Steel

Resources and Energy Quarterly June 2019

1,400 kg of iron ore needed

1,000 kg of crude steel in a blast furnace

800 kg of metallurgical coal needed

Major steel producers, 2018

China 52%

European Union 9.4%

Rest of the world 15%

Japan 5.8%

India 6%

United States 4.8%

South Korea 4%

Russia 4%

Steel consumption per capita (kilograms per person), 2017

United States 327

European Union 335

China 568

Japan 592

India 72

Indonesia 58

Brazil 107

Africa 30

Australia 270

Steel use by sector

50% Construction

16% Mechanical machinery

15% Other applications

13% Automotive

4% Electrical equipment

2% Domestic appliances
3.1 Summary

- World steel production is on track to set another record high in 2019, as robust production growth in China more than offsets subdued growth elsewhere.

- China’s steel production and consumption is forecast to rise in 2019, fuelled by government tax cuts and stimulus directed towards steel-intensive infrastructure and construction projects.

- US-China trade tensions pose a risk to the outlook via the potential adverse impact on economic growth. Steel-intensive industries such as construction and manufacturing are sensitive to swings in economic growth.

3.2 World consumption and production

World steel production forecast to increase, but at a slower pace

World steel production is estimated to have increased by 4.9 per cent year-on-year in the five months to May 2019. The solid growth has been driven by strong production in China — the world’s largest steel maker, accounting for over half of world steel production — which has more than offset weaker steel production elsewhere (Figure 3.1). Production growth in China was driven by stimulatory government spending, which focused on higher infrastructure investment and boosting construction activity.

China’s steel production boosted by high prices and strong demand

Chinese steel production increased by 10 per cent year-on-year in the five months to May 2019. Production has been buoyed by rising steel prices and profit margins (Figure 3.2), despite high iron ore and metallurgical coal prices. Government stimulus and the expanded use of special purpose bonds (mostly used to build infrastructure projects) increased domestic consumption. Despite three years of supply side reforms — which resulted in the closure of many inefficient and outdated steel mills — Chinese production has increased due to higher capacity utilisation rates.

China’s steel production is forecast to rise by 1.3 per cent to 940 million tonnes in 2019 — a new annual record. Government tax cuts and other stimulatory measures directed towards steel-intensive infrastructure and

Figure 3.1: Steel production growth in China and rest of world

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

Figure 3.2: Steel industry profits in China

Source: Bloomberg (2019) China BOF Steel Profit Index

Notes: Monthly average for integrated basic oxygen furnace (BOF) steel mills
construction projects, coupled with looser monetary conditions and good profit margins, are expected to boost steel production and consumption over the course of 2019.

**China’s steel production forecast to gradually decline**

Steel production is forecast to taper lower at an annual average rate of 0.1 per cent, to 926 million tonnes in 2021 (Figures 3.3 and 3.4). Declining steel production is expected to be driven by a range of factors, including moderating consumption, the removal of government stimulus (which is expected to weigh on housing and infrastructure investment), more stringent environmental regulations, and further reductions in steel mill capacity — including the closure of Liuzhou Steel and Changanjiang Steel in 2021, together accounting for 16 million tonnes of capacity.

China is expected to increasingly use scrap material in steel production, which will diminish demand for imported iron ore and metallurgical coal (Figure 3.3). Higher scrap use will be driven by growing scrap availability, stemming from old construction works set to be demolished and replaced, and old machinery and autos having reached the end of their life span. Government tax incentives and high scrap prices are expected to rapidly bring additional domestic shredding capacity online, and increase the availability of scrap to steel mills over the outlook period. Higher domestic scrap supply will be partly offset by restrictions on imported scrap material.

China’s steel exports decreased by 9.5 per cent in 2018 to 56 million tonnes, the lowest level in five years. Declining exports have been driven by strong domestic consumption, slowing global economic growth, and the implementation of trade barriers on steel and steel containing products into the US. China’s exports are expected to be increasingly directed towards emerging markets in South East Asia, driven by growing demand from emerging economies.

There is substantial uncertainty regarding the projections for China’s steel sector. Government policy will continue to drive the outlook for steel, as authorities continue to adjust policies to manage a smooth transition while restructuring and reforming the economy.
Emerging economies in Asia to increasingly drive steel demand growth

India overtook Japan to become the world’s second largest steel producer in 2018 (Figure 3.5). However, 2019 started slower than expected, as the election process disrupted some infrastructure projects. India’s steel production rose slightly at 1.1 per cent year-on-year in the five months to May 2019 to 45 million tonnes. Production is expected to ramp up over the remainder of 2019, driven by higher spending on infrastructure, with an estimated US$63 billion set aside in the 2019–20 budget. India’s steel production is forecast to increase at an annual average rate of 6.8 per cent to reach 130 million tonnes in 2021. Rising steel production will be driven by the ongoing expansion of steel-making capacity in line with national targets. India’s National Steel Policy (2017) targets 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.

Emerging markets in Asia (excluding China) are forecast to edge past the EU by 2021, reaching 179 million tonnes as Vietnam and India rapidly expand their domestic steel industries.

Steel production mixed among key markets

In the five months to May, steel production in the EU and Japan declined by an estimated 2.2 and 4.4 per cent year-on-year, respectively. Production was weighed down by weaker manufacturing and industrial production. In contrast, US production increased 6.4 per cent year-on-year over the same period, benefitting from stronger industrial production and construction (Figure 3.6). The EU, Japan and US together account for 20 per cent of world production. Monetary conditions remain favourable in each region. However, the recent decline in production growth, in addition to declining manufacturing indices in each country or region, suggests that production will taper lower in 2019.

The growing array of trade protection measures among key nations is likely to weigh on investment decisions and economic growth, and subsequently dampen steel production and consumption.
### Table 3.1: World steel consumption and production

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