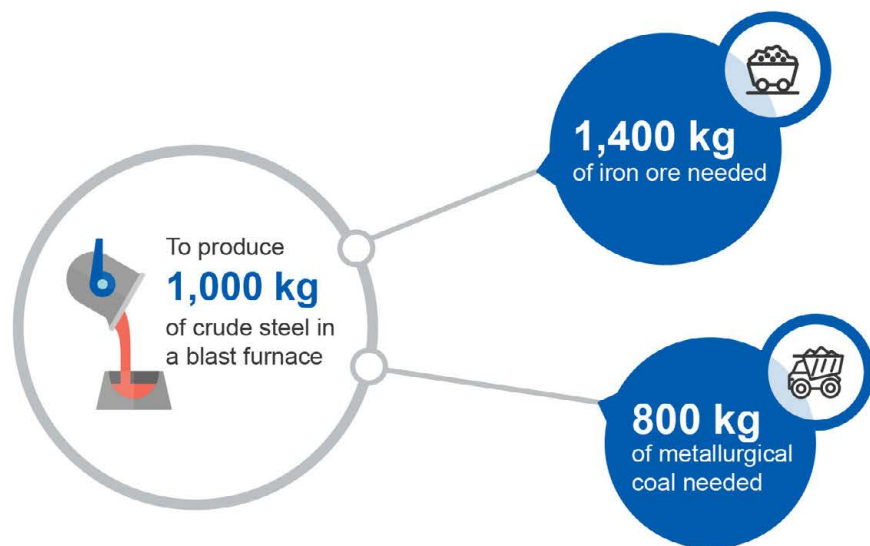
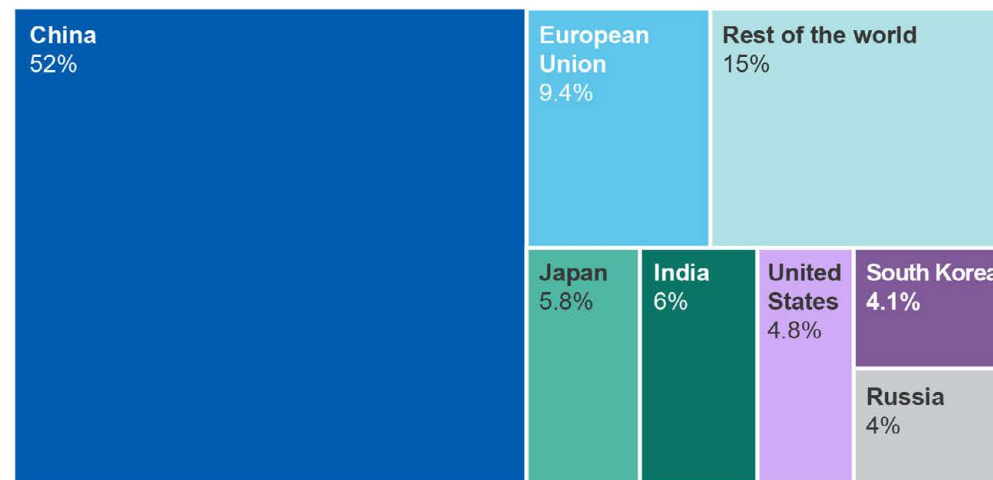


# Steel

Resources and Energy Quarterly September 2019



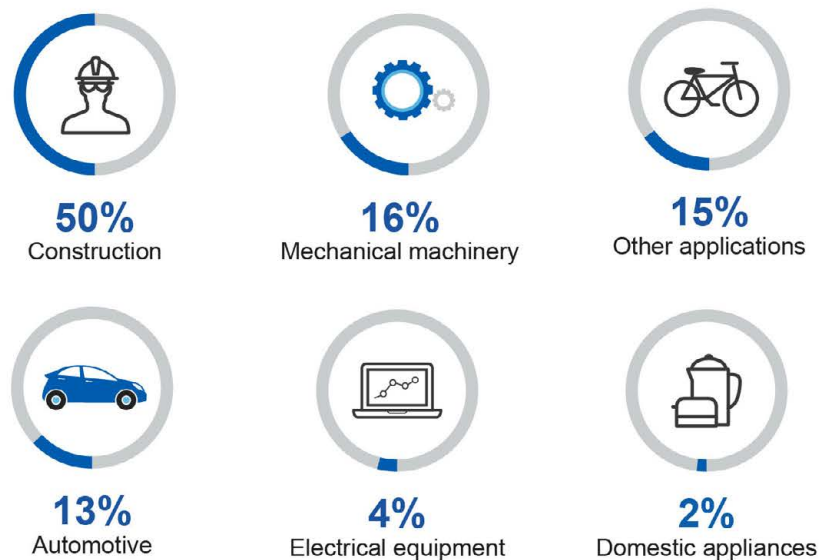
## Major steel producers, 2018



## Steel consumption per capita (kilograms per person), 2017



## Steel use by sector



### 3.1 Summary

- World steel production appears set to taper off in 2019 as global economic uncertainty affects steel markets.
- World steel production is forecast to start growing again in subsequent years, increasing by around 2.9 per cent between 2019 and 2021.
- The risks to the outlook have risen in recent months, as a range of potential downsides emerge. These include further escalations in trade tensions and the possibility of an earlier than expected global downturn.

### 3.2 World consumption and production

#### Steel markets are responding to trade tensions

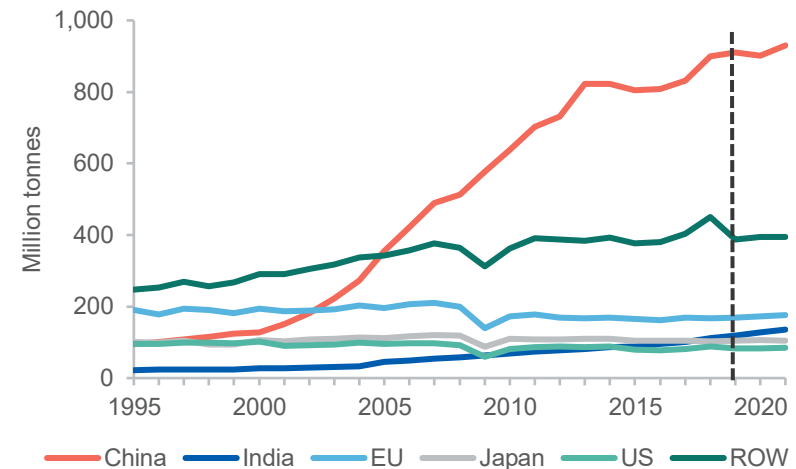
Growth in global steel demand faces headwinds as trade tensions lift and the prospects of recession in the US appear to have edged up. Yield curves for US government bonds have now inverted, with potential impact on confidence and investment.

World steel production is nonetheless estimated to have increased by 5 per cent year-on-year in the eight months to August 2019. The bulk of this growth was driven by China, where output is estimated to have risen by around 10 per cent in the first 8 months of 2019, relative to the same period one year ago (Figure 3.1).

#### Chinese steel markets have been affected by trade tensions and weather

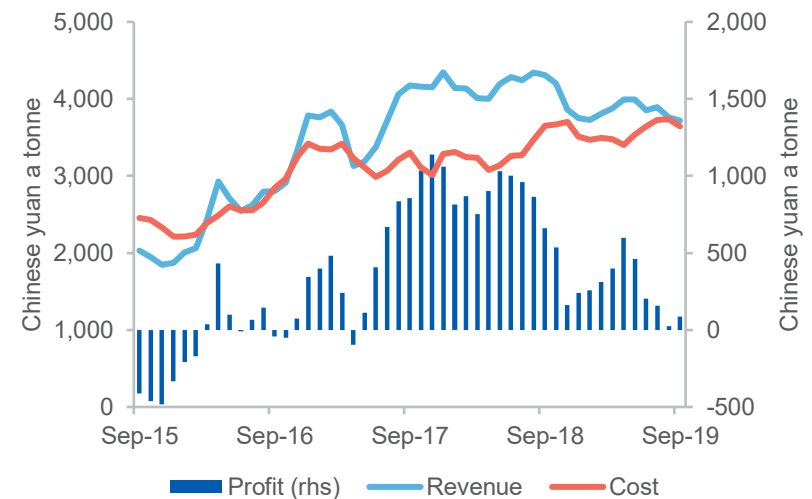
Growth in Chinese steel production weakened mid-year, as heavy rain in some regions and extreme heat across much of the country affected construction starts and reduced demand. Output of crude and finished steel fell in July, amidst falling profit margins (Figure 3.2), and rising costs for raw materials including iron ore. Output is likely to fall further in coming months. The fall partly reflects regular seasonal factors, but has been exacerbated by soft global demand and new environmental restrictions affecting production hubs in northern China. Chinese exports have fallen alongside production, declining by 39.97 million tonnes of finished steel (or around 2.9 per cent) over the year to July, relative to the same period in 2018.

Figure 3.1: Steel production by region



Source: World Steel Association (2019); Bloomberg (2019)

Figure 3.2: Steel industry profits in China



Notes: Monthly average for integrated basic oxygen furnace (BOF) steel mills  
Source: Bloomberg (2019) China BOF Steel Profit Index

Strong steel prices have acted as a partial offset, preventing sharper falls in steel production. Chinese steel demand has also been supported by expanded releases of special purpose bonds, which are being used to fund new infrastructure.

Steel production may also be supported by a weaker Chinese currency over the rest of 2019. Trade tensions and resulting falls in the value of the yuan will potentially open new space for Chinese exporters of cold-rolled coil and hot-dipped galvanised coil. Exports may be further boosted should domestic use of steel by private industry in China continue to fall.

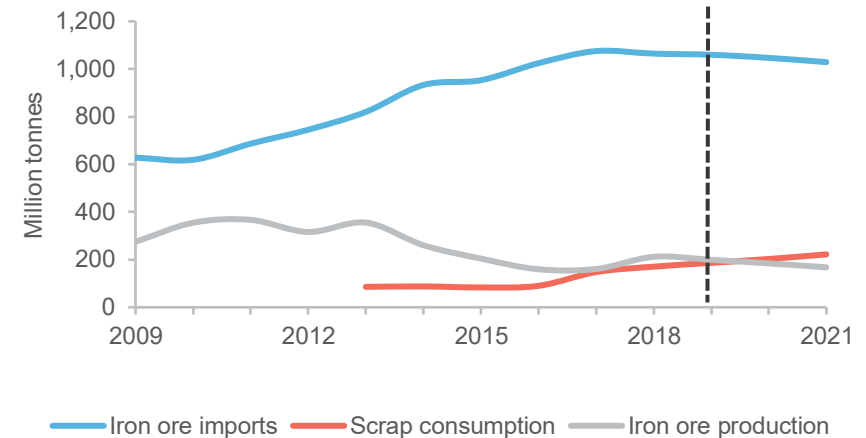
China's steel production is forecast to rise by 1.3 per cent to 937 million tonnes in 2019. Easing domestic use and a depreciating currency will likely push some of this production into export markets.

#### China's steel production is forecast to stabilise over the outlook period

Steel production is forecast to remain largely steady over the outlook period, reaching around 930 million tonnes in 2021 (Figure 3.4). Steel production in China faces competing pressures, with falling domestic consumption set against rising export prospects (Figure 3.3), and potential new stimulus measures. More stringent environmental regulations, and expected reductions in steel mill capacity — including the closure of Liuzhou Steel and Chanjiang Steel in 2021 — will likely offset growth in other areas. However, there is potential for currently idle steel capacity to return to operation should steel prices improve.

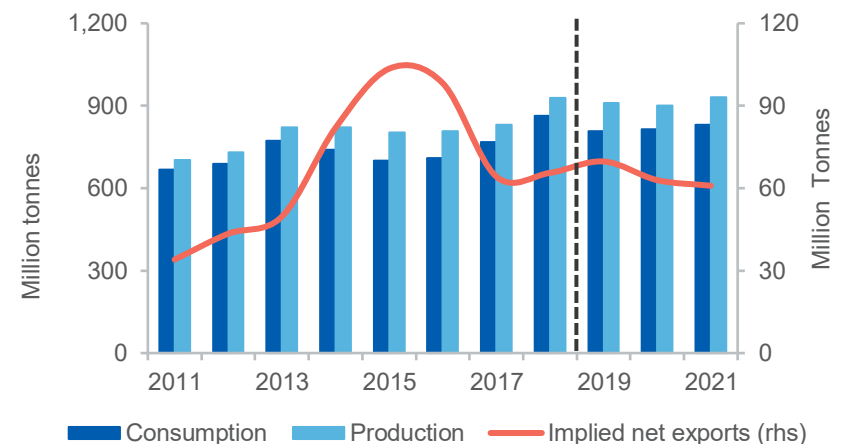
China continues to pivot towards greater use of scrap steel, which has a far lower energy cost than primary production of steel from iron ore. The transition will reduce Chinese dependence on imported iron ore and metallurgical coal (Figure 3.3). Volumes of available scrap are being supported by the rapid pace of demolition and replacement of construction works, alongside a rising proportion of machinery reaching end of life. A partial offset will occur as the Chinese Government continues to curb imports of low-grade and low-quality scrap for environmental reasons,

**Figure 3.3: Forecast for Chinese steel inputs**



Source: Bureau of International Recycling (2018) World Steel Recycling in Figures 2013–2017; Bloomberg (2019) World Steel Association; Department of Industry, Innovation and Science (2019)

**Figure 3.4: China's steel consumption, production and exports**



Source: Bloomberg (2019) World Steel Association; Department of Industry, Innovation and Science (2019)

but given China's importance as a market, this policy is likely to drive higher quality in the global scrap market rather than reduced import volumes over the longer term.

### Emerging economies in Asia are becoming increasingly important

India and Vietnam are expected to drive growth in production among emerging Asian markets, as they continue to expand their steel industries.

India is an increasingly important source of steel, and passed Japan to become the world's third largest steel producer in 2018 (Figure 3.5). Production continues to rise in 2019, and is expected to be around 5 per cent higher over the first 8 months of 2019 than in the equivalent period for 2018. Usage peaked in March, then edged back as some infrastructure projects were paused during the national election. Subsequently, steel use has risen again, and is expected to increase further over the remainder of 2019, driven by higher spending on infrastructure.

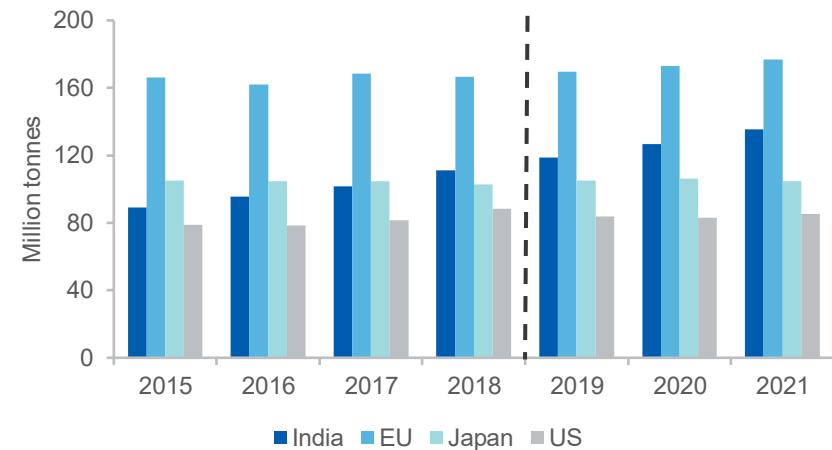
The Indian government has set aside around US\$63 billion for infrastructure spending in its 2019–20 budget, and steel production is forecast to increase at an annual average rate of 6.8 per cent to reach 130 million tonnes in 2021. India has raised its projections for the domestic steel industry; its latest National Steel Policy projects steel output capacity of 300 million tonnes and per capita steel consumption of 160 kilograms by 2030, up from 101 million tonnes and 75 kilograms per capita in 2017.

### Steel production is easing elsewhere

Steel production in the EU and Japan has shown signs of slowing in recent months. Manufacturing remains weak across most OECD nations, and industrial production is slowing, leading to a slow easing in steel production across most regions (Figure 3.6).

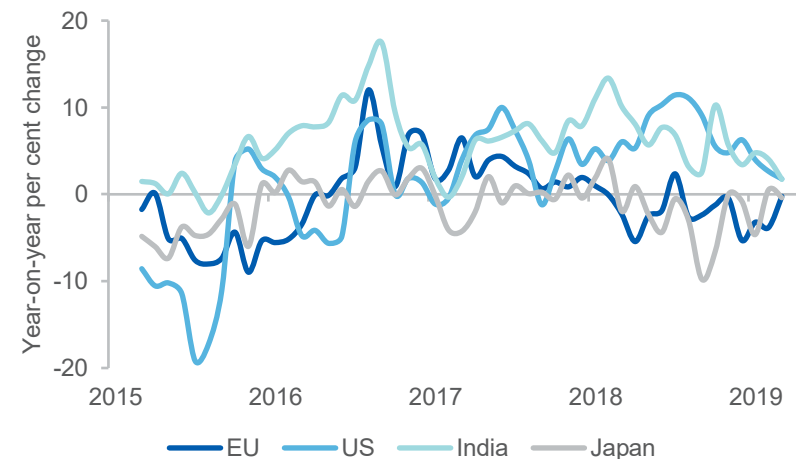
Trade tensions and a shift towards protectionist policies represent the most significant downside risk for steel over the outlook period. Steel remains deeply connected to global economic growth and industrial production and is highly responsive to shifts in these factors.

Figure 3.5: Steel production by region



Source: World Steel Association (2019); Department of Industry, Innovation and Science (2019)

Figure 3.6: Steel production growth by region



Source: Bloomberg (2019) World Steel Association

**Table 3.1: World steel consumption and production**

Crude steel consumption	Million tonnes				Annual percentage change		
	2018	2019 <sup>f</sup>	2020 <sup>f</sup>	2021 <sup>f</sup>	2019 <sup>f</sup>	2020 <sup>f</sup>	2021 <sup>f</sup>
China	798	806	814	831	1.0	1.0	2.0
European Union 28	175	175	175	175	0.0	0.0	0.0
United States	114	114	114	114	0.0	0.0	0.0
India	103	109	114	119	6.0	4.5	4.0
Japan	75	75	75	73	0.2	0.2	-3.0
Russia	59	59	59	59	-0.3	-0.3	-0.3
South Korea	44	43	43	43	-2.0	0.0	0.0
Brazil	22	23	23	24	2.0	2.0	2.0
World steel consumption	1,744	1,763	1,780	1,801	1.1	0.9	1.2
Crude steel production	2018	2019 <sup>f</sup>	2020 <sup>f</sup>	2021 <sup>f</sup>	2019 <sup>f</sup>	2020 <sup>f</sup>	2021 <sup>f</sup>
China	900	911	902	930	1.2	-1.0	3.1
European Union 28	166	170	173	177	2.0	2.0	2.0
India	103	105	106	105	2.2	0.9	-1.1
Japan	111	119	127	135	6.8	6.8	6.8
United States	88	84	83	85	-5.3	-0.8	2.6
Brazil	72	72	72	72	0.0	0.0	-0.1
Russia	73	71	70	70	-3.1	-0.4	-0.4
South Korea	30	25	30	35	-16.7	20.0	15.3
World steel production	1,819	1,776	1,785	1,827	-2.4	0.5	2.4

Notes: <sup>f</sup> Forecast.

Source: World Steel Association (2019); Department of Industry, Innovation and Science (2019)