mid–2018, US steel consumers are likely to pay at least 25 percent more for purchased steel than their competitors, as US producers continue to rely on imported steel. Experts do not expect US steel mills to quickly ramp up their capacity as required to meet domestic needs both in terms of volumes or product mix.

According to the EIU, in 2018, steel consumption in North America would grow by 4 percent due to the recent volatility and market concerns around a potential increase in inventories due to trade disputes. In 2018, consumption is likely to be driven by robust energy industry growth, higher capital investments (partly owing to lower taxes in the US) and a high level of consumer expenditures.

However, further into 2019, monetary tightening and high metal prices are set to limit the robustness of the automotive and housing industries' performance. In addition, higher steel prices in the US weigh on demand from manufacturing companies, which may shift to non-US steel and then export finished products to the US. As a result, steel consumption in North America is likely to fall to 1 percent, according to EIU forecasts.

Consumption trends

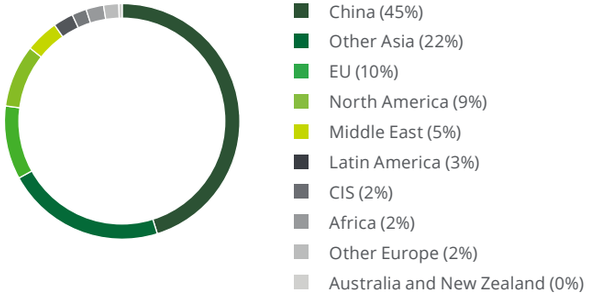
Asia
In 2017, steel consumption in Asia (ex-China) rose by 1.5 percent. Overall, the smaller countries of Southeast Asia such as Vietnam, Indonesia, Thailand and the Philippines accounted for 25 percent of total Asian demand, compared to India with its share of 20 percent. At the same time, in 2017, industrial production in India fell lower than was expected, thus hampering faster growth of the regional demand.

Nevertheless, the industrial production growth in excess of 7 percent in 1Q 2018 bodes well for higher demand. Consumption growth is expected to reach 3 percent in 2018 on the back of the stimulus programme in South Korea, which partially compensates for weak demand in Japan. By 2019, interest rate hikes in developed markets are likely to affect exporters in Southeast Asia resulting in a 1.5 percent steel consumption growth in 2019.

The EU
The demand for steel in the EU will be supported by production and infrastructure capex. Although the European Central Bank's (ECB) stimulus programme will be over by late 2018, the Eurozone's economy remains sustainable enough to accommodate for a 2.9 percent steel consumption growth this year. The robust automotive industry, which accounts for nearly 20 percent of the total regional consumption, will contribute to higher demand for steel. The number of car registrations increased by 3.4 percent in 2017, while lower unemployment led to higher consumer demand for home appliances. However, in 1H 2018 car registration rates slowed to 2.9 percent. According to the EIU, the EU automotive market is set to peak this year.

In 2019, monetary tightening is likely to affect consumption expenditures and investments and lead to slower growth of demand for steel.

Figure 6. Global steel consumption by region (%, 2017)



Source: World Steel Association, EIU forecast

Input raw material price trends

Figure 7. Prices for iron ore, 2017–2018, USD per tonne (Fe 62% CFR, Tianjin, China)

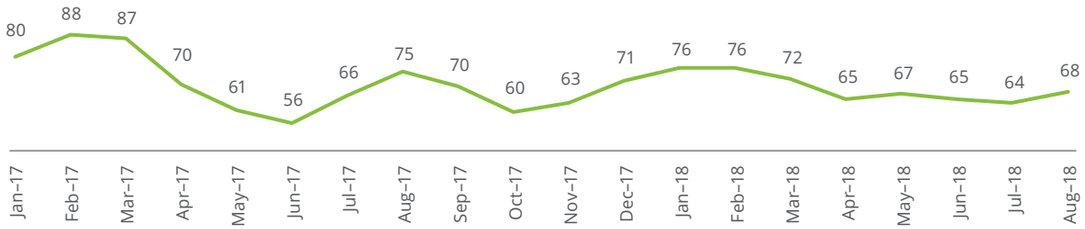
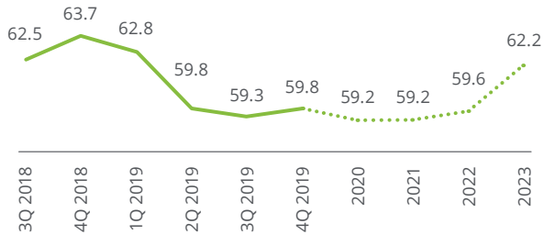


Figure 8. Prices for iron ore, consensus forecast until 2023, USD per tonne



Ore

In 2017, iron ore prices peaked at USD 80 per tonne on the back of China's steel production growth. However, concerns over the expected reduction in steel capacity in China drove the price down to USD 60 per tonne in late October. In December 2017 and January 2018, the prices rebounded after the output reduction turned out to be not that significant. However, in April 2017, the iron ore price returned to USD 65 per tonne on the back of inventory growth and concerns over demand in China.

Since then, the iron ore price remains range-bound at around USD 65 per tonne. The market expects the price to drop in 3Q 2018.

Several mining majors are continuing with their current projects, including Rio Tinto and BHP Billiton (both in the UK and Australia), Hancock Prospecting (Australia) and Anglo American (the UK/South Africa) in Brazil. New mines were commissioned in 2015 and 2016 and continued to ramp up production in 2017. In 4Q 2016, Vale launched its 90 million tonne S11D mine in Brazil, but it will not operate to full capacity until 2020.

According to the EIU, in 2018–2019, iron ore will trade within the range of USD 45–70 per tonne, sometimes going below that level, possibly even to USD 35 per tonne by the end of the forecast period.

Sources: Investing.com, EIU, MetalBulletin

Input raw material price trends

Figure 9. Prices for coking coal, 2017–2018, USD per tonne (FOB, Australia)

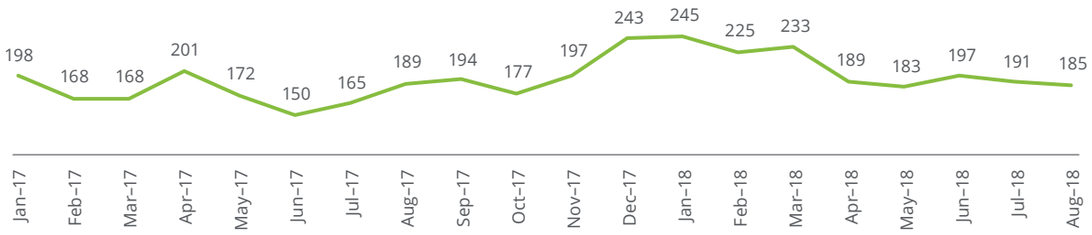
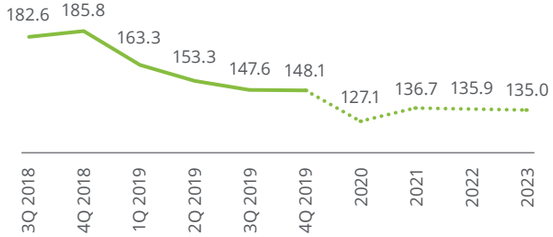


Figure 10. Prices for coking coal, consensus forecast until 2023, USD per tonne



Coal

In 2017, coking coal prices saw two increases – the first in April when Tropical Cyclone Debbie hit Queensland in Australia, damaging the major railways carrying coal to ports; the second in December, when prices went over USD 240 per tonne due to delays in shipments from Dalrymple Bay, a coal terminal in Australia. These increases were also triggered by the limitations on coking coal production in China. Later, in early 2018, the price moved down on the back of high supply, low demand in China, and the end of delays in Australian ports.

In April 2018, the prices were back to the lows (USD 175 per tonne) on lower weather concerns at the end of the rainfall season, which often affects operations in Australian ports.

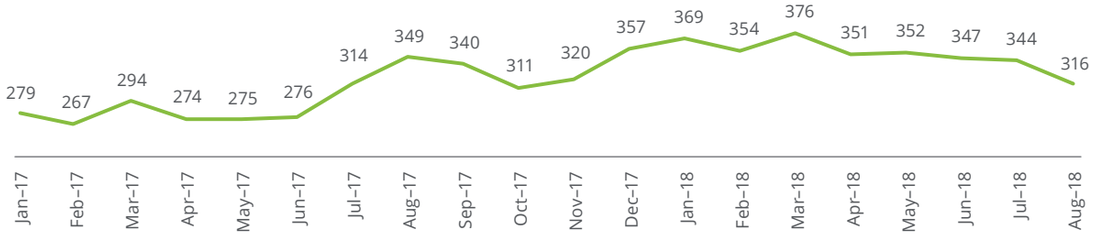
In 2Q 2018, the dispute between Queensland Coal Authority and rail freight operator Aurizon resulted in a delay in coal railway delivery from mines to ports in Australia. If the dispute is not resolved, coking coal exports from Australia may fall in 2018 despite an increase in capacity and prices. This conflict drove global coking coal prices upwards, approximately to USD 200 per tonne.

In 2H 2018, the prices are set to slightly decrease as steel output growth slows, but low inventory levels and the ongoing railway dispute should support the price at above USD 170 per tonne. In the event that the dispute is resolved, the prices are set to go back to the USD 125–160/tonne level in 2018–2019. However, any shortage or disruptions may force the steel price to retreat to USD 200 per tonne.

Sources: The Steel Index S&P Platts, EIU, MetalBulletin

Input raw material price trends

Figure 11. Prices for ferrous scrap, 2017–2018, USD per tonne (Steel Scrap Futures – (SSCc1))



Ferrous scrap

The situation in the ferrous scrap market heavily depends on trade relations between the US and Turkey, which are both the largest exporters and importers of ferrous scrap globally. Despite attempts to amend the situation, Turkish mills and American metal scrap suppliers remain the largest partners for each other. Presently, the picture may change, after the US imposed tariffs on Turkish steel reaching 50 percent. Presently, tariffs do not apply to scrap, but if Turkish steel sales decrease in the US, Turkey may refuse to buy US metal scrap. The risk of imposing tariffs on metal scrap should not be ruled out in the present trade war environment. However, such a solution may affect the entire industry.

In 2012, the US accounted for one third (29 percent) of the total ferrous scrap imports in Turkey, while the US exported 30 percent of its scrap to Turkey. Later, the levels somewhat decreased. In 2017, the US accounted for 17 percent of the total scrap imports in Turkey, with the latter importing 19 percent of the total US ferrous scrap exports.

In 1H 2018, Turkey imported 10.8 million tonnes of metal scrap while the US exported 8.6 million tonnes, with the US exporting 19 percent of the scrap to Turkey and the latter importing 18 percent of the scrap from the US.

US ferrous scrap exporters will try to tap into other markets, but there are no markets that are in a position to cover all of Turkey's import needs. In 1H 2018, Turkey increased Russian scrap imports to 1.33 million tonnes (by 60 percent). In the past four years, the list of key importers of metal scrap to Turkey (in addition to the US, the UK and Russia) comprised Belgium and the Netherlands (with each shipping 2 million tonnes per annum).

US producers try to diversify the market too. In 2017, they shipped record volumes of raw materials to Mexico (1.7 million tonnes), Pakistan (0.7 million tonnes), and Bangladesh (0.6 million tonnes). However, despite market performance and the applied efforts, US ferrous scrap shipments and the Turkish market remain closely interdependent.

Source: Investing.com, The Steel Index S&P Platts

Steel price trends

Hot-rolled products

In late 2017, the higher than expected demand for hot rolled products drove prices to USD 600 per tonne. However, as a result of the unexpectedly weak macroeconomic statistics released in March 2018, rolled product prices fell to USD 570 per tonne and remained range-bound within USD 550–570 per tonne. According to EIU experts, in 2H 2018, the low demand and supply growth would lead to a further decrease in prices which, in turn, would spur exports and increase pressure on global prices.

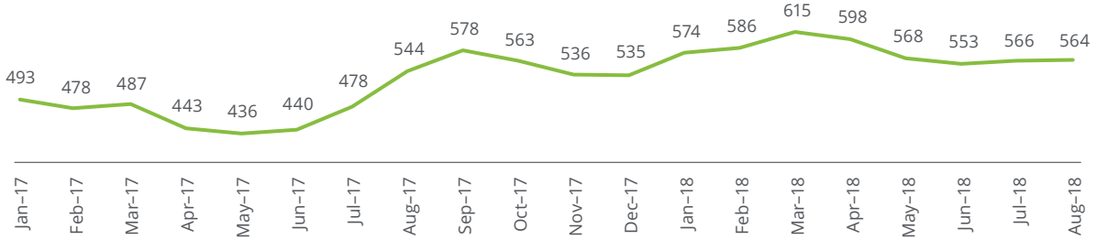
Russian rolled product prices mostly mirrored global trends in 2017. Domestic prices moved in line with the global downward trend in 1H 2018 and recovered in 2H 2018. Overall, the average domestic prices for rolled products in Russia turned out to be even higher in 2017 versus 2016 despite the strengthening of the Russian rouble. Starting from March 2018, producers in developing markets had to track Chinese rolled product suppliers who lowered prices, in order to safeguard their market shares. EIU experts predict that as domestic demand in China slows down it will trigger higher exports, putting pressure on global prices.

As a result of the rouble weakening in August 2018 on the back of relatively stable global market prices, Russian steel companies are faced with the need to hike rolled product prices on the domestic market in the current and future months. However, price hikes are problematic due to the ongoing low demand. Distributors find it difficult to set spot prices close to the primary market levels, while the current supply/demand conditions do not bode well for growth. Demand for products is still relatively weak, while inventories remain excessive. Presently, the prices for hot rolled products are virtually equal to export prices.

By 2019, a slow growth in demand and higher costs of keeping inventories, driven by higher interest rates, will force inventory adjustments and lead to lower production output due to lower prices. Global prices are set to remain at the level of marginal costs and may start rising in mid–2019.

However, the current trade policy creates risks for the forecasts. In the event that the US trade tariffs are alleviated by numerous exceptions, the forecast should be modified in accordance with the new conditions. Alternatively, should the EU trade tariffs be tightened in early 2019, EU production and prices are likely to go up as a result, which may affect global prices. Also, China's policy (reduction of statutory working days at coal mines in 2016 and shutdown of induction furnaces in 2017) has had a significant impact on global prices in the past two years too. A repeat of this situation in 2018–2019 should not be ruled out.

Figure 12. Price trends for hot-rolled products, 2017–2018, USD per tonne (CIS exports, FOB Black Sea)



Source: EIU, MetalBulletin

Global steel trade statistics

In 2017, the list of the top five steel exporting and importing countries has not changed compared to 2016. China still ranks first among exporters, but the export volumes significantly dropped (by 33 million tonnes) compared to 2016. Japan remains in second place after posting a slight decrease in exports (by 4 million tonnes). India increased exports by 6 million tonnes in 2017 year on year. Steel imports in the US increased by 4 million tonnes in 2016, whereas steel imports in South Korea fell by 4 million tonnes.

Table 2. Top twenty steel exporters (2017, million tonnes)

		Million tonnes
1	China	75
2	Japan	37
3	South Korea	31
4	Russia	31
5	EU (1)	31
6	Germany	26
7	Italy	18
8	Belgium	18
9	Turkey	17
10	India	16
11	Brazil	15
12	Ukraine	15
13	France	15
14	Taiwan	12
15	Netherlands (2)	11
16	US	10
17	Spain (2)	9
18	Austria (2)	8
19	Canada	8
20	Iran	8

Table 1. International trade (2017, million tonnes)

Exports \ Imports

	EU	Other Europe	CIS	NAFTA	Other America	Africa and the Middle East	China	Japan	Other Asia	Oceania	Total imports	Non-regional import
EU	116.9	8.6	13.5	0.5	2.8	1.4	4.1	0.2	10.0	0.1	158.1	41.2
Other Europe	10.0	0.8	8.0	0.1	1.1	0.4	1.0	0.2	1.3	0.0	22.9	22.1
CIS	1.9	0.3	8.7	0.4	0.0	0.1	2.2	0.1	0.4	0.0	14.1	5.4
NAFTA	7.3	2.2	4.0	19.0	6.7	1.2	2.5	3.8	10.7	0.3	57.7	38.7
Other America	1.4	1.1	0.6	2.4	4.2	0.1	6.6	1.2	1.1	0.0	18.7	14.5
Africa	4.8	2.4	6.0	0.1	0.2	2.4	5.5	0.9	1.3	0.0	23.6	21.2
Middle East	1.7	3.7	4.3	0.1	0.3	5.3	6.5	1.0	4.2	0.1	27.2	21.9
China	1.5	0.0	0.0	0.1	0.1	0.0	-	5.5	6.6	0.0	13.8	13.8
Japan	0.1	0.0	0.0	0.0	0.0	0.0	1.1	-	5.0	0.0	6.2	6.2
Other Asia	2.3	1.3	5.7	0.5	1.6	6.1	44.5	24.3	28.8	0.4	115.5	86.7
Oceania	0.3	0.0	0.0	0.0	0.0	0.0	0.8	0.2	3.6	0.2	5.1	4.9
Total exports	148.2	20.4	50.8	23.2	17.0	17.0	74.8	37.4	73.0	1.1	462.9	186.3
Non-regional export	31.3	19.6	42.1	4.2	12.8	9.3	74.8	37.4	44.2	0.9	276.6	
Balance (export/import)	-9.9	-2.5	36.7	-34.5	-1.7	-33.8	61.0	31.2	-42.5	-4.0		

Source: World Steel Association

(1) excluding intra-European trade
(2) including intra-European trade

Table 3. Top twenty steel importers (2017, million tonnes)

		Million tonnes
1	EU (1)	41
2	US	35
3	Germany (2)	27
4	Italy (2)	20
5	South Korea	19
6	Vietnam	16
7	Turkey	16
8	France (2)	15
9	Thailand	15
10	Belgium (2)	14
11	China	14
12	Mexico	14
13	Indonesia	11
14	Poland (2)	11
15	Spain (2)	10
16	India	9
17	Netherlands (2)	9
18	Canada	9
19	UK (2)	8
20	Malaysia	8

China’s steel and iron ore market

Steel production in China

In 2018, China’s steel production reached more record highs, peaking at 2.7 million tonnes per day in June compared to last year’s record of 2.5 million tonnes per day. This is an equivalent of 950 million tonnes per annum provided that high prices continue to prop up output. However, the Chinese government is likely to periodically impose restrictions on steel production volumes in 2018–2019 based on environmental considerations.

Nevertheless, significant production growth in 1H 2018 makes it possible to expect annual production growth at 4.5 percent versus 3 percent in 2017. In 2019, growth is set to be moderate and is likely to reach just 1 percent on the back of weak demand for steel in the construction industry and lower inventories due to lower prices.

Figure 13. Steel production in China, 2017–2018

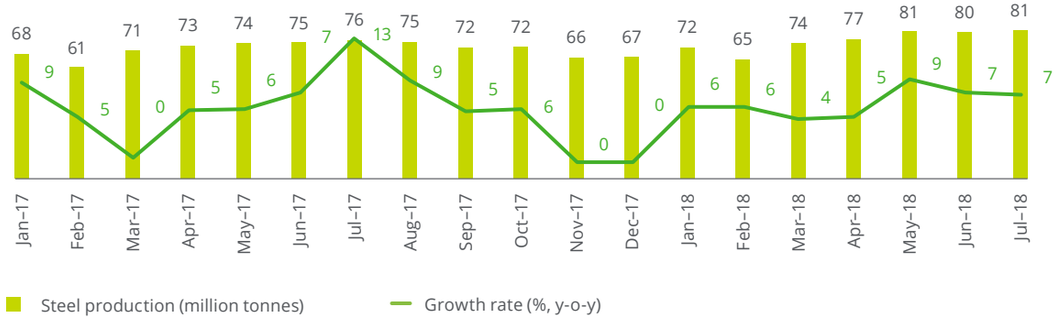


Figure 14. Hot rolled output in 2017–2018, million tonnes

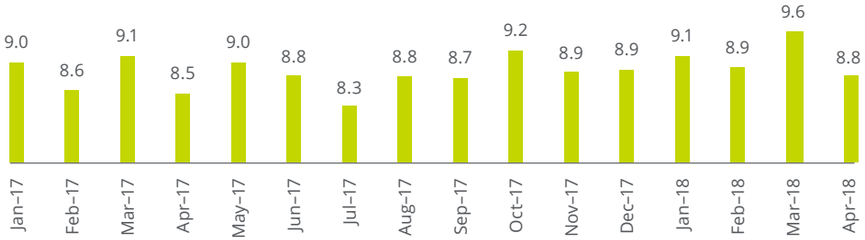


Figure 15. Tube product output in 2017–2018, million tonnes

Source: World Steel Association, EIU forecast

China’s steel and iron ore market

Figure 16. Raw steel consumption in China since 2014 (million tonnes)

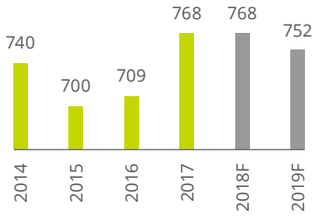
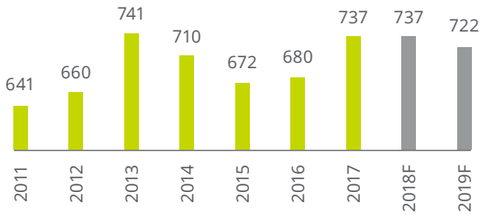


Figure 17. Steel product consumption in China since 2011 (million tonnes)



Source: World Steel Association, EIU forecast

Consumption in China

The current economic conditions negatively affect steel consumption in China. Despite the significant GDP growth in 2017 and in 1H 2018, the pace of fixed investment is slowing down. Overall, in 2017, fixed investment increased by 7.2 percent compared to the peak level of 9.2 percent reached in March 2017. Meanwhile, in June 2018, fixed investment fell to 6 percent, a record low in the history of measurement since 1997. The industrial growth accelerated from 6 percent in 2016 to 6.6 percent in 2017. However, according to the EIU, it would slow down to 6.4 percent in 2018 when lending conditions are tightened. The Chinese government’s decision not to hike interest rates will negatively impact the industrial growth and has already resulted in a weaker yuan versus USD, which is aggravated by the trade dispute between China and the US.

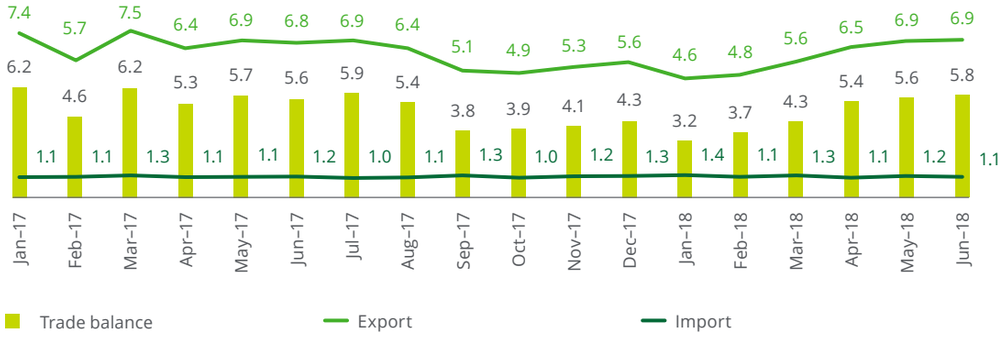
The construction sector, including the infrastructure and real estate segments, will remain critical to the overall demand for steel in China, as it accounts for almost two-thirds of the country’s steel consumption. Meanwhile, access to mortgage loans in China worsened. In June 2018, the government scaled back China Bank’s programme for providing new housing, which accounted for up to 25 percent of the total housing lending in 2017.

In an environment of economic slowdown, the government would strive to increase financial liquidity, funneling it to small and medium business as opposed to housing or infrastructure to avoid a corporate/private debt bubble in the latter segments. One third of China’s steel consumption (ex-construction) is used in shipbuilding, the automotive industry, consumer, electronics and industrial goods production. In 2017, the automotive industry’s output rose by 3.2 percent, which is significantly below the 14 percent level reached in 2016. The 2017 slowdown can be partially attributed to a reduction in tax benefits for new car purchases and ownership restrictions intended for combating pollution. The automotive industry’s growth accounts for 10 percent of the total demand for steel in China and is set to remain relatively low (below 5 percent) in 2018–2019.

After a slow start in 2018, the total steel consumption in China accelerated in March–May, with the EIU expecting it to increase by 2.5 percent this year. Later, China’s GDP is likely to contract due to lower construction activity in 2H 2018, which is likely to result in inventory accumulation, given the high steel output. Hence, in 2019, steel consumption growth in China is expected to fall to 1 percent in 2019.

China’s steel and iron ore market

Figure 18. Export/import of semi-finished products in China, 2017–2018, (million tonnes)



In 1H 2018, the import of semi-finished and finished steel products increased by 3.7 percent year on year, from 7 to 7.3 million tonnes. The exports fell by 13.2 percent to 35.3 million tonnes, with net export reaching 28.0 million tonnes, which is 16.7 percent below the 1H 2017 level.

Source: World Steel Association

Consumption drivers

In 5M 2018, investments in urban real estate rose by 9.7 percent compared to 7.0 percent in 2017.

In July 2018, China’s PMI fell by 0.3 pp to 51.2 compared to June 2018. In the same period, new manufacturing orders decreased by 0.9 p.p. to 52.3 compared to June 2018.

According to the China Federation of Logistics and Purchasing (CFLP), the ferrous industry’s PMI increased from 51.6 in June to 54.8.

In the first six months of 2018, the total area of ongoing housing construction increased by 2.5 percent compared to 1H 2017. Meanwhile, new real estate completions rate reached 11.8 percent versus the 7 percent growth year on year in 2017.

In 1H 2018, the value added of industrial output (VAIO) grew 6.7 percent compared to 6.6 percent in 2017. In particular, the value added in the automotive industry products increased by 7.9 percent. However, the value added of the metal product segment grew only 3.7 percent as opposed to 6.6 percent for the full-year of 2017.

In 6M 2018, vehicle output rose by 3.5 percent to 14.3 million units versus 3.2 percent in 2017. In the same period, the manufacturing of refrigerators and air conditioning units increased by 3.1 percent and 14.4 percent, respectively.

China’s steel and iron ore market

A map of China’s largest steel mills*

Companies owning
the above-mentioned facilities:
1. China BaoWu Steel Group
2. HBIS Group
3. Shangang Group
4. Ansteel Group
5. Shougang Group
6. Shandong Steel Group
7. Masteel
8. Rizhao Steel
9. Baotou Steel

* With annual steel output in excess of 10 million tonnes
Source: World Steel Association

China’s steel and iron ore market

China Baowu Steel Group
- USD 59,255 million
- 65.4 million tonnes
- Top-2

HBIS Group
- USD 45,266 million
- 45.6 million tonnes
- Top-4

Shangang Group
- USD 32,561 million
- 38.4 million tonnes
- Top-6

Ansteel Group
- USD 26,212 million
- 35.8 million tonnes
- Top-7

Shougang Group
- USD 34,493 million
- 27.6 million tonnes
- Top-9

- Revenue
- Steel output
- Place in «Global steel producer in 2017» rating

Shandong Steel Group
- USD 14,755 million
- 21.7 million tonnes
- Top-12

Masteel
- USD 11,244 million
- 19.7 million tonnes
- Top-16

Rizhao Steel
- n/a
- 15.0 million tonnes
- Top-24

Baotou Steel
- USD 8,243 million
- 14.2 million tonnes
- Top-27

In early July 2018, Baowu Group announced plans to relocate part of its iron-making and steelmaking capacity from Shanghai and Nanjing to Guangdong, Hubei, and Fujian provinces. The relocated iron-making capacity includes a 1.2 million tonne p.a. Meishan plant in Nanjing and a 2.9 million tonne p.a. Baosteel Stainless Steel in Shanghai. Iron-making equipment at the two plants will be removed, and a new 4.03 million tonne p.a. blast furnace will be built at Baosteel Zhanjiang Iron & Steel in Guangdong province. It will be the third blast furnace at Baosteel Zhanjiang Iron & Steel plant.

In mid-July, Liuzhou Steel announced that core assets owned in Guangxi Steel Group were transferred to Liuzhou Steel. The ownership transfer implies that the first steel capacity of Guangxi Steel Group are likely to be constructed soon after a more than 10-year delay. Guangxi Steel Group has not produced any steel since the creation of the group. Initially, the company was established to construct a 10 million tonne p.a. Steel plant in Fangcheng port located on the Guangxi Coast. However, the project was not approved by China’s government until 2012. In 2012–2017, the project was delayed again due to adverse market conditions and shareholder issues.

In late June, China’s Ministry of Ecology and Environment accused Shagang Group of ‘perfunctory’ behaviour when treating steel production waste (slag). The key issue raised by the ministry related to the steel slag accumulated in the past two decades.

Source: World Steel Association, World steel in figures 2018, Fortune 500 – 2018, Hoovers

Overview of the Russian steel and iron ore market

Production output trends

Figure 19. Metal products shipped (RUB billion)

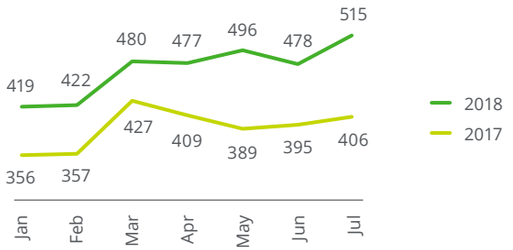
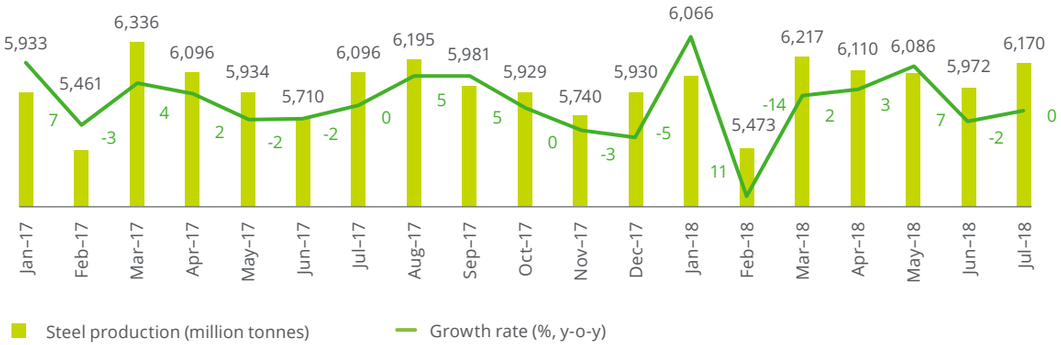


Figure 20. Steel production output in volume terms, 2017–2018



In 2017, Russia ranked fifth among global steel producers. In 2017, Russia's steel production slightly increased to 71.3 million tonnes (up 1 percent year-on-year).

In January–June 2018, Russian companies produced 35.9 million tonnes of steel posting a 1.3 percent growth. July was not the best month for Russian steel producers. Overall, according to the WSA, Russia's steel production increased by a mere 0.8 percent year on year, reaching 6.2 million tonnes.

According to the Russian Economic Development Ministry, in July, the GDP grew 1.8 percent year on year (1.1 percent in June, 1.8 percent in 2Q 2018). In total, the GDP rose 1.7 percent year on year in January–July 2018. After the temporary negative drivers ran out of steam, the industry recovered and became the main contributor to faster GDP month on month growth in July. In July 2018, the industrial production growth accelerated to 3.9 percent year on year (from 2.2 percent in June) upon the improved performance in the resource and manufacturing industries.

Metals and mining was a key contributor to faster growth in the manufacturing industry (from 2.2 percent year on year in June to 4.6 percent in July), as it normalized after a significant slowdown in June. Other manufacturing industries posted positive performance too.

In the past two months, the year-on-year performance in the manufacturing industry was affected by the calendar factor. In June 2018, there was one working day more and in July 2018, there was one working day less than in the respective months in 2017. Adjusted for working days, the manufacturing industry's performance was more moderate (growth to 3.9 percent year on year in July from 3.0 percent in June). The median growth in the manufacturing industry (smoothing the impact of 'local' factors) was 3.0 percent year on year in July, and 3.2 percent in June.

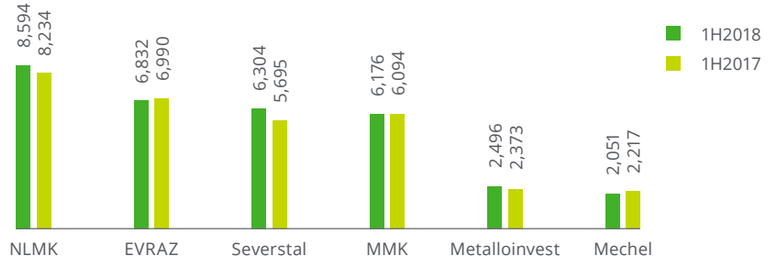
Source: Rosstat, the Russian Economic Development Ministry

Production output trends

Table 4. Financial performance of the top Russian steelmakers

	Revenue, USD million		EBITDA, USD million		EBITDA margin (%)	
	1H 2018	1H 2017	1H 2018	1H 2017	1H 2018	1H 2017
EVRAZ	6,343	5,106	1,906	1,152	30%	23%
NLMK	5,906	4,700	1,727	1,221	29%	26%
Severstal	4,432	3,698	1,580	1,207	36%	33%
MMK	4,161	3,586	1,210	907	29%	25%
Metalloinvest	3,779	3,032	1,491	1,061	39%	35%
Mechel	2,639	2,574	696	694	26%	27%

Figure 21. Steel output by the top steelmakers, 2017/2016 (thousand tonnes)



In 1H 2018, EVRAZ, NLMK, Severstal, MMK, Metalloinvest, and Mechel produced in total 32.5 million tonnes of steel, which accounted for 91 percent of the Russian steel output at the time. Top Russian metal makers demonstrated margins varying from 26 percent to 36 percent, all up on the previous year except for MMK whose EBITDA margin was down 1 percent.

EVRAZ NTMK increases the geography of railway wheel shipments to Europe

EVRAZ NTMK launched railway wheel shipments to Slovakia. In 2018, the company will ship around 1,000 wheels for freight cars to ŽOS Trnava railcar repair company. ŽOS Trnava is a new client for EVRAZ. The company is one of the top five largest railcar repair workshops in Europe, together with ÖBB TS Werk Knittelfeld (Austria), Kolowag (Bulgaria), FWN (Germany) and SZ-Vit (Slovenia), who had become EVRAZ partners earlier. "Deliveries to railcar repair companies are an important area of our wheel sales, as historically, this market segment accounts for over 70 percent of demand," stated Ilya Shirokobrod, EVRAZ Vice President of Sales and Logistics. "In addition, expanding sales to Europe strengthens EVRAZ's position in this priority market."

In 1H 2018, Severstal supplied over 2.7 million tonnes of steel products to Russian construction companies

In 1H 2018, Severstal, a leading global integrated steel and iron ore producer, shipped 2.717 million tonnes of steel products, which is 7 percent above the 1H 2018 level.

Severstal's steel products are used to erect the largest infrastructure facilities in Russia. In particular, Severstal shipped around 40 thousand tonnes of various steel products for the construction of all 12 stadiums in preparation for the 2018 FIFA World Cup.

NLMK Group to open a service center in South Africa.

NLMK South Africa will supply abrasion-resistant (NLMK Quard) and high-strength (NLMK Quend) thick plates produced at the Belgian NLMK Clabecq. NLMK South Africa will also make parts of these steel products as per customers' requirements.

Key clients of the new service center will include mining, machine-building, construction and other companies, not only in South Africa, but also in Namibia, Botswana, Zimbabwe, Mozambique, Angola, Zambia, etc.

Source: company data

Consumption trends

Key steel consuming industries show stable performance compared to more robust 2017 results. The automotive industry's potential is restrained by low new car sales (seasonally adjusted), which remained at around 150 thousand cars per month in the past several months, while the year on year growth slowed to 10.8 and 10.6 percent in June and July, respectively (compared to 21.1 percent year on year in January–May).

Figure 22. Russian Purchasing Managers Index (PMI) in 2017

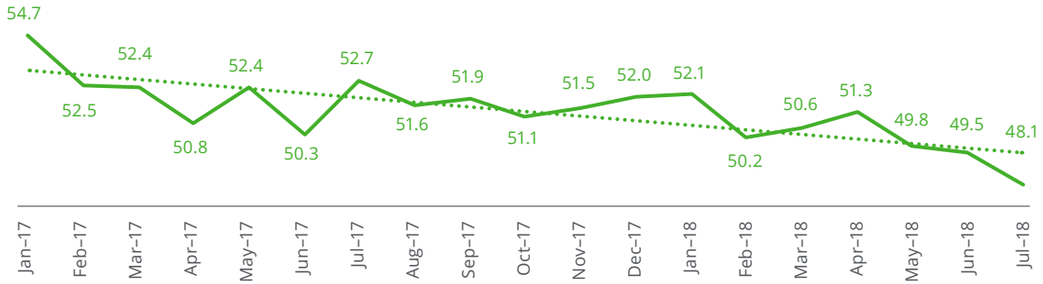


Figure 23. Crude oil consumption since 2014 (million tonnes)

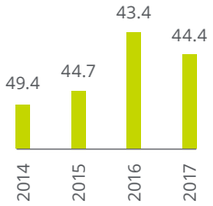
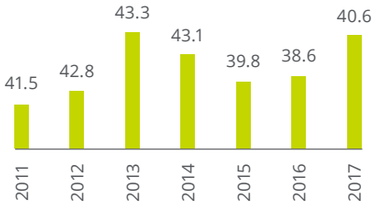


Figure 24. Steel product consumption since 2011 (million tonnes)



The construction industry remains volatile this year too. However, construction works continue to stagnate at levels reached in mid–2017. Investment-grade automotive products and construction material output showed solid growth again (18.3 percent and 7.6 percent year on year, respectively). However, both figures were below the June levels in seasonally adjusted terms despite the stable growth in the preceding months.

Starting from April, fixed investments were negatively affected by business sentiment due to high financial market volatility. As a result, the PMI index fell to 48.1 in July 2018.

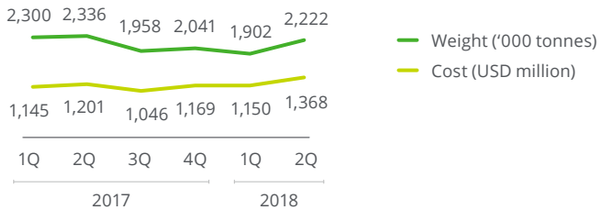
The demand for steel products may grow after the programmes are announced to implement the presidential decrees dated last May. Those programmes are expected to result in new major investments in the infrastructure including construction of highways, railroads, airports, strategic bridges, as well as city and housing renovation.

Source: Markit Economics, World Steel Association, Russian Economic Development Ministry

Exports of steel products

In 2018, exports of flat-rolled products were up 38 percent in monetary terms and down 3 percent in volume terms on 2017, totaling USD 2,518 million and 4,124 thousand tonnes.

Figure 25. Exports of flat-rolled products by quarter



In 1H 2018, exports of tube products were up 106 percent in monetary terms and up 62 percent in volume terms, totaling USD 1,682 million and 1,493 thousand tonnes.

Figure 26. Exports of tube products by quarter

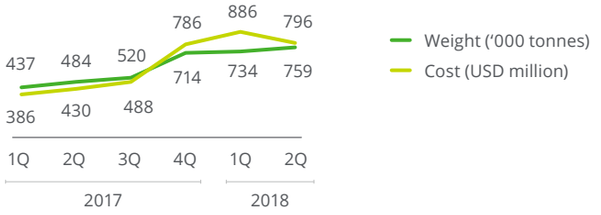


Table 5. Exports of flat-rolled products

	Value (USD million)		Weight (thousand tonnes)	
	1H 2018	1H 2017	1H 2018	1H 2017
Turkey	702	771	1,207	1,634
Belarus	212	187	301	285
Poland	169	27	300	54
Kazakhstan	136	125	190	203
Latvia	131	57	208	116
Uzbekistan	114	97	150	141
US	113	73	165	121
Vietnam	112	61	209	135
Italy	83	74	146	164
Germany	80	39	123	72

Table 6. Exports of tube products

	Value (USD million)		Weight (thousand tonnes)	
	1H 2018	1H 2017	1H 2018	1H 2017
Finland	510	402	393	375
Turkey	394	10	287	24
Kazakhstan	193	127	207	147
Belarus	115	90	120	106
US	86	53	99	80
Bulgaria	60	0	38	1
Uzbekistan	55	8	45	7
Egypt	49	3	50	5
Azerbaijan	34	13	41	17
Saudi Arabia	21	0	26	0

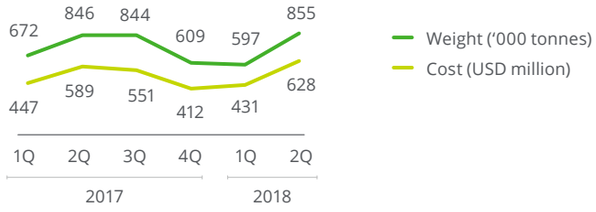
Source: Russian Federal Customs Service

Flat-rolled products: TNVED (Commodity Classification for Foreign Economic Activity) codes 7208; 7209; 7210; 7211; 7212; tube products: TNVED codes 7303,7304,7305, 7306

Imports of steel products

In 1H 2018, imports of flat-rolled products were up 2 percent year on year in monetary terms and down 4 percent in volume terms, totaling USD 1,059 million and 1,452 thousand tonnes, respectively.

Figure 27. Imports of flat-rolled products by quarter



In 1H 2018, imports of tube products were down 10 percent year on year in monetary terms and up 31 percent in volume terms, totaling USD 468 million and 260 thousand tonnes.

Figure 28. Imports of tube products by quarter

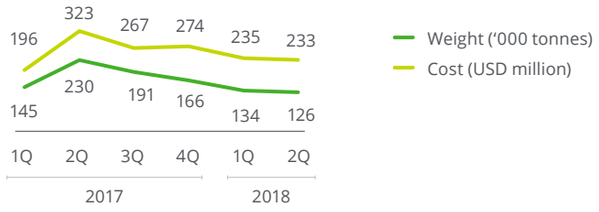


Table 7. Imports of flat-rolled products by major destination

	Value (USD million)		Weight (thousand tonnes)	
	1H 2018	1H 2017	1H 2018	1H 2017
Kazakhstan	495	429	766	697
Ukraine	190	177	322	319
China	131	223	153	303
South Korea	76	69	71	70
Germany	44	29	34	27
Belgium	27	25	25	25
Hungary	15	8	10	6
Finland	14	13	12	12
France	12	12	10	13
Japan	12	1	15	1

Table 8. Import of tube products by major destination

	Value (USD million)		Weight (thousand tonnes)	
	1H 2018	1H 2017	1H 2018	1H 2017
China	101	97	44	54
Kazakhstan	88	57	78	64
Ukraine	52	64	38	79
Italy	34	33	9	10
Belarus	32	35	35	43
Japan	26	19	12	6
Germany	21	110	5	82
Austria	19	3	10	1
US	12	13	2	2
South Korea	9	4	2	1

Source: Russian Federal Customs Service

Flat-rolled products: TNVED (Commodity Classification for Foreign Economic Activity) codes 7208; 7209; 7210; 7211; 7212; tube products: TNVED codes 7303,7304,7305, 7306

Key industry events

Metalloinvest introduces fine screening technology at Mikhailovsky GOK

The introduction of new Derrick stack sizers at Mikhailovsky GOK's beneficiation plant will improve the quality of merchant iron ore concentrate, increasing its Fe content from 65 percent to 67 percent by reducing the silicon dioxide content. Investments in the project are expected to reach RUB 10.6 billion by 2022. The launch of fine screening technology is part of a comprehensive development programme at Mikhailovsky GOK, which aims to boost the efficiency of the beneficiation processing, improve the iron ore product quality, and increase the production volume.

MMK completes the implementation of a large-scale water protection project

The construction of a separating dam at Magnitogorsk Reservoir, part of the rebuilding processes of the MMK circulating water supply system, is entering its final stages. The project, at a cost of approximately RUB 660 million, will significantly reduce the environmental burden on the reservoir. This is one of MMK's most important initiatives with regard to protecting the surface waters of the Magnitogorsk Reservoir and the Ural River. The project will ensure an 11-fold reduction of water discharge from 52,000 cubic meters of water per hour to 4,500 per hour, and decrease the weight of discharged pollutants sevenfold. As a result, the Magnitogorsk reservoir will be maximally isolated from the impact of MMK's water supply system. The project provides for an increase in the volumes of recycled water supply due to the transfer of CHP and Oxygen Station No. 4 recycling processes to the cooling tank area.

Mechel prolongs coal contract with China's Baosteel Resources – part of China Baowu Steel, China's largest steel group, until 2019. The new agreement will be valid for July 2018 to June 2019. During this time, Mechel will supply Baosteel Resources' facilities with up to 700,000 tonnes of premium-grade coking coal. According to the contract, a major part of this coal – up to 40,000 tonnes monthly – will be supplied by Yakutugol Holding Company AO. The price will be determined on a monthly basis. "Russia's coking coal share in Chinese imports is around 7 percent. Mechel is a key Russian supplier of high-quality coking coal to China. In 2017, we shipped two million tonnes of coking coal to our Chinese clients. We have fully met our obligations on our previous contract with Baosteel Resources, which is our longstanding and respected partner. We are glad that our fruitful cooperation continues," Mechel PAO's Chief Executive Officer Oleg Korzhov commented.

Severstal has begun the supply of construction elements for a liquefied natural gas (LNG) storage facility

made of cryogenic low-carbon steel with a 9 percent nickel content. The products will be used in the construction of an LNG plant which Gazprom is building in Portovaya, in the Leningrad Region. The first 60-tonne product batch has already been delivered to the customer. Within the agreement, Severstal plans to supply approximately 700 tonnes of steel. Severstal has begun producing innovative products as part of its import substitution programme for construction materials run in partnership with Gazprom. Cryogenic steel has high resistance to the cold, retaining its plasticity and strength even at low temperatures.

EVRAZ signed a contract on building a new oxygen production facility

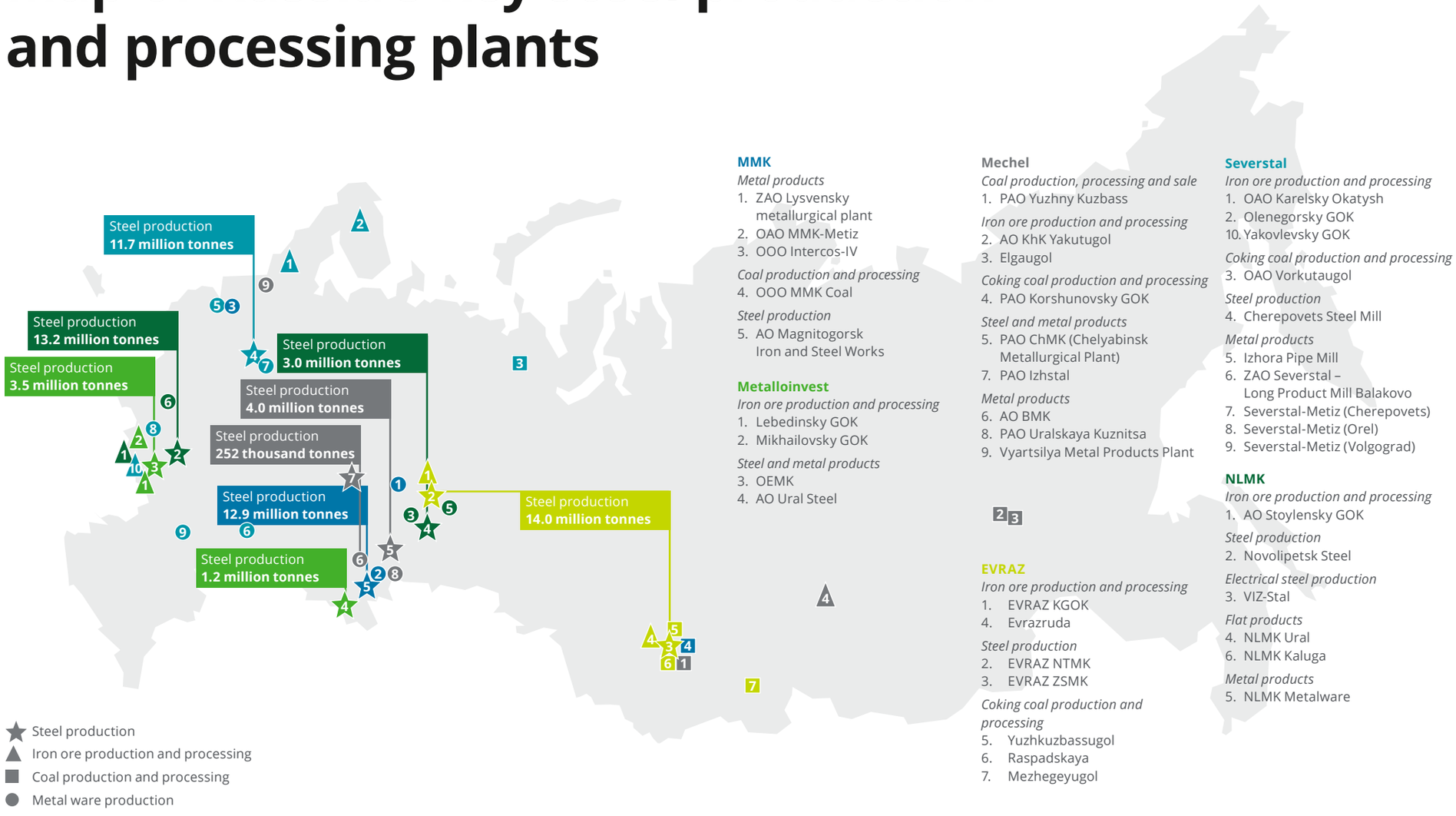
EVRAZ ZSMK signed an agreement with Air Liquide on the construction of a new oxygen production facility on the territory of the plant for the supply of air separation products for technological needs. The project will provide EVRAZ ZSMK with advanced equipment, which will be 30 percent more energy efficient than the previous one, and will make it possible to avoid expensive repairs. Within three years, two air separation units with a capacity of around 90,000 cubic meters per hour will be built at EVRAZ ZSMK's premises. They will serve the needs of construction and rail mills. EVRAZ ZSMK's active oxygen production has two workshops. Oxygen and other air separation products are supplied for the blast furnace and steelmaking shops of the plant.

Severstal becomes Russia's first manufacturer of damping steel

PJSC Severstal, one of the world's leading vertically integrated steel and mining companies, presented a new vibration and sound absorbing damping steel, 01U5T, during a techno-breakfast organised by the All-Russian Society of Inventors and Innovators (ARSII). The damping steel can be used in transport infrastructure (for railways and subways, aircraft construction and shipbuilding and in the automotive industry), and also in the manufacturing of energy, household, ventilation and military equipment, and in mining, metalworking and other industries. The properties of 01U5T steel include high elasticity and high vibration absorbency, making it suited to delivering structural rigidity and high damping. This combination makes it effective in combating noise and vibration, which are important considerations for the designers of today's megacities.

Source: corporate press-releases

Map of Russia's key steel production and processing plants



MMK
Metal products
1. ZAO Lysvensky metallurgical plant
2. OAO MMK-Metiz
3. OOO Intercos-IV

Coal production and processing
4. OOO MMK Coal

Steel production
5. AO Magnitogorsk Iron and Steel Works

Metalloinvest
Iron ore production and processing
1. Lebedinsky GOK
2. Mikhailovsky GOK

Steel and metal products
3. OEMK
4. AO Ural Steel

Mechel
Coal production, processing and sale
1. PAO Yuzhny Kuzbass

Iron ore production and processing
2. AO KhK Yakutugol
3. Elgaugol

Coking coal production and processing
4. PAO Korshunovsky GOK

Steel and metal products
5. PAO ChMK (Chelyabinsk Metallurgical Plant)
7. PAO Izhstal

Metal products
6. AO BMK
8. PAO Uralskaya Kuznitsa
9. Vyartsilya Metal Products Plant

EVRAZ
Iron ore production and processing
1. EVRAZ KGOK
4. Evrazruda

Steel production
2. EVRAZ NTMK
3. EVRAZ ZSMK

Coking coal production and processing
5. Yuzhkuzbassugol
6. Raspadskaya
7. Mezhegeyugol

Severstal
Iron ore production and processing
1. OAO Karelsky Okatysh
2. Olenegorsky GOK
10. Yakovlevsky GOK

Coking coal production and processing
3. OAO Vorkutaugol

Steel production
4. Cherepovets Steel Mill

Metal products
5. Izhora Pipe Mill
6. ZAO Severstal – Long Product Mill Balakovo
7. Severstal-Metiz (Cherepovets)
8. Severstal-Metiz (Orel)
9. Severstal-Metiz (Volgograd)

NLMK
Iron ore production and processing
1. AO Stoylensky GOK

Steel production
2. Novolipetsk Steel

Electrical steel production
3. VIZ-Stal

Flat products
4. NLMK Ural
6. NLMK Kaluga

Metal products
5. NLMK Metalware

★ Steel production
▲ Iron ore production and processing
■ Coal production and processing
● Metal ware production

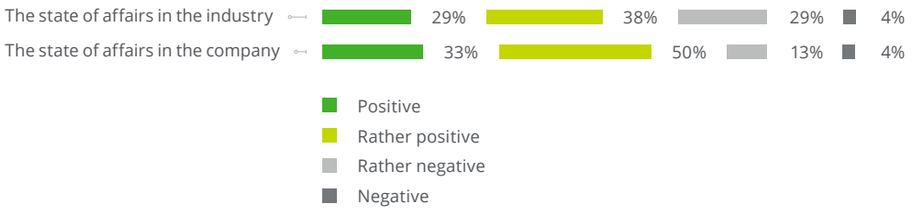
Source: Company data

Steel and iron ore industry – temperature check

The current state of the steelmaking industry

In 2H 2018, Deloitte CIS conducted comprehensive research on the Current State and Outlook for the Manufacturing Sector in Russia – 2018. The research included a survey of experts from a number of steel and tube-making companies. The detailed analysis of the collected data allowed us to get a clearer picture of the Russian steel-making industry and identify the sentiments and expectations of the market players, as well as forecasts they have for the future direction of their businesses and the industry as a whole.

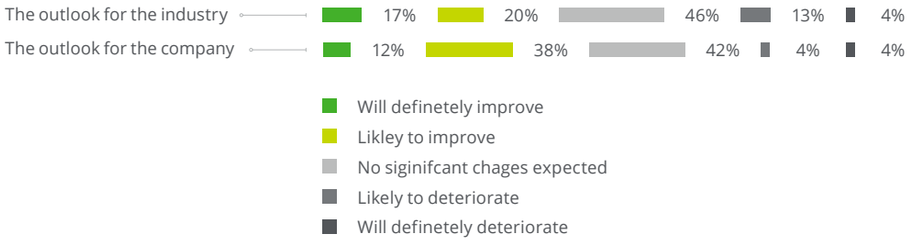
Figure 29. Survey of the current situation in the industry



Two-thirds (67 percent) of the respondents have a positive view of the situation, and 83 percent of the respondents are optimistic about the state of affairs in their companies. Compared to the last year, the share of respondents who optimistically view the situation in the industry increased by 17 p.p. year on year.

The representatives of steel companies tend to be more optimistic in their assessments of the current situation in the manufacturing industry as a whole (10 p.p. above the average).

Figure 30. Assessment of the outlook for the industry and companies

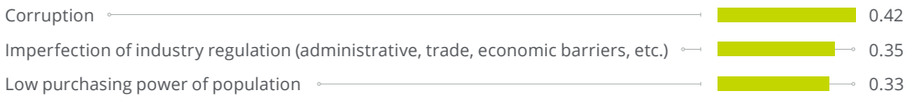


One half of the experts (50 percent) have a positive view of the development outlook for their companies. However, in 2018, there is a slight decrease in this category (-5 p.p.).

The experts are less optimistic about the development prospects of the Russian steel industry. Sixty-three percent of the respondents stated that the situation is not likely to change, and may even deteriorate.

Issues, drivers of competitiveness and priority strategies

Figure 31. Top three issues faced by steel companies (score 0-1)



This year, corruption was named as the top problem faced by the Russian steel industry (score 0.42). The imperfection of government regulation (score 0.35) became slightly less significant and moved from first to second place compared to the last year.

Figure 32. Top three drivers of global competitiveness for the Russian steel industry (Score 0–1)

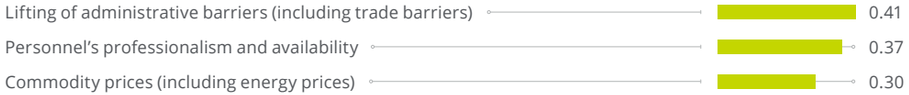
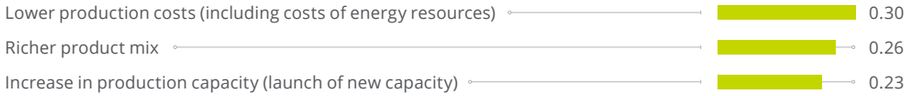


Figure 33. Top three drivers of competitiveness for steel companies on the Russian market (Score 0–1):



This year, specialists indicated the need to soften administrative barriers (including trade barriers) as a key driver of global competitiveness. They also continue to believe, (similarly to the previous year, that the cutting of production costs is a key driver of competitiveness on the domestic market.

Figure 34. Top five priority business development strategies for companies in 2018 (Score 0–1):

This year, there are slight changes in the ratings of business development strategies. The strengthening of production potential is now ranked as the first, along with organic growth strategy (scored 0.76 each).

A new strategy in the top five list is investment in talent development (0.71). It should be noted that respondents from all manufacturing companies tend to show more interest in talent development strategies.

This year, the import substitution strategy is no longer in the top five priority strategy list. Our manufacturing industry analysis shows that the share of imported raw materials in the total amount of commodities bought by steel companies amounts to 18 percent, while the share of imported equipment in procurements is 27 percent. This is 12 p.p. and 17 p.p. below the manufacturing industry levels, respectively.

Digitalisation and innovation in the steel industry

Figure 35. Advanced technology implementation

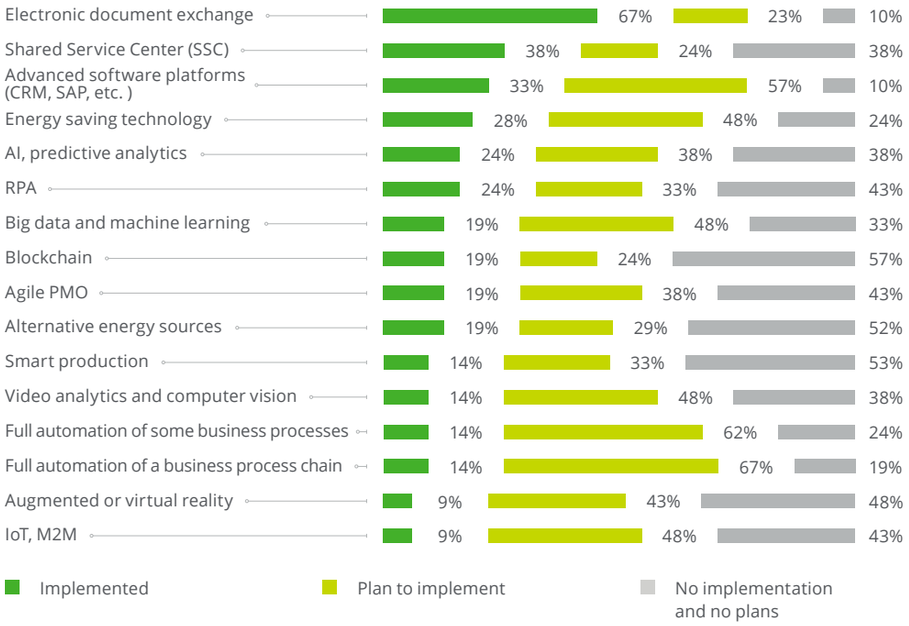
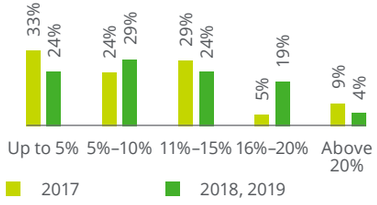


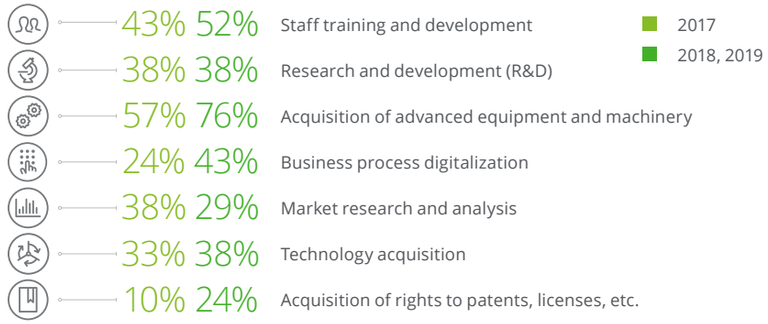
Figure 36. Innovation implementation costs (% of revenue)



10.6% in 2018–2019 **9.7%** in 2017

Average R&D investments by Russian steel companies (% of revenue)

Figure 37. Innovative activities



Approximately half of the surveyed steel companies (53 percent) allocated 5 to 15 percent of their revenue to innovative activities. This trend is likely to continue in the near future (2018–2019). Approximately one-fifth of the companies (19 percent) plan to invest 15 to 25 percent of their revenue in innovative activities in the near future.

The acquisition of advanced equipment and machines is the most wide-spread type of innovative activity among steel companies. Also, over half of the surveyed specialists (52 percent) plan to train and educate their personnel in 2018–2019.

Similarly to 2017, the to-do list of most respondents includes the implementation of a business process (or business process chain) automation technology, which accounts for 62 and 67 percent of responses, respectively.

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