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Steel Market Development report

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This paper was authored by Fabien Mercier, Luciano Giua, Rodrigo Pazos, Muhammad Yamin and Jeongyeon Lee from the OECD Directorate for Science, Technology and Innovation (STI). It was approved and declassified by the OECD Steel Committee on 12/11/2024 and prepared for publication on the O.N.E. platform by the OECD Secretariat.

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1. Executive Summary

In 2024, the steel industry faces intensified challenges. Capacity growth, fuelled by subsidies in partner economies that outpace OECD Member countries by 11 times, coupled with sluggish demand growth, has exacerbated excess capacity and led to a surge of exports from China. Amid modest and diverging demand conditions, steel prices have plummeted 30-50% since July 2021, converging towards Chinese levels. This has squeezed profit margins in spite of temporary lower raw material cost pressures. Going forward, structurally low steel prices due to unmitigated excess capacity may hinder the sector's ability to adapt to emerging market demands and support decarbonisation efforts. In the near term, global steel demand is still expected to rise to 1,782 mmt in 2024, but steel markets are facing a sluggish demand in advanced economies and a real estate crisis in the People's Republic of China (hereafter China).

This report provides an overview of recent steel market developments, focusing on steel demand, supply, and prices during the first semester of 2024, with reflections on the outlook for steel markets going forward. It also includes a section related to the use of subsidies, especially energy subsidies, in regions of rapidly expanding steel production capacity.

Key findings are:

- High inflation, geopolitical tensions, and sluggish steel consumption growth in developed markets and a rapidly deteriorating real estate sector in the People's Republic of China (hereafter China) despite government measures weigh on current and future growth and steel demand. Manufacturers' costs have remained stuck at very elevated levels in OECD and in several partner economies, whereas they have fallen back to pre-pandemic levels in China. Disparities in access to cheap energy sources significantly affect the price-competitiveness of industries in different jurisdictions. Purchasing managers of steel-intensive products anticipate some growth of new orders in Asia for the upcoming months, especially for export orders, while they expect contractions in the United States and Europe for both new orders and new export orders.
- Despite falling profits in 2022, steel firms located in partner economies expanded both capacity and capacity utilisation. The slowdown in China's domestic market has unleashed a surplus of steel aggressively seeking international buyers. Consequently, exports from China to ASEAN, the Middle East, South America and to OECD Member countries have surged, threatening their domestic steel firms market shares and financial viability, especially in OECD Member countries where steel firms do not benefit from the high level of below market borrowings and other forms of government support offered to Chinese firms.
- Government subsidies and other non-market policies and practices can significantly accelerate capacity expansions, regardless of domestic or global steel market conditions, thereby intensifying the issue of excess capacity. Since 2020, subsidies per unit of newly installed productive capacity have increased in both OECD Member countries and partner economies. However, the scale of subsidies is substantially higher in partner economies compared to OECD Member countries. For instance, steel firms in partner economies received, on average, 42% more in cash grants and 11 times more in below-market borrowings than in OECD Member countries. This phenomenon is not limited to large steel producing economies but

can be witnessed as well in almost every smaller economy of rapidly expanding capacity. Countries like Egypt and Algeria have extensively used energy subsidies to lower their steel production costs and to boost their domestic steel outputs, while Malaysia, Indonesia, and Viet Nam have attracted substantial foreign direct investment, particularly from Chinese firms, which benefited from a mix of targeted tax incentives, low-cost financing from state-owned banks, and reduced energy prices. Those subsidies and incentives risk rapidly driving capacity expansions, irrespective of domestic and global market demand for steel, and raise serious concerns about excess capacity and its implications for world steel markets. Non-market excess capacity and its negative effects threaten the long-term viability of market-oriented steel industries.

- The overall decline in steel prices reflects weak global demand and the impact of excess capacity entering export markets. While regional steel price indices have continued to fall in 2024, the rate of decline has slowed, indicating a possible stabilisation. As of October 2024, prices of rebar and flat steel products stand respectively only 5.6% and 4.6% lower than one year ago. This is respectively 30% and 50% lower than their July 2021 peak. Prices across different regions have converged. The downward pressure on steel prices in the United States and Europe has significantly narrowed the price gap with China, bringing the price differential to historically low levels. Raw material prices, particularly coking coal, fell at a faster rate than steel prices in 2023, allowing steel firms' margins to recover from recent all-time lows. However, any increase in the main raw material or energy inputs is likely to push margins back to historically low levels, given the overall market condition.
- Global steel production is following two diverging trends. Many advanced economies are experiencing slowdowns due to weaker demand, economic uncertainty, and high energy costs. However, emerging markets are expected to see a rebound driven by infrastructure projects and government-led industrial growth. While mature markets in Europe and Oceania face challenges, regions like Southeast Asia, India, and the Middle East are positioned for gradual recovery and long-term growth, supported by policy reforms and expanding industrial sectors.
- World steel demand is projected to reach 1,782 mmt in 2024, reflecting minimal growth of 0.3% versus 2023, before gaining some momentum in 2025 with an increase to 1,800 mmt (+1%). Emerging economies, particularly in ASEAN, South America, and the Middle East, are driving demand. In developed markets, steel demand has only marginally recovered in 2024 and remains below pre-pandemic volumes. The easing of monetary policy, reduced inflation rates, and decreased labor market pressures could enable some stronger investment going forward.

In summary, the global steel industry is at a critical crossroads. The maintenance and expansion of non-market excess capacity, coupled with depressed demand and export surges from China, the largest steel producer, and unabated steel production, threaten to depress steel prices globally, squeeze other firms' margins, distort market shares and trade, and shift production to less efficient firms. This scenario threatens the long-term viability of market-oriented steel industries and could also severely undermine the green transition.

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2. Growth is expected to be sluggish in advanced economies, despite resilience

The global economy has demonstrated resilience despite enduring high and persistent inflation, geopolitical tensions, and elevated shipping costs; however, these factors continue to pose downside risks. Growth is expected to remain sluggish in OECD Member countries, while partner economies are projected to experience a deceleration. Producer costs have stayed high in OECD Member countries and numerous partner economies, in contrast to a reduction in Asia. Purchasing managers of steel-intensive products anticipate growth in Asia, particularly regarding new export orders, whereas they foresee a contraction in the United States and Europe. Disparities in access to affordable energy are also weighing on the competitiveness of the many advanced economies.

According to the latest OECD Economic Interim Outlook (OECD, 2024[1]), global GDP growth is projected to stabilise at 3.2% in 2024 and 2025, supported by an easing of monetary policy in most economies much anticipated by the market.

This stabilisation of GDP growth takes place against the background of conjugated adverse economic circumstances: persistently high inflation, increased geopolitical tensions and higher shipping costs. Average growth rates projections are hiding significant macroeconomic heterogeneity across countries. Table 1 shows that advanced economies, in particular the Euro area, the United Kingdom and Canada, would all be confronted with sluggish growth going forward. For example, the projected growth rate for the Euro area in 2024 and 2025 will only be 0.7% and 1.3% respectively. Emerging economies, including China, which experienced a significant slow-down in recent years, are expected to grow at a robust pace, for example 4.9% and 4.5% for China in 2024 and 2025 respectively.

Table 1. GDP growth halved after its 2021-rebound and seems stuck at low numbers for most advanced economies (September 2024 OECD projections)

	2020	2021	2022	2023	2024	2025
World [1]	-3.0	5.8	3.0	3.1	3.2	3.2
United States	-2.2	5.7	1.5	2.5	2.6	1.6
Euro area	-6.2	5.3	3.1	0.5	0.7	1.3
Germany	-4.2	2.9	1.2	-0.1	0.1	1.0
France	-7.7	6.8	2.6	1.1	1.1	1.2
Italy	-9.0	6.6	3.4	1.0	1.0	1.1
Spain	-11.2	5.1	4.4	2.5	2.5	2.2
Japan	-4.2	1.7	1.6	1.7	1.7	1.4
United Kingdom	-10.4	7.4	3.4	0.1	1.1	1.2
Mexico	-8.7	4.8	2.1	3.2	3.2	1.2
Korea	-0.7	4.0	2.8	1.4	2.5	2.2
Canada	-5.1	4.5	3.4	1.2	1.1	1.8
Türkiye	1.9	11.0	5.4	5.1	3.2	3.1
Australia	-1.9	4.8	4.1	2.0	2.0	1.8
China (People's Republic of)	2.2	8.1	3.2	5.2	4.9	4.5
India [2]	-5.8	8.7	6.9	8.2	8.2	6.8
Russia	-2.6	4.7	-5.5	3.6	3.7	1.1
Brazil	-3.6	5.0	2.5	2.9	2.9	2.6
Indonesia	-2.1	3.7	5.0	5.0	5.1	5.2
South Africa	0.3	4.9	1.7	0.7	1.0	1.4
World real GDP growth	-4.2	5.8	3.0	3.1	3.2	3.2

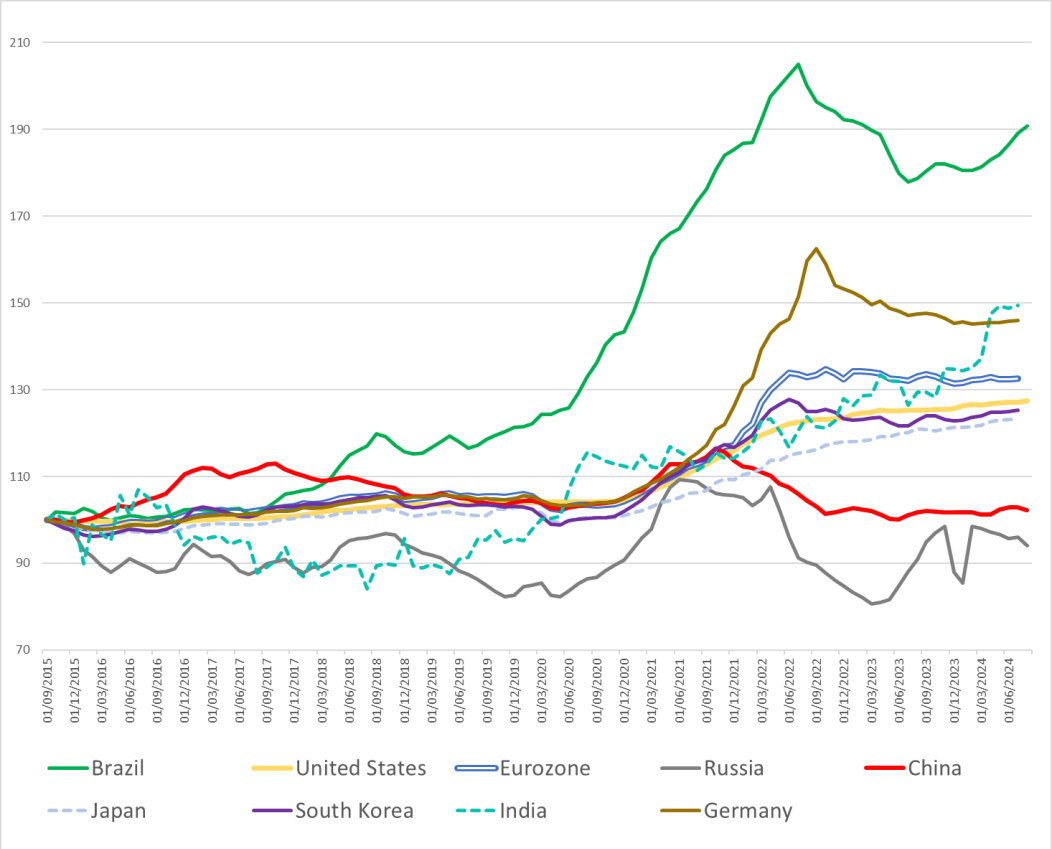
Note: (1) World aggregates use moving nominal GDP weights at purchasing power parities (PPPs). Revisions to PPP estimates affect the differences in the aggregates. Based on data available up to 19 September 2024
(2) fiscal year, starting in April.
Source: OECD Interim Economic Outlook projections, September 2024 (OECD, 2024[1]).

Downside risks to the general economic outlook include higher than expected price and cost increases that would prevent central banks from reducing policy rates and could thus reveal hidden financial vulnerabilities in an environment of record-level government borrowings. Upside risks include a stronger than expected increase in real wages that would provide much needed additional purchasing power to households.

Indeed, a particular point of concern since the post-COVID recovery period and a main downward risk going forward are the significant inflationary pressures still experienced in most economies, which impact steel-intensive product demand from household and put pressure on manufacturing and steel firms margins through higher raw material, energy and labour costs (Figure 1).[1]

Figure 1. Producer price indices have diverged since 2020 and remained elevated in a number of jurisdictions.

Differences in the evolution of PPI across economies and their containment (or lack thereof) of producer costs during the COVID and post-COVID inflationary period are poised to affect the relative competitiveness of these economies.



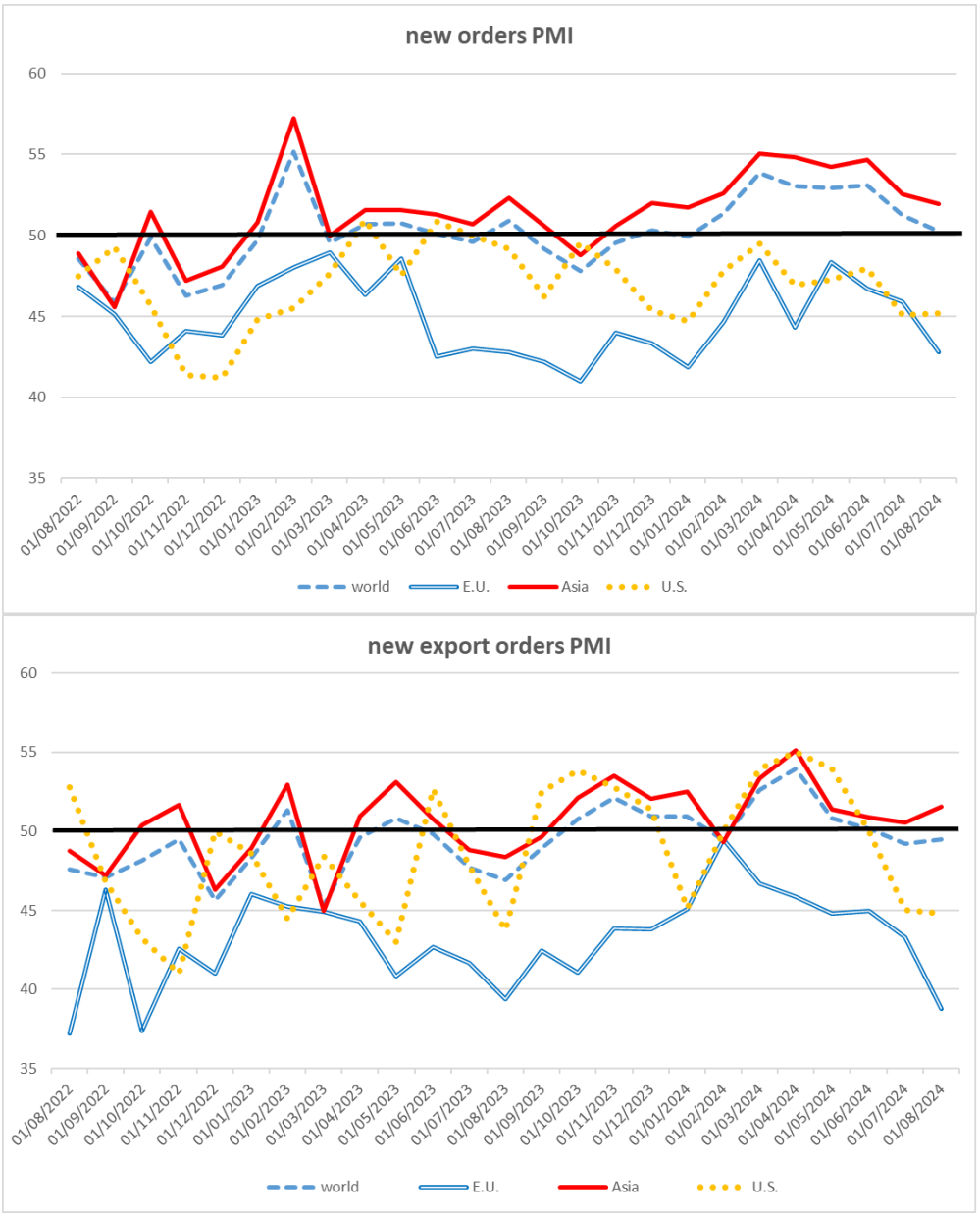
Note: All national indices were recentred to September 2015 as base year for comparison.
Source: National statistics agencies, accessed through LSEG.

Manufacturing activity expectations indices provide a picture of the aggregate expectations of purchasing managers of companies worldwide for their future purchases of steel for the purpose of their companies making steel-intensive products.[2] The IHS-Markit indices for new orders and new export orders of steel-intensive sectors, two forward-looking sub-indices of the broad Markit's Purchasing Managers' Index (PMI), are shown in Figure 2

below. To the extent purchasing managers are correct in their expectations, those indices signal a divergence in the purchases of steel-intensive products across regions.

Figure 2. New orders and new export orders are expected to increase in Asia and to contract in both Europe and the United States.

Expectations from purchasing managers of steel-intensive products differ radically between the Asian sample and the US and EU sample of managers



Source: LSEG.

An index higher than 50 indicates (the expectation of) an expansion the following month, while an index less than 50 indicates (the expectation of) a contraction. The indices indicate that purchasing managers of steel-intensive products expect a contraction in the European Union and in the US (index below 50 for those regions), whereas purchasing managers still expect some expansion in Asia (index above 50), although less than in the two previous

months: the index has declined and is trending toward the 50 level). – both for new orders and new export orders. The differences between the two groups are at an all-time high despite the real estate downturn in China, and, interestingly, are picking up for Asia new *export* orders, while going down overall for Asia new orders, reflecting the economic slowdown of the region.

Box 1. Economic challenges in European Union's Steel Sector: the role of energy prices, interest rates, and carbon costs.

The divergence in the steel PMI across regions can also be linked to broader economic factors, which can be illustrated by energy costs in the European Union. In 2023, electricity prices for energy-intensive industries in the European Union were nearly double those in the United States and China (IEA, 2024[2]), which themselves are already more elevated than in many other regions. The increasing production costs in Europe put downward pressure on steel producers, manufacturing activity and, consequently, steel demand. In contrast, economies with more stable or lower energy prices, like those in Asia, continue to maintain a more favorable environment for their steel industries.

In addition, energy-intensive industries in Europe continue to struggle with weak profit margins in spite of some recent relief in the energy prices. Furthermore, the European Union's Emissions Trading System (ETS) has increased carbon costs (Bijnens, Duprez and Jonckheere, 2024[3]). These factors, in an environment of subdued demand, are creating challenges for the steel sector's profitability.

The increase in energy prices in the European Union fuels higher inflation, which in turn prompted the European Central Bank (ECB) to raise interest rates (European Central Bank, 2024[4]). These elevated interest rates have significantly dampened demand in steel-intensive sectors such as construction and automotive, as higher borrowing costs made it more expensive to finance new projects, especially for real estate. While energy prices have since moderated in 2024, interest rates have remained elevated for an extended period, prolonging the negative impact on demand.

3. Steel production will decline in 2024 and slightly recover in 2025.

Global steel production is following diverging trends. Many advanced economies are experiencing a slowdown due to weaker demand, economic uncertainty, and high energy costs. However, emerging markets are expected to see a rebound driven by infrastructure projects and government-led industrial growth. While mature markets in Europe and Oceania face challenges, regions like Southeast Asia, India, and the Middle East are positioned for gradual recovery and long-term growth, supported by policy reforms and expanding industrial sectors.

3.1. Global steel production and outlook

According to the OECD steel Secretariat, global steel production is expected to decline in 2024 by 2.3% compared to 2023 (Table 2). The overall decline is primarily due to a reduction in production in China, the world's largest steel producer, which is expected to experience a 3.7% decrease. In contrast, growth regions such as Africa and Southeast Asia will play an increasingly prominent role in global steel production, even as overall global output contracts in 2024.

In 2025, global steel production is projected to grow slightly, with a 0.8% increase compared to 2024. After the decline in 2024, China’s steel production is forecasted to stabilise in 2025, with a modest 0.3% growth. However, developed economies remain largely stagnant, with the EU and the UK seeing only modest growth of 1.0% and other developed regions showing little change. This highlights a clear division between the growth trajectories of emerging markets and more mature economies, where structural issues such as energy costs, environmental regulations, and shifting industrial demand weigh heavily on production.

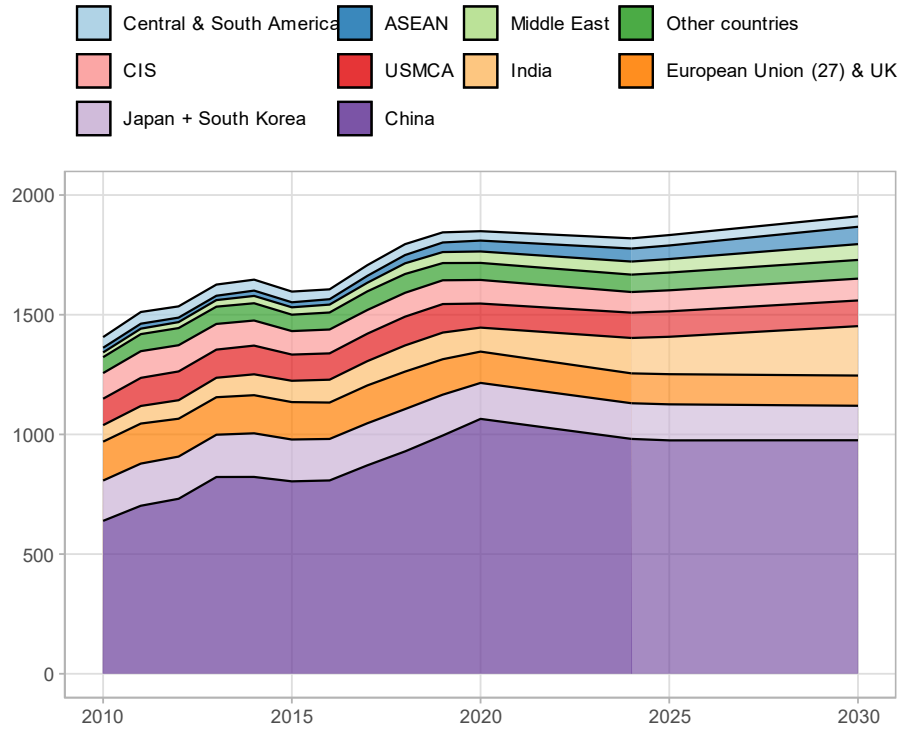
Table 2. Global steel production by regions.

	2023		2024		2025		2030	
	Mt	change, %	Mt	change, %	Mt	change, %	Mt	CAGR, %
European Union (27) & UK	131,891	-1.5	134,877	2.3	136,168	1.0	136,454	0.0
Other Europe	34,699	-3.8	38,739	11.6	39,226	1.3	38,614	-0.3
CIS	88,480	5.0	86,234	-2.5	87,736	1.7	91,243	0.8
USMCA	109,750	-1.1	105,716	-3.7	106,372	0.6	107,190	0.2
Central & South America	42,128	-5.6	42,677	1.3	43,481	1.9	43,851	0.2
Africa	22,014	5.7	22,366	1.6	23,111	3.3	25,829	2.2
Middle East	53,659	2.5	55,276	3.0	56,582	2.4	60,477	1.3
Asia	1,362,202	0.8	1,328,332	-2.5	1,335,342	0.5	1,397,214	0.9
Oceania	6,014	-2.9	5,521	-8.2	5,563	0.8	6,248	2.3
World	**1,892,562**	**0.1**	**1,848,167**	**-2.3**	**1,863,038**	**0.8**	**1,943,985**	**0.9**
World excl. China	873,482	0.3	867,081	-0.7	888,001	2.4	968,410	1.7
Developed Economies	389,481	-2.5	387,659	-0.5	391,150	0.9	385,594	-0.3
China	1,019,080	0.0	981,086	-3.7	975,038	-0.6	975,575	0.0
Em. and Dev. Economies excl. China	484,001	2.6	479,422	-0.9	496,621	3.6	580,959	3.2
ASEAN	50,418	1.5	53,506	6.1	55,737	4.2	71,246	5.0
MENA	53,870	1.0	52,085	3.1	53,866	3.4	63,039	3.2
OECD	437,700	-3.0	435,338	-0.5	439,670	1.0	437,069	-0.1
Partner economies	1,455,116	1.1	1,422,753	-2.2	1,433,361	0.7	1,517,377	1.1

Source: OECD Steel Secretariat
Note: CAGR (Compound Annual Growth Rate) measures the expected annual growth of country

Figure 3. Steel production outlook: China remains flat, India and emerging economies on the rise

Crude steel production. In million metric tonnes



Source: OECD Steel Secretariat

3.2. Regional steel production and outlook

3.2.1. Asia and Oceania

In China, the imbalance between supply and demand, along with widespread losses among enterprises, has compelled steel mills to reduce production in 2024 (Caixin, 2024[5]). Although a minor recovery in Chinese production is projected for 2025, this is unlikely to mark a return to rapid growth, as steel demand continues to decline, driven by a structural downturn in key sectors like property and infrastructure (see Box 6). Regulatory measures, such as the recent suspension of steel capacity swaps, have come too late to curb the industry's expansion, with new facilities still slated to come online through 2026, exacerbating the issue of excess capacity (S&P Global, 2024[6]). By 2030, production is expected to stagnate, as decarbonisation pressures and energy-saving targets push less efficient mills out of the market, forcing the sector to cut at least 20% of current capacity to regain profitability (S&P Global, 2024[6]).

India's steel sector is experiencing rapid growth, with production expected to rise by over 41% from 147.9 million tonnes in 2024 to over 208.5 million tonnes by 2030. This expansion is driven by government reforms and strong domestic demand. The National Steel Policy sets an ambitious target of reaching 300 million tonnes of capacity by 2030-31, underscoring India's growing role as an important steel producer (Government of India, 2024[7]).

ASEAN countries are seeing significant steel production growth, driven by industrialisation and infrastructure development. Viet Nam leads the region with its

production rising by 36% between 2024 to 2030, while Indonesia is expected to grow by 21% over the same period. Thailand is also on a sharp upward trajectory, increasing by 96% by 2030. These countries are positioning themselves as key players in regional and global steel markets, capitalising on rising domestic demand and export potential (SEAISI, 2024[8]). However, the rise in steelmaking capacity, supported largely by Chinese foreign investment, which accounts for around 66% of new capacity coming into stream, far outpaces current demand projections, raising concerns about excess capacity in the region (see section 4.4.1).

Korea and Japan are experiencing contrasting trends in their steel production. Korea is expected to see modest growth, with production rising by 1.3% from 2024 to 2025 and by 2.2% overall by 2030, driven by demand in key sectors like shipbuilding and infrastructure (The Chosun, 2024[9]) (SteelRadar, 2024[10]). In contrast, Japan's steel production is set to decline, falling by 0.7% from 2024 to 2025 and by 7.6% by 2030, reflecting slower domestic demand and industrial activity (Yieh Corp Steel News, 2024[11]).

In Oceania, steel production is expected to decrease by 8.2% in 2024 after a 2.9% decrease in 2023. The sharpest decrease in 2024 took place in New Zealand and Australia which experienced an 18% and 5% year-on-year decrease respectively by August 2024. This slowdown in production is mainly due to weakened global steel demand and weak demand for early-stage construction materials (Australian Bureau of Statistics, 2024[12]). Production is expected to slightly recover in 2025 and continue in 2030 with an increase the steel production by 0.8% and 2.3% respectively. This recovery is driven by the Australian government's commitment to accelerate public infrastructure projects by USD 230 billion over five years which will require and prioritise domestic steel producers (Infrastructure Australia, 2024[13]).

3.2.2. Americas

The US, Mexico and Canada, are showing stable but varied trends in steel production. The US is projected to see modest growth, with production increasing by 0.5% from 2024 to 2025 and by 1.7% by 2030. This growth reflects increases in demand for steel, driven by the Inflation Reduction Act (IRA) and its $370 billion in tax incentives, as well as lower interest rates and large infrastructure projects supported by the Infrastructure and Investment Jobs Act of 2021, which allocates USD 550 billion for projects using steel (GMK Center, 2024[14]), (Fast Markets, 2023[15]). Despite the recent slowdown of the economy, Mexico’s steel production is expected to grow by 1.1% from 2024 to 2025 and by 5.5% by 2030, driven by strong industrial demand supported by government initiatives (NAPS, 2024[16]). Canada, on the other hand, will experience a slight decline, with a 0.6% increase from 2024 to 2025, but overall, a 4% reduction by 2030 due to increasing competition from global markets.

Brazil's steel production is projected to increase slightly from 33.7 million tonnes in 2024 to 34.3 million tonnes in 2025, marking a 1.8% rise. By 2030, production is expected to reach 36.9 million tonnes, reflecting a total growth of 9.5% from 2024. This steady increase is driven by infrastructure development and export demand, despite challenges posed by global market dynamics and the need for facility modernisation (ArcelorMittal, 2024[17]). Argentina’s steel production follows a similar upward trend, rising from 4.03 million tonnes in 2024 to 4.12 million tonnes in 2025, with an 18% total growth by 2030, reaching 4.76 million tonnes.

3.2.3. Europe

Steel production in Europe is expected to see varied growth patterns across the region. Germany, the largest producer, will see its capacity grow slightly from 37.2 million tonnes in 2024 to 37.5 million tonnes in 2025, before reaching 37.1 million tonnes by 2030, showing a slight decline of 0.3% over the period. Italy is projected to increase its production modestly, from 20.3 million tonnes in 2024 to 20.5 million tonnes in 2025, and reaching 20.6 million tonnes by 2030, reflecting a total growth of 1.5%. In contrast, Spain will experience slower growth, with production rising marginally from 11.7 million tonnes in 2024 to 11.8 million tonnes by 2025, and thereafter remaining stable at 11.8 million tonnes through 2030. Overall, Europe's steel sector faces slow growth, influenced by industrial demand and environmental policies across the region. Additionally, the European steel market has seen a surge in steel imports, placing further pressure on domestic production (Eurofer, 2024[18])

In Other Europe, steel production is expected to increase by 11.6% in 2024 mainly driven by Türkiye's steel production which grew by 12.1% supported by an increase in domestic steel consumption, steel sales to Europe and higher prices for hot rolled coil (HRC) products. (Steel Orbis, 2024[19]) Türkiye's steel production is projected to increase by approximately 2.2% from 2024 to 2025, reaching 38.64 million tonnes. By 2030, production is expected to rise by about 8.7%, reaching 41.09 million tonnes.

3.2.4. Africa and the Middle East

In Africa, Egypt stands out as a major steel producer, with significant growth expected over the next decade. Egypt's production is projected to increase from 10.65 million tonnes in 2024 to 11.09 million tonnes in 2025, representing a 4.1% rise. By 2030, Egyptian steel production is forecast to reach 13.41 million tonnes, marking a total increase of 26% from 2024 levels. This growth is largely driven by government support (see section 4.2), infrastructure projects and large-scale government initiatives, aimed at modernising the country's economy (Zawya, 2023[20]).

Other African countries, such as South Africa and Algeria, are also expected to contribute to the region's steel output. South Africa, a traditional leader in steel production on the continent, is projected to grow, with production rising from 4.98 million tonnes in 2024 to 5.66 million tonnes by 2030, an increase of 13.5%. Algeria is similarly positioned for growth as the government continues to support the industry through incentivised gas prices (see Section 4.3).

The Middle East is set to experience robust growth in steel production, with Saudi Arabia and the United Arab Emirates leading the way. Saudi Arabia, in particular, is expected to see strong growth due to its Vision 2030 plan, which focuses on diversifying the economy and boosting the country's infrastructure. Steel production in Saudi Arabia is projected to increase from 9.97 million tonnes in 2024 to 10.25 million tonnes in 2025, and further to 11.57 million tonnes by 2030, representing a 16% growth from 2024. The country's ambitious infrastructure projects, including the development of Neom, a smart city, and other large-scale construction efforts, are major drivers of this growth (Kingdom of Saudi Arabia, n.d.[21]).

4. Subsidies towards the steel sector are extensively deployed in partner economies and in jurisdictions of rapidly growing steel producing capacity

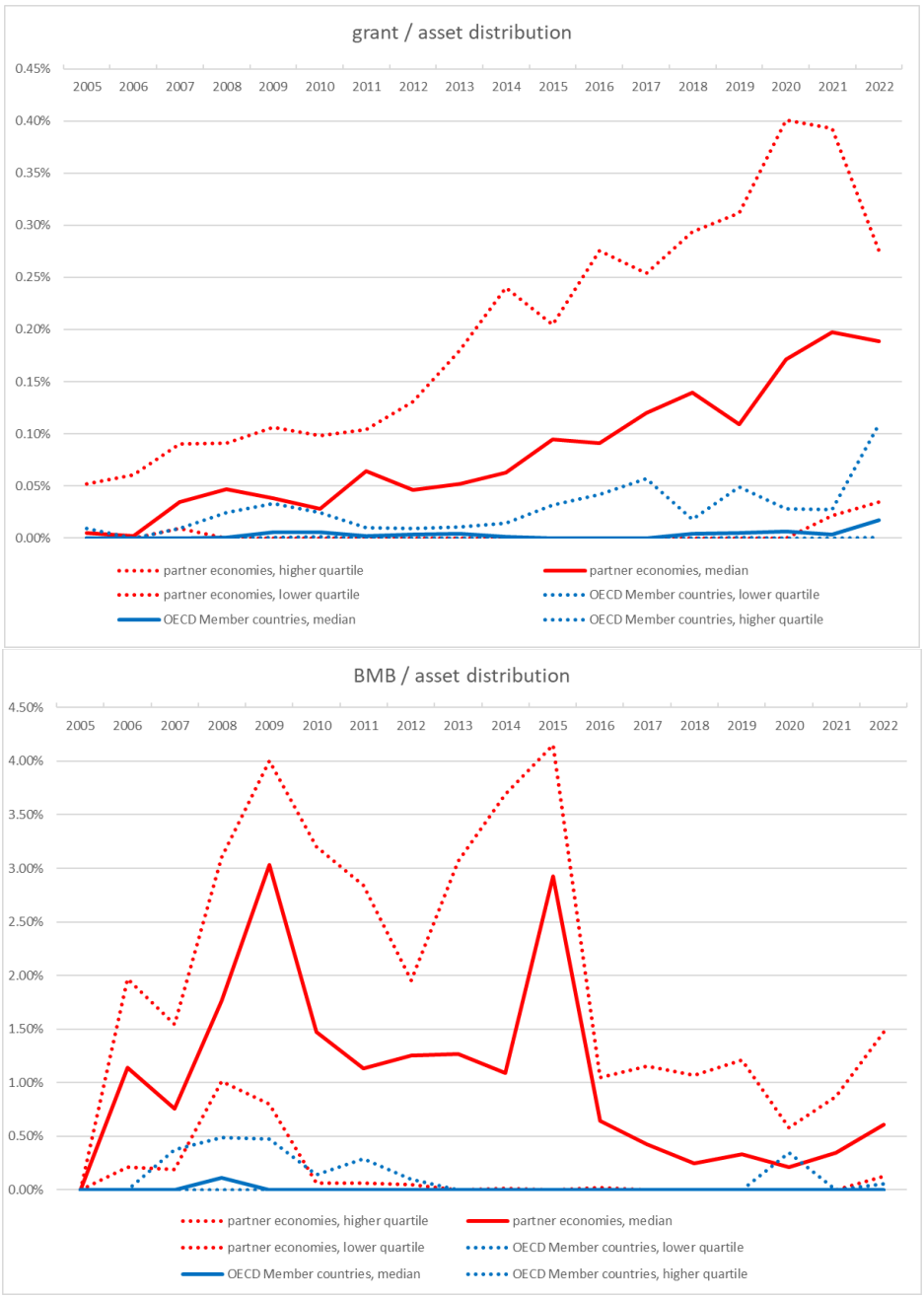
Subsidies per unit of crude steelmaking capacity have increased in both OECD Member countries and partner economies since 2020, but are multiple times higher in partner economies than in OECD Member countries. Furthermore, subsidies are also widely used in smaller steel producing countries which have experienced a significant rise in steel producing capacity, such as Egypt and Algeria, or economies of the ASEAN region. Egypt and Algeria have extensively used energy subsidies to lower their relative production costs and drive up their domestic output, exacerbating regional and global market imbalances. However, it is in the ASEAN region where government support has had an even larger impact. Countries like Malaysia, Indonesia, and Viet Nam have attracted large direct foreign investment, especially from Chinese firms, partially due to tax incentives, low-cost financing of state-owned enterprises (SOEs), and reduced energy prices. This has enabled rapid capacity expansion, and raises concerns related to the global excess capacity issue and the impact of excess capacity on regional and global steel markets.

4.1. Introduction

Subsidies can be delivered to steel firms through very different instruments. Grants are the easiest instruments to quantify, as their nominal amounts represent the amounts of subsidies received by the firms. Below market borrowing (BMB), which represents loans provided at better conditions than what the market would offer absent government intervention or implicit government guarantees, is another instrument commonly used. Using a precise methodology developed by OECD's Trade and Agriculture Directorate (TAD) (OECD, 2024[22]), BMB subsidies can be quantified in terms of amounts of subsidies they entail, which enable to compare them to grants.[3] Other instruments, such as below-market input costs, land-use rights, facilitation of administrative processes, etc., are even more challenging to spot, to assess and to quantify.

Subsidies provided to steel firms through grants and BMB are multiple times higher in partner economies than in OECD Member countries, even when adjusting for firms' asset size or crude steelmaking capacity, that is, dividing the amount of subsidies received through each instrument by the total asset size or the total steelmaking capacity of the recipient steel firm (Figure 4). This finding corroborates previous findings based on the information gathered in the OECD Steel Subsidy database (Mercier and Giua, 2023[23]). BMB does not seem to be significantly used in OECD Member countries compared to partner economies and entails significantly more subsidisation than grants in partner economies. Furthermore, BMB was used in a significantly counter-cyclical manner in partner economies, especially China, as detailed in [DSTI(SC)2024(18)]. The use of BMB in the two major steel crises (2009 and 2015) allowed some financially strained large SOEs in China to continue maintaining capacity, thus effectively providing them with a "soft budget constrain" [DSTI(SC)2024(18)].

Figure 4. Subsidies provided through grants and BMB are multiple times higher in partner economies than in OECD Member countries.



Note: Only steel crude-making firms are represented in the sample data used; hence, subsidies provided to downstream producers of steel products are not captured except if they are vertically integrated within a crude steelmaking firm. The dotted lines provide information on the distribution (first and third quartiles) of the represented values across the firms in the sample: 25% of the companies have a value below (respectively, above) the first (respectively, third) quartile line. The continuous line provides information on median values for the firms in the sample: those lines divide the distribution into two halves with 50% of the companies benefiting from more subsidies per asset than the level indicated by the median line, and 50% receiving less than the level indicated by the median line.
Source: MAGIC database.

More recently, the introduction of a new stock repurchase and shareholding increase stimulus by the People's Bank of China in 2024 adds another layer of complexity to the financial landscape for Chinese steel firms, while implying significant potential amounts of BMB (Box 2).

Box 2. China's new liquidity Facilities might increase subsidies to steel firms

In October 2024, the People's Bank of China (PBoC) introduced two new financial facilities in an attempt to stabilise the capital market and boost liquidity. These facilities represent a shift from typical central bank interventions witnessed in other major economies (e.g. the Bank of Japan directly purchasing shares, or the European Central Bank buying corporate debt). In contrast, the two new PBoC facilities provide liquidity in more indirect and targeted ways.

The first facility, the Securities, Funds, and Insurance Companies Swap Facility (SFISF), was introduced on 10 October 2024 and is an unprecedented move in China. It allows non-banking financial institutions - such as securities firms, funds, and insurers - to swap assets like corporate bonds, stock ETFs, and others in exchange for highly liquid assets like government bonds and central bank bills. The swap facility, initially funded with 500 billion yuan (approximately USD 71 billion), is aimed at increasing these institutions' capacity to invest in the stock market, thereby boosting market liquidity (Chinese Government, 2024[24]). This tool is unique in that it enables non-banking financial institutions to swap less liquid assets in exchange for more liquid ones.[4] At this stage, there is a lack of publicly available information on the eligible assets and the haircut or valuation applied.

The second facility, the Relending Facility for Technological Innovation, is a 300-billion-yuan (approximately USD 42 billion) re-lending mechanism introduced on 7 October to help commercial banks provide low-interest loans to listed companies engaging in technological innovation. This facility directly supports stock repurchases and shareholding increases by offering loans with interest rates starting as low as 1.75%, with banks expected to re-lend to their clients at around 2.25% (Chinese Government, 2024[25]). This type of intervention, while indirect, allows the PBoC to support stock market value without engaging in direct asset purchases. By encouraging companies to manage their market positions through share buybacks, the facility aims to provide stabilising support to capital markets during a period of sluggish consumption, property market instability, and rising corporate debt. Furthermore, this tool applies to listed companies with various ownership structures, including state-owned enterprises (SOEs), private companies, and mixed-ownership enterprises, thereby ensuring broad access to liquidity across different types of companies..

Together, these measures represent a new form of indirect support from the central bank to the capital markets, which, unlike traditional monetary interventions, provide liquidity without directly increasing the money supply. However, the long-term effectiveness of these tools is uncertain, as previous rescue efforts in China had limited impact on reversing broader market trends. Furthermore, both facilities have the potential to increase subsidies through BMB to steel firms: the first indirectly, and the second through explicit support with a 2.25% re-lending rate. Going forward, the Secretariat will monitor these measures to assess if steel firms are recipients of these soft loans.

Government interventions in the steel sector are also prominent in regions where steelmaking capacity is rapidly expanding, such as ASEAN and MENA. (OECD, 2023[26]) These regions are witnessing significant government involvement aimed at fostering industrial growth, safeguarding local producers, and enhancing global competitiveness. Through subsidised energy prices, below-market borrowing, and preferential tax treatments, governments are shaping the future of the steel industry, with implications for both domestic markets and international trade dynamics. The next section explores some of the varied instruments used in those regions to subsidise steel firms and discusses the possible impact of these interventions.

4.2. Energy subsidies in Egypt

Egypt is the largest steel producer in Africa and the second largest in the African and Middle East region, expected to produce 10.6 mmt in 2024. In 2023, the country's steel exports surged to USD 2.33 billion, a 65% increase compared to USD 1.41 billion in 2022. Meanwhile, iron and steel imports declined by 17.8%, dropping from USD 5.1 billion in 2022 to USD 4.2 billion in 2023. This reduction in imports is closely linked to the substantial increase in domestic production capacity, which saw crude steel production rise by 63% in a decade (Arab Iron and Steel Union, 2024[27]). Government subsidies and various forms of support to domestic producers seem to have been instrumental in this expansion. Energy subsidies, in particular, enabled domestic steel firms to benefit from energy prices well below their market value and thus to produce steel at a cheaper price. This would distort competition by artificially lowering Egyptian domestic firms' steel production costs and enabling higher level of domestic production at lower cost.

Energy subsidies can represent a significant cost to the government, and thus, to the public in general. This has been the case in Egypt for some time. For example, in 2013, the Egyptian government's expenditure on energy subsidies, for both industry and households, reached 22% of the total government annual budget, and 7% of the GDP (IISD, 2014[28]). These are substantial numbers which certainly entail a significant opportunity cost: tax-payer money could have had a more sustainable and fairer impact if used in other fields. To put it in perspective, the expenditure for energy subsidies exceeds the combined expenditure of education, health, and infrastructure, three sectors which significantly improve a country' sustainable growth prospect. A context of high government deficit, overvalued exchange rate, and declining gross international reserve prompted the Egyptian government to announce it will gradually phase out the energy subsidy from 2014 onwards, with a total phase out by December 2025 (World Bank, 2020[29]). However, due to the COVID-19 pandemic and further global and regional challenges, the Egyptian government reconsidered its position on subsidy policies (Egypt Oil & Gas, 2024[30]). As a consequence, energy subsidies were left unchanged and will continue in the future. The government allocated an energy subsidy budget of EGP 154.5 billion in 2024/2025, which is the highest value since 2015/2016.

Energy subsidies can lead to overproduction, excess capacity, and trade frictions, as firms are incentivised to produce more than the market demands, ultimately destabilising global steel markets and undermining efforts to promote sustainable industry practices. Table 3 represents all the changes in set prices from 2019 to today. Setting non-market energy prices can not only contribute to market imbalances, by artificially suppressing market cost and price signals, but can also create considerable uncertainty among investors about the value and return of current and future projects, which depends on the level of energy prices set by the government. By subsidising energy costs, the Egyptian government enables local producers to maintain high output levels, even when demand does not justify it, exacerbating competition issues both domestically and internationally.

Table 3. Government intervention on gas prices for the industrial sector

Start year	End year	Program description	Final Price for the steel sector in USD per MMBtu	Domestic market prices USD per MMBtu
2019	2020	Prime Minister Decision No.1884 intended to offset the surge in operating cost for industrial output and export of manufactured goods for the Cement, Metallurgy and Ceramic industries.	5.5	7
2020	2021	Intended to soften the economic impact of COVID-19, this program, Prime Minister Decision No.744, benefited all industrial sectors, including steel.	4,5	5.5

Source: (The Arab Republic of Egypt, 2019[31]), (UNIDO, 2020[32]).
Note: MMBtu stands for Million Metric British thermal unit and is a common energy unit measure.

4.3. Market distortions in Algeria's steel industry

Algeria ranked 34th in global crude steel production and is the third producer in the MENA region with 4.4 mmt in 2023. Although Algeria is not yet the leading steel producer in the MENA region as of 2024, its rapid growth in crude steel production far surpasses that of Egypt, Saudi Arabia, and the UAE. From 2019 to 2023, Algeria's crude steel production surged by an impressive 83.3%, compared to Egypt's 42.7%, Saudi Arabia's 21.4%, and the UAE's modest 1.4%. Furthermore, Algeria's direct reduced iron (DRI) production soared by 160.0% over the same period (World Steel Association, n.d.[33]). This remarkable growth trajectory highlights the need for increased attention to Algeria's evolving role in shaping its regional steel industry.

The distortions in Algeria's steel industry are significantly influenced by Decree No. 15-247, issued on September 16, 2015, which sets out specific procedures for the pricing of public utilities such as water, gas, and electricity (The People's Democratic Republic of Algeria, 2015[34]). This decree allows the government to offer these services to industries at prices well below even cost recovery levels, effectively providing a substantial subsidy. Under this framework, public contracts are designed to fix prices or establish mechanisms for setting prices for successive deliveries, creating an environment where steel producers can benefit from significantly reduced energy costs.

This favourable pricing structure is in practice implemented by Sonatrach, the Algerian SOE that controls the majority of the country natural gas production and supply. Sonatrach's dominance in the domestic energy sector stems from its control over exploration, production, refining, and distribution of hydrocarbons, which are Algeria's main energy resources. Algeria's domestic energy consumption is overwhelmingly supplied by natural gas, and Sonatrach fulfills virtually all of this demand, while playing a leading role in the North African energy landscape[5]. Sonatrach's dominance in the energy sector ensures that natural gas, which accounts for nearly all of the country's electricity generation, is supplied at prices over 90% below cost recovery levels based on IMF's estimates using the Climate Policy Assessment Tool (CPAT)[6] developed jointly by IMF and the World Bank (Dept., 2024[35])[7]. Such government interventions distort the market by lowering production costs for domestic steelmakers, enabling them to maintain high output levels and artificially competitive prices. These practices contribute to market imbalances and exacerbate issues of excess capacity, impacting both domestic and international steel markets.

This preferential pricing led to an average electricity cost for industrial users of just USD 12,46/MWh in 2022, compared to the overall average for residential, commercial and industries of USD 27.54/MWh (BloombergNEF, 2023[36]). As a result, Algeria's steel

production has been rapidly expanding, driven by these artificially low energy costs and altered price signals. However, this has created significant market distortions, enabling domestic steel producers to operate with lower production costs, which in turn contributes to excess capacity and disrupts the balance of the regional steel market, and, through exports, of global steel markets.

4.4. Government intervention to boost investment in new steelmaking capacity in ASEAN.

The ASEAN region is witnessing a rapid expansion in integrated mega-mill developments, significantly boosting steel production capacity. As of 2021, existing capacity stood at 78.1 mmt, but with new projects, an additional 104.4 mmt is expected to come online by 2024. This expansion could push the total capacity to 182.5 mmt by 2029 or 2030, raising concerns about excess capacity in the region. A significant portion of this new capacity comes from BF/BOF projects, contributing 80 mmt, while DRI/EAF projects account for an additional 20 mmt (SEAISI, 2024[37]).

A key driver behind this surge seems to have been government intervention, including subsidies and other non-market policies and practices. Subsidies make it financially more attractive for companies to invest in large-scale projects, while benefiting from low-cost financing, tax incentives, and reduced energy prices. While these measures aim to bolster industrial growth and attract investments, they also exacerbate excess capacity and pose serious risks to the global steel market, as they artificially lower costs and encourage expansion beyond what the market can sustainably absorb. In practice for the steel sector, it is often Chinese steel firms which benefit from the scheme, since Chinese firms are subject to capacity restrictions in their domestic market and are seeking to expand capacity outside of China in order to continue their expansion and acquire foreign markets shares.

4.4.1. Foreign Investment in ASEAN and steel production capacity expansion

The ASEAN-6 governments are generally optimistic about their future economic growth, since their economies are expected to continue being driven by robust private consumption, infrastructure development, tourism recovery, and the rebound in the electronics sector. Declining inflation further supports this outlook. In this context, governments are welcoming foreign investment in the steel industry through supportive policies. However, significant risks remain: rising geopolitical tensions, supply chain disruptions, weakening currencies (except for the Singapore dollar), and the economic slowdown in China. These risks, should they materialise, would exacerbate the global excess capacity issues, as investments in steel continue to be incentivised despite market imbalances[8].

Table 4 below summarises the foreign investments in capacity expansions mostly driven by Chinese companies. In 2013, China launched its “Belt and Road Initiative” (BRI), accompanied by a strategy encouraging Chinese enterprises to "go global" as part of their development and foreign policy agenda (yidaiyilu.gov, 2013[38]). This approach aimed to address China's domestic excess capacity by utilising it to fill production gaps in other countries, presenting itself as a "win-win" solution. The BRI and the “going global” strategy have significantly boosted Chinese investment in ASEAN member states, a trend that intensified with the onset of the US-China trade conflict in 2018.

Table 4. Foreign investments in capacity expansion in ASEAN

	Chinese Investment in ASEAN							
Country	**Firms**	**Ownership**	**Type**	**Production capacity in Million Tonnes (MT)**	**Operation year**	**Investment size in USD billion**	**Government Support**	**Instrument(s) used for providing support**
Malaysia	Alliance Steel	Private	BOF	3.5	2018	1.6	Yes	Tax benefits
		Private	BOF	6.5	2026	1.8	Yes	
	Eastern Steel	State-owned[9]	BOF	0.7	2015	Unknown	Yes	Tax benefits
		Private	BOF	2	2023	1.7		
		Private	BOF	2.3	2027	Unknown		
	Wenan Steel	Private	BOF	10	2025	3.3	Yes	Tax benefits, lower than market pricing related to land use and others
	E-Steel	Private	DRI-EAF	5	2025	4.8	Yes	Tax benefits
Viet Nam	Yongjin Metal	Private	?	0.25	2022	0.1	No	
		Private	?	0.26	2025	0.1		
Philippines	Panhua Group	Private	BOF	10	2025	3.5	Yes	Tax benefits
	Baowu Steel	State-owned	BOF	3	Unknown	2	Unknown	?
Indonesia	Dexin Steel	Private	BOF	4	2020	4	Yes	Tax benefits
		Private	BOF	3	2023			
		Private	BOF	13	Unknown	Unknown		
	Other investments in ASEAN							
Indonesia	Krakatau Steel	State-owned[10]	BOF	3	2013	3	Yes	Debt instrument placements, debt forgiveness and debt restructuring
		State-owned	BOF	3	2027	3.5		
		State-owned	BOF	4	2030	Unknown		
Viet Nam	Formosa Ha Tinh Steel	Private	BOF	7.5	2017	9.9	Yes	Tax benefits, lower than market pricing related to infrastructure and land use
		Private	BOF	15	Unknown	Unknown		

Source: OECD desk research.
Note: Please note that some information presented here may be subject to change as new data or developments emerge. This document reflects the current understanding at the time of writing.

4.4.2. Tax incentives

Tax incentives are a widely used tool by many governments to attract foreign investment in strategic industries. These incentives are supposed to create jobs, promote technology transfer, bolster capital inflows, and contribute to the development of the national industrial base. However, while effective in attracting investment, such measures often result in unfair cost advantages for beneficiary companies, leading to distorted competition domestically and with respect to foreign firms. This can create imbalances, as steel producers with varying scales of production face uneven playing fields. Tax incentives may need to be better tailored to enable to achieve sustainable FDI, as set out in the Recommendation on FDI Qualities for Sustainable Development (see Box 2).

Box 3. The OECD's Foreign Direct Investment Qualities Policy Toolkit

The OECD emphasises the importance of creating a transparent, non-distortive, and competitive environment that promotes long-term investment rather than relying on subsidies that may distort competition or lead to inefficient resource allocation. The OECD advocates for policies that focus on broader reforms, including improving the overall business environment, strengthening institutional frameworks, and reducing barriers to investment, rather than offering targeted incentives.

For example, the Toolkit illustrates how to target specific labour market outcomes, such as gender equality, through investment tax incentives.

The OECD also stresses that FDI incentives should be designed in a way that avoids "race-to-the-bottom" dynamics, where countries excessively compete by lowering standards or offering unsustainable subsidies to attract investment. Such practices can undermine sustainable economic growth, fiscal stability, and regional development goals.

The OECD's Foreign Direct Investment Qualities Policy Toolkit outlines how governments can, in practice, design policies, including incentives, to attract FDI that contribute to inclusive and sustainable development. It provides in a non-prescriptive way useful broad policy directions for improving the impact of FDI on sustainable development, thus allowing for a flexible approach according to a country's context and stage of development. The Toolkit thus supports the implementation of the OECD Recommendation on FDI Qualities for Sustainable Development, and complements the OECD Policy Framework for Investment. It can be used for self-evaluation and reform design by governments sharing the purpose of more sustainable and fair development.

Source: (OECD, 2022[39])

Malaysia

In Malaysia, both direct and indirect tax incentives are provided via the Promotion of Investments Act 1986, Income Tax Act 1967, Customs Act 1967, Excise Act 1976, and the Free Zones Act 1990 (MIDA, 2021[40]). The acts cover investments in Iron and Steel, design, development, and manufacture of advanced electronics and computing, professional, medical, scientific, and measuring devices or parts, biotechnology, advanced materials, and alternative energy technology. The act is then categorised into two types of tax incentives called Pioneer Status (PS) and Investment Tax Allowance (ITA), which are designed to encourage investment and job creation. Companies can choose between PS, which offers a 70% income tax exemption for five years based on specific criteria like technology use and local employment, or ITA, allowing a 60% allowance on qualifying capital expenditures to be offset against 70% of their statutory income.

Viet Nam

In 2015, the Vietnamese government provided support to the steel industry through tax incentives, import duty exemptions, and land rental subsidies under the Investment Law [11]. Steel companies benefit from reduced corporate income tax (CIT) rates as low as 10%, tax holidays for up to four years and 50% tax reductions for the following nine years (Vietnam Briefing, 2024[41]). Additionally, companies importing machinery and raw materials not

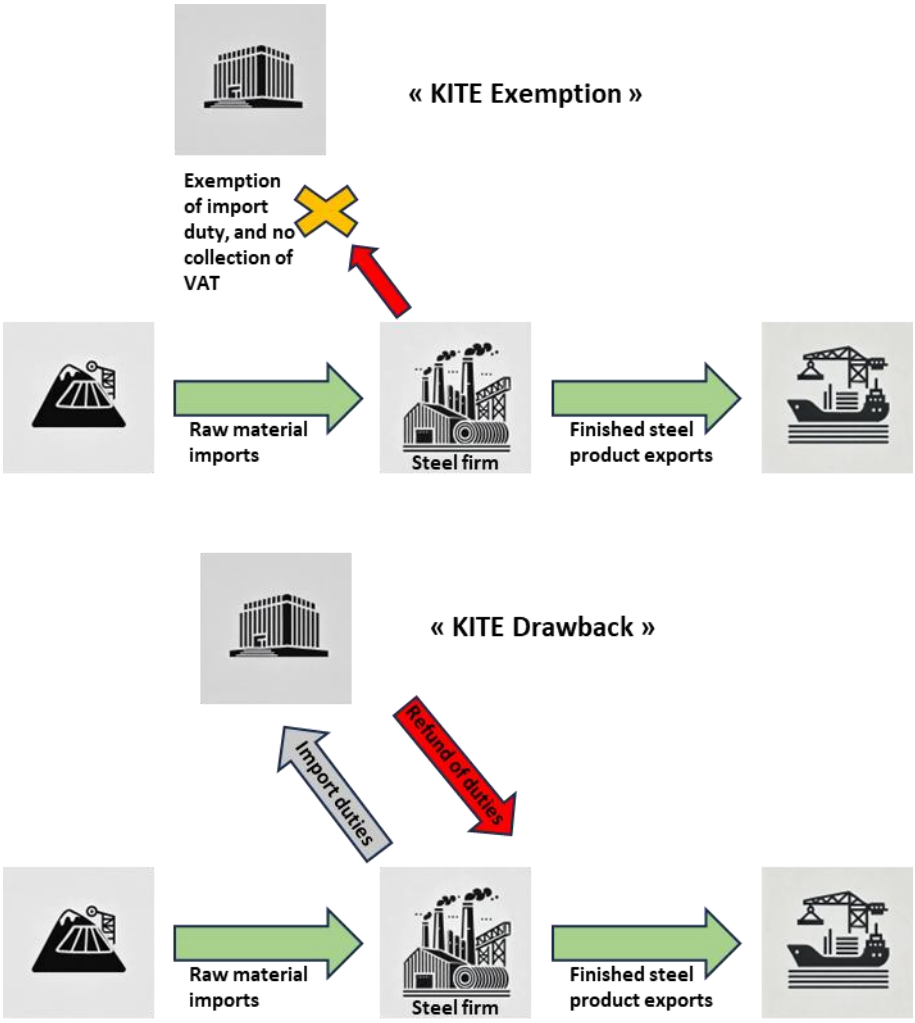
produced domestically get import duty exemptions, and those located in special economic zones receive land rental fee exemptions for up to 15 years.

Indonesia

Since 2018, the Indonesian government exempted corporate income tax ranging from 50% to 100% for a period ranging from 5 to 20 years for foreign firms that invest at least USD 33 million in the country. This policy supported foreign steel firms, including POSCO and Dexin in expanding their steelmaking capacity in Java and Sulawesi (SEAISI, 2023[42]).

Besides encouraging the expansion of steelmaking capacity, the government has implemented supportive tax policies to incentivise the import of essential raw materials for export-oriented production since 2020. Through these regulations, the government seeks to strengthen the industry's resilience and capacity to meet both domestic and international demand. Figure 5 illustrates how these policies waive import duties and VAT for steel companies importing raw materials for producing steel products that get exported. For example, importing scrap for crude steel production to export the finished product would qualify for these exemptions. There are two types of tax exemptions available: the Kite Exemption, which grants an upfront duty waiver for imported raw materials used to produce steel locally and export it, and the Kite Drawback, which provides a refund of import duties after the export of the finished steel product (Dirjen Bea Cukai, 2023[43]).

Figure 5. Indonesian "Ease of Imports for Export Purposes" can support exporting steel producers through two channels: "Kite Exemption" and "Kite Drawback"



Note: KITE (Kemudahan Impor Tujuan Ekspor of "Ease of Imports for Export Purposes")
KITE Exemption is import duty and VAT exemption facilities are not levied on the import of raw materials to be processed, assembled, installed and exported.
KITE Drawback is import duty refund facility on the import of raw materials to be processed, assembled, installed and the production results are exported. Definition of import duty includes additional import duties such as anti-dumping import duties, retaliatory import duties, safeguard import duties, and reward import duties
Source: (Dirjen Bea Cukai, 2023[43])

4.4.3. Preferential treatment of SOE in Indonesia

The Indonesian steel firm Krakatau Steel, the biggest steel producer in Indonesia, and a domestic SOE, has struggled with operational issues, high debt, and excess capacity which caused multiple government interventions.

Box 4. The structure of the Indonesian steel industry

There are ten steel companies in Indonesia that are listed in Indonesia Stock Exchange, and they produce various steel products such as hot rolled steel plate, steel pipe, galvanised steel, and scrap metal. Those are Saranacentral Bajatama, Betonjaya Manunggal, Citra Tubindo, Gunawan Dianjaya Steel, Gunung Raja Paksi, HK Metals Utama, Steel Pipe Industry, Krakatau Steel, Lionmesh Prima and Optima Prima Metal Sinergi.

Krakatau Steel is the only state-owned steel company in Indonesia, and the majority of its shares are held by the Indonesian Ministry of SOE.

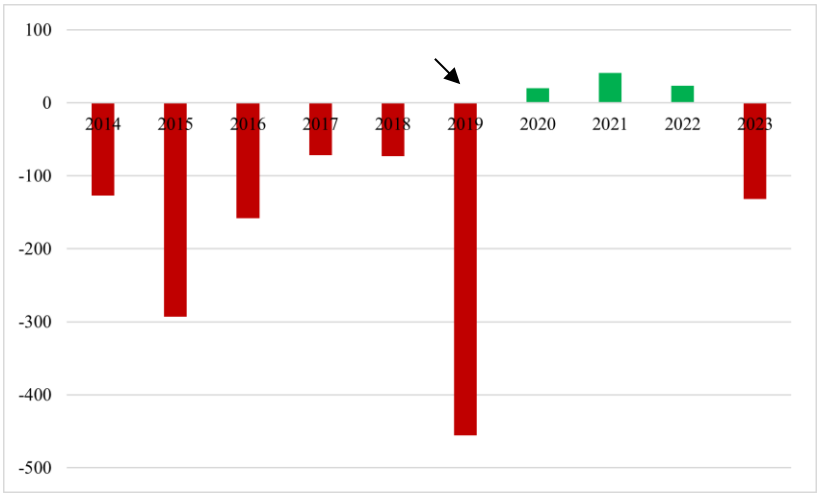
The two biggest steel players in Steel sector are Krakatau Steel and Gunung Raja Paksi with following key information:

Criteria	Krakatau Steel	Gunung Raja Paksi
Ownership	Indonesian Government	Gunung Steel Group
Established	1970	1970
Production capacity	3 mmt/year	2.2 mmt/year
Core products	Hot Rolled Coiles, Cold Rolled Coils, Steel Plates, Long Products	Hot Rolled Coils, Hot Rolled Plates
Revenue	USD 1.67 billion (as of 2022)	USD 532 million (as of 2022)
Market Capitalization	USD 425 million (as of 2023)	USD 230 million (as of 2023)

There are two Chinese steel companies established in Indonesia: Dexin Steel and the Tsingshan Holding Group. There is also a joint venture with the Korean steel company POSCO. In 2011, POSCO and Krakatau Steel created a Joint company named Krakatau POSCO with the share of Krakatau Steel (30%) and Posco (70%). In 2022, Krakatau Steel increased its ownership to 50%. Krakatau POSCO benefited from corporate income tax reductions for its plant in Java.

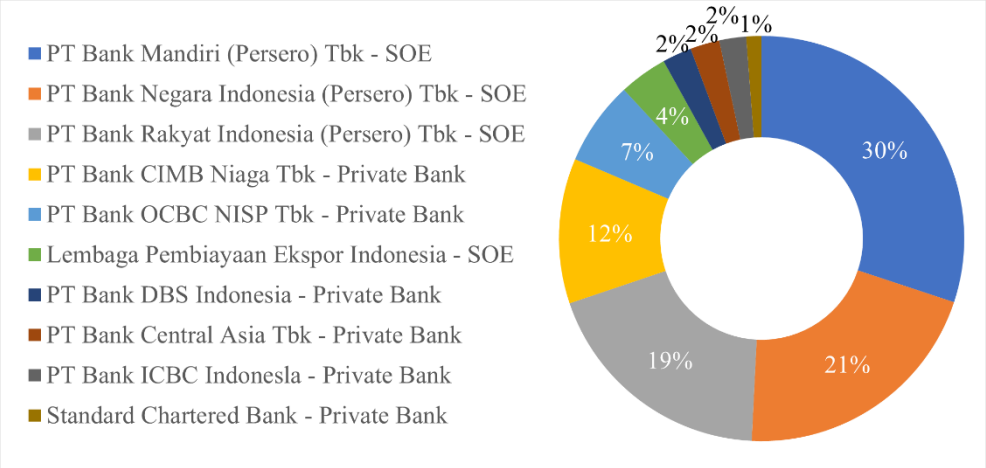
Krakatau Steel issues in 2019 and before were reflected in their negative net income shown in Figure 6. In 2019, Krakatau Steels underwent a significant debt restructuring of its USD 2 billion debt with various creditors, benefiting from government-backed guarantees to ensure the continuity of its operations, as illustrated from Figure 7 and Figure 8 (The Jakarta Post, 2020[44]). Figure 7 shows that the majority of Krakatau Steel's debt is held by state-owned banks, with PT Bank Mandiri, PT Bank Negara Indonesia, and PT Bank Rakyat Indonesia together holding over 70% of the company's debt. Meanwhile, Figure 8 outlines the government-led scheme behind the restructuring. Krakatau Steel received two key forms of financial support: first, debt restructuring from its creditors—most of which were state-owned banks—and second, financial investment from the government in the form of "Mandatory Convertible Bonds", which will convert to shares after seven years. This entire process was facilitated by the Ministry of State-Owned Enterprises and the Ministry of Finance, demonstrating the government's active role in stabilising Krakatau Steel's finances and ensuring it remains in operation.

Figure 6. Krakatau Steel Net Income only showed positive after the Indonesian's government intervention



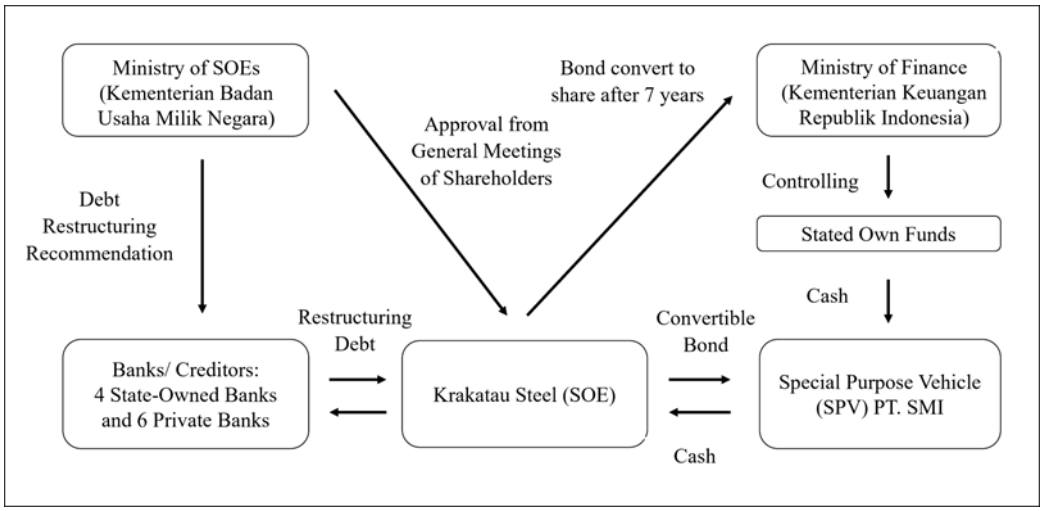
Note: The Arrow indicates the year of government intervention.
Source: (Krakatau Steel, 2024[45])

Figure 7. Krakatau Steel debt is in majority owned by State-Owned Banks.



Note: Debt restructuring would cut interest payments to USD 466 million from USD 847 million and cut costs by around USD 685 million until 2027.
Source: (Krakatau Steel, 2024[45])

Figure 8. Krakatau debt restructuring: a government-led scheme



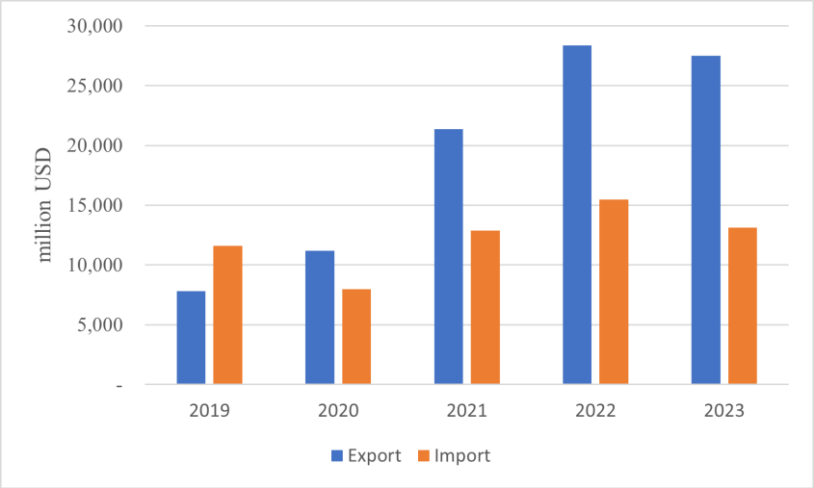
Source (DJKN, 2020[46])

On 6 October 2020, the Indonesian government agreed to invest of USD 142 million in Krakatau Steel as part of the government's investment scheme (DJKN, 2020[46]). Figure 8 explains that Krakatau Steel issued mandatory convertible bonds (MCBs) with a maturity period of 7 years. Krakatau Steel serves as the issuer, with the government as the investor, and PT Sarana Multi Infrastructure (Persero) acting as the investment executor, under the Ministry of Finance's assignment, who manages all the investment processes and assesses the feasibility of the projects from financial, legal, and economic perspectives. This initiative was implemented to address the significant decline in operational and production activities within the upstream steel industry, downstream steel industry, and user industries including Krakatau Steel.

Krakatau Steel has benefited from significant government assistance, such as financial bailouts, debt restructuring, and tax incentives. The Indonesian government's special support for Krakatau Steel is intended to safeguard the domestic steel industry against competition from importers, promote self-reliance in steel production, and protect local employment opportunities. Krakatau steel is only steel company that benefited from such government investment scheme (through convertible bonds). However, this strategy has faced backlash as it was criticised for causing large market imbalances, particularly within the region's steel market. For instance, Viet Nam’s domestic steel industry attributed the challenges it faced in its own domestic stainless steel sector to the support provided to the Indonesia’s steel firm when Indonesia became one of the largest exporting countries of those products with an amount of USD 4.21 billion in 2022, with Viet Nam one of the top 5 key countries of export destinations (SteelRadar, 2024[47]).

The implementation of this government investment mechanism has led to market distortions among global players and raises global excess capacity issues. This instrument is well reflected in the Indonesia steel trade balance where in 2019, Indonesia had a trade deficit of USD 3.8 billion, which has now turned into a surplus of USD 14.3 billion in 2023 (Figure 9). The latest available data from 2023 reveals that Indonesia's steel products are primarily exported to five key countries. These countries are China, accounting for 73.7% of the exports, followed by Taiwan at 10.3%, India at 6.4%, the Philippines at 4.8%, and Viet Nam at 4.7% (IISIA, 2024[48]).

Figure 9. Indonesia steel trade balance



Source: (IISIA, 2024[48])

4.4.4. Natural gas prices in Indonesia

Since 2016, the Indonesian government has implemented a policy called the specific natural gas prices for industrial sectors (ESDM, 2023[49]), to provide subsidies for natural gas prices. The government provides subsidies for natural gas prices to seven specific industries, including fertilizers, petrochemicals, oleochemicals, steel, ceramics, glass, and rubber gloves. Gas producers and supplier companies which are also SOE appointed by the government are responsible for supplying natural gas. To put this in context, plant gate price amounts range from USD 6 to USD 6.5/MMBtu (Metric Million British Thermal Unit), and the market gas prices range from USD 9.16 to USD 11.99/MMBtu. The regulated tariffs include the natural gas price, the adjustment price, and the distribution tariff, which covers transport and midstream costs. This initiative is specifically designed to support the steel industry, which is considered a priority sector in Indonesia. This policy aims to sustain the operational capabilities of steel companies and minimise their operational expenses. However, this measure has differing impacts on large-scale and small-scale producers. Large-scale steel companies, with their substantial production capacities and resources, can leverage these cost savings more effectively, enabling them to significantly increase their steel output and further consolidate their market position. In contrast, small-scale steel companies, despite benefiting from lower energy costs, often lack the capacity to scale up their production to the same extent. This creates a disparity, as smaller firms struggle to compete with the increased output and efficiency of their larger counterparts. The resulting imbalance can lead to domestic excess capacity and reduced competition, ultimately disadvantaging smaller producers. Furthermore, on the international front, the enhanced competitiveness of large-scale producers could disrupt global markets and heighten trade tensions due to perceptions of unfair advantages stemming from domestic energy policy.

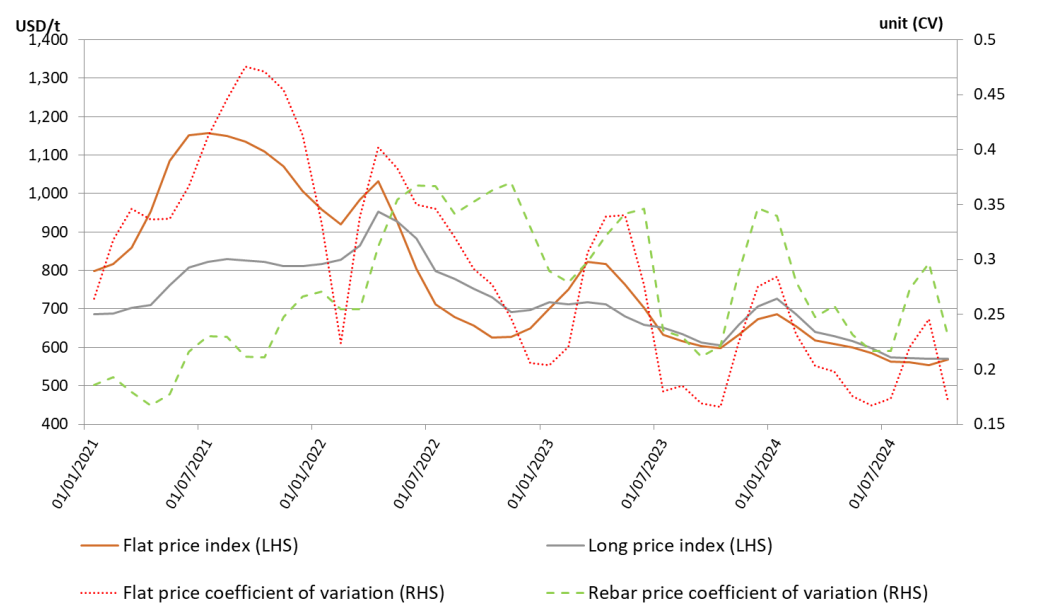
5. Steel and raw material prices have fallen

Steel prices have trended lower in 2024 but at a decreasing pace and seem to have stabilised now. Because raw material prices, especially for coking coal, fell at a faster pace than steel prices in 2023, steel firms' margins increased from the all-time lows recently witnessed. Nevertheless, any increase in any of the main raw material or energy inputs for steel will likely once again push margins to all-time lows.

5.1. Global steel prices

Flat and rebar steel prices have continued their decreasing trend started in July 2021, albeit at a much smaller pace and seem to have stabilised (Figure 10). As of October 2024, rebar and flat prices stand respectively only 5.6% and 4.6% lower than one year ago. This is respectively -30.1% and -50.1% lower than their July 2021 peak. The coefficients of variation across regions have also fallen significantly, as steel prices have converged around the globe.

Figure 10. Aggregate flat and long steel price averages



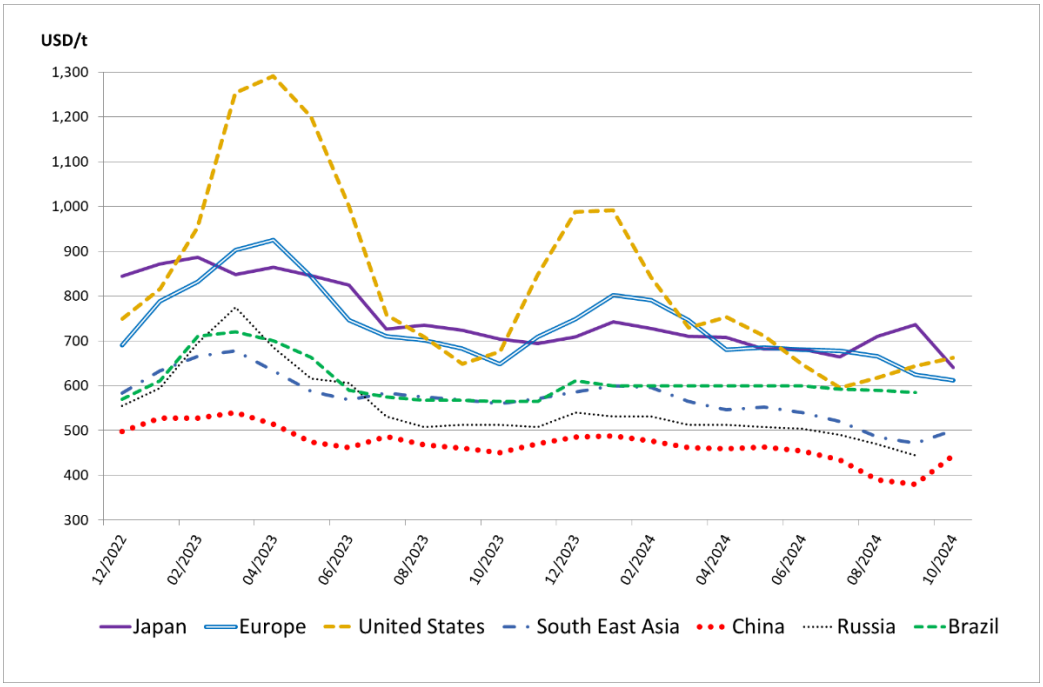
Note: The flat price and long steel price indices are defined as the arithmetic average of the individual regional Platts price series for the United States, North Europe, China, Japan and India, when available. This indicator had the closest fit to the two global Platts price indices used in Steel Market 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: S&P Global Commodity Insights.

5.2. Steel prices per region

Flat steel product prices have converged since the beginning of 2024, with the US and Japan prices falling back from their previous heights, while Brazilian prices remained stable (Figure 11). Interestingly, Chinese steel flat prices also fell since 2023, and only

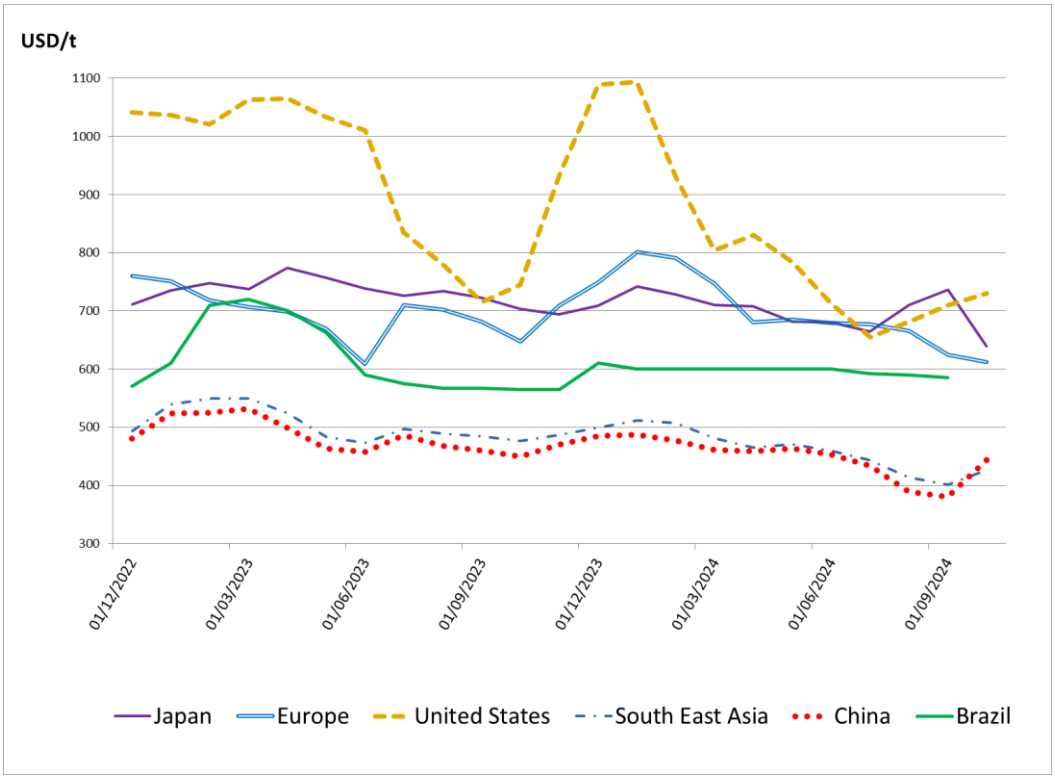
rebounded slightly on October 2024. Rebar prices underwent similar developments (Figure 12).

Figure 11. Flat steel products' prices have converged for all regions



Note: Latest price: October 2024 or September 2024.
Source: S&P Global Commodity Insights.

Figure 12. Steel prices for rebar also converged

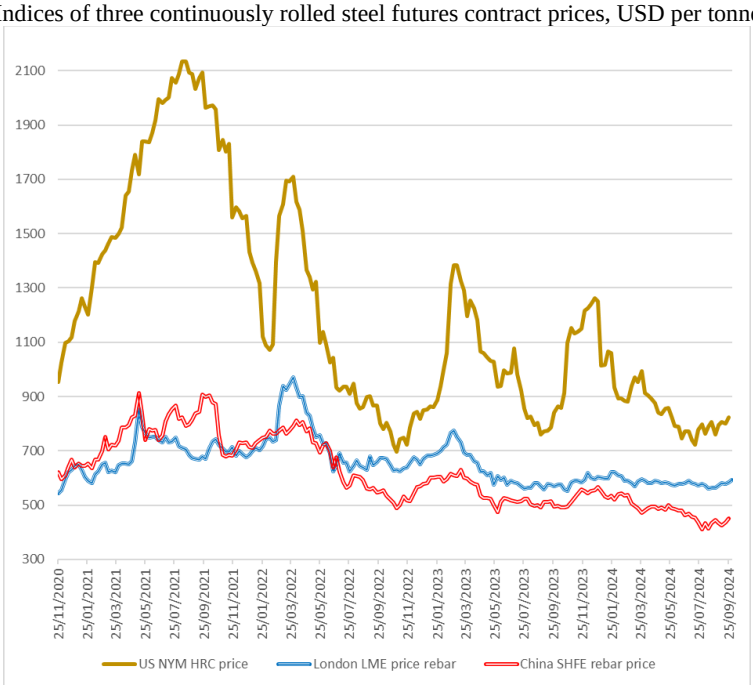


Note: Latest price: October 2024 or September 2024.
Source: S&P Global Commodity Insights.

Steel futures prices tend to move slightly in advance of spot prices, suggesting that they may be able to predict steel spot price dynamics at short frequencies by being quicker to incorporate new market information. Figure 13. below shows three steel futures prices obtained by rolling short-term futures traded on different stock exchanges. The futures price series confirms the idea of a potential trend reversal, since steel future prices are not falling further but even slightly increasing.

Figure 13. Steel futures prices (as of October 2024)

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

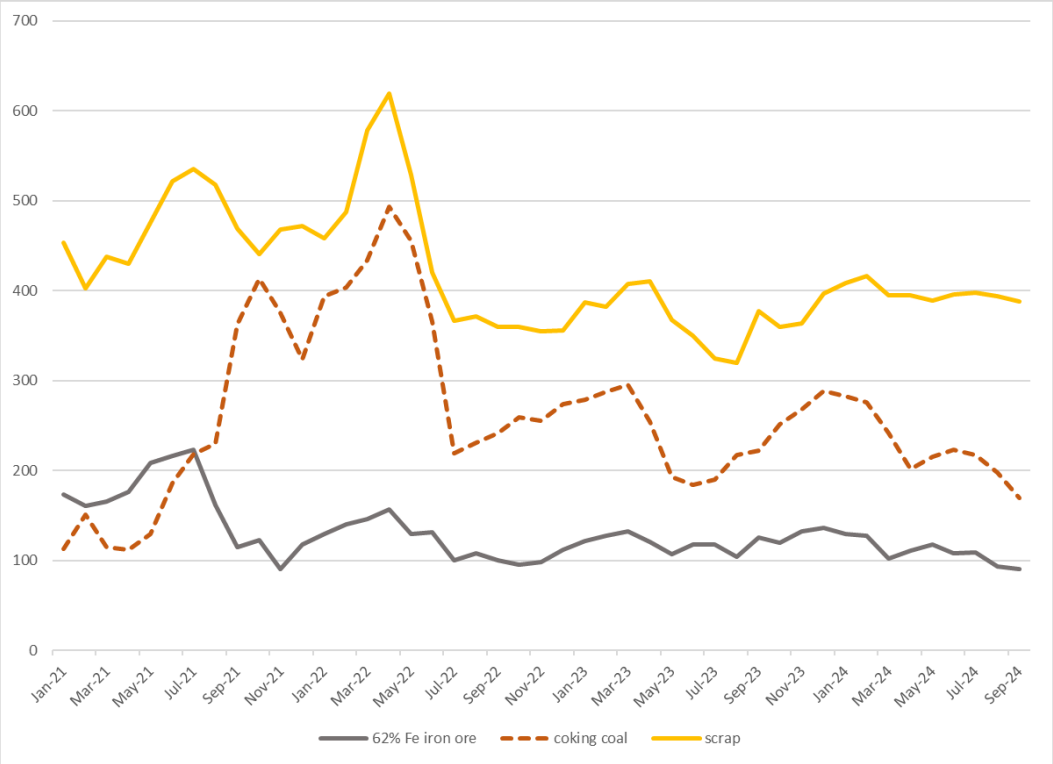


Note: NYMEX US Midwest futures prices were converted to correspond to metric tonnes rather than short tons. SHFE Steel rebar futures prices were converted from RMB to USD using daily exchange rates at closing. For more information on contract specifications, please refer to https://www.lme.com/en-GB/Metals/Ferrous/Steel-Rebar#tabIndex=0 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: LSEG.

5.3. Steel raw material prices

The price of a typical basket of raw material[12] used for steelmaking has decreased since January 2024, essentially due to the large decreasing in the price of coking coal Figure 14.

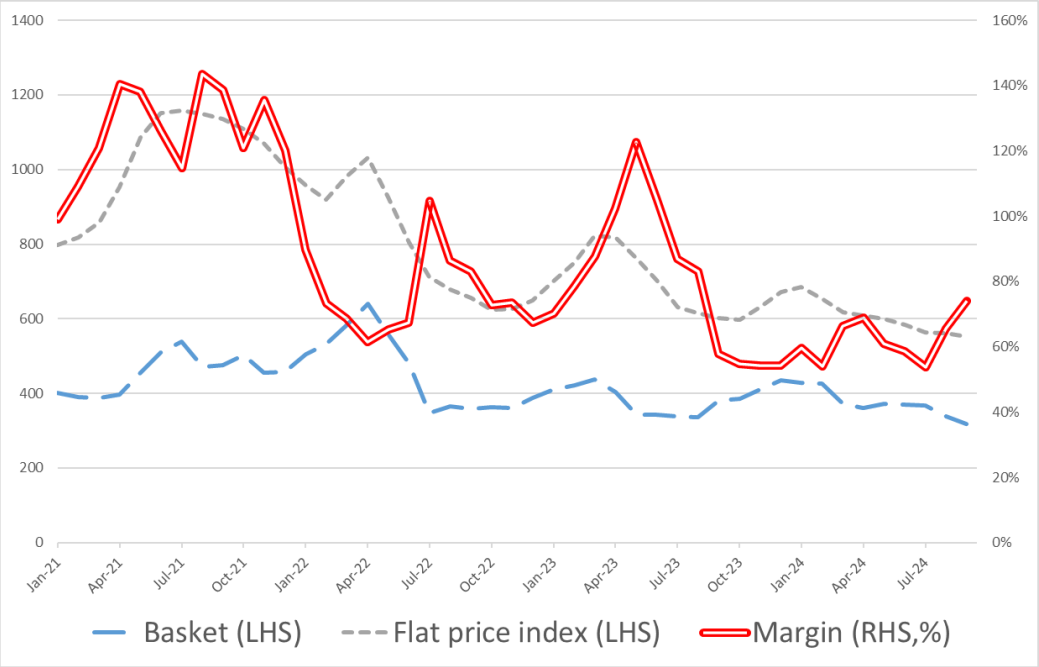
Figure 14. Prices for key steelmaking raw materials (as of February 2024)



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 USD /t"; the coking coal price series is LSEG's "Premium Coking Coal Australia"; the scrap price series is Platts "Scrap / Shredded / N.Europe domestic delivered UDS /t"
Source: S&P Global Commodity Insights, LSEG.

Consequently, the steel raw material price margin, measured by the difference between the price of steel and a generic basket of steel inputs, has been trending down[13] (Figure 15). As the price of raw materials has fallen quicker than the price of steel products, this has brought some breathing space to previously pressured margins. Despite their recent increase, margins are nevertheless close to historical lows.

Figure 15. The margin between steel and raw material prices has started to increase again



Note: Last data point is February 2024. The raw materials basket for steel production is made up of 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. Prices used are as follows: Iron ore Fines, 62% Fe, SPOT, CFR China; Hard coking coal spot, FOB Australia; Scrap, shredded North Europe domestic price. The basket is compared against HRC world prices. The margin is defined as the percentage difference between the steel flat price and the raw materials basket price.
Source: OECD based on data from LSEG and S&P Global Commodity Insights.

6. Financial performance of crude steelmaking firms deteriorated in 2022

The year 2022 witnessed a sharp reversal of the upward trend in steel firms' profitability that had started in 2019, with median crude steelmaking firm's profitability levels falling in both OECD Member countries and partner economies. Capacity utilisation rates nevertheless continue to increase in partner economies, in contrast to OECD Member countries.

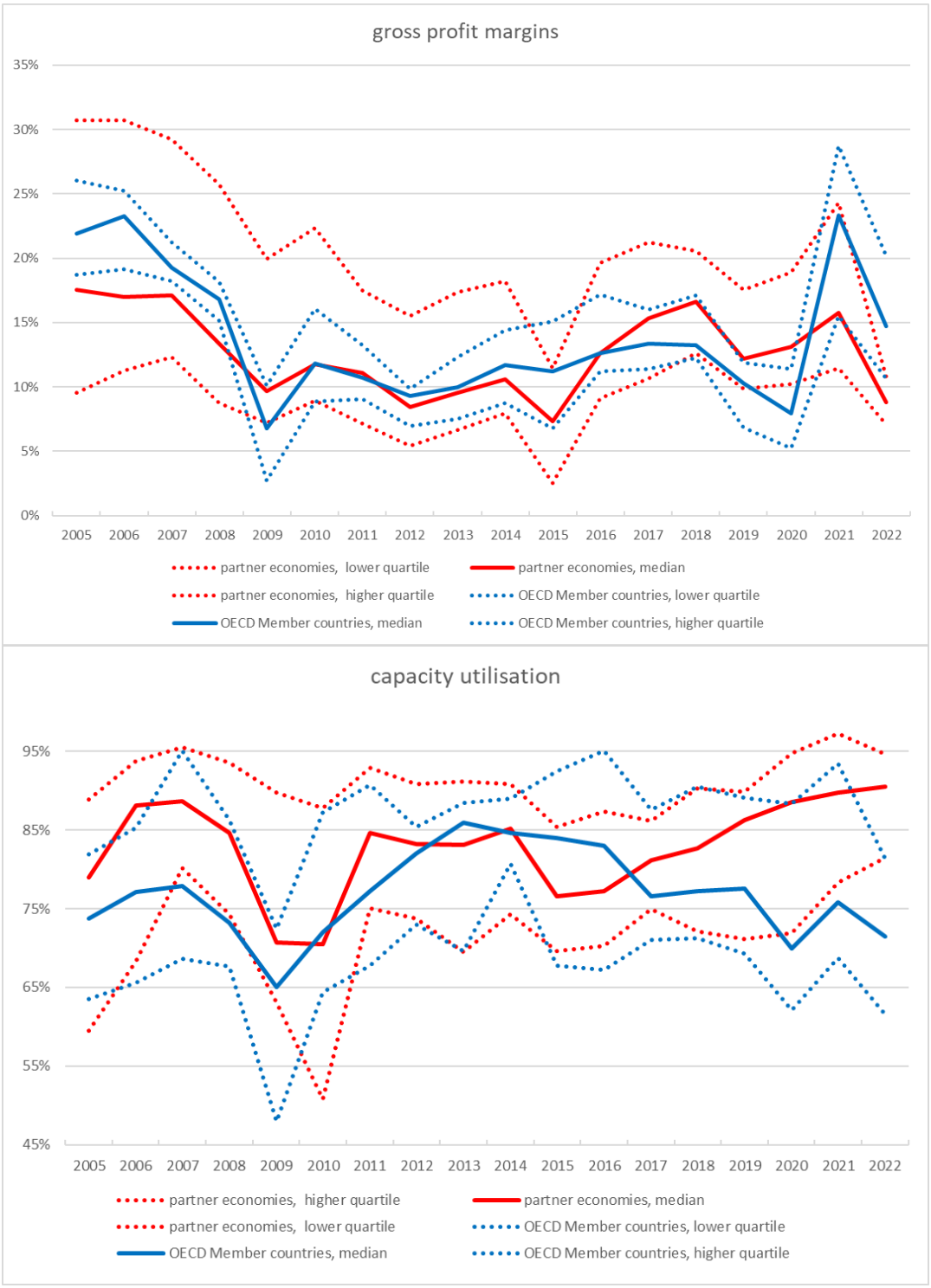
6.1. Profitability

The profitability of a large and representative sample [14] of crude steelmakers fell significantly in 2022 (Figure 16), as foreseen in a previous edition of this Steel Market Development paper series (OECD, 2023[51]) which attributed the good operating profitability to speculative price swings in the face of uncertainty rather than to any long-lasting structural improvement of steel markets that would have made the steel sector resilient and its growth sustainable.

Profitability is probably still below sustainable levels for several steel firms. Profitability is also noticeably lower for steel firms in partner economies than for steel firms in OECD Member countries, both in terms of gross profit ratios and in terms of EBITDA over total sales (Figure 16).

Interestingly, capacity utilisation in partner economies has not fallen in line with profitability as during the 2008-2009 period. Contrary to steel firms in the OECD Member countries, capacity utilisation has kept going up in partner economies. As capacity is not being withdrawn, this means steel kept being produced, possibly for replenishing stocks, or for other purposes.

Figure 16. Profitability and capacity utilisation rates for OECD Member countries and partner economies



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 the represented values across the firms in the sample: 25% of the companies have a value below (respectively, above) the first (respectively, third) quartile line. The continuous line provides information on median values for firms in the sample: those lines divide the distribution into two halves with 50% of the companies having operating profitability below the line.

Source: MAGIC database.

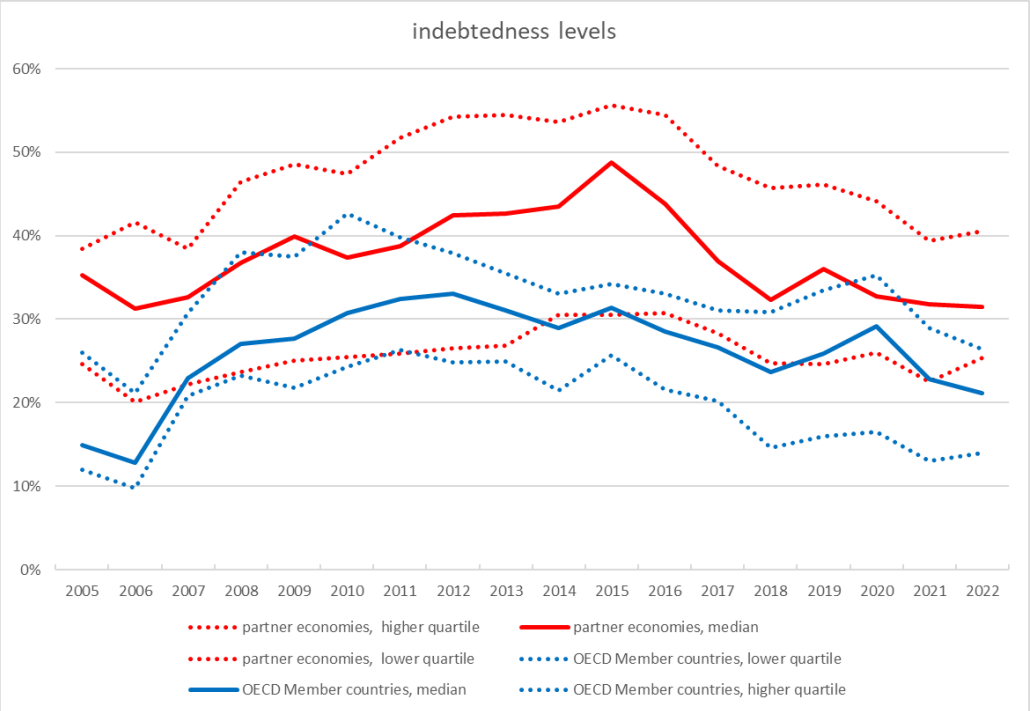
6.2. Indebtedness

Overall, steel firms in both OECD Member countries and partner economies have continued deleveraging, with the median indebtedness declining steadily since its 2015 peak, despite a slight uptick in 2020 (Figure 17).

Nevertheless, steel firms in partner economies remain much more indebted than in OECD Member countries, with the 25% least indebted of firms in partner economies (the lower quartile of steel firms in partner economies) actually at similar indebtedness level than the 25% most indebted firms in OECD Member countries (orange circle in Figure 17).

As of 2022, the debt-to-asset ratio of steel firms in partner economies had a median of 32%, compared to 21% for steel firms in OECD Member countries: the median representative firms have 50% higher debt to asset in partner economies than in OECD Member countries, a significant difference.

Figure 17. Indebtedness of crude steel-producing firms is higher in partner economies than in OECD Member countries and did not decrease in 2022.



Note: Indebtedness is computed as the debt-to-asset ratio, although the total liabilities-to-debt ratio would paint a similar picture.
Source: MAGIC database.

Compared to previous Steel Market Development reports (OECD, 2023[51]), the sample of the MAGIC database used in this section does not cover solely the publicly listed steel companies. Hence, it is geared towards presenting a more accurate picture of indebtedness levels. Nevertheless, some caution is still warranted in the interpretation of the depicted indebtedness levels as in some large steel-producing economies such as China, debt has been artificially reduced by relying extensively on debt-for-equity swaps schemes that were

not agreed in advance by investors and lacked clarity concerning losses in cases of bankruptcy.

7. Steel consumption will remain subdued in 2024

World steel demand is expected to reach 1,782 mmt in 2024, reflecting minimal growth of 0.3% compared to 2023, before gaining momentum in 2025 with an increase to 1,800 mmt (+1%). Emerging economies, particularly in ASEAN, South America, and the Middle East, are driving demand.

Steel demand in developed markets remains weak so far in 2024, still below pre-pandemic volumes. The easing of monetary policy, a reduced inflation rate and less labour market pressures are expected to favour stronger investment in 2025.

7.1. Global steel market outlook

Demand in the global steel market is sluggish in 2024 and is expected to reach 1,782 mmt by the end of the year, only 0.3% above the level of 2023 (Table 5). Despite solid growth in emerging markets outside China so far, global demand is falling due to a significant decline coming from China while developed markets are recovering very slowly. With depressed prices for steel products and a flood of exports from China to other economies, demand adjusted upwards in markets outside China, especially in emerging economies in ASEAN, MENA and South America (Fitch Ratings, 2024[52]).

Expectations for this year have deteriorated due to a significant reduction in Chinese demand and a much milder recovery in Europe. In its April 2024 Short Range Outlook (SRO), Worldsteel estimated that global steel demand would grow by 1.7% in 2024 (-1.1 pps with respect to OECD estimates) and further increase by 1.2% in 2025 (-0.2 pps) (Worldsteel, 2024[53]).

However, in the first half of 2024, demand conditions worsened due to a stronger-than-expected downturn in the Chinese real estate sector and the lack of efficient stimulus measures. As a result, Chinese steel demand is expected to decrease by 2.6% this year (Table 5)

World steel demand is forecast to reach 1,799 mmt in 2025 (+1% vs 2024).

Chinese demand would stabilise at current levels next year (+0% vs. 2024), leading to a gradual easing of downward price pressures as markets outside China recover and global demand strengthens. The Chinese government's recently announced stimulus measures on the property market could contribute to soften the negative impact of falling new residential investments and prevent a further decline in the market (Box 6). However, these stimulus policies are unlikely to be strong enough to reverse the downward long-term trend in Chinese steel demand.

Developed markets, such as the EU and United States, are expected to see stronger recovery on the back of a more favourable environment for investment and consumption of durable goods, with lower interest rates and less restrictive monetary policies.

The medium-term outlook anticipates a flattening of steel demand by 2030 (1,881 mmt, 0.9% CAGR) driven by a declining trend in Chinese steel consumption and a stabilisation of demand in developed markets amid supply-side adjustments.

Table 5. The Steel demand outlook looks bleak

Finished steel. In thousand metric tons and %

Regions	OECD estimations						Worldsteel SRO April 2024			
	2024		2025		2030		2024		2025	
	Mt	y-o-y	Mt	y-o-y	Mt	CAGR	y-o-y	pps diff vs OECD	y-o-y	pps diff vs OECD
European Union (27) & UK	135,631	-0.6	138,849	2.4	138,657	0.0	2.9	(-3.5)	5.3	(2.6)
CIS	60,131	3.6	60,964	1.4	65,164	1.3	4.1	(-0.5)	0.8	(0.6)
USMCA	139,480	-0.6	143,147	2.6	144,909	0.2	1.4	(-2)	1.9	(0.7)
Central & South America	42,021	2.5	42,905	2.1	43,716	0.4	-0.5	(3)	2.8	(-0.7)
Africa	28,841	4.6	29,889	3.6	33,295	2.2	5.4	(-0.8)	4.4	(-0.8)
Middle East	53,695	2.6	54,954	2.3	58,361	1.2	4.1	(-1.5)	2.6	(-0.3)
Asia & Oceania	1,189,082	-0.6	1,197,381	0.7	1,262,903	1.1	1.2	(-1.8)	1.2	(-0.5)
World	**1,782,646**	**0.3**	**1,799,988**	**1.0**	**1,881,813**	**0.9**	**1.7**	**(-1.4)**	**1.2**	**(-0.2)**
World excl. China	921,178	3.0	944,683	2.6	1,028,979	1.7	3.5	(-0.5)	3.5	(-0.9)
Developed Economies	354,007	-0.5	358,219	1.2	376,067	-0.1	1.3	(-1.8)	2.7	(-1.5)
China	859,119	-2.6	852,452	-0.8	852,833	0.0	0	(-2.6)	-1	(0.2)
Em. and Dev. Economies excl. China	569,519	4.5	589,317	3.5	652,913	2.8	5	(-0.5)	4	(-0.5)
ASEAN	80,933	8.5	84,845	4.8	98,353	3.0	3.5	(5)	4.3	(0.5)
MENA	79,388	1.5	82,198	3.5	93,274	2.6	4.7	(-3.2)	3	(0.5)
OECD	433,780	-0.7	446,216	2.9	441,384	-0.2				
Partner economies	1,348,866	0.6	1,353,772	0.4	1,440,429	0.3				

Note: The table shows OECD recent estimates of steel demand derived from its long-term steel demand model (DSTI/SC(2024)1). These are based on the latest available data and provide an overview of recent developments across the main steelmaking economies (Section 7.2**)**. OECD forecasts are systematically compared with the latest Short-Range Outlook (SRO) from Worldsteel, published in April 2024 (Worldsteel, 2024[53]) with the aim of assessing any shifts in the trends.
CAGR (Compound Annual Growth Rate) measures the expected annual growth of country.
Source: OECD Steel Secretariat estimates based on Worldsteel, ISSB and COMTRADE. Worldsteel April 2024 Short-Range Outlook (SRO).

Key drivers of steel demand growth towards 2030

Steel demand in 2030 is projected to be around 1,881 mmt, resulting from a CAGR of 0.9% from 2025. This is mainly supported by a slowdown in China's GDP growth from around 5% this year to 3.1% in 2030 (CAGR 3.8%) amid structural adjustments to its growth model based on high investment rates and relatively low consumption, notably in its property market.

Conversely, additional sources of steel demand would come from emerging markets (CAGR 2.8%) especially from Asia, and to a lesser extent from MENA (+2.6%). Steel demand in the ASEAN region and India is expected by grow by 3% and 8.4%, respectively. Growth in these markets is expected to remain strong, led by demand for infrastructure and housing.

Developed markets in Europe, United States, Canada and Asia would see very modest growth. These are mature markets that will face more limited demand from infrastructure

and housing, with less credit growth. Likewise, in Japan and Korea, the industry will have to realign to the decline of some export markets in the face of new capacity expansion in emerging markets.

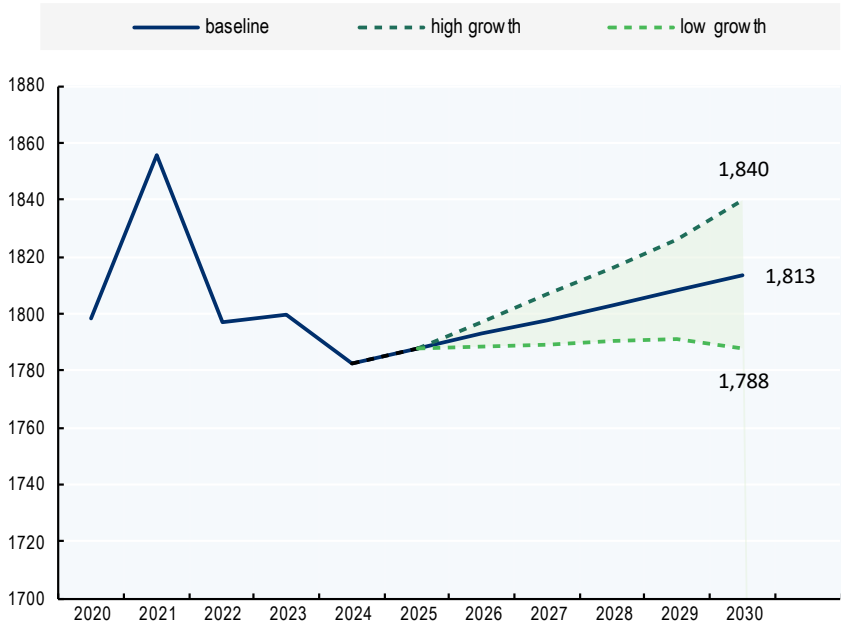
Figure 18 illustrates two possible scenarios for steel demand, reflecting 'high' and 'low' GDP growth outside of China, within a margin of 50 basis points compared to the OECD Economic Outlook's GDP baseline projections (CAGR of 2.4% for the period 2025-2030). The scenarios do not consider potential changes in demand from the Chinese market, which represents 50% of the world demand, as trends clearly point to a continued decline in its GDP growth rate, from 4.9% this year to slightly over 3% by 2030 (OECD, 2024[54]).

In the high-demand scenario, stronger-than-expected growth in developed economies might be driven by factors such as lower interest rates, increased purchasing power due to lower inflation, a stronger recovery in the housing market, a higher volume of international trade, and rising global steel prices. On the other hand, the low-demand scenario could result from a slower economic recovery and greater disruptions in international trade, in particular related to steel markets.

The variation in steel demand compared to the baseline scenario would amount to around 26 mmt either above (high growth) or below (low growth) the baseline.

Figure 18. Two scenarios for global steel demand

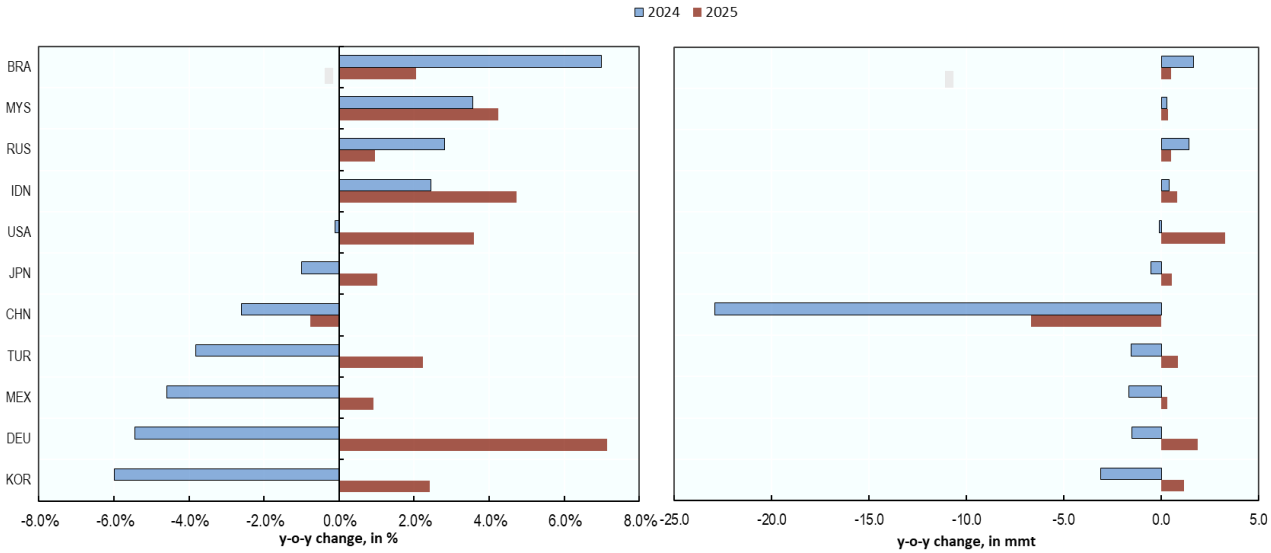
World steel demand (apparent steel use). In million metric tonnes of finished steel



Note: The graph depicts two possible scenarios for steel demand, reflecting 'high' and 'low' global GDP growth excluding China; with an impact of 50 basis points (+5 percentage points) compared to the OECD Economic Outlook baseline forecast (CAGR of 2.4% for the period 2025-2030). These are derived from estimates of the OECD steel demand model.

Figure 19. Steel demand by main steelmaking economies

Change from previous year. Finished steel. In % (left chart) and in mmt (right chart)



Source: OECD estimates based on Worldsteel, COMTRADE and ISSB

As can be seen on Figure 19 above, even minimal changes in Chinese steel demand translates into huge amounts of steel finding no domestic purchaser. The Chinese steel market, by its sheer size, can have drastic impacts on international steel markets, and this particular risk seems to be materialising.

Box 5. Steel demand projections are derived from the recently developed OECD model for Steel markets

The production and consumption sections of this Market Paper are built on the basis of new OECD projections derived from its steel market modelling work. This new development provide forecasts of:

- production flows;
- apparent and true steel consumption by steel-using sectors;
- finished steel trade; and
- downstream sectors' indirect steel trade.

The model leverages the extended OECD Inter-Country Input Output (ICIO) database (OECD, 2023[55]) that considers the perspective of the whole steel global value chain, covering production and international trade flows from 76 countries and 45 industries, considering the iron and steel industry as a separate sector.

The model combines two types of estimates that use different sources of information. Short-term estimates, which approximate the series 1 and 2 years ahead; and long-term estimates, which project the series up to 2050 in 5-year intervals.

The short-term estimates are based on the latest available monthly crude steel and final steel product production series from Worldsteel as well as the export and import series

derived from the trade data infrastructure, which includes very timely information from COMTRADE and ISSB. In addition, key short-term economic indicators and the latest data from the OECD Economic Outlook are used, both with information on the latest developments in industrial production, construction activity, passenger car registrations, GDP growth, interest rates and other relevant macroeconomic variables.

Moreover, long-term estimates are built upon OECD's long-term economic projections of GDP, GDP per capita, investment and other series up to 2060, while drawing on structural assumptions and considerations from diverse sources, such as the IEA and other research papers.

Source: DSTI/SC(2024)1

7.2. Regional steel market outlook

7.2.1. Asia and Oceania

Steel demand in Asia and Oceania is expected to decrease by 0.6% in 2024. Further, demand is forecast to grow by 0.7% in 2025.

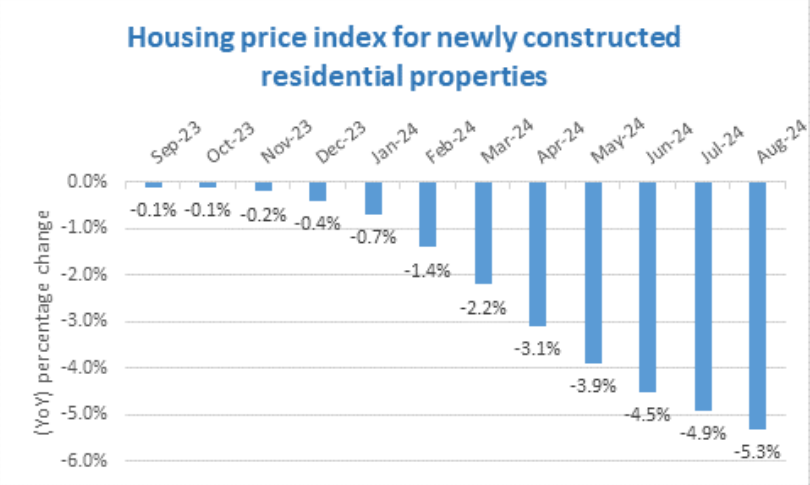
China, the world's largest steel producer, is expected to reduce steel demand by 2.6% in 2024. The economy is currently experiencing a much stronger-than-anticipated slowdown in the construction sector. According to the National Bureau of Statistics of China, real estate development investment saw a cumulative decline of 10.2% from January to August this year (National Bureau of Statistics of China, 2024[56]). A mild improvement can be expected in the last quarter of the year supported by an increase in government spending, following a recent uptick in local government bond issuance. However, the prolonged correction in the real estate sector is likely to persist (OECD, 2024[54]).

Box 6. China's real estate market declines

China's real estate sector has long been a central pillar of the country's economic engine, driving steel consumption and broader growth. Over the past few decades, real estate development has fuelled demand for commodities and construction materials, making it a key determinant of the country's industrial landscape, particularly for the steel sector. However, since mid-2021, China's property market has shown signs of significant strain, marked by falling prices, weaker demand, and a decline in overall sales activities.

The current situation is alarming. In August 2024, the housing price index for newly constructed residential properties in 70 major Chinese cities recorded a 5.3% year-on-year (y-o-y) decline, illustrating the prolonged downward trend (National Bureau of Statistics, 2024[57]). This sharp drop follows consistent monthly declines throughout 2024, as highlighted in Figure 20, where declines intensified each month.

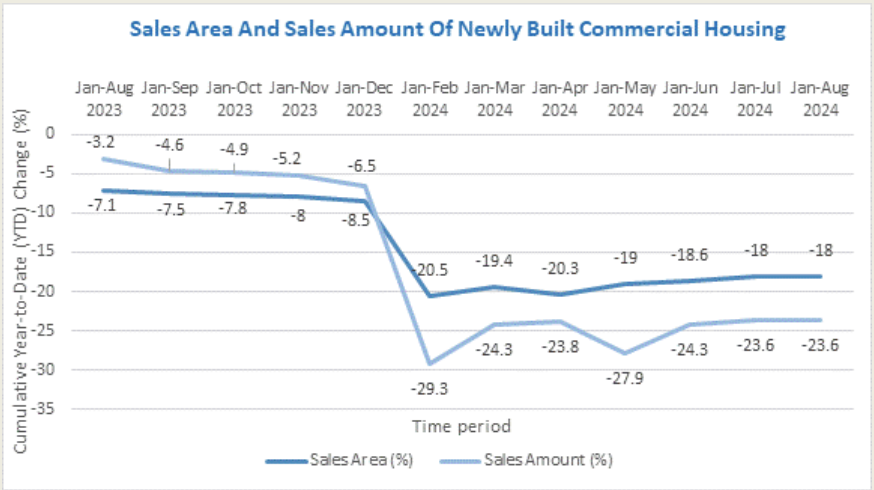
Figure 20. housing prices in China



Note: Newly built commercial housing sales price index in 70 large and medium-sized cities across China
Source: National Bureau of Statistics

Furthermore, the sales area and sales amount of newly built commercial housing have experienced a similar contraction. Figure 21 shows that the sales area for newly built commercial properties dropped by 18% by August 2024, and sales amounts have consistently remained around -23.6%, reflecting a slowdown in property purchases and investments (National Bureau of Statistics, 2024[58])

Figure 21. House sales in China



Note: Newly built commercial housing sales area refers to the total contracted area of newly built commercial housing sold during the reporting period (i.e. the building area confirmed in the formal sales contract signed by both parties). This indicator is cumulative data.
Source: National Bureau of Statistics

Government Response to Stabilise the Real Estate Market

In response to the challenges in the real estate sector, on the 24th of September, the Chinese authorities have introduced a range of targeted measures aimed at stabilising the market and promoting recovery (Chinese Government, 2024[59]). During a recent press conference, key financial institutions, including the People's Bank of China (PBOC), the Financial Regulatory Administration, and the China Securities Regulatory Commission (CSRC), outlined policies designed to address liquidity constraints, affordability issues, and longer-term market stability:

Monetary Easing: The PBOC has reduced both the reserve requirement ratio (RRR) and policy interest rates, injecting approximately 1 trillion yuan into the financial system. These measures are intended to lower borrowing costs, stimulate lending, and enhance financial liquidity.

Housing Affordability Support: The central bank is guiding commercial banks to reduce mortgage rates on existing loans and has unified the minimum down payment ratios for housing across the country. The minimum down payment for second-home buyers has been lowered from 25% to 15%, aiming to boost affordability and encourage transactions.

Extension of Property Loans: Property-related loan policies, including the extension of operating property loans and the "Financial 16 Measures" , have been extended until the end of 2026. Additionally, the "no-repayment renewal loan" policy, originally designed for small businesses, has been temporarily expanded to cover medium-sized enterprises, providing them with three more years to manage their liquidity challenges. These measures aim to offer both developers and medium-sized businesses more time and financial support, helping to stabilise the real estate market amid ongoing financial difficulties.

Capital Market Stability: The CSRC has introduced new financial tools aimed at improving the stability of capital markets, including facilitating stock buybacks, and providing liquidity support for institutional investors such as insurance companies. These measures are intended to support the real estate sector indirectly by stabilising the broader financial environment.

Despite these wide-ranging efforts, the impact of the government's intervention remains uncertain. Although government efforts may alleviate some short-term pressures, the challenges facing the real estate sector are profound and deeply structural. With consumer confidence still fragile and developers struggling to stay solvent, recovery is likely to be slow and uneven.

According to a few preliminary estimates, the impact of recent measures would boost China's GDP growth by an additional 0.4 percentage points this year, helping it achieve the government's 5% growth target (Reuters, 2024[60]). This initial impact would be very limited, translating into a modest 3.3-4 mmt of additional finished steel demand for the Chinese economy in the last quarter of 2024 with respect to the baseline estimates for 2024 from the OECD steel demand model (Table 5).

In India, steel demand is proving very strong so far this year (+10.7% year-on-year, January-May 2024) and is expected to reach +8.8% in 2024 and expand a further 6% in 2025.

The economy is expanding at high rates in 2024, with investment accelerating in the second quarter of 2024. However, in a low steel prices international context, Indian mills are

reducing exports and adjusting domestic production through maintenance shutdowns and production cuts to maintain margins (SEAISI, 2024[61]).

Japan's steel demand is expected to decrease by 1% in 2024 after a drop of 3.9% in 2023. In 2025 demand would recover slightly by 1.1%. The Japanese economy is showing a sharp recovery in the second quarter of 2024 after contracting in the first amid temporary supply disruptions (OECD, 2024[54]). In a context where investment and final consumption are increasing, steel imports are growing at an annualised rate of 6.2%. Towards the end of the year the outlook could worsen as the construction sector, a key driver of steel demand, is facing significant challenges with rising raw material costs and labour shortages due to changes in legislation limiting labour demand growth (Yieh, 2024[62]).

Steel demand in Korea has been hit hard this year. Korean steelmakers are facing strong competition in foreign markets from Chinese exporters and are reporting significant reductions in their balance sheets' operating profits (Financial Times, 2024[63]). Moreover, construction activity is experiencing a slowdown (-2.6 year-on-year in the second quarter of 2024) that is currently affecting steel deliveries. Steel demand is expected to close 2024 at a level 9.5% below 2023 and recover in 2025 (+6.5%).

Steel demand in the ASEAN-5 region (Indonesia, Malaysia, Philippines, Thailand, and Viet Nam) is expected to increase strongly in 2024 (+8.5% vs 2023), driven mainly by Viet Nam, which is enjoying the most dynamic growth. The region is currently experiencing a strong influx of steel imports from China that are growing at an annualised rate higher than 20% in most member countries amid a very resilient GDP growth, with investment and industrial production expanding in Malaysia, Thailand and Viet Nam (McKinsey, 2024[64]).

7.2.2. Americas

In Central and South America, steel demand is expected to increase by 3.1% in 2024.

In Brazil, steel consumption is rising at a cumulative 8.2% in the period January-August 2024 with respect to the same period last year (Instituto Aço, 2024[65]). Towards the end of the year, demand is expected be 7.1% above 2023 level. The domestic market is growing at a robust pace with GDP expected to expand at 3.2% according to Brazil's central bank, above what was previously expected (+2.3%) and the highest rate since the post-pandemic recovery (Agência Brasil, 2024[66]). The Brazilian steel industry, however, is very concerned about the very strong competition it faces from Chinese products. Steel companies are losing domestic local market share and decreasing their export revenues.

In Argentina, demand for steel is experiencing a major decline amid an economic recession. It is expected to fall by 20% in 2024 and to recover by the second half of next year. The construction industry, a major driver of steel demand, is one of the most affected in the country after a significant reduction in public infrastructure spending was announced. The manufacturing industry is recovering slightly in August, and it is expected that the economy will emerge from recession in the last quarter of the year (BBVA Research, 2024[67]).

In USMCA, steel consumption is expected to increase by 0.3% in 2024 and 1.7% in 2025.

In the United States, demand for steel decreased 0.4% year-on-year in the first half of 2024 (GMK Center, 2024[68]) and is expected to fall by 0.1% this year. Higher interest rates have hit the real estate market, which had an impact on steel consumption. Housing transactions are only slowly recovering towards the second quarter of this year after falling by more than 10% in 2023. Monetary easing could help underpin stronger growth through the second half of 2025 (OECD, 2024[54]).

In Mexico, steel consumption is forecasted to decrease by 4.6% in 2024. The economy is facing a general stagnation, with a slowdown particularly in durable goods consumption and construction, sectors that drive steel demand. According to the Mexican Central Bank, towards next year, growth would slow even further (Banco de Mexico, 2024[69]).

7.2.3. Europe

In Europe, steel consumption would decrease by 0.6% in 2024 after falling by 7.2% in 2023. The severe impacts of the war in Ukraine, combined with a worsening manufacturing outlook and challenging economic conditions, have continued to weigh heavily. The outlook for steel demand remains highly uncertain, with volumes anticipated to remain below pre-pandemic levels. The construction sector could start to recover as monetary policy eases further (European Steel Association, 2024[70]).

Türkiye's steel industry is experiencing growth in local production led by a recovery in its main export markets (GMK Center, 2024[71]). Increased sales of flat products to Europe are boosting domestic steel production by 15% year-on-year in the first 8 months of 2024. This is taking place in a sluggish domestic market, where imports are 5.4% below 2023 levels.

The CIS economies are expected to increase steel demand by 3.6% in the midst of a recovery of the Ukrainian industry that expands its demand at 19.7% year-on-year in the period January-May 2024.

7.2.4. Africa and the Middle East

The Middle East and Africa would see an increase in demand of 2.6% and 4.6% in 2024, respectively. By 2025, these regions are expected to continue showing strong momentum.

Egypt would increase steel demand by 4.6% this year. The economy is expanding at a rate of more than 2.5% for the year, although there are signs of a slowdown that could have an impact towards the end of the year. However, good expectations are driven by inflation heading towards the target, the completion of infrastructure projects and new building legislation that will lead to the issuance of more private building permits and the resumption of private construction in Egypt (Egypt today, 2024[72]).

Saudi Arabian steel demand is expected to increase by 1.7% this year. Imports are growing significantly (+18% in annualised terms for 2024), mostly from China. Steel demand is stable and driven by requirements from large infrastructure projects (Argaam, 2024[73]).

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Endnotes

[1] The figure depicts the Producer Price Index (PPI) for several large steel-producing economies. It highlights that contrary to China, which managed, after a moderate increase in 2021, to reduce producer prices back to their pre-COVID levels, most economies have to operate at much higher costs. Producer prices weigh on producers' competitiveness, triggering changes in trade patterns. They also ultimately tend to be reflected on the consumers' end, as firms' margins can only temporarily absorb cost increases, which ultimately will be passed on to the final consumer. This makes the PPI a forward-looking indicator of consumer prices and a better predictor of price increases, on top of not being subject to as many hedonic and substitution adjustments as consumer prices. Hedonic adjustments in consumer prices account for assumed quality changes in goods and services by including the (imputed) value of improved features, supposedly ensuring that price indices reflect "pure" price changes rather than enhanced quality. Substitution adjustments account for consumers potential to switch to cheaper alternatives when prices rise, thus lowering the calculated inflation by modifying the basket of consumer goods over time. Producer Price Indices (PPI) generally do not use hedonic or substitution adjustments as extensively as Consumer Price Indices (CPI), since they focus on the prices of inputs for production rather than consumer behaviour or quality changes.

[2] The purchasing managers surveyed in the Steel PMI are responsible for procuring steel and steel-related materials for their companies. Their responses are used as proxies for the overall activity in the steel sector because their purchasing decisions are directly linked to their company's operational needs, as their purchasing decisions reflect how much their company is likely to sell or produce in the short term. Hence purchasing managers have insight into both the purchasing of inputs and the production sides of their company's operations. This is the reason their input is particularly valuable for understanding current and future demand for steel.

[3] In order to capture large SOEs, the database used in this report is the OECD MAnufacturing Groups and Industrial Corporations (MAGIC) database. The MAGIC database covers 482 of the largest industrial firms (listed and non-listed) in 14 manufacturing sectors producing either durable goods or industrial raw materials over the period 2005-22. Based on the location of these firms' headquarters or their main place of business, around 55% of them are from OECD countries (of which roughly one-third from the European Union and slightly less from the United States) and around one-third from China. The database contains basic financial and economic data (including revenue, employment, labour costs and assets) and estimates of three types of government subsidies: grants, below market borrowings, and corporate income tax rebates.

[4] Notice that because the swap is an asset swap and the facility is fully funded, this does not increase money supply nor provide non-banking financial institutions access to central bank money. Nevertheless, non-banking financial institutions can then easily sell the swapped assets in the secondary markets and get cash for investing in that way (or get loans from commercial banks by providing the liquid assets as collateral).

[5] For example, Sonatrach manages key transcontinental pipelines, such as the Medgaz pipeline to Spain and the Enrico Mattei pipeline to Italy, with a combined capacity of 43 billion cubic meters annually. Sonatrach's influence is further solidified by its partnerships with international energy firms and its control over a large share of Algeria's hydrocarbon exports, which constitute around 95% of the country's foreign exchange earnings.

[6] CPAT is a model that provides projections of fuel consumption and GHG emissions for major sectors in 188 countries. It is widely used in IMF surveillance, cross-country analysis, and technical assistance (IMF Middle East and Central Asia Dept., 2024[79]).

[7] "In Algeria, state-owned enterprises (SOEs) dominate the domestic oil and gas supply chain of extracting, producing, and selling hydrocarbons, and, if needed, import-derived products to domestic end-users. Transactions are made at administered prices well below cost recovery levels. Natural gas for power generation is also sold below cost-recovery levels to the public electricity company which, in turn, supplies electricity to consumers at subsidised prices. Annual on-budget spending on the subsidies of electricity, gas, and water desalination is about 0.5 percent of GDP. However, the bulk of the fiscal cost of subsidies are implicit (off-budget) through foregone taxes, royalties, and dividends from hydrocarbon extraction and sales. The government has also occasionally made transfers to SOEs in the energy sector to offset the cost of subsidies, for example on imported fuel products" (IMF Middle East and Central Asia Dept., 2024[79]).

[8] It is also important to note that Indonesia, being an OECD accession country, will undergo a more comprehensive review of its government intervention policies during the accession process, expected to conclude in 2025/26. This review will help assess the long-term impacts of such measures on both domestic and international steel markets, providing further clarity on potential market distortions.

[9] In 2015 Hiap teck (Malaysian POEs) owned 55% and Shougang (Chinese SOEs) owned 40%. In early 2018, Shougang sold its stake in Eastern Steel to Beijing Jianlong, a not-state-owned Chinese steelmaking company.

[10] In 2013, POSCO (Korean POEs) owned 70% and Krakatau Steel (Indonesian SOEs) owned 30%. In 2022, Krakatau Steel increased its share ownership to 50%.

[11] (Decree No. 118/2015/ND-CP on 12 November 2015). In Viet Nam, land is owned by the state. The government of Viet Nam provides rent exemptions and reductions apply to a number of investment projects which satisfy certain conditions such as being directed towards the development of sectors or business field encouraged by the government, of in specifically determined geographical locations. Foreign companies may enjoy land rent exemptions between 3 years to the whole operation period.

[12] The raw materials basket for steel production is made up of 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.

[13] A word of caution is nevertheless warranted when interpreting the broad averages indicated in Figure 14. Indeed, price divergences observed and commented upon in this report for both steel and raw materials alike means that generic price margins should rather be estimated on a region-specific basis than as a world average.

[14] In order to capture large SOEs, the database used in this report is the OECD MAnufacturing Groups and Industrial Corporations (MAGIC) database, contrary to earlier versions of the report which used Refinitiv data. The MAGIC database covers 482 of the largest industrial firms (listed and non-listed) in 14 manufacturing sectors producing either durable goods or industrial raw materials over the period 2005-22. Based on the location of these firms' headquarters or their main place of business, around 55% of them are from OECD countries (of which roughly one-third from the European Union and slightly less from the United States) and around one-third from China. The database contains basic financial and economic data (including revenue, employment, labour costs and assets) and estimates of three types of government subsidies: grants, below market borrowings, and corporate income tax rebates.