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Steel Market developments: Q4 2021

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Note to Delegations:
This document is also available on the Steel Committee website:
oe.cd/slmktdev

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Recent market developments in the global steel industry

This document is part of a regular monitoring exercise to provide the Steel Committee with timely information on steel market developments during the first half of the year 2021. It provides an update on recent developments in steel markets, based on the latest information available at the time of writing (as of July 2021). Given that the data for regional aggregates presented in the tables throughout this paper extend until the end of 2021, the United Kingdom is no longer included in the EU aggregate.

1. Executive summary

This document provides an overview of recent steel market developments - including demand, supply, and prices - and the outlook by region based on the latest information available as of July 2021. To summarise, the following key developments are discussed in this report:

- **The economic situation**: According to the OECD's September 2021 Interim Economic Outlook, the global recovery is projected to strengthen gradually, particularly in the latter half of 2021, with global GDP growth projected to pick up to 5.7% in 2021 and moderating to 4.5% in 2022. Output in some jurisdictions, such as the People's Republic of China (hereafter "China"), has already surpassed the pre-pandemic level. The recovery has been uneven, and considerable heterogeneity in near-term developments is likely to persist, both between advanced and emerging-market economies and across wider regions.
- **Steel consumption**: According to the *Short Range Outlook* released in April 2021 by the World Steel Association (hereafter, worldsteel), global steel consumption declined by 0.2% in 2020. The largest percentage declines were recorded in North America (-15.7%), EU27 and the United Kingdom (-11.4%) and Africa (-9.4%) in 2020.
- **Steel consumption outlook**: In its April 2021 outlook, worldsteel forecast finished-steel demand to grow by 5.8% and 2.7% in 2021 and 2022 respectively. According to the forecast, the world-ex China is expected to contribute most of the growth (9.3% and 4.7% in 2021 and 2022 respectively). Of the top-10 steel-consuming economies only two (China and Russia) were forecast to grow at less than 5% in 2021. Global steel demand is expected to surpass pre-pandemic levels in 2021, although many mature economies are not expected to recover fully for a few years.
- **Steel production**: According to worldsteel, crude steel production for the first half of 2021 compared to the same period in 2020 increased by 13.7% globally. Steel production increased the most in South America (+28.1%) and Africa (+28%), followed by the European Union (+18.1%), Other Europe (+18.1%) and North America (+16.4%). Asian steel production increased by a robust +13%, while other regions of the world also witnessed an increase: Middle East steel production increased by 8.7%, the Commonwealth of Independent States (CIS) by 8.7%, and Oceania by 8.4%.
- **World steel trade**: After a considerable contraction in global steel trade in 2020 (-7.7%) due to the effects of the COVID pandemic, a vigorous rebound started in early 2021 (+10.3% during January-April, year on year). The export upswing observed in the first months of the year is partly due to the steep rise in China's export performance (+50%), but also to the increase in steel shipments from the European Union (+5.4%), Japan (+5.8%) and the United States (+23.8%). Amongst the group of largest steelmaking economies, India is the only economy to have experienced a decline in exports in the same period (-31.9%) when compared to the same period in 2020.
- **Steel and steelmaking raw material prices**: Steel prices have continued to rise during the first half of 2021. As of July 2021, flat steel prices and long prices stood 134% and 58% higher than one year earlier, respectively. Interestingly, the sharp increase in steel prices witnessed since July 2020 did not translate into an increase in the average steel firm's profit margin. Indeed, strong increases in raw materials needed to produce steel have contributed to reduce steel firms' margins. As of July 2021, benchmark prices for iron ore, coking coal and scrap were up 99%, 127% and 89%, y-o-y, respectively.

Furthermore, other costs such as logistical costs and raw material supply disruptions are affecting the profitability of the steel sector (see below).

- **Financial performance of steel firms:** Median profitability only increased by a negligible amount, suggesting that only larger steel firms benefited from better market conditions. Steel firms slightly decreased their indebtedness and the amount of liabilities compared to their assets over the period, and slightly increased the maturity of their debt. About 25% of steel firms in the sample made losses greater than 2.8% of their total sales in 2020, which are historically high losses even for the weakest-performing quartile of firms.
- **Capacity**: Global steelmaking capacity could increase to 2 485.8 mmt by the end of 2021, i.e. by 1.3% (33.1 mmt) from the level at the end of 2020, according to the available information as of June 2021. World steel production as a share of capacity is expected to rise sharply, from 74.7% in 2020 to 80.8% in 2021.
- **Topical themes:** On top of the usual reporting highlighted above, this special issue touched on three topics: the large role the State plays in the Iranian steel sector and the functionning of the different agencies that implement government policies and target, the national policies that drive Chinese steel producer Baowu's development, and the heavy subsidisation of the energy sector in Iran and its evolution over years.

2. The OECD Economic outlook

2.1. Global prospects

Although global growth prospects have significantly improved since the height of the COVID-19 crisis, the resurgence of the pandemic in a number of jurisdictions prompted governments to re-instate strong social distancing rules and restrictions on mobility. This has affected consumption and economic activity, put further strain on smaller firms and entrepreneurs, and slowed down the reduction of unemployment. Accomodating monetary policy have remained in place in advanced economies and in most emerging economies: policy interest rates remain unchanged at historical lows, and central banks have indicated to the market that these will remain low for a considerable amount of time. Fiscal policy has been extensively used to cushion the impact of COVID-19 restrictions on household purchasing power and businesses, with the consequence of considerably increasing public debt. Upside risks to the global outlook relate to the positive impacts on economic growth from successful vaccine deployment, while downside risks include the resurgence of the pandemic due to continued virus mutations and the associated negative impact of governments' lockdowns on 1) economic activity, 2) investors' confidence and financial market stability because of the already historically high debt-to-GDP ratios in many jurisdictions, and 3) the number of bankruptcies in the hardest hit sectors. Near-term risks are the broad-based increases in export prices from many key economies, which reflect both rising input costs from higher global commodity prices and capacity constraints and supply disruptions. Rising export prices are further amplified by the sharp rise of global shipping costs, which more than quadrupled from July 2020 to July 2021.

According to the OECD's September 2021 Interim Economic Outlook, the global recovery is projected to strengthen gradually, particularly in the latter half of 2021, with global GDP projected to pick up by 5.7% in 2021, and by 4.5% in 2022. Output in some jurisdictions, notably China, has already surpassed the pre-pandemic level and by mid-2021 global GDP should also surpass its pre-pandemic level. Some jurisdictions are recovering more slowly, including many in Europe, and considerable heterogeneity in near-term developments is likely to persist, both between advanced and emerging-market economies and between wider regions. The risk of lasting costs from the pandemic also remains high, with global output projected to remain weaker at the end of 2022 than what was expected prior to the pandemic.

Table 1 below presents the GDP growth forecasts according to the OECD's September 2021 Interim Economic Outlook. There is considerable uncertainty around the projections presented in this table, due to the challenge of predicting the speed and the success of the vaccines in the face of a rapidly evolving situation and the emerging of new variants of the virus.

Table 1. The OECD Interim Economic Projections (September 2021)

Real GDP growth (%)

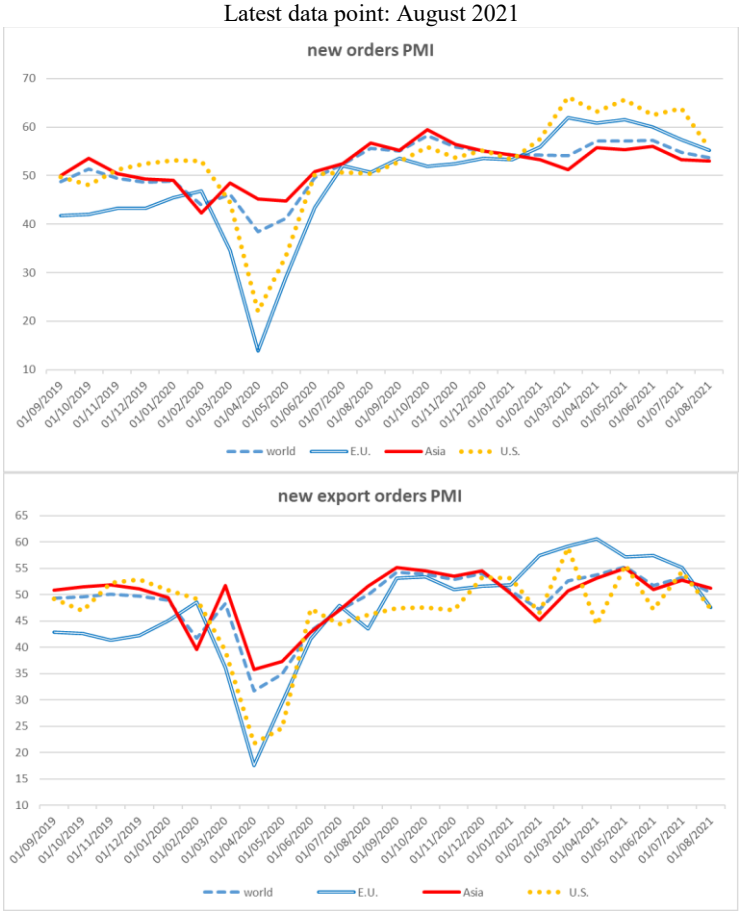
	2018	2019	2020	2021	2022
World [1]	3.5	2.7	-3.4	5.7	4.5
United States	3.0	2.2	-3.4	6.0	3.9
Euro area	1.9	1.3	-6.5	5.3	4.6
Germany	1.3	0.6	-4.9	2.9	4.6
France	1.8	1.5	-8.0	6.3	4.0
Italy	0.8	0.3	-8.9	5.9	4.1
Spain	2.4	2.0	-10.8	6.8	6.6
Japan	0.6	0.0	-4.6	2.5	2.1
United Kingdom	1.3	1.4	-9.8	6.7	5.2
Mexico	2.2	-0.1	-8.3	6.3	3.4
Korea	2.9	2.0	-0.9	4.0	2.9
Canada	2.4	1.9	-5.3	5.4	4.1
Turkey	3.0	0.9	1.8	8.4	3.1
Australia	2.9	1.9	-2.5	4.0	3.3
China	6.7	6.0	2.3	8.5	5.8
India [2]	6.5	4.0	-7.3	9.7	7.9
Russia	2.6	1.8	-2.5	2.7	3.4
Brazil	1.8	1.4	-4.1	3.7	2.5
Indonesia	5.2	5.0	-2.1	3.7	4.9
South Africa	0.8	0.2	-7.0	4.6	2.5
OECD [1]	2.4	1.6	-4.8	5.3	3.8
Non-OECD [1]	4.6	3.7	-2.3	6.2	4.9
World real GDP growth	3.5	2.7	-3.4	5.7	4.5

Note: 1. Moving nominal GDP weights using purchasing power parities.
2. Fiscal years starting in April.
Source: OECD Interim Economic Outlook, September 2021, available at: http://www.oecd.org/eco/outlook/economic-outlook

Manufacturing activity has continued to rebound worldwide. The IHS-Markit index for new export orders of steel-intensive sectors, a forward-looking component of the overall Purchasing Managers' Index (PMI), indicates that a recovery in global manufacturing activity among steel-intensive sectors has taken place since April 2020 (Figure 1). Indeed, in July 2020 the above-mentioned Markit indices all jumped to levels higher than 50, which indicates expectations of an increase in new orders from steel-intensive sectors over the previous month, possibly reflecting better-targeted restriction measures. Nevertheless, all Markit PMI indices have decreased again in recent months, with new export PMI indices even indicating a contraction (index inferior to 50) for the U.S and the EU.

Figure 1. Markit Steel Index: new orders and new export orders among Steel-Intensive Sectors PMI

Latest data point: August 2021



Note: An index reading of less than 50 indicates that more purchasing managers expect a decrease over the next month than an increase. The last data point represents expectations for the month of August 2021.
Source: Markit economics, via Datastream

2.2. Regional prospects

In the euro area, GDP is expected to grow by 5.3% in 2021 and by 4.6% in 2022, supported by strong private consumption as well as robust external demand, notably from the United States. The epidemiological situation has remained difficult during the first half of 2021, with substantial pressure on healthcare systems in spite of the rolling out of vaccines. While varying across jurisdictions and over time, restrictions implemented to reduce mobility have significantly impacted the hospitality sector, as well as recreation and international travel. Manufacturing and construction recovered faster than services during the second half of 2020, but were mostly flat in early 2021. Export-oriented industrial sectors have performed better due to a greater external demand dynamism. Financing conditions for public and private borrowers have remained very favourable, with the European Central Bank (ECB) introducing additional targeted and non-targeted longer-term refinancing operations while expanding its pandemic emergency purchase programme (PEPP) by another EUR 500 billion, with net purchases to run until at least March 2022. Furthermore, in July 2021 the ECB adopted a new "symmetric" inflation target of 2% over the medium term[1], which gives the central bank more room for maintaining rates lower for longer, even if inflation would go above the 2% mark in the medium term. The fiscal stance has also been supportive, with substantial implementation of national recovery and resilience plans and the activation of a "general escape clause" that allows a departure from the Stability

and Growth Pact's budgetary requirements that would normally apply, a situation which is expected to extend up to end-2022.

In the United States, GDP is projected to grow by 6.0% in 2021 and by 3.9% in 2022. The US economic recovery has gained momentum: indicators of consumption activity have risen and household income growth prompted by fiscal stimulus support in combination with a gradual relaxation of containment measures, has boosted spending. About two thirds of the jobs lost during the pandemic have been recovered and unemployment is expected to continue further to decrease. Wages have been increasing at a significant pace. Manufacturing activity has finally reached its pre-pandemic levels while housing construction has remained robust. Monetary policy has been very accommodative, with the Federal Reserve expected to keep the federal funds rate close to zero until the labour market returns to full employment and yearly inflation rates stand slightly above 2% for an extended period of time. The Federal Reserve also continued to expand its balance sheet, with monthly purchases of USD 80 billion in Treasury Securities and USD 40 billion in mortgage-backed securities to continue for the time being. Fiscal policy has also been very supportive: the American Rescue Plan, passed in mid-March 2021, contains spending measures which represent about 8.5% of GDP and will be largely concentrated in 2021. Supplementary unemployment benefits have been extended until September 2021, and temporary provisions to expand health insurance coverage and provide further support to low-income households, such as the Child Tax Credit and the Earned Income Tax Credit, were also passed. As many support measures are set to expire in 2022, the administration has already proposed further additional spending that may temper this effect, with the "American Jobs Plan" and the "American Families Plan" focusing on a broad array of priority areas. These plans include fiscal support for decarbonisation, infrastructure, research and development, elderly and disabled care, job training, childcare, tax credits, paid leave and universal pre-school. If legislated as proposed, these fiscal support packages would represent about 19% of GDP spread over the next ten years and will be partly financed through higher taxation. The main upside risk to current OECD's GDP growth projections is a more expansionary impact of fiscal support in 2022 than currently assumed, as the current projections do not factor in the new proposed spending packages. Two downside risks to growth are a stronger than expected inflation rate which would prompt the Federal Reserve to raise the Federal Funds Rate before 2022, and a rise of firm insolvencies, given the high-leverage of non-financial corporations in many sectors of the economy hit by the pandemic.

In Japan, GDP is projected to expand by 2.5% in 2021 and 2.1% in 2022, supported by strong external demand and by government spending. The new sanitary measures are more targeted than previously, which has translated into a smaller negative impact on domestic consumption. Subdued wage and employment growth is however expected to limit the pick-up in consumption which would follow the lifting-up of the measures. Nevertheless, robust external demand should support exports as well as investment. The Bank of Japan has maintained its accommodative policy stance in 2021, and clarified the range of fluctuations for government long-term interest rates it is seeking to achieve. It also introduced "fixed-rate purchase operations for consecutive days", which allows it to quickly purchase bonds should yields rise significantly. The Bank also introduced a new "Interest Scheme to Promote Lending" to improve its monetary transmission.[2] Fiscal policy has also been supportive of Japan's economic activity, with the third supplementary budget for the fiscal year 2020 including spending on vaccination and grants to local governments for COVID-19 counter-measures, help for the service sector such as the "Go To campaign", and support for structural reforms including investment in local government digital infrastructure and the upgrading of disaster management, and SME investment support. New funds to enhance green R&D and investment in the private sector, as part of the

government's commitment to carbon neutrality by 2050, were also created. The effects of the supplementary budget should generate effects both in 2021 and in 2022. In addition, the initial fiscal year 2021 budget included a JPY 5 trillion (0.9% of GDP) contingency reserve fund for COVID-19. In case of emergency, the government could use these funds directly to support the medical system, households or SMEs. Government support during the pandemic has pushed up public debt to unprecedented levels, now in excess of 240% of GDP.

In the People's Republic of China (hereafter "China"), economic activity has been swift and growth is expected to reach a robust 8.5% in 2021 and 5.8% in 2022. Investment remains the main driver of growth, with infrastructure investment sustaining the domestic productionof a number of midstream manufacturing industries as well as for imports of raw materials such as iron ore or copper. Construction activity, which has been robust over the past year, is increasing further due to the arrival of the peak season and the start of infrastructure projects. In contrast, the consumption recovery has been more gradual. The low import content of consumption means that the surge of imported raw material prices will only have a limited impact on consumer price inflation. Monetary policy is expected to tighten in pace with strengthening economic activity. Tightening measures were already introduced in the property market to dampen the rise of real estate prices and avoid the formation of real estate bubbles. Stricter regulations concerning credit rating agencies aimed at improving their pricing of risks, as well as regulations regarding the issuance of corporate bonds[3] by local government investment vehicles with a low credit rating, were enacted. Fiscal policy is also expected to be less supportive of economic activity in 2021 than in 2020, as most sectors have already recovered. Some support measures will nevertheless remain in place, such as debt moratoria for firms hit by the crisis as well as the possibility for firms to carry over their losses for up to eight years, and lower-than-statutory social security contribution rates for unemployment insurance. The sanitary situation remains a downside risk in the absence of mass inoculation, which prevents the reopening of borders. A vaccine-resistant strain could also jeopardise the recovery. An upside risk to economic activity, according to the OECD forecast, would be quicker than expected vaccination progress, which would translate into a further boost to consumer and investor confidence, and thus to economic activity.

In India, GDP is expected to bounce back by 9.7% in 2021, and to grow by 7.9% in 2022 due to pent-up demand and robust external demand. A large number of infections since February of this year has weakened the recovery and could compound the financial burden of corporates and banks. Consumer sentiment has remained bleak. Inflation fears are mounting, fuelled by food prices that are increasing faster than expected due to supply-chain disruptions and the increase of fuel prices. Negative consequences of the lock-downs and of the government-mandated closing-down of schools are among others a significant surge in the number of school dropouts, heightened child malnutrition due to the suspension of the cooked meal programme and of the mid-day school meal scheme in particular, and more than 150 thousand estimated additional child and maternal deaths. Investor sentiment is more positive, as it was boosted by robust financial results for large corporates and record levels of merchandise exports and imports. Considerable foreign portfolio flows have thus entered the country, with the Bank of India keeping a record level of foreign exchange currencies as cushion any potential shock stemming from future currency outflows. Monetary policy has remained accommodative, with the Bank of India maintaining its rate unchanged at 4%, while providing forward guidance to the market by signalling its intention to remain accommodative as long as necessary. Given downside risks surrounding the pace of the recovery, the central bank is expected to delay any rate increase to mid-2022. Furthermore, significant sovereign bond purchases have been announced. Fiscal measures announced in October and November 2020 include additional public

investment, such as higher capital expenditure by the central government and interest-free loans to states, of about 0.2 percent of GDP, and support schemes targeting certain sectors. Support schemes include a "Production Linked Incentive scheme" targeting 13 priority sectors including Speciality Steel[4] of about 0.8 percent of GDP over 5 years, a higher fertilizer subsidy allocation benefiting the agriculture sector and support for urban housing construction. Several measures to ease the tax compliance burden across a range of sectors have also been announced. In April 2021, in response to the recent surge in infections, the central government also announced that it would distribute free food rations to 800 million individuals in May and June, similar to the additional food rations provided in 2020. The central government also extended a scheme for providing interest-free loans to states for capital expenditure to the Indian fiscal year 2021/2022 and set up a Disaster Response Fund for state governments.[5] Downside risks include higher than expected inflation due to increasing food and fuel prices, persistent weak investment in spite of the Production Linked Incentive scheme, and a soaring number of impaired loans as well as a surge of credit costs following the lifting of moratorium relief to borrowers, which could endanger the health of many state banks that provided credit to the economy.

In Brazil, GDP growth is expected to reach 5.2% in 2021 and 2.3% in 2022, driven by a progressive increase in household consumption and investment. Despite solid growth in January and February 2021 in retail and other services sectors, activity in the first semester of this year is expected to remain subdued, constrained by the propagation of the virus and mobility restrictions. The strong economic rebound projected for the second half of the year is expected to be driven by household consumption and exports on the back of a more effective vaccination rollout and improvements in controlling the spread of the virus. Increasing inflation is making the fiscal and monetary policy mix more complicated. While still set to remain accommodative, the expected further tightening of monetary policy will reduce support to the economy. Inflation rebounded sharply at the end of 2020 and reached a quarter-on-quarter annualised rate of 9.7% in the first quarter of 2021, which caused the central bank to increase its policy rate by 0.75 percentage point to 3.5%. The Central Bank further decided to start the partial normalisation of its monetary policy. Fiscal policy is expected to remain accommodative, but the government has limited space for further fiscal support as public debt approaches 90% of GDP. The fiscal package to protect vulnerable people, including informal workers, amounted to 11.4% of GDP in 2020, the largest of the region, which significantly increased public debt. The extension of the temporary emergency benefit to over 67 million informal, self-employed or unemployed workers may prove insufficient to maintain private consumption as the paid amounts were progressively decreased. Policy uncertainty around the fiscal strategy has become a major downside risk to the forecast, as it may add to the volatility of financial markets and impact investors' confidence in the credibility of public policies. An upside risk to economic activity is the effect of a quick implementation of the infrastructure and fiscal stimulus package in the United States on Brazilian exports.

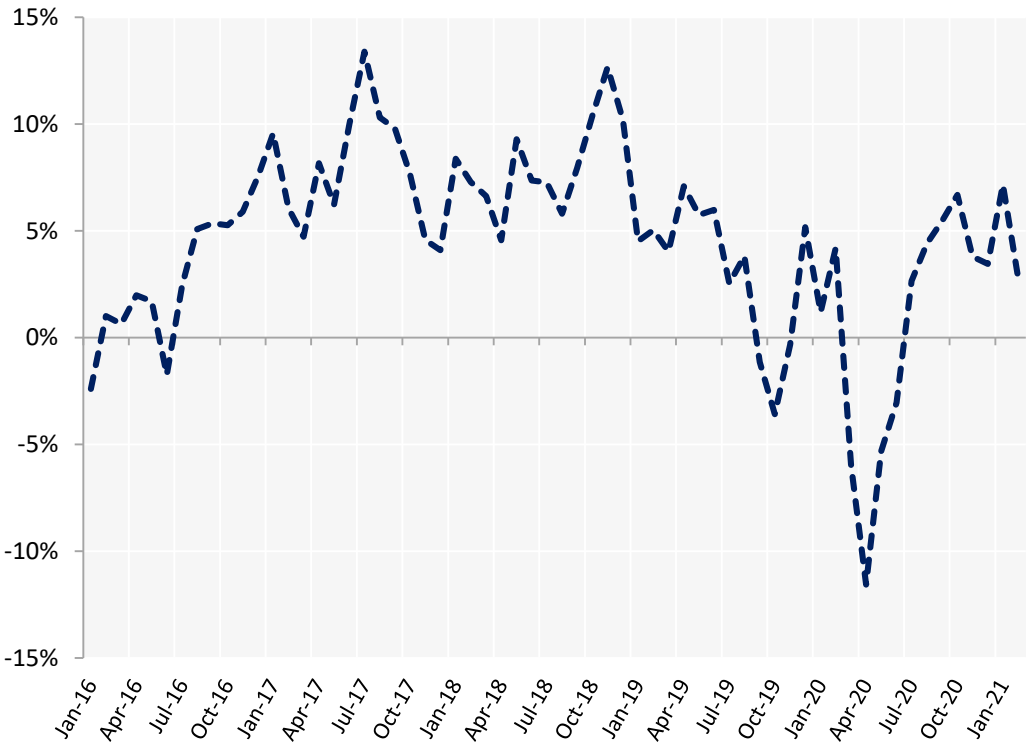
3. Steel consumption

Global steel consumption was hit hard by the Covid-19 pandemic in the spring of 2020 and has been gradually recovering since then. Hence, consumption statistics for the year 2020, which are the focus of this section[6], are very weak, whereas it is expected that pent-up demand will push consumption higher in 2021 (Section 9). Figure 2 below presents the percentage change of a given month compared to the same month one year earlier in the combined consumption of hot-rolled steel products for 10 of the world's largest steel-consuming economies in Asia, the CIS region, Europe, North America and South America. Together, these economies account for approximately 75% of global steel demand. Aggregate steel consumption, as measured by this indicator, increased by 0.4% in 2020 compared to the level of 2019. Almost all economies except China suffered sharp declines in steel consumption during the year 2020. Going forward in 2021, steel consumption is expected to pick up. Section 9 details market expectations of steel consumption for each region.

Global steel consumption declined by only 0.2% in 2020, according to worldsteel's April 2021 Short Range Outlook (hereafter "SRO"). According to worldsteel, this was due to a surprisingly robust recovery in China, with a growth rate of 9.1%. In the rest of the world, steel demand contracted by 10.0% (worldsteel, 2021[1]).

Figure 2. Consumption of hot-rolled steel products, major economies (aggregate)

monthly year-on-year % changes



Note: Total represents the combined consumption of hot-rolled steel products of the following economies: Brazil, China, Germany, India, Italy, Japan, Korea, Mexico, Russia and the United States.
The consumption of hot-rolled products is defined as the sum of production and net imports.
Source: OECD calculations based on data from ISSB (International Steel Statistics Bureau) (ISSB, 2021[2]).

3.1. Americas

According to worldsteel's April 2021 SRO, steel consumption in the North America region decreased by 15.7% - the largest decrease of steel demand by region – and amounted to about 114.0 million metric tonnes (mmt) in 2020 (worldsteel, 2021[1]). Although the United States economy was able to rebound strongly from the first wave of the pandemic, steel demand in the United States fell by 18% in 2020 (worldsteel, 2021[1]). Steel demand in Mexico also shrank by 11.8% to 21.7 mmt in 2020 due to lower automotive production and investment (worldsteel, 2021[1]). For instance, automotive production in Mexico declined by 20.2% to 3.04 million units in 2020, falling for three consecutive years, according to the Mexico National Institute of Statistics and Geography (Metal Expert, 2021[3]).

According to worldsteel, steel consumption in Central and South America decreased by 7.9% to 38.6 mmt in 2020 (worldsteel, 2021[1]). According to Alacero (the Latin American Steel Association), this decline in demand reflects a contraction of industrial activity during the months of strict confinement (Metal Expert, 2021[4]). On the contrary, in Brazil, the largest steel-consuming economy in the region, steel consumption increased slightly, by 2.3% to 21.4 mmt in 2020, according to the Brazilian steel association Instituto Aço Brasil. In the second half of 2020, there was a strong recovery in domestic consumption, which rose sharply, i.e. by 31.1% to 2.0 mmt in December 2020 compared with the same month of 2019 (Aço Brasil, 2021[5]).

3.2. Africa and the Middle East

Steel consumption in Africa contracted by 9.4% to 35.6 mmt in 2020, according to the worldsteel's April 2021 SRO (worldsteel, 2021[1]). In particular, ArcelorMittal South Africa estimated that South African steel consumption in 2020 was approximately 10% lower than the level of 2019 (ArcelorMittal, 2021[6]).

Apparent steel consumption in the Middle East also dropped by 8.6% to 46.0 mmt in 2020 (worldsteel, 2021[1]).

3.3. Asia and Oceania

According to worldsteel, steel consumption in Asia and Oceania increased by 3.5% to 1,303 mmt in 2020. This was due to a strong recovery in China, where consumption grew by 9.1% (worldsteel, 2021[1]).

In China, the construction sector recovered quickly from April 2020, supported by infrastructure investment (worldsteel, 2021[1]). In addition, investment in real estate increased by 7% to about USD 2.2 trillion in 2020, according to the National Bureau of Statistics (Kallanish, 2021[7]). On the other hand, in the manufacturing sector, automotive sales fell by 1.9% to 25.3 million units in 2020, according to the China Association of Automobile Manufacturers. Although passenger vehicle sales decreased by 6%, the sales of commercial vehicles increased by 19% thanks to government investment in infrastructure and as buyers upgraded their vehicles to comply with the stricter emissions policies (Reuters, 2021[8]). Other manufacturing sectors showed growth due to strong export demand (worldsteel, 2021[1]).

In India, steel consumption declined sharply, by 13.7% to 88.5 mmt in 2020, from about 100 mmt in 2019. This was because of an extended period of severe lockdown, which suspended most industrial and construction activities (worldsteel, 2021[1]). According to the Society of Indian Automobile Manufacturers, domestic passenger vehicle sales

declined by 2.2% from April 2020 to March 2021 compared to the same period of last year (SIAM, 2021[9]).

In Japan, steel consumption decreased by 16.8% to 52.6 mmt in 2020 (worldsteel, 2021[1]). By industry, steel demand from the automotive sector sharply decreased in Q2 2020, and steel demand from industrial machinery dropped in the same quarter (JISF, 2021[10]). Steel consumption in Korea also shrank by 8.0% to 49.0 mmt in 2020 (worldsteel, 2021[1]).

Steel consumption in the ASEAN-5 region (Indonesia, Malaysia, Philippines, Thailand and Viet Nam) declined sharply, falling by 11.9% to 68.7 mmt in 2020, according to worldsteel's April 2021 SRO (worldsteel, 2021[1]). According to the South East Asia Iron and Steel Institute, apparent steel consumption in the Association of Southeast Asian Nations region (ASEAN-6, i.e. Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam) decreased by 12% y-o-y to 70.6 mmt in 2020 (SEAISI, 2021[11]). Malaysia (-38%) and the Philippines (-15.5%) were the most severely hit jurisdictions. In comparison, Viet Nam (- 4%) and Indonesia (-5.3%) recorded relatively modest declines in their steel consumption (SEAISI, 2021[11]).

3.4. Europe and CIS Economies

According to the European Steel Association (Eurofer), steel consumption in the EU dropped by 11.1% to 136 mmt in 2020. This decline was mostly due to the severe lockdowns in the second quarter (Eurofer, 2021[12]).

In the automotive sector, EU passenger car sales dropped by 23.7% to 9.9 million units in 2020 compared to the previous year due to the Covid-19 pandemic and the associated containment measures, according to the European Automobile Manufacturers Association) (ACEA, 2021[13]).

In the Other Europe region, steel consumption increased by 9.4% to 36.0 mmt in 2020. Turkey was a key driver of this increase. Steel consumption in Turkey suffered a deep contraction in 2019 due to the currency crisis of 2018, but subsequently Turkey's economy sharply rebounded as well as its steel consumption (worldsteel, 2021[1]). Nevertheless, Turkish automotive production fell by 11% to about 1.3 million units in 2020, according to the Turkish Automotive Manufacturers' Association (Kallanish, 2021[14]).

In the Commonwealth of Independent States (CIS) region, steel consumption slightly decreased by 0.1% to 58.2 mmt in 2020 (worldsteel, 2021[1]). According to the Russian Steel Association, steel consumption in Russia dropped by about 3% in 2020, compared to the previous year (Russian Steel, 2021[15]). According to Novolipetsk Steel (NLMK), domestic consumption was partly supported by the state program of discount mortgages and subsidies for the automotive industry (NLMK, 2021[16]). In Ukraine, apparent steel consumption declined by 2.3% in 2020, according to the Ukrainian steel company Metinvest. This decline was mainly due to a 18.5% drop in machinery output and partly offset by a 4.0% y-o-y growth in construction activity (Metinvest, 2021[17]).

4. Steel production

The COVID-19 pandemic triggered significant reductions in steel production in many jurisdictions during the year 2020. The rebound during the first half of 2021 affected most jurisdictions, but especially the hard-hit regions that had reduced their production the most in 2020. According to worldsteel, global steel production increased by 13.7 % during the first half of 2021 compared to the same period in 2020.

Table 2 below highlights steel production growth rates across regions. The largest increases in crude steel production for the first half of 2021 (year-on-year) were recorded in South America (+28.1%), Africa (+28%), followed by the European Union (+18.1%), Other Europe (+18.1%) and North America (+16.4%). Asian steel production increased by a robust +13%, while other regions of the world also witnessed an increase: Middle East steel production increased by 8.7%, the Commonwealth of Independent States (CIS) by 8.7%, and Oceania by 8.4%.

Table 2. World crude steel production developments in the first half of 2021

	Level, thousand tonnes		% change, year-on-year		
	Jun 2021	**2020**	**Jun 2021**	**Jan-Jun 2021 /Jan-Jun 2020**	**2020 / 2019**
EU	13,224	132,131	34.7	18.4	-21.2
Other Europe	4,336	45,915	21.0	18.1	12.5
CIS	8,915	100,025	9.1	8.7	-0.8
North America	10,029	101,030	45.2	16.4	-16.4
South America	3,897	38,687	51.3	28.1	-13.9
Africa	1,465	12,600	46.9	28.0	-13.3
Middle East	3,559	40,734	9.1	8.7	14.5
Asia, of which:	121,959	1,354,527	6.4	13.0	7.7
China	93,880	1,057,884	1.5	10.7	14.6
Oceania	536	6,076	1.5	8.4	-4.2
World	167,920	1,831,725	11.6	13.7	2.4

Source: worldsteel data, as released on 23 July 2021.
Note: 1. Data are based on monthly production data and can differ from annual data published after December of each year. Furthermore, monthly production data can be revised at any time.
2. The present publication presents time series which extend beyond the date of the United Kingdom's withdrawal from the European Union on 1 February 2020. In order to maintain consistency over time, the "European Union" aggregate presented here excludes the UK for the entire time series.

4.1. Americas

In North America, total crude steel production increased by about 16.4% during the first half of 2021 year-on-year, mainly driven by the increase in Canada (+21.8%). The United States and Mexico also grew strongly (+15.5% and +16.2% respectively).

In South America, steel production increased by 28.1% during the first half of 2021, year-on-year. Production increased sharply year-on-year during the first half of 2021 in Argentina (+53.8%), Colombia (+40.6%) and Brazil (+23.3%), but more moderately so in Chile (+15.1%).[7]

4.2. Africa and the Middle East

African steel production increased by 28.0% during the first half of 2021, year-on-year. Egypt and South Africa experienced large steel production increases of 21.8% and 38.6% respectively.

In the Middle East, steel production increased by 8.7% year-on-year, with Saudi Arabia's steel production increasing the most (+18.0%) followed by Iran's (+8.0%), in spite of international sanctions. Box 1 below focuses on some specificities of the steel sector in Iran, including the Iranian government targets in steel production and a description of the main Iranian government agencies linked to steel. Box 3 in Section 6.2 takes a closer look at Iranian energy input prices.

Box 1. Special Focus: The Steel Sector in Iran

The steel sector is among the priority sectors for the Iranian 6th Economic, Social and Cultural Development Plan (2017-2021) (Islamic Republic of Iran, 2017[18]), as well as for the current 20-Year Vision document (2005-2025) (Islamic Republic of Iran, 2005[19]). The latter has also been complemented by the Comprehensive Program for Steel which targets annual production output of 55 Mt by 2025.

The Iranian steel sector is heavily controlled by the government, which owns 90% of all mines and related large institutions. The most important one is the Iranian Mines and Mining Industries Development and Renovation Organization (IMIDRO), founded in 2001. IMIDRO is a state-owned holding company which owns 8 major companies, among which Mobarakeh Steel Company, Isfahan Steel Co. and the National Iranian Steel Co., and around 30 subsidiaries. As a result of the privatisation efforts (article 44 of the Constitution) undertaken by the Islamic Republic of Iran, around 20 companies previously englobed in IMIDRO have been privatised in the last two decades (Industrial Developement and Renovation Organization of Iran (IDRO), n.d.[20])

Furthermore, the state-owned Industrial Development and Renovation Organization (IDRO), established in 1967, contributes to the development of the sector. Similar to IMIDRO, IDRO is a state-owned corporation that used to own more than 150 companies. In line with privatisation efforts, it is now seeking to convert its role to that of an industrial development agency. IDRO's main achievements include the establishment of numerous industrial and manufacturing enterprises to complete the national industrial chain, the direction of a part of nationalized heavy industries and the implementation of key projects (Sedighikamal and Talebnia, 2014[21]).

While advancing privatisation and the participation of the private sector (Sedighikamal and Talebnia, 2014[21]), the government is seeking to maintain the upward trend in steel production and industry in the country notwithstanding international sanctions, which heavily impact the steel sector (United States Department of the Treasury, 2021[22]) Tehran is actively creating Special Economic Zones (Government of Iran, n.d.[23]) offering tax exemptions (Iranian Mines and Mining Industries Development & Renovation Organization (IMIDRO), n.d.[24]) and setting up and developing new steel companies through the Ministry of Industry and Mines (Iranian Ministry of Industry, 2020[25])The latter endeavour is part of the Plan for Creation and Development of industries, mines and mining infrastructure, and receives significant amounts from the government on an annual basis, according to the Iranian government's annual budget (Iranian Plan and Budget Organization, 2020[26]). The program also provides grants to

established firms to buy machinery and equipment and is responsible for the construction of entire industrial cities.

Another program providing support to the sector is the Iranian National Development Fund which is a non-governmental public agency providing financial facilities both in foreign currency and in Iranian Ryals (IRR) to selected industries in the country, among which the steel sector is explicitly mentioned. The fund operates through a complex process, in which a number of phases involve both an "agent" bank and the Central Bank of Iran (National Development Fund of Islamic Republic of Iran, n.d.[27]).

Furthermore, the country's budget law highlights a continuous flow of injections to the Steel Workers' Pension Fund, to support the distribution of pensions. However, the fund owns steel firms, therefore, the capital provided could also be potentially aimed at rescuing such companies. Normally, the fund should derive its funding to pay for its liabilities from the steel firms it owns.

The steel sector is also among the main recipients of licenses for foreign investment as provided by the 2002 Foreign Investment Promotion and Protection Act (FIPPA). Indeed, projects with Foreign Direct Investment are subject to the approval of the Foreign Investment Board. The Foreign Investment Board has recently been accepting a growing number of licenses for projects in the mining, mineral and industrial sectors, with the registered number of licenses increasing by 189% between 2019/2020 period and the 2020/2021 period (FarsNews Agency, 2021[28]).Projects range from investment in new companies to funding for starting particular metal production in Iran that is then given to specific companies in Iran.

Furthermore, there seems to be a strong government involvement in reducing the input costs for steel firms and increasing the volume of mineral extraction. Indeed, insufficient mineral extraction has been identified as the main hindering factor for reaching the goal set for 2025 (55 Mt of steel production annually), making development of the mining sector a government priority in the short-term. In particular, the government is now granting licenses for mineral exploration purposes to individual or legal people who spot an unexplored area of the country, upon the acceptance of the Ministry for Industry and Mines. Indeed, according to the Iranian Mine Law, the sovereignty of mines is vested by the aforementioned Ministry, which is also in charge of issuing exploration and – subsequently – exploitation licenses. Economic incentives are also offered to sustain the exploration process, which is considered crucial for the country's development.

The Iranian Bank for Industry and Mines is a state-owned specialised bank offering financial services to companies in the steel sector through subsidised rates. The bank itself owns shares of some companies (Bank for Industry and Mines, 2019[29]). It is noteworthy that the debts of IMIDRO and IDRO to the government were partially erased in exchange of those companies' financing the Bank for Industry and Mines. Debts to the government of those two agencies were cancelled in exchange for the financing of the Bank for Industry and Mines by those agencies (Iranian Plan and Budget Organization, 2021[30]).

Reforms of subsidies stands out prominently among the latest endeavours of the country (Guillaume, Zytek and Farzin, 2011[31]). Iran used to subsidise both energy and food products for its citizens and industries. The Organization for Targeted Subsidies has been established to control the reform process, which, however, is being implemented at a very slow pace. The industrial and mining sectors are among the portions of the economy that are still allowed to receive subsidies to a certain extent, for instance

subsidized water and lower than market energy prices – as provided by Article 39 of the 6th Development Plan.

4.3. Asia and Oceania

Crude steel production in Asia increased by 14.0% during the first half of 2021 year-on-year, with China increasing by 10.7%, India by 31.4%, Japan by 13.8% and Korea by 8.3%. Changes in steel production in China were driven by infrastructure and manufacturing developments and growth took place earlier than in the rest of Asia. This explains why China is the only large steel producing economy in Asia to experience higher production in 2020 than in 2019, increasing its yearly production by 14.6% in 2020, which explains the whole Asian annual increase of a robust 7.7% in 2020. All the other large steel-producing Asian economies mentioned above recorded steel production declines in 2020. The resumption of infrastructure investments and quantitative easing supported the recovery of the Chinese steel industry in the second half of 2020 (Jiemian, 2020[32]). Furthermore, an important trend in Chinese steel production has been the concentration of production through mergers and acquisitions (M&A) (see Box 2 below).

Box 2. Special Focus: National Policies behind China Baowu's Development

According to the World Steel Association (worldsteel), China Baowu Group was the world's largest producer of crude steel in 2020. Since China Baowu Group was established in 2016, the company has merged and acquired a series of Chinese steelmakers, increasing its steel production by 80.67% in merely three years from 63.81 million metric tonnes in 2017 to 115.29 million in 2020 (worldsteel, 2021[33]).

China Baowu's merger and acquisition policies are the result of national reforms implemented between 2015 and 2020 aimed at transforming Chinese state-owned enterprises in order to resolve excess capacity and increase industry concentration. China Baowu is "a pilot company" in the transformation of Chinese SOEs (SASAC, 2017[34]). Since 2016, China Baowu has based its business strategy on two important policies: the 2015 "Guiding Opinions of the CPC Central Committee and the State Council on Deepening the Reform of State-owned Enterprises" and the 2015 "Iron and Steel adjustment Policy".

The "Guiding Opinions of the CPC Central Committee and the State Council on Deepening the Reform of State-owned Enterprises" invites SOEs to become "stronger and larger" and to "accelerate the cultivation of a group of world-class multinational companies that can speed up the disposal of inefficient and ineffective assets, and eliminate outdated production capacity" (Chinese Government, 2015[35]). The State-owned Assets Supervision and Administration Commission of the State Council (SASAC) praised China Baowu for aligning its mergers and acquisitions (M&A) activities with the policies proposed by the CPC and the State Council (SASAC, 2017[34]). Furthermore, China Baowu was included among the central enterprises that are bound to become global steel industry leaders (SASAC, 2020[36]). According to SASAC, China Baowu's merger and oacquisition strategy "should become a popular developing model to be followed" (SASAC, 2021[37]).

On August 19, 2020, General Secretary Xi Jinping visited China Baowu Maanshan Iron & Steel Group and pointed out that "The state has handed over hundreds of billions of

assets to China Baowu" and "After the expansion now China Baowu needs to become stronger by modernising the corporate governance system and capabilities" (SASAC, 2020[36]). In 2020, following the release of the "three-year action for the reform of state-owned enterprises" (SASAC, 2020[38]), China Baowu adhered to the vision of "becoming a global steel industry leader", to the mission of "jointly building a high-quality steel ecosystem" and to strive to achieve a domestic market share of 15% by the end of 2022, a per capita steel output of 1,400 tonnes, and a R&D investment rate that reaches the top level of the global steel industry" (SASAC, 2021[39]).

Resolving excess capacity and increasing industry concentration are at the core of China Baowu's M&A strategy. While mergers and acquisition would eliminate inefficient production capacity, the government believes that industry concentration would improve operations, enhance competitiveness and reduce emissions (Chinese Government, 2008[40]). The "Iron and Steel Industry Development Policy" issued in 2005 proposed that the goal of industrial concentration is to increase China's steel output of the top ten domestic iron and steel enterprise groups by 50% before 2010 and by 70% before 2020 (NDRC, 2005[41]). However, the government realized that the objectives formulated in 2005 were far too ambitious. In 2015, the Ministry of Commerce released the "Iron and Steel adjustment Policy" to replace the former plan. The document proposed to "speed up mergers and reorganizations to allow the top 10 steel companies to produce no less than 60% of crude steel nationwide by 2025 and to form 3 to 5 super large steel-making enterprises with enhanced competitiveness" (MOFCOM, 2015[42]).

Although China's steel industry is still quite fragmented, industry concentration has been increasing in recent years. According to data calculated by the Lange Iron and Steel Research Center, based on the cumulative crude steel output of the top ten steel companies, the concentration of China's steel industry in 2020 will be 39.2%, an increase of 2.6 percentage points from 2019 and an increase of 5.0 points from the end of the "13th Five-Year Plan" period (LGMI, 2021[43]).[8]

In Oceania, crude steel production increased by 8.4% during the first half of 2021 year-on-year, with Australian crude steel production increasing by 6.6%, and New Zealand, a much smaller steel producer, by 28.2%, year-on-year.

4.4. Europe and CIS Economies

In the European Union, steel production experienced an increase of 18.4% over the first half of 2021 year-on-year.[9] Amongst the larger steel producers, the increase was more pronounced in Spain (+33.0%), France (+29.5%), Italy (+26%) and Germany (+18.1%).

Steel production in the United Kingdom increased by 10.3% over the period year-on-year.

In the "Other Europe" region, steel output increased by 18.1% over the first half of 2021 year-on-year, essentially explained by Turkey's significant increase in steel production (+20.6%). In the CIS region, steel output increased by 8.7% due to an increase in both Russia (+8.5%) and Ukraine (+7.4%).

5. World steel trade

After a year of considerable decline in global steel trade, reflecting the effects of the COVID pandemic on steel demand, 2021 has started with a strong rebound in trade. According to the International Steel Statistics Bureau (ISSB), world aggregate exports increased by 10.3% relative to 2020 in the first four months of this year (in annualised terms - see Table 3). Looking at 2020 final figures, the impact of the pandemic on steel trade has been quite significant, although in line with the global merchandise sector's figures. Indeed, global steel exports plummeted by 7.7% in 2020, whereas the drop in the global merchandise trade WTO indicator stood at 7.5% during the same period.[10]

A large share of this significant export growth observed recently is due to the steep rise in shipments from China, which saw its exports increase by almost 50% in the first four months of this year, in y-o-y terms. After a short period of negative trade balance in steel in late 2020, spurred by a sudden decrease in exports in May-June 2020 and a simultaneous increase in imports of steel, Chinese exports started to increase again in 2021 at a much higher pace than the pre-COVID period (see Figure 3). The widening of the Chinese trade balance surplus is also supported by a marked decline of steel imports in the same period, which contracted by approximately 40% in first four months of the year, in y-o-y terms.

Amongst other major steelmaking economies, also the European Union (external trade) saw exports increase quite significantly, registering a positive growth of about 5.4% with respect to 2020 figures. Imports into the European market increased more rapidly during the first few months of year, with import growth of about 26%. India and Korea are the only economies to have experienced a decline in their exports in the first part of 2021 (respectively, -31.9% and -2.5%). On the import side, while shipments to India remained relatively stable, Korean imports increased considerably in the first part of 2021 (16.5%).

Japan, the United States and Russia also saw their exports grow during the first months of the year. While Japanese exports increased moderately by 5.8%, shipments of steel products from the United States and Russia increased significantly (respectively by about 23.8% and 14.6%). On the import side, both Japanese and United States' imports grew significantly (11.6% and 20.2%).

Turkish exports increased by 3.7% during the first part of 2021, whereas imports gained substantial momentum over the same period (33.7%), thus further narrowing the economy's steel trade balance to almost a zero net position in April 2021 (see also Figure 3). In the Americas, most of the major steelmaking economies registered an increase in their steel import figures in 2021. For example, Brazilian exports remained relatively stable on y-o-y terms, while imports more than doubled over the same period. Shipments from Mexico grew moderately by 1.6% in the first four months of year, whereas its imports increased quite substantially (40%). Similarly, Canadian imports increased significantly in the first months of 2021 after the lows of 2020, while exports registered an increase of about 33.4% in y-o-y terms.

Table 3. Steel exports, annual data

2015-21 (up to April)

Economy	2015	2016	2017	2018	2019	2020	2021	2021 (ann.)	2021-20 (%)
CHN	103,289.9	100,510.9	68,049.4	61,621.1	56,293.6	47,301.7	23,633.6	70,900.9	49.9%
EU27	30,872.0	29,818.9	30,711.9	28,505.4	27,483.0	22,813.8	8,017.0	24,050.9	5.4%
IND	6,258.3	8,966.6	14,769.2	9,895.3	12,276.7	16,399.4	3,721.7	11,165.1	-31.9%
JPN	38,563.3	38,312.4	35,247.8	33,793.5	31,111.2	29,660.4	10,461.3	31,383.9	5.8%
USA	8,895.8	8,363.8	9,469.0	7,875.0	6,607.9	6,058.0	2,500.5	7,501.6	23.8%
RUS	28,778.9	30,076.6	29,246.7	31,246.4	27,793.2	27,215.7	10,398.0	31,194.1	14.6%
KOR	30,010.5	29,696.5	30,168.2	29,055.9	29,057.5	27,725.2	9,013.8	27,041.3	-2.5%
TUR	14,505.7	14,951.7	15,985.1	19,297.1	19,124.9	18,082.8	6,249.3	18,747.8	3.7%
BRA	13,386.9	13,143.1	14,903.1	13,298.0	12,247.7	10,387.3	3,435.6	10,306.9	-0.8%
TWN	11,096.0	12,165.3	12,039.5	12,209.0	11,167.0	10,506.3	3,482.8	10,448.5	-0.6%
UKR	17,250.0	17,882.3	14,750.3	14,568.7	15,041.2	14,800.2	5,351.2	16,053.7	8.5%
MEX	3,168.8	3,230.9	3,773.7	4,745.1	4,354.5	4,505.2	1,525.5	4,576.4	1.6%
CAN	5,531.4	5,606.8	6,125.3	5,969.9	5,418.1	5,045.8	2,242.9	6,728.7	33.4%
SAU	836.6	805.9	823.9	2,524.7	1,946.1	1,075.4	400.5	1,201.5	11.7%
EGY	452.1	803.4	1,472.2	1,449.9	1,156.9	4,128.0	1,414.9	4,244.8	2.8%
GBR	6,830.8	4,119.4	4,399.5	4,281.1	6,361.1	3,998.3	1,016.2	3,048.5	-23.8%
MYS	1,151.6	1,274.6	1,359.1	1,560.0	5,023.6	8,354.5	2,538.3	7,615.0	-8.9%
ZAF	2,030.6	2,072.3	2,401.8	2,610.2	3,952.9	1,295.3	401.6	1,204.9	-7.0%
AUS	768.5	700.8	926.9	939.9	1,096.9	813.8	213.8	641.4	-21.2%
ARG	312.2	267.8	150.7	43.8	24.5	11.7	9.0	26.9	131.2%
Global agg.	**341,672.7**	**343,251.2**	**319,213.5**	**311,549.4**	**296,123.1**	**276,773.7**	**101,793.3**	**305,379.9**	**10.3%**
Global agg. (w. EU intra trade)	**434,222.8**	**440,370.7**	**421,689.6**	**414,202.4**	**394,005.8**	**363,826.3**	**136,715.2**	**410,145.6**	**12.7%**

Notes: Values expressed in thousand of metric tonnes. Global aggregate is a proxy for World trade, which is calculated as the total sum of all exports for about 75 economies.
Source: OECD based on ISSB data.

Table 4. Steel imports, annual data

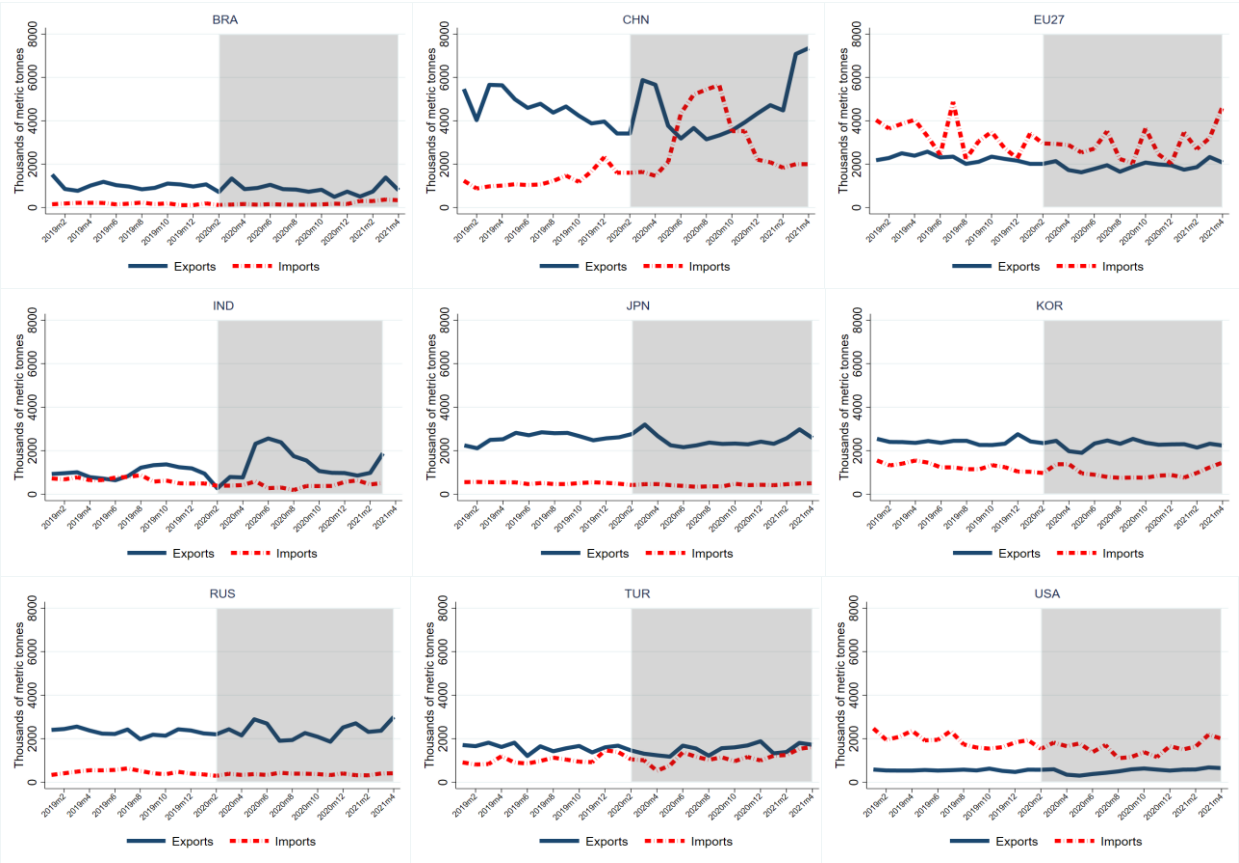
2015-21 (up to April)

Economy	2015	2016	2017	2018	2019	2020	2021	2021 (ann.)	2021-20 (%)
CHN	12,767.1	13,211.0	13,534.8	13,953.5	15,167.9	38,324.6	7,926.5	23,779.6	-38.0%
EU27	37,979.4	40,745.2	40,357.5	44,944.8	39,995.0	33,397.1	14,023.5	42,070.5	26.0%
IND	12,734.0	9,258.7	8,379.3	8,312.2	8,139.8	4,793.8	1,607.5	4,822.4	0.6%
JPN	5,707.0	5,821.5	6,042.1	5,840.5	6,278.6	5,042.1	1,875.8	5,627.4	11.6%
USA	31,584.0	27,796.7	30,938.3	27,168.4	23,440.2	18,311.5	7,337.3	22,011.8	20.2%
RUS	3,975.5	3,971.1	5,763.2	5,734.8	5,726.3	4,434.3	1,462.1	4,386.4	-1.1%
KOR	20,866.2	22,573.8	18,676.0	14,278.4	15,697.4	11,455.5	4,449.4	13,348.3	16.5%
TUR	18,137.7	16,539.0	15,342.3	13,643.8	12,025.9	12,626.5	5,626.2	16,878.6	33.7%
BRA	2,746.9	1,638.0	2,058.2	2,157.6	2,120.1	1,768.6	1,310.6	3,931.9	122.3%
TWN	7,313.3	7,654.0	7,241.9	7,478.1	7,105.7	7,207.8	2,984.8	8,954.3	24.2%
UKR	754.7	1,060.6	1,315.1	1,454.3	1,430.5	1,241.1	296.1	888.2	-28.4%
MEX	9,350.7	9,113.8	10,800.5	10,521.3	11,080.8	9,578.9	4,482.1	13,446.4	40.4%
CAN	6,816.1	6,814.9	7,471.8	7,822.6	7,978.5	5,952.0	2,493.2	7,479.6	25.7%
SAU	7,065.5	5,836.6	3,239.6	3,993.7	6,379.3	6,180.8	1,263.5	3,790.4	-38.7%
EGY	567.6	733.5	1,558.2	302.7	512.3	155.9	44.5	133.4	-14.4%
GBR	6,602.3	7,061.0	7,050.2	7,419.4	8,339.7	4,583.4	1,940.9	5,822.6	27.0%
MYS	7,441.1	8,478.7	6,941.5	7,433.1	6,990.2	5,548.1	2,132.6	6,397.7	15.3%
ZAF	1,518.1	1,265.1	1,061.5	896.1	1,011.5	1,049.6	541.0	1,623.1	54.6%
AUS	1,737.0	1,682.8	2,032.7	2,024.0	1,581.5	1,554.8	672.0	2,016.1	29.7%
ARG	998.8	694.8	1,466.5	789.8	574.3	685.9	570.1	1,710.2	149.3%
Global agg.	**349,508.5**	**358,775.6**	**355,323.9**	**351,842.7**	**339,468.9**	**314,142.8**	**112,611.0**	**337,833.0**	**7.5%**
Global agg. (w. EU intra trade)	**259,966.3**	**264,882.4**	**255,906.6**	**250,722.6**	**241,613.8**	**226,709.6**	**76,942.2**	**230,826.6**	**1.8%**

Note: Values expressed in thousand of tonnes. Global aggregate is a proxy for World trade, which is calculated as the total sum of all exports for about 75 economies.
Source: OECD based on ISSB data.

Figure 3. Trade balances

Major steelmaking economies, monthly data (2019m1-2021m4)



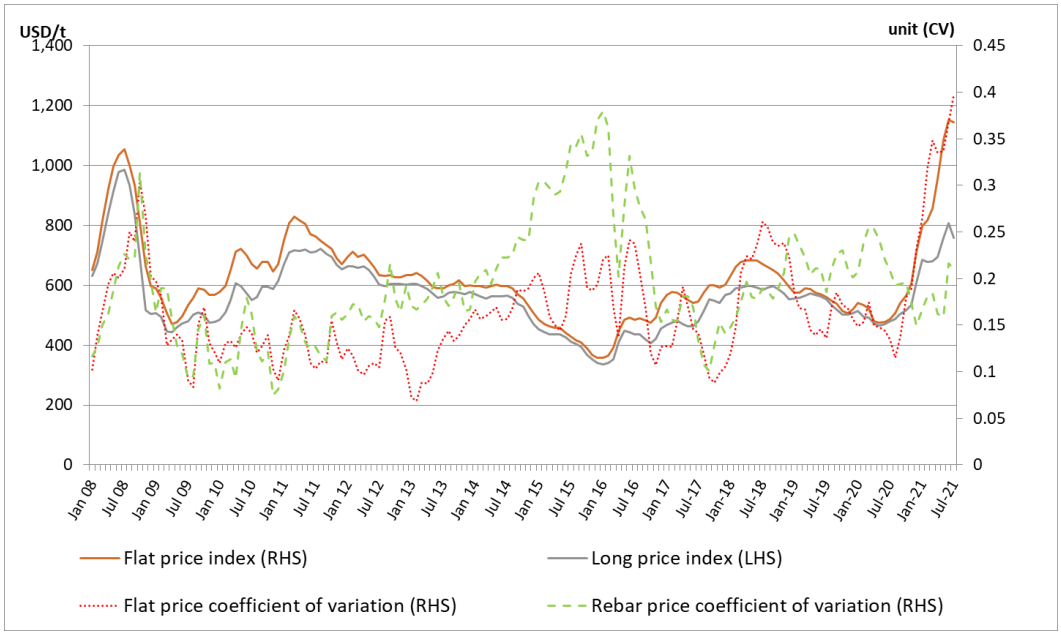
Note: The figure reports monthly steel export and import volumes (in thousands of metric tonnes) for major steel trading economies from January 2019 to April 2021. European Union data refer to external trade. The grey area highlights the COVID-19 crisis period. Economies are sorted in alphabetical order.
Source: OECD based on ISSB data.

6. Steel and raw material prices

6.1. Steel prices

Steel prices have risen significantly since July 2020. As of July 2021, flat steel prices and long prices stood at 134% and 58% higher than one year earlier, respectively (Figure 4). The price upswing has been sudden, following a rather weak first half of 2020. The last time steel prices were so elevated was on July 2008; current flat prices are 8% higher than in July 2008, while long prices remain 23% lower. Initially, the rise in prices was partly explained by the vast steelmaking capacity made idle during the heights of the pandemic which could not be brought online on time to meet recovering steel demand and restocking (Fitch Ratings, 2021[44]). Currently most of the plants that idled capacity during 2020 have resumed full production, according to the OECD Secretariat's desk research, yet prices continue to creep higher. Government infrastructure spending, but also stronger than expected demand during COVID-19 due to unanticipated switches in household consumption patterns, with households substituting leisure and travel for equipment and housing (Fortune, 2021[45]), partially explain higher steel prices. This is despite massive Chinese steel production in 2021 (Russel, 2021[46]). The strong recovery in a number of sectors should continue to support steel prices.

Figure 4. Aggregate flat and long steel price averages (latest month July 2021)

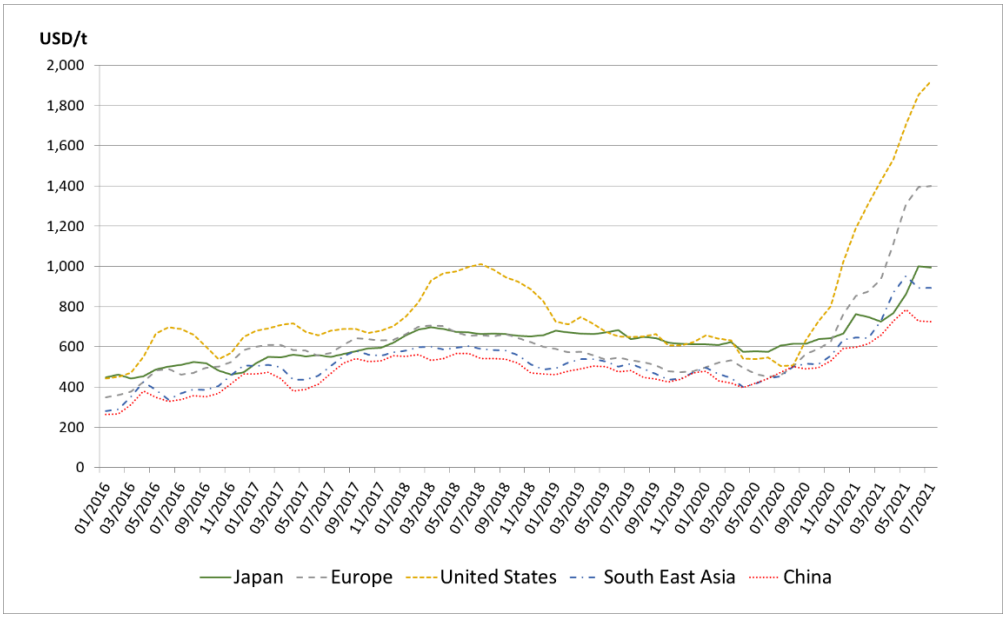


Note: The flat price and long price indices are defined as the arithmetic average of the individual regional Platts price series for the United States, North Europe, China, Japan, India and Russia, when available. This indicator had the closest fit to the two global Platts price indices used in Steel Market Developments reports prior to being discontinued (in September 2017). The coefficients of variation (CV) are the ratio of the standard deviation of the regional Platts price series making up the indices to their mean, thus capturing price dispersion across regions.
Source: Platts Steel Business Briefing.

All regions displayed similar dynamics with respect to both flat and long steel prices.

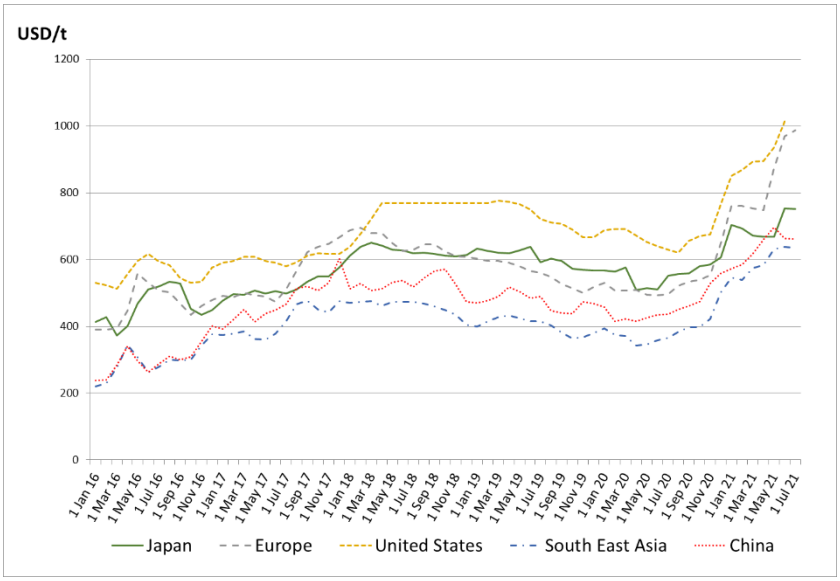
Steel prices increased more rapidly in the United States than in other economies since July 2020 for both flat and long products (Figure 5, Figure 6). The intensity of the demand rebound in July 2020 surprised steel users with low steel inventory levels, spurring late orders that were less sensitive to the price (World Steel Dynamics, 2020[47]). Additionally, the domestic production response may have been slow to react to rising demand potentially due to higher than expected demand and supply chain challenges resulting from the COVID-19 pandemic. In spite of a widely shared perception that steel supply would catch up with orders by the end of the first quarter of 2021 and that prices would level off (Wood Mackenzie, 2021[48]; World Steel Dynamics, 2020[47]), flat steel prices in the US have continued to increase. Demand remained robust which prompted US mills and service centres to raise their offer prices. According to market participants, US mills and service centres were in no rush to sell their (limited) steel production for August and September (Ruggiero, 2021[49]), which indicates they are confident that price levels will remain elevated. The Platts US HRC index hit a record high 1921 USD/t in July, as prices have risen by 278% since August 2020, when the recovery began.

Figure 5. Steel price for flat products, by region



Note: Latest price: 1 July 2021
Source: Platts Steel Business Briefing.

Figure 6. Steel price for rebar, by region



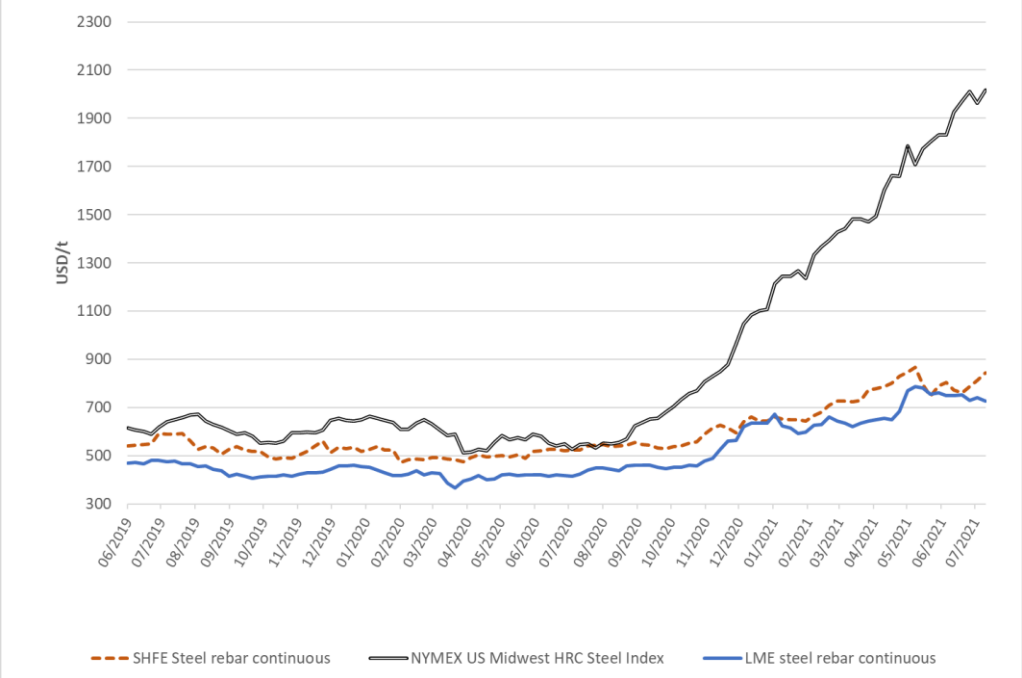
Note: The latest price is 1 January 2021, with the exception of Russia (1 May 2021) and US (1 June 2021)
Source: Platts Steel Business Briefing.

Steel futures prices tend to move slightly in advance of spot prices, suggesting that they are able to predict steel spot price dynamics at the daily frequency by quickly incorporating new market information. Figure 7 below shows three steel futures continuous contracts, as provided by Thomson Reuters Datastream (Refinitiv). Steel futures prices seem to have recently stabilised at their high levels on the Chinese and the European stock exchanges, while they have continued trending higher in the United States.

In some markets spot prices have increased higher than future prices, a phenomenon which is called backwardation (Ruggiero, 2021[49]). Backwardation would indicate a higher demand for buying steel immediately rather than for future delivery through futures or forward contracts. Hence, it may indicate that, contrary to many steel makers, the market expects somehow weaker steel prices in the late summer and going forward (Ruggiero, 2021[49]).

Figure 7. Steel futures prices (as of 19/07/2021)

Indices of three continuously rolled steel futures contract prices, USD per tonne

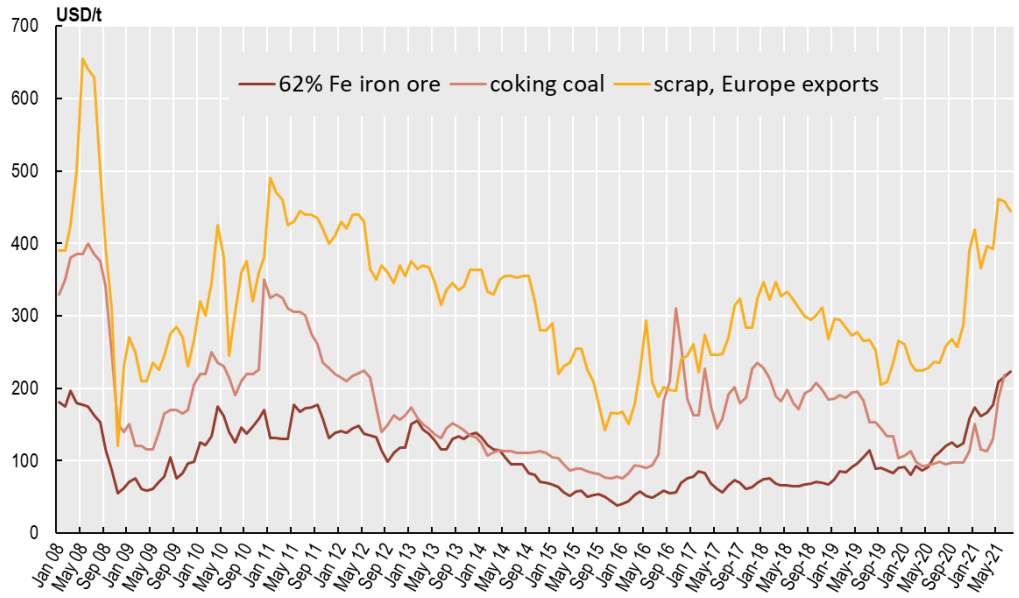


Note: NYMEX US Midwest futures prices were converted to correspond to metric tonnes rather than short tons. SHFE Steel rebar futures prices were converted from RMB to USD using daily exchange rates at closing. For more information on contract specifications, please refer to https://www.lme.com/en-GB/Metals/Ferrous/Steel-Rebar#tabIndex=0 for LME steel rebar contracts; to http://www.shfe.com.cn/en/products/SteelRebar/contract/9220216.html for SHFE steel rebar continuous contracts, and to https://www.cmegroup.com/education/files/hot-rolled-coil-steel-index-futures-options.pdf for NYMEX US Midwest HRC contracts. For a more detailed description of steel futures market, see (OECD, 2018[50]).
Source: Thomson Reuters, Datastream.

6.2. Steel raw material prices

Prices of the main steelmaking raw materials increased significantly since July 2020, and as of July 2021 benchmark prices for iron ore, coking coal and scrap were up 99%, 127% and 89%, y-o-y, respectively.

Figure 8. Prices for key steel-making raw materials (as of July 2021)



Note: The iron ore price series is Platt's "Forwards / SGX 62% Fe Iron Ore cash-settled swaps (dry metric tonne) / China import CFR Tianjin port $/t"; the coking coal price series is Datastream's "Premium Coking Coal Australia"; the scrap price series is Platts "Scrap / Platts TSI HMS 1&2 (75:25) / Europe export FOB Rotterdam $/t"
Source: Platts Steel Business Briefing (SBB), Datastream.

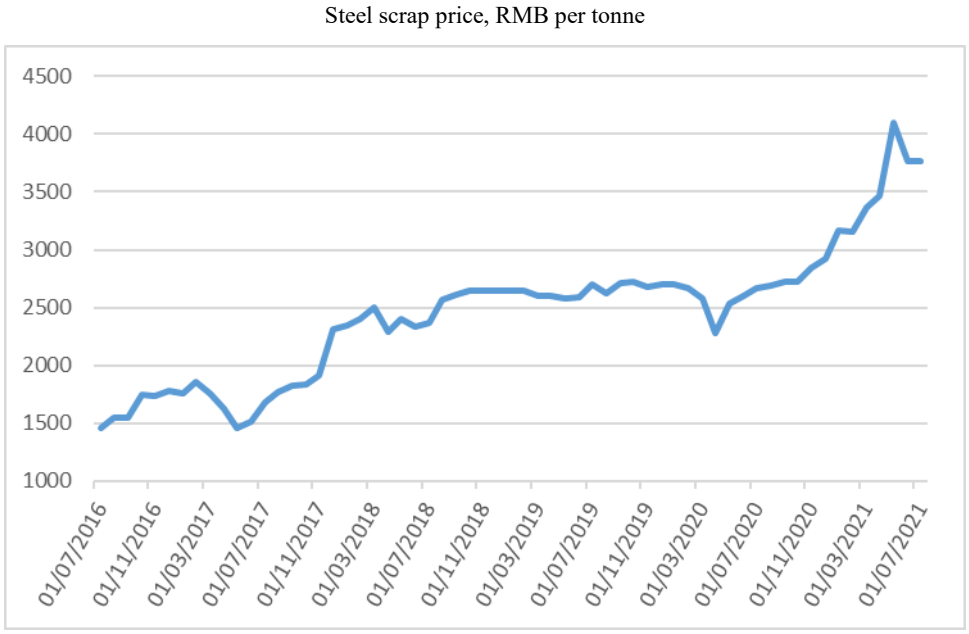
Iron ore prices have continued to increase due to record demand from Chinese mills (Financial Times, 2021[51]). Furthermore, no increase in iron ore supply is foreseen in the coming months as large iron ore producers are experiencing a range of issues in their efforts to boost output, from labour shortages to bad weather (Financial Times, 2021[51]). Global miner BHP is set to start a "major maintenance" campaign at Port Hedland, its key iron ore loading facility in Western Australia, and is experiencing some skilled labour shortage in the Australian market (Clarke, 2021[52]). Vale, the Rio-de-Janeiro based company, indicated delays to the start of some of its operation following the damn disaster. Anglo American owned company Kamba Iron Ore reduced its iron ore volume sales guidance citing adverse weather in South Africa as well as logistic constraints. Indeed Transnet, the state-owned freight and logistics company, reported a number of derailments this year and is running an investigation to ascertain if sabotage by contractors might be the cause. In addition to the low rail utilisation rate, Transnet has also reported low turnover at its various ports, partly owing to Covid-19 related absenteeism (McKay, 2021[53]). Rio Tinto, the largest iron ore producer, indicated that the replacement of some of its mines was late on schedule (Financial Times, 2021[51]). In the absence of additional supply, and if the strong demand for iron ore from Chinese mills persists, iron ore prices will remain at elevated levels. In their effort to decrease iron ore prices, China's National Development and Reform Commission (NDRC), the nation's top economic planner and market regulator, and Beijing's Iron Ore Trading Center have issued a joint statement saying that the current high price for iron ore was not sustainable and that they had launched a joint probe into the trading volume and prices of iron ore, will continue monitor closely the spot price and "identify abnormal transactions and speculation" to take action (Graham, 2021[54]). Going forward, iron ore prices will probably be determined by China's policy action concerning the reduction of steel production (Russel, 2021[46]).

Coking coal prices rose globally, due to a sustained demand from steel firms. China, which had previously imported about 20% of its coking coal consumption, had placed in October

2020 an unofficial ban[11] on Australian coking coal imports (Russel, 2020[55]). Consequently Chinese coking coal prices surged much higher than global prices, rising on June 2021 to above USD 300 per tonne for the first time since 2017, up almost 150% since October 2021 (Hume, 2021[56]), while premium Australian coking coal FOB stood at USD 200 per tonne (Lu and Li, 2021[57]). Although Chinese coke producers are relying now mostly on domestic coking coal, they are still making use of higher grade coking coal from imports to reduce the ash and sulfur in their coke blend (Lu and Li, 2021[57]) (The South China Morning Post, 2020[58]). As exports from North America have been diverted to meet higher Chinese bids, Australian exports have replaced them in some of their traditional markets such as Europe (Lu and Li, 2021[57]), reflecting a global redistribution of global coking coal supplies. As a further sign of the global disturbance caused by the Chinese ban, the coking coal market witnessed an historical reversal in recent months of the relative value of the premium hard coking coal with low volatile matter (PLV) and the premium mid-volume coking coal (PMV) (Lu, 2021[59]). PLM has historically been the best type of coking coal, as it contains a lower percentage of volatile matter than PMV[12], but it was the main export from Australia (Lu, 2021[59]), and thus in over-supply globally after the Chinese ban. This reversal, considered a new normal by some experts and as temporary by others, has affected both spot and long-term contract volumes, even though it can be observed more readily in the spot market. A challenge in utilising the now cheaper PLV is the lower resulting wall pressure, which can require some coke producers to blend it up with more volatile matter. This adds a further step in the processing and can thus increase the overall cost of production (Lu, 2021[59]).

Scrap prices have risen considerably, and prices of European scrap exports are standing at their highest level since April 2011. New regulations enacted in China on January 2021 classified scrap as a recycled raw material and thus permitted Chinese scrap consumers to import their scrap from the rest of the world again (BIR, 2020[60]; BIR, 2021[61]). Japan has been China's most important scrap supplier since China officially eased restrictions: 71.2%from a total of 111,432 imported tonnes of ferrous scrap imported into China in May 2021 originated from Japan. Nevertheless Chinese buyers are, as of July 2021, investigating other alternative and more affordable scrap sources including Canadian scrap (Zhao and Lim, 2021[62]). On the contrary, the Vietnamese scrap import market has closed due to the worsening Covid-19 pandemic and the related shutdown of the economy (Zhao and Lim, 2021[62]). An important development on the scrap market is the new Chinese target of increasing steel scrap use by 23% to 320 million tonnes by 2025, with the stated purpose of meeting the country's climate commitments of bringing its greenhouse gas emissions to a peak before 2030 and becoming "carbon neutral"[13] by 2060 (Zhang, 2021[63]). This underlying trend should boost scrap prices in the long-run, while reducing China's demand for iron ore. Domestic Chinese scrap prices have continued to increase (Figure 9), with most of the increase in Chinese scrap prices occurring after October 2020. The increase in Chinese domestic scrap price occurred despite the new permission to import scrap into the country and despite Chinese regulators allowing new companies to supply processed ferrous scrap domestically, increasing the number of such companies[14] to 478 (American Metal Market, 2021[64]).

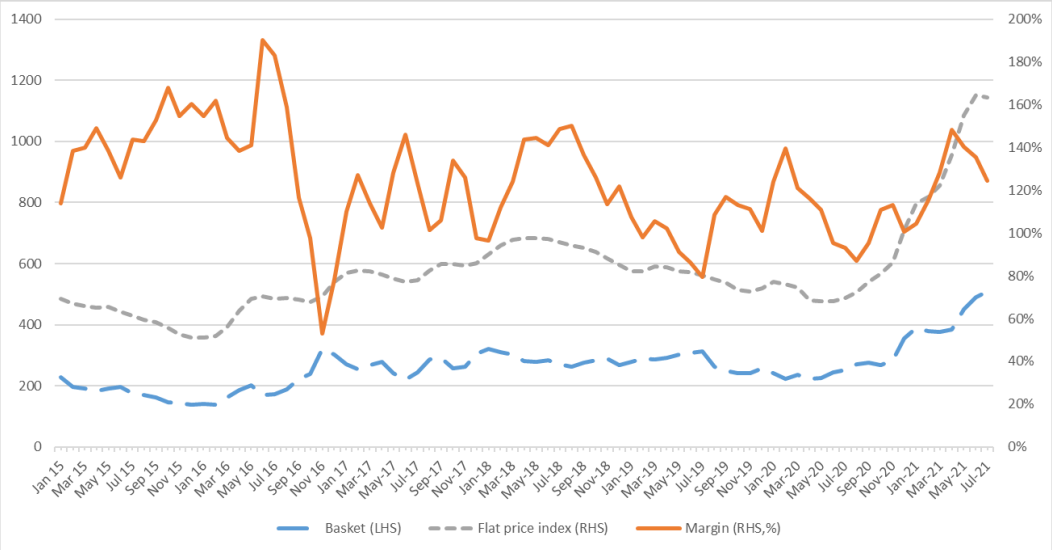
Figure 9. The upward trend in Chinese scrap prices has recently stabilised (last data point is July 2021)



Source: Datastream price series "Steel Scrap Price Index SHCNFSI - PRICE INDEX", originally sourced from Home Steel.

The steel-raw material price margin, measured by the difference between the price of steel and a basket of steel inputs, increased moderately during the first months of 2021 but decreased again from April to July 2021 due to the upswing of raw material prices (Figure 10). Overall, and in spite of the large steel price increase, the margin as of July 2021 is only 0.8% higher than its average for the period January 2015 to July 2021. Producers of higher-grade steel products may be less exposed to steel raw materials costs volatility than those who produce lower-grade steel products (Foster, 2021[65]). Furthermore, transportation and logistics costs, which are not represented here, are affecting steel producers margins (Foster, 2021[65]).

Figure 10. Margin between steel and raw material prices



Note: The raw materials basket for steel production includes 70% of the usual quantities of iron ore (1.6 tonne) and coking coal (0.77 tonne) needed to produce steel in the integrated process and 30% of the quantity of ferrous scrap (1.07 tonne) needed to produce steel in the electric arc furnace process (see OECD, 2016). Prices used are as follows: Iron ore Fines, 62% Fe, SPOT, CFR China; Hard coking coal spot, FOB Australia; Scrap, #1 HMS, FOB Rotterdam. The basket is compared against HRC world prices. The margin is defined as the per cent difference between the steel flat price and the raw materials basket price.
Source: OECD based on data from Thomson Reuters, Platts Steel Business Briefing (SBB), and Datastream.

Box 3. Special Focus: Energy input costs in Iran

Iran's large oil and gas reserves in combination with the Iranian government's desire to promote industrial development have led to a continuous trend of energy subsidisation, both for individuals and for corporations. Indeed, after the 1973 oil crisis and the subsequent increase of international oil prices, Iran began to earn high revenues from exports, and domestic prices were administratively set at extremely low levels (Brew, 2016[66]).After the Islamic Revolution of 1979, subsidising energy through price-setting was pursued to meet modernisation and industralisation goals. Between the 1970s and the 2010s, the exoansion of the Iranian steel sector was strongly supported by the government through the establishment of state-owned corporations such as Iranian Mines and Mining Industries Development and Renovation Organization (IMIDRO), companies such as the National Iranian Steel Company (NISCO) and the Mobarakeh Steel Company. The growth of the steel sector in that period was due both to the government-led industrialisation efforts, as well as to the large availability of low-priced natural gas, the main reducing agent used by the domestic steel industry (IFNAA, 2014[67]).

The rise of international oil and gas prices, the exponential increase in domestic energy consumption and the imposition of sanctions restricting the exports of oil and gas were all contributing factors that led to the "Targeted Subsidies Reform" in 2010 (UNESCAP, n.d.[68]). The Reform envisaged a gradual reduction of subsidies on energy to reflect actual prices at the end of the Fifth Economic, Social and Cultural Development Plan (2010-2015). The resulting price increases were accompanied with cash compensations and "targeted subsidies" for households to mitigate the negative effects on their welfare. On the side of businesses, the progressive implementation of the "Targeted Subsidies

Reform" meant in no way the removal of energy subsidies, as by Article 8 of the Reform Act, 30% of revenues earned through the reform itself would be devoted to grants, subsidies on bank facility charges and funds to support producers, enhance energy efficiency and technological development of industries and plants, and compensate for losses of companies derived from the reform (Guillaume, Zytek and Farzin, 2011[31]). Subsidies that were provided at the level of energy costs, albeit still in place in many industrial sectors, primarily steel, were thus simply transformed into grants and subsidised loans for companies.

While implementation of the reform progressed quickly in the first two years, it slowed down in subsequent years. The reform was extended in the Sixth Economic, Social and Cultural Development Plan (2016-2021), but is still not complete. As for the steel sector, indirect subsidies mainly in the form of provision of energy at lower than market price, were granted at least up until 2020, when steel, alongside cement, was labelled as the sector receiving the most subsidies (Mehr News, 2020[69]).During that year, when oil prices were between USD 50 and USD 70, subsidies between IRR 120-150 trillion were granted to the steel sector through the provision of under-priced energy (Ismaili, 2020[70]). Some media sources mention a governmental decision to lift subsidies provided to the steel sector at the end of 2020 and finally align the cost of energy for steel to the actual cost, (Eghtesad Online, 2020[71]), but information on implementation does not seem to be publicly available.

The distribution of oil and gas within Iran is completely managed by the National Iranian Gas Company and the National Iranian Oil Companies, both subsidiaries of the Ministry of Petroleum, which is also responsible for pricing resources. This, in turn, renders the identification of subsidies almost impossible, insofar as prices are never publicly announced. A media report from 2014 sought to calculate the amount of subsidies perceived by steel firms, which amounted to about USD 118 per tonne of steel, based on a price of IRR 1320 per cubic meter of gas (IFNAA, 2014[67]).

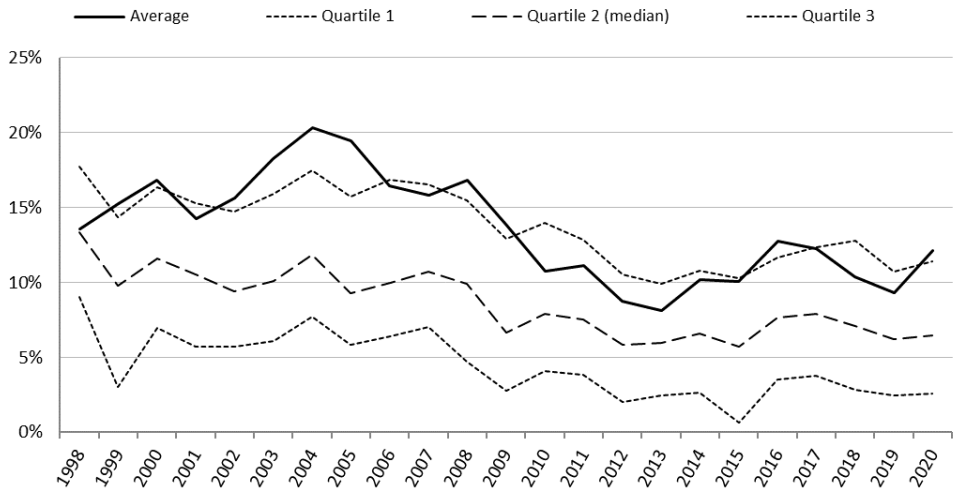
7. Financial performance of steel firms

7.1. Profitability

The average operating profitability of the global steelmaking industry, defined here by the ratio of earnings before interest, taxes and depreciation (EBITDA) to sales revenues (weighted by total sales) increased to 12% in 2020 from 9% in 2019 (Figure 11). This rebound in average operating profitability followed a three-year decline that saw profitability fall from 13% in 2016. Nevertheless, median profitability only increased by a negligible amount, suggesting that the increase in profitability affected steel firms unequally and was mostly confined to larger steel firms (as average operating profitability is weighted by total sales, contrary to median profitability). In spite of the rebound, average operating profitability is not high by any historical standard: it is still below its 13.6% average for the period 1998 to 2020.

Furthermore, profitability is probably still below sustainable levels for a large number of firms. For example, the median line in Figure 11 indicates that in 2020 half of the companies had operating profitability levels below 6.4%, while the lower dashed line shows that almost 25% of the steelmaking companies were operating with profitability ratios lower than 2.6%, and were thus likely faced with a particularly challenging financial situation.

Figure 11. Evolution of operating profitability between 1998 and 2020

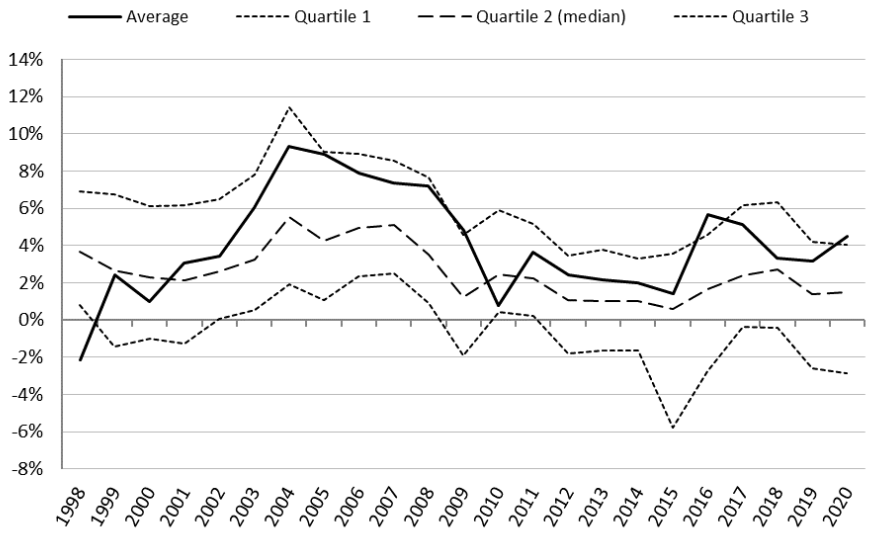


Note: Operating profitability is defined as EBITDA (earnings before interest, taxes, depreciation and amortisation) to sales revenue in per cent. The dotted lines provide information on the distribution (first and third quartiles) of operating profitability across the firms in the sample: 25% of the companies have operating profitability below (above) the first (third) quartile line. The long dashed line provides information on median operating profitability across firms in the sample: this line divides the distribution in two halves with 50% of the companies having operating profitability below the line. The heavy line depicts the industry average operating profitability, weighted by total sales.
Source: OECD calculations based on data from Refinitiv.

The steel industry's net profit, which is derived from operating profit by deducting all expenses incurred by firms, including taxes, interest paid on debt, depreciation and

amortisation, paints a similar picture of an industry facing challenging market conditions, albeit with divergences across companies. Figure 12 shows that the average net profit margin (average, weighted by sales, of the net profits over sales) of steel companies rebounded in 2020 after falling year after year since 2015, but that the median net margin did not experience a similar improvement. More precisely, whereas the average net profit margin rebounded by 1.3 percentage points in 2020, increasing from a very low level of 3.2% in 2019 to about 4.5% in 2020 (which corresponds to its historical average for the period 1998 to 2020), median net profits remained flat at a historically low ratio of 1.5% in both 2019 and 2020. The gap between the first and fourth quartile of the net profit distribution widened considerably in 2020, mostly due to the relatively worse performance of the lower quartile of the distribution. The quartile of worse performing firms are indeed facing a historically high financial pressure, as all repoted losses below 2.8% of their total sales for the year 2020. Only the year 2015 was worse for this quartile than 2020, when examining the whole 1998-2020 period.

Figure 12. Evolution of net profit margin between 1998 and 2020

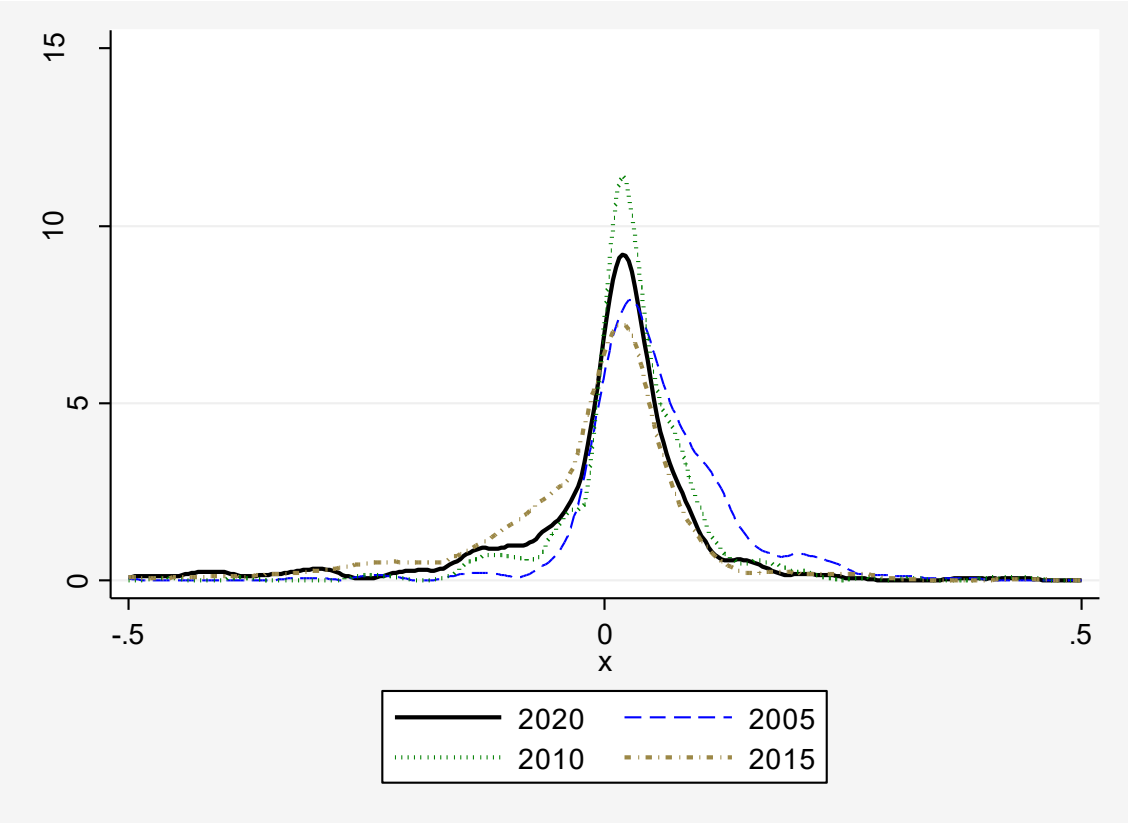


Note: The dotted lines provide information on the distribution (first and third quartiles) of net profits across the firms in the sample: 25% of the companies have net profits below (above) the first (third) quartile line. The long dash line provides information on median net profits across firms in the sample: this line divides the distribution in two halves with 50% of the companies having net profits below the line. The heavy line depicts the industry average net profits, weighted by sales.
Source: OECD calculations based on data from Refinitiv.

Figure 13 below shows how the distribution of (a logarithmic transformation of) net profit margins across steelmaking companies has changed between four selected years (2005, 2010, 2015 and 2020). It is clear that there has been a strong shift in the distribution towards the left (i.e. lower profitability) between 2005 and 2015: the reduction in average profitability was felt across the board. Moreover, a fatter left tail in the 2015 distribution indicates that a greater number of firms were facing considerable challenges. The distribution shifted back to the right in 2020, but never regained the position it had in 2005. The distribution remains still more to the left, indicating that most firms are making less profits now than in 2005. Moreover, the relatively fat left tail of the distribution in 2020 (the solid black line appears above all others) suggests that a non-negligible number of steel firms are facing considerable financial difficulties. Also, net profits seem to have been more

heterogeneous across firms in 2020 (more dispersion), with a smaller number of firms standing at the middle of the distribution. The additional costs in running operations after disruptions last year as well as inventory management effects continue to lag on steel company margins and earnings, and some analysts believe the stronger prices and orders seen during the last quarter of 2020 will thus only be reflected in the firms second or third quarter of 2021 financial results (Foster, 2021[65]).

Figure 13. Distribution of net profits in selected years



Note: This figure plots the distributions of net profit margin in different years using kernel density estimates. The kernel density estimate gives an approximation of the probability density function of a given distribution — up to a given point x in the horizontal axis, the area under this function provides the percentage of observations that have values that are lower or equal to x. The total area below the curve for each year equals one. For presentation purposes, the net profit values shown on the X axis of the chart range between 50% and 50%.
Source: OECD calculations based on data from Refinitiv.

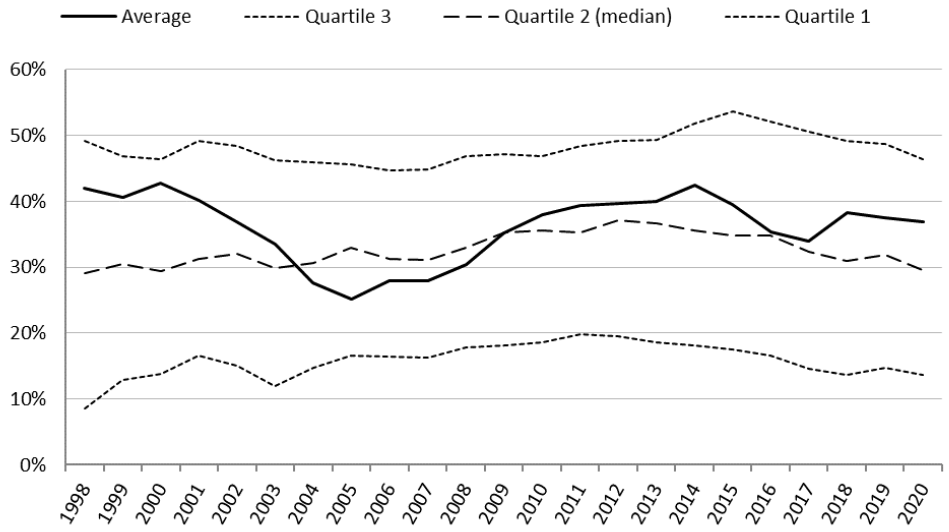
7.2. Indebtedness

After recording increasing debt levels from 2005 to 2014, the steel sector seems to have continued to slowly deleverage in 2020. Average debt over assets (weighted by total sales) was reduced by 1.3% in 2020 compared to one year earlier, resulting in a 37% ratio for debt over assets in 2020. The median debt was reduced even more significantly, i.e. by 7.5%, which resulted in a 30% ratio for debt over assets in 2020 (Figure 14).

As in previous reports, caution is warranted in interpreting steel companies' indebtedness. First, there are sample limitations in the data presented in this section as only debt of publicly listed companies is included in the Refinitiv data used for this report. Hence, debt levels represented in Figure 14 exclude data for unlisted firms (including state-owned

companies), some of which are possibly large and indebted. Second, in some large steel-producing economies, debt has been reduced by using debt-for-equity swaps that are not necessarily market-driven and lack clarity concerning losses in cases of bankruptcy (Ren, 2017[72]). Finally, the maturity of the debt and the average interest rate paid are two other relevant aspects to consider for assessing corporate indebtedness. This means that the total indebtedness represented in Figure 14 is not enough to completely capture steel firms' financial conditions, which may be more precarious than they seem.

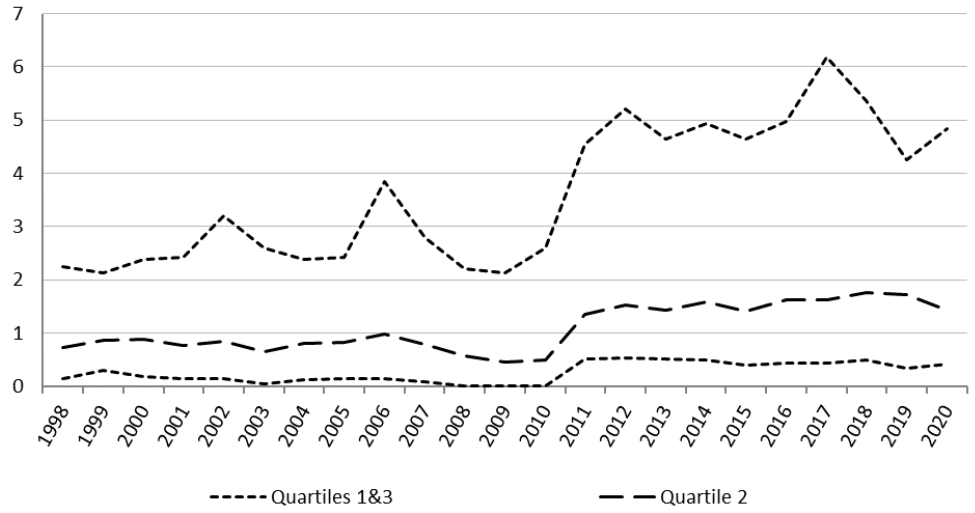
Figure 14. Evolution of indebtedness between 1998 and 2020



Note: The dotted lines provide information on the distribution (first and third quartiles) of indebtedness across the firms in the sample: 25% of the companies have debt to asset ratios below the quartile line at the bottom of the chart, and 25% have ratios above the quartile line at the top. The remaining 50% of companies have debt to asset ratios between the first and third quartile lines. The long dash line provides information on median indebtedness across firms in the sample: this line divides the distribution in two halves with 50% of the companies having debt to assets ratios below the line and 50% above the line. The heavy line depicts the industry average indebtedness, weighted by sales.
Source: OECD calculations based on data from Refinitiv.

Figure 15 presents data on companies' indebtedness in more detail, as it compares the level of long-term (debt of maturity superior to one year) versus short-term debt (debt of maturity less or equal to one year). It shows that the median amount of short-term debt relative to the amount of long term debt of steel companies in the sample ("Quartile 2" in Figure 15) has declined by 1.7% in 2020. This means that there has been a decreasing amount of short-term borrowing compared to longer-term borrowing by steel firms. The reason for the decline is unclear. Longer-term borrowing could be a result of steel firms trying to lock in lower interest rates, given the current low interest rate environment. Nevertheless, the ratio of 1.7% in 2020 is still lower than the average for the period 1998 to 2020, which stands at 1.09%.

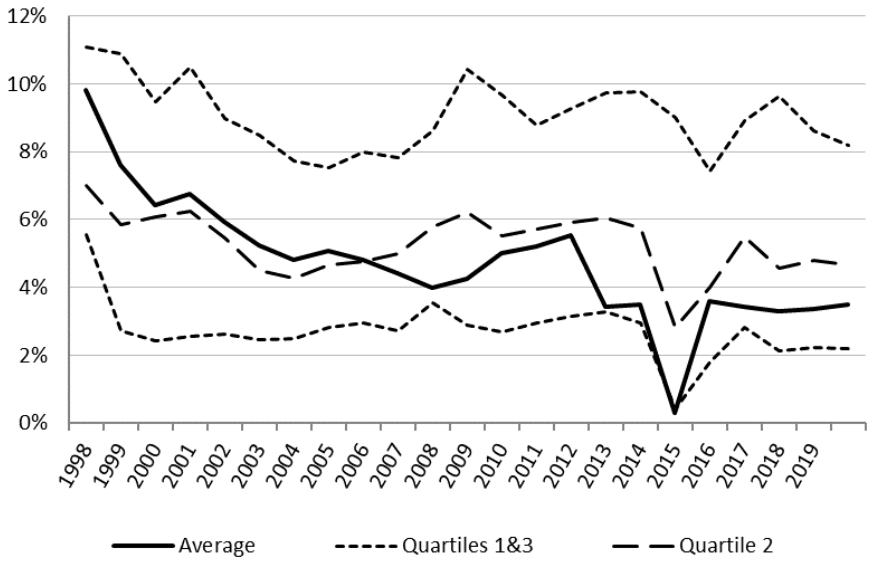
Figure 15. Ratio of short-term debt over long term debt of steel firms from 1998 to 2020



Note: The dotted lines provide information on the distribution (first and third quartiles) of debt composition, represented by the ratio of short term debt over long term debt, across all the firms in the sample: 25% of the companies have a short term debt over long term debt ratio below the quartile line at the bottom of the chart, and 25% have ratios above the quartile line at the top. The remaining 50% of companies have debt to asset ratios between the first and third quartile lines. The long dash line provides information on the median short term debt over long term debt ratio across firms in the sample: this line divides the distribution in two halves with 50% of the companies having debt to assets ratios below the line and 50% above the line.
Source: OECD calculations based on data from Refinitiv.

The current low interest rate environment probably explains the relatively low average interest rate paid by steel firms on their outstanding debt. In 2020, steel firms paid an average (weighted by sales) interest of 3.5% on their outstanding debt (across all maturities), compared to 6.4% in 2000 (Figure 16). This hides differences across firms, as the median interest rate (which does not over-represent the lower rates paid by firms with larger total sales) is higher, standing at 4.7%.

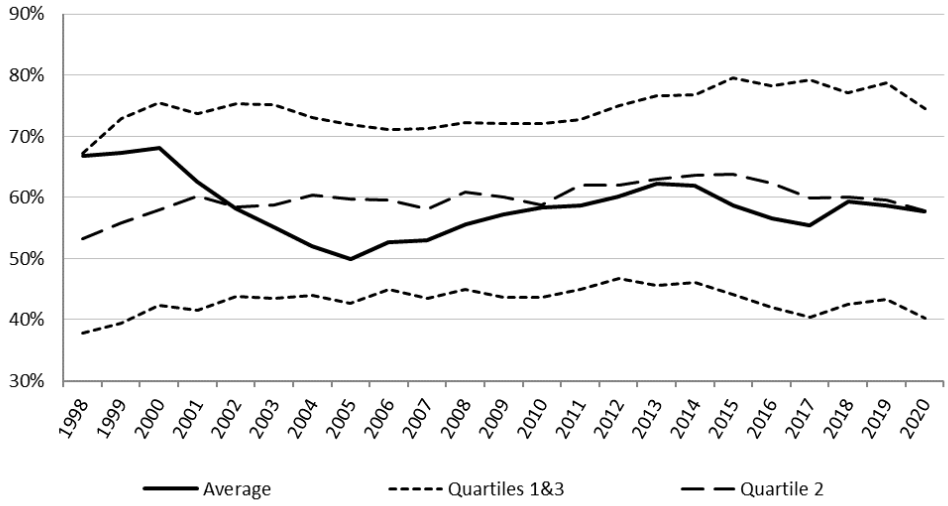
Figure 16. Evolution of interest paid on total debt from 1998 to 2020



Note: The dotted lines provide information on the distribution (first and third quartiles) of interest paid over total debt across the firms in the sample: 25% of the companies have a ratio of interest paid over total debt below the quartile line at the bottom of the chart, and 25% have ratios above the quartile line at the top. The remaining 50% of companies have ratios of interest paid over total debt between the first and third quartile lines. The long dash line provides information on the ratio of interest paid over total debt across firms in the sample. The heavy line depicts the industry average indebtedness, weighted by sales.
Source: OECD calculations based on data from Refinitiv.

Although debt usually constitutes the bulk of the liabilities that a steel firm carries, there are other forms of liabilities. For example, outstanding bills to suppliers, also known as account payables, are another type of liability and so are wages due and pensions. Technically, a steel firm could reduce its debt by delaying the payment it makes to its suppliers. To avoid misinterpreting the situation due to these possible substitution effects, it is useful to consider the ratio of total liabilities over assets (Figure 17) and to compare it to the debt-to-asset ratio shown before. This ratio seems to confirm the slightly positive picture of debt reduction relative to assets' book value. Nevertheless, debt reduction may not always be a choice or strategy of the steel firms, but due to lenders' assessments of the risks of their business. Over the longer-term, steel mills may have less ease of access to funding, even in a context of overall extremely low government borrowing rates, due to the negative expectations of lenders and investors about the long-term prospects of the sector, coupled with the depressed asset valuations of the steel firms (Marcus et al., 2020[73]). Some anecdotal evidence points towards the disappearing in 2020 of attractively priced borrowed funds that benefitted many steel mills in the past (Marcus et al., 2020[73]).

Figure 17. Ratio of steel firms' liabilities over assets



Note: Liabilities are defined here as total liabilities, including short-term and long-term debt, account payables and deferred income tax. Assets are defined as total assets, which includes properties, plants, long-term investments, but also intangibles (e.g. patents). The dotted lines provide information on the distribution (first and third quartiles) of the ratio of liabilities over assets across the firms in the sample: 25% of the companies have liabilities to assets ratios below the quartile line at the bottom of the chart, and 25% have ratios above the quartile line at the top. The remaining 50% of companies have liabilities to assets ratios between the first and third quartile lines. The long dash line provides information on median ratio of liabilities over assets across firms in the sample. The heavy line depicts the industry average ratio, weighted by sales.
Source: OECD calculations based on data from Refinitiv.

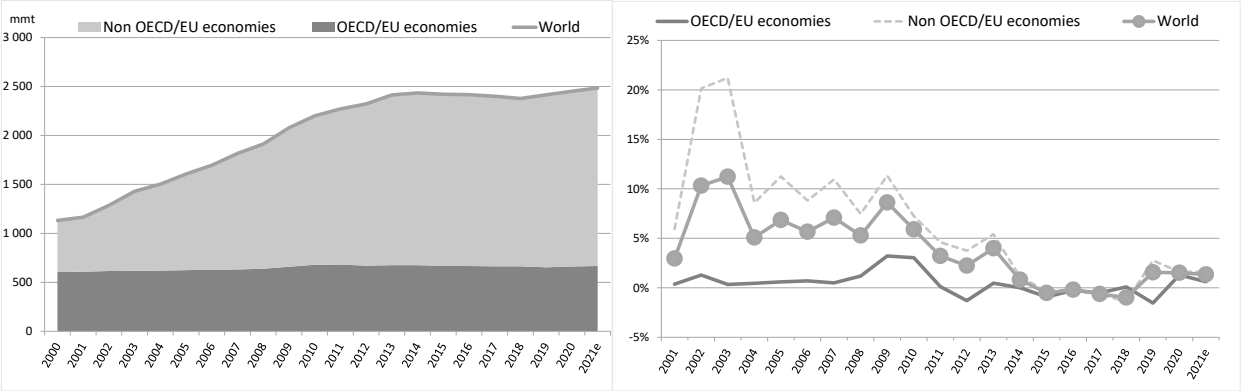
8. The global steelmaking capacity situation

The latest available information (as of June 2021) suggests that global steelmaking capacity could increase in 2021 for the third year in a row (Figure 18). Global steelmaking capacity could increase to 2 484.8 mmt at the end of 2021, resulting in a 1.3% increase from the level at the end of 2020 This would mean 33.1 mmt of new steel production capacity, according to the latest information on new capacity additions and closures available.

In 2021, the largest capacity additions are expected to take place in Asia, where an additional 16.4 mmt of capacity is coming on stream. Significant capacity additions are also expected to take place in the Middle East, where 9.9 mmt of capacity is expected to be added this year. Steelmaking capacity could also increase in North America (by 4.0 mmt, i.e. 2.6% over the previous year), the CIS (1.3 mmt, i.e. 0.9% over the previous year), Africa (1.0 mmt, i.e. 2.1% over the previous year) and Latin America (0.6 mmt, i.e. 0.7% over the previous year). On the contrary, steelmaking capacity should not change in Europe and Oceania as new underway investments and permanent closures are not registered during 2021, according to the sources used to update the OECD's steel production capacity database.

Figure 18. Evolution of crude steelmaking capacity in OECD/EU economies and non OECD/EU economies

A. Level (mmt) B. Annual % change



Note: Capacity data reflect information available to June 2021.
Source: OECD

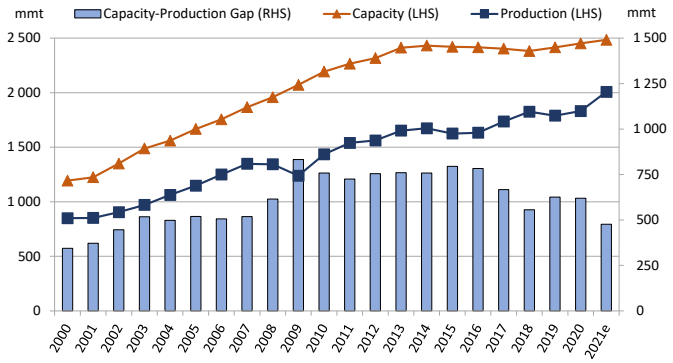
The expected increase in capacity is lower than than the annualgrowth of world steel production (based on the first six months of this year) which would result in the easing of the capacity –production gap to 476.9 mmt in 2021, compared to 620.0 mmt in 2020. (

Figure 19 A). The annualised data from the first half of 2021 suggest a potential rise in the global steel production as a share of capacity, a rough indicator of the global utilisation rate, from 74.7% in 2020 to 80.8% in 2021 (

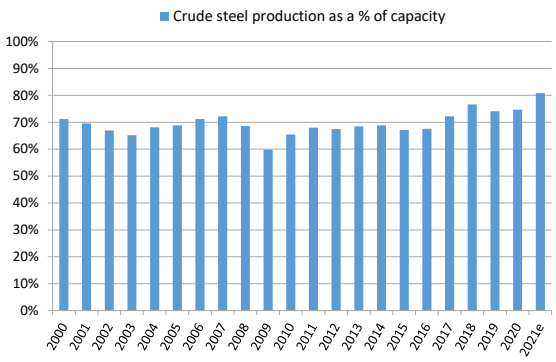
Figure 19 B).

Figure 19. Global crude steelmaking capacity and crude steel production

A. Capacity-Production gap (mmt)



B. Crude steel production as a % of capacity



Note: Capacity data reflect information up to June 2021. Production figure for 2021 is calculated by multiplying the production for the six months of 2021 (January to June) by 2. Annual production data for 2020 are based on worldsteel (released on 23 July 2021). Annual production data from 2000 to 2019 are from "Steel Statistical Yearbook 2020", published by worldsteel (Worldsteel, 2021[74]).
Source: OECD for capacity and worldsteel for production.

9. The steel market outlook

9.1. Global steel market outlook

In its April 2021 SRO, worldsteel forecast steel consumption to increase by 5.8% and 2.7% in 2021 and 2022 respectively. The forecast assumed a stabilisation of the COVID-19 pandemic. In China and in mature economies, government-backed infrastructure spending is expected to support steel-demand growth in the construction sector. Government support to household incomes and pent-up demand are forecast to support a recovery in steel demand from manufacturing and durable goods. Global capital spending is also expected to recover and support steel demand from the machinery sector (worldsteel, 2021[1]).

Uncertainty surrounding the evolution of COVID-19 and of trade relations poses substantial risks to the outlook, particularly in those emerging economies that have experienced lower rates of vaccination and lower levels of government intervention. Strained trade relations pose risks to steel-demand growth in manufacturing, particularly in the mature economies and China (worldsteel, 2021[1]).

9.2. Regional steel market outlook

9.2.1. Americas

In Central and South America, worldsteel expects finished-steel demand to rebound by 10.6% and 4.2% in 2021 and 2022 respectively (worldsteel, 2021[1]). In the early months of 2021, the construction sector continued to support a recovery of steel demand in Argentina and Peru (Gerdau, 2021[75]). In their Q1 2021 quarterly reports, regional steelmakers expected drilling activity to continue to recover in 2021, supported by rising oil prices (Tenaris, 2021[76]).

In Argentina, steel demand rebounded in Q4 2020 and in Q1 2021, supported by activity in numerous steel-consuming sectors including agricultural machinery and equipment, food and disinfectant containers, and construction. Steelmakers active in the Argentinian market expected durable goods, industrial materials and drilling activity to sustain the recovery (Ternium, 2021[77]; Tenaris, 2021[76]; Cámara Argentina del Acero, 2021[78]). However, risks linked to COVID-19 remain and affect steel-consuming sectors unevenly. Automotive production has continued to grow robustly in May 2021, but available data for April-June 2021 suggest that the tightening of restrictions to contain the second wave of infections in May 2021 could yet undermine the pace of steel-demand recovery in the construction sector (CEP-XXI, 2021, p. 31[79]; ADEFA, 2021[80]; Cámara Argentina del Acero, 2021[78]). The OECD expects that GDP will expand by 6.1% in 2021, underpinned by higher commodity prices and government support to firms and household incomes (OECD, 2021, pp. 66-67[81]).

In Brazil in the first five months of 2021, apparent finished-steel demand increased to 11.6 mmt, the highest level since at least 2013, representing a 33.4% growth compared to the first five months of 2019 (Aço Brasil, 2021[5]). Some steelmakers have reported record financial results and strong demand for Q1 2021 (Gerdau, 2021[75]; ArcelorMittal, 2021[82]). Until May 2021, construction sector enterprises reported low levels of activity and employment, due to the effects of the pandemic and the lack or high cost of raw materials. At the same time, their expectations of growth for the second half of 2021 were robust (CNI, 2021[83]; [84]). Expectations of growth in machinery and equipment manufacturing, another key steel-consuming sector, were strong throughout the first half of 2021 (CNI,

2021[85]). Auto production rebounded in the first half of 2021, but shortages of semiconductors impeded a recovery to 2019 levels. In the expectation that supply-chain issues will persist, the Brazilian National Association of Automotive Vehicles Producers revised its forecast for annual automotive production growth downwards, from 25% to 22%. This represents 2.46 million units compared to 2.94 million units in 2019 (ANFAVEA, 2021[86]; [87]). Worsening expectations of Brazil's economic performance in the second half of 2021 have moderated the outlook of Brazilian steel industry executives in June 2021 (Aço Brasil, 2021[88]). The risk that COVID-19 infections may constrain the economic recovery remains high, and a deterioration of the sanitary situation has for example reduced economic activity in March 2021 (OECD, 2021, p. 82[81]).

In Chile, deliveries of rebar to the construction sector in the first five months of 2021 were at their highest level since 2013 (CChC, 2021[89]), suggesting that a strong recovery in steel demand may be underway. Growing vitality was also observed in the subsector of infrastructure, where activity accelerated in April (CChC, 2021[90]). The Cámara Chilena de la Construcción, the industry body of Chilean construction firms, expects investment in the construction sector to increase between 6.7% and 9.7% in 2021, depending on the speed of execution of government investment in both the residential and the infrastructure subsectors and on the evolution of the COVID-19 epidemic (CChC, 2021[91]; [90]). Risks to the recovery remain however high. For example, tighter restrictions and a general quarantine were reintroduced in the Santiago region in June 2021, despite the high rate of vaccination in the population (Le Figaro, 2021[92]).

In Colombia, construction permits rebounded on a year-on-year basis in March-May 2021. However, they remain below the pre-COVID-19 levels of 2019 (DANE, 2021[93]). Significant public investment plans in infrastructure and housing have not yet made a mark on activity indicators which have remained in contraction at least until Q1 2021 (OECD, 2020[94]; DANE, 2021[95]).

In North America, worldsteel forecasts a steel-demand growth of 7.6% and 4.6% in 2021 and 2022 respectively, supported by a strong recovery in the United States (worldsteel, 2021[1]). In July, the U.S. automotive producers association, the Alliance for Automotive Innovation, forecasted North American automotive production of 15.8 million units for 2021, up 22.7% year-on-year, but below the pre-COVID-19 level of 16.8 million units. Despite strong demand for light vehicles, production levels were expected to remain constrained by the shortage of semiconductors (Alliance for Automotive Innovation, 2021[96]).

In Canada, capital expenditure intentions in machinery and equipment for the year 2021 grew by 6.2%. This level of expenditure would mark a rebound, but it would not offset the decline experienced in 2020. In contrast, capital expenditure intentions in non-residential construction mark a year-on-year growth of 7.5%, surpassing the pre-COVID levels of 2019 (Statistics Canada, 2021[97]). In the five months to May 2021, investment in non-residential building declined 4% year-on-year, while investment in residential building rose by 47%, supported by single dwellings (Statistics Canada, 2021[98]). In April 2021, the Petroleum Services Association of Canada revised its forecasts for drilling activity in 2021 upwards. Due to higher oil and gas prices, the association now forecasts a 20% annual increase, with the majority of the activity expected for the second half of the year (PSAC, 2021[99]). The OECD forecasts that Canada's GDP will grow by 6.1% and 3.8% in 2021 and 2022 respectively, supported by expansive fiscal policy (OECD, 2021[81]).

In Mexico, worldsteel expects finished steel demand to grow by 7.5% and 5.5% in 2021 and 2022 respectively, underpinned by the recovery in the automotive sector and stronger demand in the United States (worldsteel, 2021[1]). Steel manufacturers operating in Mexico reported that their shipments in the domestic market grew in Q1 2021 both on a quarter-

on-quarter and on a year-on-year basis, supported by the robust production of steel-containing goods for the export market and a gradual recovery in the construction sector (Ternium, 2021[100]). In the first six months of 2021, light-vehicle production stood at 1.6 million units, 32% higher than in 2020, but still 41% below the pre-COVID-19 levels of 2019 (INEGI, 2021[101]). Construction activity indicators (such as hours worked and construction value) have trended up between June 2020 and April 2021, the last month for which data are available. However, the totals for the first four months of 2021 remain below the same period in 2020 and long-run historical levels (INEGI, 2021[102]; [103]).

In the United States, worldsteel forecasts finished steel demand to increase by 8.1% and 4.3% in 2021 and 2022 respectively, supported by a strong recovery in the automotive sector and a somewhat weaker growth in the non-residential construction and energy sectors. Upside risks to worldsteel forecast depend on the final shape that the infrastructure spending package of the Biden administration will take (2021[1]). Automotive production in Q1 2021 was reported at 2.5 million units, a small 0.7% year-on-year contraction (OICA, 2021[104]). In May 2021, annualised sales of vehicles stood at 17.5 million units, equivalent to a 41% increase compared to May 2020 and only 2% below 2019 levels (Bureau of Transportation Statistics, 2021[105]). This represented a decline from the higher annualised sales figures of April, but a semiconductors shortage is expected to prevent production from keeping pace with demand at least until September 2021. As a result, the Alliance for Automotive innovation forecast automotive sales in the United States to grow by 17% year-on-year, reaching a similar level as in 2019 (2021[96]). The United States Census Bureau reported that in the first five months of 2021 construction spending had grown between 3.6% and 5.6% year-on-year (2021[106]). In May – the last month for which data were available – the Architectural Billing Index (ABI) recorded strong readings. The ABI – a leading indicator of non-residential construction activity – reported that a growing number of architectural firms experienced increasing billing as well as an increasing number of enquiries. Some firms voiced concerns that shortages of construction materials or their high prices may lead to project cancellations (AIA, 2021[107]). Demand from the oil and gas sector was expected to recover only slowly (Tenaris, 2021[108]; US Steel, 2021[109]; Nucor, 2021[110]).

9.2.2. Africa and the Middle East

According to worldsteel's April 2021 SRO, African steel demand is expected to grow by 8.3% in 2021 (worldsteel, 2021[1]). In South Africa, the industry has faced increasing pressure with fewer local infrastructure projects, high input costs, and global price competition. In June 2021, the South African Department of Trade, Industry and Competition has signed a USD 44 billion plan that aims to revive the local steel industry and boost output. The plan focuses on addressing demand and supply, implementing the African Continental Free Trade Area Agreement (AfCFTA) and has already established a steel fund to support industry projects (Reuters, 2021[111]).

After the gradual resumption of operations hit by the pandemic crisis, ArcelorMittal South Africa (AMSA), which supplies over 61% of the steel used in South Africa, has faced another challenge. The unrest and violence that broke out across the country due to political turmoil will probably affect the company's obligations. The transport of material into and out of AMSA's plants and all dispatches by road have been disrupted (Kallanish, 2021[112]). Taking into account the numerous challenges, AMSA's operating and business results will likely be undermined in the second half of 2021. In 2020, the revenue eroded by 40% year-on-year, while operating and net loss deepened to USD 56 million and USD 117 million respectively (Metal Expert, 2021[113]).

South Africa's construction industry struggled during the COVID-19 lockdown resulting in the rise of unemployment with a Q1 unemployment rate at 32.6%. Statistics South Africa indicated that job losses in the first quarter were recorded mostly in construction, followed by trade, private households, transport and agriculture sectors (Reuters, 2021[114]).

South Africa's automotive sector is gaining momentum and it remains in line with industry expectations. According to the National Association of Automobile Manufacturers of South Africa (NAAMSA), aggregate domestic sales in June 2021 reflected an increase of 20.2% year-on-year while export sales increased by 50.9% year-on-year (NAAMSA, 2021[115]).

Africa's rail sector is poised for growth as many governments in the region are investing to install ultra-modern railroad. According to Metal Expert, steel production is expected to increase as the supply section and rail rolling mills will be built in Africa (Metal Expert, 2021[116]). According to Global data, Sub-Saharan Africa has significant infrastructure needs, but funding remains insufficient, despite the huge opportunities for investment. GlobalData pointed out that, in Sub-Saharan Africa, Tanzania stands out as having good prospects for accelerating infrastructure, given its low debt position and an economy that avoided a recession in 2020. Cameroon, Ghana and Kenya are also considered to have many good investment prospects (GlobalData, 2021[117]).

Morocco's automobile industry has been undergoing steady growth, and experts predict the country will become an international hub for automotive production. According to Mordor Intelligence, the Moroccan automotive market was valued at USD 8 billion in 2020 and is expected to reach a value of USD 22 billion by 2026, registering a CAGR of over 15% during the forecast period (Mordor Intelligence, 2021[118]).

In the Middle East and North Africa (MENA), spending of at least 8.2% of GDP will be needed to meet the infrastructure goals by 2030 according to the World Bank. However, infrastructure spending over the past decade has averaged just 3% of GDP (World Bank, 2020[119]). Egypt's loss of tourism income since the beginning of 2020 will undermine the country's recovery in 2021. This is limiting new residential construction and infrastructure projects (Kallanish, 2021[120]) Despite the numerous challenges, housing construction, infrastructure development, electricity services and reduction of environmental impact remain at the core of the government's agenda (Metal Expert, 2021[121]).

In its April 2021 SRO, worldsteel forecast steel consumption to increase by 5.4% in the Middle East in 2021 (worldsteel, 2021[1]). Strong governmental expenditures, buoyed by high-energy prices are expected to stimulate construction-led steel demand for the region (Market Research, 2021[122]). Saudi Arabia moves forwards the implementation of Vision 2030 targets, with affordable housing as a key initiative. The program is expected to provide regular support to the domestic steel producers (Metal Expert, 2021[123]). The United Arab Emirates' construction sector is expected to grow by 3.1% in 2021 and to expand at an annual average of 3.8% between 2022 and 2025 (Research and Markets, 2021[124]). A large part of the Kuwait budget for the 2021-2022 fiscal year will finance construction projects. According to Metal Expert, capital expenditure is expected to increase by 20% y-o-y to USD 11.5 billion. About 15% of the total expenditure in 2021-2022 will finance infrastructure projects (Metal Expert, 2021[125]).

Steel consumption weakened in Iran in Q1 of the current Persian year (March 21 – June 21, 2021). Steel consumption was affected by insufficient performance of the construction segment due to limitations caused by COVID-19 as well as slower automotive production (Metal Expert, 2021[126]). Despite a decline in steel demand, Iranian crude steel output grew 6% on-year in Q1 of the current Persian year lagging behind finished steel output growth. Decline in domestic consumption and increasing steel production has been a consistent

feature of the Iranian steel sector for some time, and is proably linked to government mandated targets of steel production as well as to the provision of subsidies to the sector (Box 1 of Section 4.2). However, the recent electricity supply curbs will likely slowdown steel production necessitating a revision of the Iranian Steel Producers' Association (ISPA)'s 33.6mt output forecast for the current Iranian year (Kallanish, 2021[127]), in spite of artificially low energy input price for the sector (Box 3 of Section 6.2).

9.2.3. Asia and Oceania

In worldsteel's April 2021 SRO, steel consumption in Asia and Oceania is forecasted to increase by 4.7% in 2021. India is forecasted to be the driver of growth in steel demand in those regions in 2021 since Indian steel demand is expected to rebound sharply (worldsteel, 2021[1]).

In China, steel demand is expected to increase by 3.0% in 2021, after expanding 9.1% in 2020. Worldsteel noted that the Chinese government has started several new projects to support the economy, so the growth in infrastructure investment would accelerate in 2021. In 2021, infrastructure spending will focus on supporting public health to address the shortcomings exposed by the pandemic, as well as the construction of railways, highways, water transportation, airports, major water conservancy, major technology and energy infrastructure, and the transformation of old urban communities (Chinese Government, 2021[128]). Until now, 16 provinces and municipalities including Beijing, Shanghai, Chongqing, and Guangxi have issued construction investment plans for major projects in 2021, with a total investment of about RMB 30.34 trillion and planned investment in 2021 for about RMB 6 trillion (China SME Information Network, 2021[129]). According to the National Bureau of Statistics, From January to June, the national investment in fixed assets (excluding rural households) increased by 12.6% year-on-year (National Bureau of Statistics, 2021[130]).

On the other hand, the government's reaction to the new US administration's trade policy and its intensified environmental focus could add uncertainty to steel demand (worldsteel, 2021[1]).

The China metallurgical industry planning and research institute (MPI, Chinese state-run think tank) has published a more conservative outlook for steel demand in 2021 and forecasted a meagre positive growth rate of 1.0%. According to MPI, steel demand will moderately benefit from a slight increase in construction, machinery, automotive, energy, home appliances, and railway sector except shipbuilding industry (ChinaNewsWeb, 2021[131]).

Looking at the automotive sector, the China Association of Automobile Manufacturers (CAAM) forecasts total automotive sales (including passenger and commercial vehicles) will increase by 7% in 2021, to exceed 27 million units following a 1.9% decrease to 25.31 million units in 2020 (Metal Expert, 2021[132]). Meanwhile, the association warned that the supply shortage of automotive semiconductor chips might impact vehicle production (Platts, 2021[133]).

In India, and according to worldsteel's April 2021 SRO, steel demand could increase by 19.8% to 106.1 mmt in 2021, exceeding the level of 2019. In 2020, Indian steel demand declined by 13.7% because of an extended period of severe lockdowns that interfered with most industrial and construction activities (worldsteel, 2021[1]). However, the economy has been recovering strongly, and massive government investment in infrastructure development and a positive outlook for automotive industry added optimism to 2021 forecasts. For instance, the Indian government approved the total capital expenditure of 73.4 USD billion for FY2022 (April 2021 – March 2022), which is 34.5% higher than last

year (Metal Expert, 2021[134]). In addition, Consulting firm LMC Automotive expects that Indian automotive sales will increase by 35% to 3.17 million units in 2021 from 2.35 million units in 2020 (Reuters, 2021[135]).

In Japan, steel demand is expected to recover in 2021. In its April 2021 SRO, the worldsteel forecasted a growth rate of 6.5% in 2021 following the 16.8% decline in 2020. This recovery is anticipated to be driven by the automotive sector and industrial machinery sector (worldsteel, 2021[1]).

In Korea, steel demand in 2021 is expected to rebound by 5.2% supported by the automotive and shipbuilding sectors, after shrinking by 8.0% in 2020, according to the latest forecast by worldsteel (worldsteel, 2021[1]). For example, Hyundai Steel forecasts that domestic automotive production will rise by 8.5% to 3.81 million units and new shipbuilding orders will increase by 11.1% to 9.67 million CGT (Compensated Gross Tonnage) in 2021 (Platts, 2021[136]). In fact, automotive production increased by 11.5% to 1.8 million units due to robust export growth (27.9%) in the first six months of 2021 (Ministry of Trade, 2021[137]). The total number of new shipbuilding orders in South Korea reached 10.88 million CGT in the first six months of 2021. According to the Ministry of Trade, Industry and Energy (MOTIE), this was the highest performance in 13 years (Metal Expert, 2021[138]) .

Steel demand in the ASEAN-5 region (Indonesia, Malaysia, Philippines, Thailand and Viet Nam) is expected to rebound by 6.2% in 2021, after having shrunk 11.9% in 2020, according to worldsteel's April 2021 SRO (worldsteel, 2021[1]). In addition, South East Asia Iron & Steel Institute (SEASI) expects steel demand in the broader ASEAN region (Indonesia, Malaysia, Philippines, Thailand Viet Nam and Singapore) to expand by 6.1 % from 70.6 mmt in 2020 to 74.9 mmt in 2021 (SEAISI, 2021[139]).

Domestic steel consumption in Thailand may increase by 4.7% year-on-year to 17.1-17.4 mmt after falling by 11.6% in 2020, according to the Iron and Steel Institute of Thailand (ISIT). The main driver is a recovery of the construction industry. For instance, public construction investment surged by 19.6% y-o-y during the first three months of 2021. Besides, automotive production is expected to increase by 5.1% to 1.5 million units in 2021, according to the Federation of Thai Industries (Metal Expert, 2021[140]). On the other hand, they are concerned about the global semiconductor shortage and the third wave of the pandemic in Thailand (Bangkokpost, 2021[141]).

Steel consumption in Indonesia is projected to increase by 6% to 16 mmt y-o-y in 2021, according to the Indonesian Iron and Steel Industry Association (Metal Expert, 2021[142]). In the automotive industry, the government's tax relaxation program for the automotive market implemented from March 2021 is expected to affect the steel sector positively (Metal Expert, 2021[143]). In fact, domestic sales increased by 52% year-on-year to 393,469 units in the first half of 2021, according to the Association of Indonesian Automotive Industries (GAIKINDO) (Metal Expert, 2021[144]). In the long term, steel consumption in Indonesia may reach 22 mmt in 2025, according to the base scenario by the Indonesian Iron and Steel Industry Association (Metal Expert, 2021[142]).

In Malaysia, automotive sales would grow by at least around 8% to 570,000 units in 2021, according to the Malaysian Automotive Association. In addition, they expect that domestic sales may reach 662,100 units by 2025 (Malaysian Automotive Association, 2021[145]).

In Viet Nam, Hoa Sen Group expects further recovery of domestic steel demand and higher export sales. Therefore, they have an optimistic production target of 1.8 mmt by 11% increases y-o-y in FY 2021 (Metal Expert, 2021[146]).

9.2.4. Europe and CIS economies

In the EU and the UK[15], worldsteel forecasts finished-steel consumption to rebound by 10.2% in 2021 and then grow by 4.8% in 2022. worldsteel expects that public construction initiatives and a strong recovery in automotive manufacturing will promote higher finished-steel demand (worldsteel, 2021[1]). Eurofer forecasts slightly higher growth of 11.7% and 4.9% in 2021 and 2022 respectively (EUROFER, 2021[147]). Neither association expects that steel consumption will return to pre-COVID levels before 2022. Confidence in the EU construction sector improved continuously between January and June 2021, the last month for which data were available (Eurostat, 2021[148]). Eurofer expects that governments' countercyclical investment in infrastructure will drive 5% growth in construction output in 2021. In the automotive sector, Q1 2021 production stood at 3.8 million units – the same level as in 2020, but 19.6% below production in Q1 2019 (OICA, 2021[104]). A similar trend of strong year-on-year rebound without recovery characterised EU demand for passenger cars. In the six months to June, demand for new cars grew 25% year-on-year, to 5.4 million units, equivalent to 1.5 million units below pre-COVID-19 levels (ACEA, 2021[149]). For 2021 as a whole, Eurofer expects a very strong rebound in the automotive sector, contingent on the resumption of demand from the EU key trading partners. However, continuous supply chain disruptions are expected to keep production levels below historical highs (EUROFER, 2021[147]). Concerns over COVID-19-related disruptions to supply chains, trade frictions and hesitant business confidence are expected to weigh on the output of the mechanical engineering sector. Also for this steel-consuming sector, Eurofer forecasts that output will rebound strongly but will fall short of a complete recovery in 2021 (EUROFER, 2021[147]).

In Other Europe, worldsteel forecasts the continuation of robust steel-demand growth, with growth rates of 17.4% and 5.5% in 2021 and 2022 respectively. Growth in Turkey is expected at 18.7% (2021) and 5.7% (2022), supported by the continuous uptrend of construction activity (worldsteel, 2021[1]). In Q1 2021, steel demand grew more than 15% year-on-year and building permits rose to their highest level since 2017, mostly supported by growth in the residential segment (Erdemir, 2021[150]; TUIK, 2021[151]). A strong rebound was reported also in the household-appliances sector, where production of the four main products (fridge, washing machines, dishwashers and ovens) increased 57% year-on-year in the first four months of 2021 (Beysad, 2021[152]).

In its April 2021 SRO, worldsteel forecast steel demand in the C.I.S. to grow by 3.4% and 3.2% in 2021 and 2022 respectively. In Russia, worldsteel expects steel-demand growth of 3% in both years, supported by the initiatives of the National Projects, a government investment package with a 2024 horizon (worldsteel, 2021[1]; The Accounts Chamber of the Russian Federation, 2020[153]). In the first quarter of 2021, Russian automotive production rose by 14.3% year-on-year but remained 2.7% below 2019 levels (OICA, 2021[104]). Steel demand continued to be supported in Q2 2021 by the strong recovery in the automotive industry and a pick-up in construction activity and in the oil and gas sector (MMK, 2021[154]). Steelmakers operating in the Russian market expect that an intensification of government expenditure in the National Projects will support steel demand recovery particularly in the second half of 2021 (MMK, 2021[154]).

In Ukraine, among the key steel-consuming sectors, only tube and pipe production grew by 4.4% year-on-year in Q1 2021, while construction and machinery continued to contract by 12.3% and 2.4% year-on-year respectively (Metinvest, 2021[155]).

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Endnotes

[1] https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708~dc78cc4b0d.en.html

[2] Commercial banks having COVID related funds on their account with the Bank of Japan will be paid the short term interest rate, which is negative. The scheme should thus promote further lending to the economy.

[3] In China, debt by local government investment vehicles is classified as corporate debt.

[4]https://pib.gov.in/PressReleasePage.aspx?PRID=1703785#:~:text=(i)%20Automobiles%20and%20Auto%20Components,solar%20PV%20modules%2C%20and%20(x

[5] https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#I

[6] Compared to production statistics, consumption statistics are always available with a significant lag. Section 9 uses anecdotal evidence and downstream sector performance to try to provide an outlook for steel consumption going forward.

[7] Aço Brasil is the source used for the growth rate of Brazil (Aço Brasil, 2021[5]).

[8] For comparison, the cement industry in China concentration of the top 10 producers is 55.2% (Ccement, 2020[272]), and for coal it is 47.6% (SINA, 2021[433]).

[9] The present publication uses time series that extend beyond the date of the United Kingdom's withdrawal from the European Union on 1 February 2020. In order to maintain consistency over time, the "European Union" aggregate presented here excludes the UK for the entire time series. This allows more meaningful year-over-year comparisons.

[10] Data retrieved from the WTO data portal, indicator: merchandise exports by product group, retrievable at: https://data.wto.org/?idSavedQuery=d4a9a4c4-92be-4f44-966b-f04244c22529

[11] On 18 November 2020 the foreign ministry spokesperson Zhao Lijian officially confirmed that "many" Australian coal shipments had "failed to pass environmental standard tests" (Muju, 2020[360]). China's coking coal imports from Australia slumped in October 2020 to 1.53 million tonnes, or about 26% of its total imports of the fuel, according to customs data, down from 78% in March.

[12] Coals within a narrow range of volatile matter (from 20% to 25%) are prefered by most coke makers as it allows for an optimal flame stability in the oven. Besides being more wasteful as more coal is lost as gas, coals with higher volatile matter content may be associated with spontaneous combustion. Furthermore, low-volatile matter can cause wall pressure that damages the coke oven.

[13] The ferrous sector contributes about 15% to China's total carbon emissions (Zhang, 2021[63]).

[14] The companies obtaining those new permits are located mainly in steel production hubs such as the provinces of Hebei, Shandong and Jiangsu. Others are in provinces that typically have a high output of ferrous scrap such as Guangdong and Hubei (American Metal Market, 2021[64]).

[15] worldsteel and Eurofer's forecasts refers to the EU 27 + UK (worldsteel, 2021[1]) (EUROFER, 2021[147]).