



Metals and Steel Industry Outlook 2025/2026



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Nicola Harris
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Nicola is a Senior Underwriter based in our Cardiff office in the UK. She has worked with Atradius for the past nine years following a successful internship with our Special Risk Management Team after she had graduated with a degree in Accounting and Finance. She is responsible for the Metals and Steel and UK Transport portfolios, where she leads the underwriting team. Nicola regularly contributes to Atradius reporting, focusing on her areas of specialism and on UK economic trends.



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Kim Wei is a Senior Underwriter at Atradius. Based in Singapore he has worked with Atradius for five years, and currently manages a portfolio of Energy, Metals, Fuels, Mining, Construction Materials, Rubber and Services in Singapore, Malaysia, Philippines and Brunei. His expertise includes analysing a range of businesses (SMEs, MNCs to Listed Conglomerates), coaching and mentoring junior credit professionals. Kim Wei is a Fellow of the Association of Chartered Certified Accountants (FCCA), and formally worked with a Big 4 Audit firm for over 10 years.

Global: Multiple headwinds are impacting the global metals and steel industry

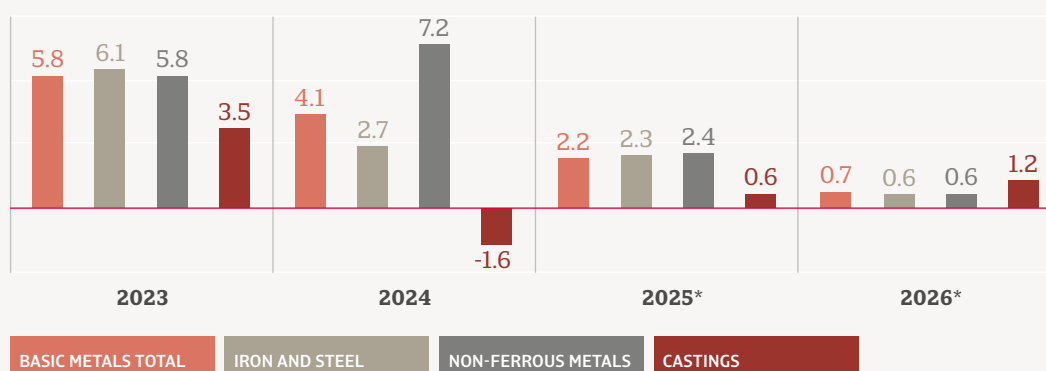
The global metals and steel industry is facing an unsettled time, with headwinds from several different directions. These include the latest wave of tariffs imposed by President Trump on imports to the US, the clean energy transition which can involve costly capital investment to replace coke and coal-fired furnaces with electric arc furnaces, and the glut of global product caused by oversupply. Global forecasts point to a slowdown in production output in every subsector over the next couple of years. Our analysts predict basic metals growth of just 2.2% this year, slowing to a meagre 0.7% in 2026.

Steel production will plateau in China over the rest of this decade before structurally declining over the long run. India and emerging market economies will be key engines of supply growth over the entire forecast. New capacity additions in advanced economies, especially in Europe will focus on greener technologies, replacing highly polluting blast furnaces, rather than increasing overall domestic capacity.

In this report, our sector specialists located in the world's major markets dig deeper into how the metals and steel industry is faring in their local regions. They raise the issue of increased credit risk

for the sector. This is high in several regions and countries, exacerbated by the tariffs and uncertainty about the global economy. However, while they note the major headwinds causing industry instability, they also point to areas of growth and potential. These include the opportunities afforded to metals and steel businesses across Europe that have already transitioned to clean energy and are able to sell premium green steel, as well as the growth potential presented across the Indian subcontinent and other emerging markets. Read on to learn more about what our underwriters see to be the greatest opportunities in addition to the challenges currently affecting the sector.

Global basic metals output



Year-on-year, % change. (* Forecast) Source: Oxford Economics.

Metals and steel industry performance and outlook: Americas

USA: Despite slower growth, local producers should benefit from import tariffs

“We can’t look at the metals and steel industry in the USA without also looking at the tariffs”, said AJ Cobos, Atradius Senior Underwriter. “But this is tricky”, he added. “There is significant uncertainty for how long the tariffs will remain or whether key players could negotiate exemptions and makes forecasting more complicated.”

The import tariffs were imposed to redress an imbalance in trade and, in aluminium and steel in particular, to address an oversupply being imported into the USA. As AJ Cobos noted: “Most domestic ferrous and non-ferrous metals producers should benefit from the 25% tariffs on steel and aluminium imports. Domestic steel players will gain market share and additional revenue due to higher prices, which will boost their margins. A quarter of steel consumption in the US relies on imports to meet domestic demand, which will drive prices higher. We expect prices to increase by 23% this year, peaking in Q3 of 2025, before slowly pulling back thereafter as supply increases and high prices dampen demand.”

However, the picture for domestic metals producers in the USA is more complicated than simply gaining revenue from higher prices. Most recent projections of US economic growth point to just 1.3% in 2025 and 1.7% in 2026. US basic metals production, is forecast to increase by just 0.4% in 2025 and 0.8% the following year. Demand from key buyer sectors such as construction and, in particular, automotive is set to decelerate, the latter due to the 25% tariff on imported cars and car parts.

USA basic metals output

	2023	2024	2025*	2026*
Basic metals total	0.2	1.0	0.4	0.8
Iron and steel	1.4	-1.7	1.7	1.6
Non-ferrous metals	0.2	4.4	-0.3	0.6
Castings	-2.9	1.7	-1.4	-1.0

Year-on-year, % change. (* Forecast) Source: Oxford Economics.



Has business confidence increased alongside margins?

AJ Cobos added: “Business confidence and investment in the US metals and steel industry has been dented by the uncertainty associated with the tariff policy. This largely affects planning. Some businesses have been hesitant to invest in new production facilities as tariffs could be removed at any point.”

Given the current price environment, the margins of US metals and steel businesses will likely increase over the coming year, or at least level off. Banks are still willing to lend, and most of the companies don't have problems renewing or extending their

credit lines amid an environment of good payment behaviour and low insolvency levels. However, credit risk is higher for some small and mid-sized companies, especially those with a leveraged balance sheet and liquidity issues. Businesses that rely on imports could see escalating input costs, which could result in diminished profit margins or the need to increase prices.

“US domestic steel players will gain market share and additional revenue due to higher prices.”

Canada: Iron and steel hit hard by tariffs, though US demand for aluminium to continue

Canada is the single largest foreign supplier of steel to the US market and the tariffs will bite. In 2024 Canada shipped 87% of its total steel exports to the US. It will be challenging to redirect that steel elsewhere amid an oversupplied global market. Basic metal production is set to contract by 2.2% in 2025 and 4.5% in 2026. Iron and steel is forecast to contract by 8.1% next year.

However, the outlook for aluminium is slightly different. AJ Cobos explained: “The picture with aluminium exports to the US is complicated. Canada is a key supplier to the US, accounting for around two thirds of its demand. Despite the 25% US tariffs on aluminium, trade flows are likely to continue. Domestic production in the US is limited to just four smelters and is so it is unlikely to be able to offset the effects of more expensive imports from Canada.”

He added: “That said, we expect Canada's non-ferrous metals production to fall by 3.6% in 2025 and 2.2% in 2026. The tariffs and associated higher export costs will be a factor, but so will be a decline in US demand due to

lower US economic growth. In this more challenging trade environment, credit risk among smaller players has increased, especially for those with leveraged balance sheets and liquidity issues.”



AJ Cobos

Canada basic metals output

	2023	2024	2025*	2026*
Basic metals total	-1.5	-2.0	-2.2	-4.5
Iron and steel	-3.6	1.5	0.1	-8.1
Non-ferrous metals	0.9	-3.4	-3.6	-2.2
Castings	-6.7	-10.5	-5.6	-1.0

Year-on-year, % change. (* Forecast) Source: Oxford Economics.

Metals and steel industry performance and outlook: Asia Pacific

Australia: Government projects likely to underpin steel industry despite overseas competition

With demand from China slowing, the Australian mining industry is expected to increase consolidation through joint ventures and asset sales, as companies seek to optimise operations and maintain profitability.

Australia basic metals output

	2023	2024	2025*	2026*
Basic metals total	1.8	-3.9	-3.0	0.8
Iron and steel	3.1	-3.9	-3.8	1.1
Non-ferrous metals	0.3	-3.9	-2.1	0.4
Castings	2.7	-3.9	-4.0	0.9

Year-on-year, % change. (* Forecast) Source: Oxford Economics.

In addition, a drop in US-bound exports, along with lower Chinese demand, could lead to an oversupply of aluminium in Australia. This increase in local availability might push domestic prices down, benefiting industries that use aluminium but squeezing the margins of producers and refiners.

Jenn Doan, Senior Underwriter Atradius Australia explained: "Australian steel producers were already facing serious competition from overseas competitors before the US tariffs were announced.

Steel imports have risen by 50% in the past two years, and the tariffs are likely to see more steel bound for Australia. That said, government-backed infrastructure projects, ongoing housing demand, renewable energy projects and higher defence spending and will sustain domestic steel consumption in the mid-term."

She added: "Due to the higher market uncertainties we expect rising payment delays and insolvencies in the Australian metals and steel industry. Lithium and nickel suppliers are most exposed to business failures as price levels have been dramatically hit due to global overcapacities."



Jenn Doan

"Lithium and nickel suppliers are most exposed to business failures."



China: Overcapacity and US tariffs will shrink sector margins

“Metals and steel production are facing significant headwinds in China. The decline in the property sector is still unlikely to bottom out for a few years and continues to impact domestic construction growth, which is expected to slow down to 0.3% in 2025 and 2.9% in 2026.”

Even though only a small amount of China’s steel is shipped to the US (1.8% of total US steel imports in 2024), the expected economic slowdown, partly a result of the ongoing tariff dispute, will impact domestic demand for metals and steel. China’s ongoing stimulus programme is likely to benefit consumption and services rather than metal-intensive manufacturing.

Kim Wei Koe, Senior Underwriter, Atradius Asia said: “Overcapacity and low prices squeezed the gross margin for market players in 2024. Profit margins are expected to shrink further in 2025. Some financially weak and smaller players may encounter liquidity issues if they fail to source funding externally. We expect an increase in business failures this year, in particular in the iron and steel subsector.”

Overcapacity in the industry remains a serious issue, with steel prices and margins plummeting. Rather than sharply cut production, China’s mills have ramped up exports to levels seen during previous periods of overcapacity. Kim Wei Koe explained: “Many countries have been increasingly pushing back against the surge in Chinese steel exports, and what they see as ever-growing Chinese trade surpluses. In response, the Chinese government has announced plans to restructure the steel industry, which means output cuts will be likely.”

“We expect an increase in business failures this year, in particular in iron and steel.”

The non-ferrous metals subsector is faring better than steel, as the government prioritises advanced manufacturing, electric vehicles and renewable energy production. However, there are overcapacities in some segments such as nickel and copper. However, Kim Wei Koe noted a word of caution. He said: “China’s aluminium industry also faces risks in the short term. The United States is its primary destination for aluminium exports, accounting for a massive 10.7% (USD 4.2bn) of its exports in 2024, a figure that could drop in the current trade dispute.”

Looking a little further ahead to the medium term, however, we anticipate resilience in the sector. The country’s robust production capacity and cost competitiveness should help it navigate headwinds and find new buyers in the global aluminium market, especially as demand increases with the acceleration of the clean energy transition.

China basic metals output

	2023	2024	2025*	2026*
Basic metals total	8.8	6.6	2.9	-1.1
Iron and steel	8.0	4.2	3.1	-1.6
Non-ferrous metals	9.8	9.8	2.5	-0.7
Castings	8.9	7.0	5.4	1.4

Year-on-year, % change. (* Forecast) Source: Oxford Economics.



Kim Wei Koe



India: Strong growth outlook amid burgeoning domestic demand

India will see some of the world's strongest basic metals production growth with 6.1% in 2025 and 6.5% in 2026. Demand is driven by robust economic growth (up 6.5% in 2025).

India's rapid economic progress, urbanisation, and growing population will sustain metals and steel production in the mid to long-term.

Population urbanisation is a major driver of construction growth, ensuring a solid outlook for metals demand. India's steel production is likely to grow in line with market conditions. This contrasts with China where steel production has been heavily subsidised and export dependent.

India basic metals output

	2023	2024	2025*	2026*
Basic metals total	17.4	7.0	6.1	6.5
Iron and steel	17.4	7.0	6.5	6.9
Non-ferrous metals	17.4	7.0	6.1	6.4
Castings	17.4	7.0	1.5	2.0

Year-on-year, % change. (* Forecast) Source: Oxford Economics.

Southeast Asia: Regional demand supports local industry growth

In Southeast Asia demand is stable and high due to growth in housing (construction), ongoing government infrastructure projects and foreign investment in factories. However, there is pressure on profit margins due to high competition and commodity price volatility.

External financing and indebtedness in the sector are high, causing many banks to request tight covenants and secured collateral. Payments experience in the region's metals and steel industry is poor and we expect rising insolvencies in the coming months. Credit risk is highest in the Philippines and Vietnam. The situation for metal and steel businesses in Indonesia, Malaysia and Thailand is better, but vulnerabilities due to high competition and pressure on prices also exist there. Vietnam's substantial exports of steel and

aluminium to the US mean it is likely to be hit hardest by the steel tariffs. But Malaysia could also experience considerable disruptions, with businesses facing higher costs and reduced market access.

Over the longer term, we expect capacity expansions in Southeast Asia to meet growing domestic and regional demand. Projects in transportation, energy, and urban development are set to boost steel demand.

South East Asia basic metals output per country

	2023	2024	2025*	2026*
Indonesia	14.3	13.5	5.0	5.6
Malaysia	2.5	4.0	-1.2	4.0
Philippines	4.2	-5.9	5.2	5.5
Singapore	-2.5	-15.3	16.8	2.9
Thailand	-4.3	-1.9	0.1	0.7
Vietnam	8.3	7.7	5.6	5.0

Year-on-year, % change. (* Forecast) Source: Oxford Economics.

“Southeast Asia should brace for insolvencies in the near term. Further ahead, industry growth will be driven by improving regional demand.”



Kim Wei Koe

Japan basic metals output

	2023	2024	2025*	2026*
Basic metals total	-1.1	-3.1	2.3	1.5
Iron and steel	-1.0	-3.5	1.0	2.2
Non-ferrous metals	-6.2	1.4	2.2	-0.6
Castings	4.1	-6.7	4.8	2.1

Year-on-year, % change. (* Forecast) Source: Oxford Economics.


Japan: Steel production faces long-term structural decline

Japan's basic metals production has contracted four out of the past five years, and the outlook for 2025 and 2026 remains subdued, with only a modest rebound expected. About 12% of Japanese exported metal products and one third of Japanese automotive products go to the US, so tariffs on metals and car imports are likely to hurt. The automotive sector is a main end-user of Japanese steel and aluminium, and cost pressures are high.

“US tariffs on metals and car imports are likely to hurt Japanese producers.”

The long-term outlook continues to face the headwinds of a shrinking and ageing population. Consequently, we expect steel production to continue its structural decline from 2027 as Japan's economy faces structural-demographic headwinds, impacting key buyer sectors like construction and automotive.





Metals and steel industry performance and outlook: Europe

Subdued economic growth and tariffs squeeze margins

After contractions in 2023 and 2024 we expect production of basic metals in the EU to decrease by 1.5% in 2025, followed by a meagre 0.4% rebound in 2026.



Nicola Harris

Economic growth in the eurozone is forecast to be a cumulative 0.6 percentage points lower in 2025 and 2026 than previous forecasts. This revision is mostly the result of the US 10% blanket tariffs, and 25% on steel, aluminium and automotive products, including finished and fabricated products. The extreme uncertainty around the US trade and economic policies will continue to hamper business decisions in key buyer sectors for metals and steel, including automotive and engineering.

What is the impact of US tariffs on the European metals industry?

According to the EU Commission, the 25% US tariffs on aluminium and steel will affect EU exports totalling EUR 26 billion, which corresponds to around 5% of the EU's total exports to the USA. Although the threat of tariffs will be felt heavily by those who produce for export, the indirect price impact is a much bigger concern for a greater number of businesses, especially those who are typically smaller in scale and not as well placed to endure challenging market conditions.

“The redirection of global exports could become an issue for European metals businesses.”

As Nicola Harris, Senior Underwriter Atradius UK and Europe explained: “Challenges to the region's metals industry include more than the cost of the tariffs. The redirection of global exports as a consequence of the tariffs could also become an issue for European metals businesses. If large exporters such as China, South Korea or Brazil reroute their steel into Europe, we could see a further fall in prices.” To help minimise this risk, the EU has tightened import quotas for steel in a bid to reduce the flood of cheap imports in the already severely oversupplied global market.



Nicola Harris said: “Furthermore, the introduction of carbon border adjustment mechanism (CBAM) policies should help protect domestic basic metal producers from imports of more carbon-intensive metal products. A weaker euro could also fade the competitiveness of cheap imported metals into Europe.”

She added: “We expect global trade dynamics to keep domestic prices low, reducing already tight margins for suppliers and creating further price instability for stockholders and processors. Some businesses have already said they are delaying buying stocks as they anticipate market prices bottoming further.”

US import tariffs are likely to impact supply dynamics within the EU. This is because local

suppliers who traditionally exported into the US may be forced to offload their products closer to home, potentially resulting in a glut of supply and increased price competition.

Demand from domestic manufacturers is already weak and these measures threaten to erode that further, suppressing both the top line and margins for suppliers in the metals sector.



Germany: Contractions forecast amid subdued domestic demand

We forecast basic metals production to contract by 3.4% this year and by 0.7% in 2026 as Germany’s domestic demand remains subdued and its export-oriented economy is affected by tariffs. Demand from key buyer industries like automotive, residential construction and engineering remains modest this year. In particular the German automotive industry is hit by US tariffs, leading to lower metals and steel demand. High energy and labour costs, and a high level of bureaucracy are issues impacting profit margins.

Nicola Harris explained: While it is true that the tariffs are challenging for the sector in Germany, this is not the whole story. Higher demand from defence, rail engineering and the renewable energy sector should provide some relief. With an additional EUR 500 billion in government funding for infrastructure investments, and higher arms procurement,

we can expect domestic metal producers and manufacturers to start benefitting from an improving market in the course of 2026.”

Financial requirements and gearing are high in the industry. Most of the small and medium sized companies are dependent on credit lines in order to finance their working capital or increase of inventory.

Profit margins are still low, but the bottom seems to be reached. Cost reduction measures have started to stabilise the results. The most important topic for companies is to manage their liquidity.

Payment delays have grown, and metal/steel insolvencies have increased by more than 20% in 2024. More business failures are expected over the coming 12 months. Most exposed are automotive suppliers and highly geared companies.

“German metal and steel insolvencies increased by more than 20% in 2024.”

Germany basic metals output

	2023	2024	2025*	2026*
Basic metals total	-0.7	-0.5	-3.4	-0.7
Iron and steel	-0.2	2.3	-2.7	-0.1
Non-ferrous metals	-5.1	3.9	0.1	-1.2
Castings	3.1	-11.1	-9.5	-1.3

Year-on-year, % change. (* Forecast) Source: Oxford Economics.

Italy: Energy costs, low demand and tariffs impact margins

We forecast Italian basic metals production will contract by 2.2% this year after decreases in 2023 and 2024. Last year the market was stagnant due to low demand, in particular from local construction and manufacturing. In addition, high energy costs are hurting international competition and negatively affecting margins.

Italy is a big producer of metals. The US has been an important market. As Nicola Harris explained: “Italy is the 10th largest supplier of steel, aluminum and iron to the United States. President Trump’s tariffs could result in duties costing as much as EUR 2 billion for Italy.”

As with other markets, challenges will come from more than the tariffs themselves.

Nicola Harris said: “A more lasting, pervasive effect from tariffs will come from their impact on investment decisions. Additionally, demand from automotive as a key buyer sector is subdued. Consequently, we now expect much weaker basic metals production in 2025.”

Payment behaviour has deteriorated since 2023. Today we are seeing requests for longer payment terms and payment plans. We expect rising insolvencies in the sector over the coming 12 months, especially among smaller and medium-sized businesses with poor liquidity and capitalisation. Also at risk are businesses with high energy consumption, including steel and rolling mills.

Italy basic metals output				
	2023	2024	2025*	2026*
Basic metals total	-5.7	-0.3	-2.2	2.4
Iron and steel	-4.6	0.4	-0.8	2.3
Non-ferrous metals	-14.8	8.1	-3.2	0.4
Castings	0.9	-8.7	-5.0	4.9

Year-on-year, % change. (* Forecast) Source: Oxford Economics.





United Kingdom: Furnace closures and subdued demand drive output contraction

UK metals and steel demand has suffered in 2024 from subdued demand from key buyer industries such as construction, automotive and engineering. Steel, in particular, has seen a significant slump in prices relative to prior years, with destocking continuing in the latter half of 2024. Against stagnant demand and renewed uncertainty around global supply chains, there is no expectation for significant demand recovery in the near-term, although niche markets such as aerospace alloys and battery metals have seen recent improvement in results.

Nicola Harris said: “We expect UK basic metals production to contract by more than 9% annually in 2025 and 2026. This sharp contraction has been in part caused by the closure of Tata Steel’s blast furnaces, while the new electric arc furnaces (EAF) are still to be built.”

transitions in recent years, which has added to the debt profile of many businesses, often via second-tier lenders. For businesses reliant on debtor-backed funding models, recent collapses in output and pricing have materially weakened funding availability. Against higher interest rates, debt servicing costs have proven challenging.

“Failures of metals and steel businesses were above historic levels during 2024.”



Nicola Harris

A spring trade deal with the USA means that unlike mainland Europe, the UK now avoids heavy steel and aluminium tariffs and receives a reduced tariff rate quota on vehicle exports. However, a 10% blanket tariff remains, as does the threat of cheaper overseas products entering the UK, which would drive prices lower and cause price instability for UK stockists.

Debt reliance increased during pandemic closures and has remained high since. There has also been a high number of leveraged management buy-outs and employee ownership trust

Although interest rates are now easing, lenders have been slow to pass this on, meaning borrowing cost pressures will persist in 2025.

Failures of metals and steel businesses were above historic levels during 2024. These insolvencies were concentrated primarily in the fabricated metals sub-sector. Against the backdrop of continued weak demand and resurgent geopolitical uncertainty, we expect UK sector insolvencies to remain high in 2025.

UK basic metals output

	2023	2024	2025*	2026*
Basic metals total	1.7	-1.4	-9.5	-11.3
Iron and steel	-10.6	-3.5	-17.5	-21.5
Non-ferrous metals	14.6	0.2	-4.8	-5.8
Castings	16.0	0.2	-12.5	-15.9

Year-on-year, % change. (* Forecast) Source: Oxford Economics.



Energy costs squeeze margins and widen the gap in an uneven playing field

Steel and metals production are intrinsically energy intensive. When energy prices rise, so do operating costs. However, when you apply this simple equation to a global industry, the picture becomes more complicated, with an uneven playing field offering an advantage to regions and markets where energy costs are lower.

On one side are some areas in emerging Asia, as well as the Middle East and the USA, where individual countries are benefitting from a local abundance of cheaper coal, natural gas, or both. On the other side are countries in wider Asia Pacific and Europe where compromised energy security and higher energy costs make it more expensive for businesses to produce steel and metal products.

In Europe, metals and steel manufacturers have been facing higher energy prices since Russia's 2022 invasion of Ukraine and the subsequent interruptions to gas supply chains. What's more, Europe's low levels of gas in storage is likely to result in a spike in demand during the restocking season to meet its 90% requirements.

Nicola Harris said: "Following Russia's invasion of Ukraine and the hike in energy prices, many buyers have become risk averse, with energy-intensive firms now opting to forward hedge expected usage (or at least the majority of it). Buyers are also much quicker to lock in prices in a bid to minimise the impact of price increases on their overheads. Cost-plus mechanisms have been implemented as standard when pricing large contract tenders as businesses learn from the mistakes of recent years."

While Southeast Asia and Australia have not faced the same pressures as Europe following the Russian invasion, Asia Pacific has still been grappling with energy price volatility. Southeast Asia has been facing headwinds from global fuel price increases, which have driven up the cost of energy, exacerbated by geopolitical tensions and climate-related disruptions.

"Following Russia's invasion of Ukraine and the hike in energy prices, many buyers have become risk averse."



Nicola Harris

Cheap shale gas and domestic coal underpin US industry

The same is not true for other markets. For example, energy prices are much lower in the US than in other regions, due to the size of US domestic energy production, especially cheap natural gas. US metals and steel producers have a competitive advantage over their peers in Europe and Asia Pacific. While we forecast global energy prices to ease over the medium term, the US competitive advantage will persist.



The persisting issue of steel overcapacity

Historically, the steel industry has been seen as vital to national interests, and domestic production has been encouraged and protected. In addition, stopping and restarting blast furnaces is expensive and takes time. Many mills are unwilling to do this, with their continuous production further adding to the issue of overproduction.

But increased globalisation has led to excess capacity. Over the past 20 years, China has been the biggest contributor to overcapacity. There is now growing pushback, with several countries raising tariffs, or imposing restrictions on Chinese steel.

“China’s mills are accused of dumping excess steel in foreign markets to maintain market share.”



Kim Wei Koe

Impact of US tariffs on steel overproduction

President Trump’s tariffs could lead to a significant reshuffling of steel market supply chains, with steel exporters looking to sell in markets outside the US. This is likely to add pressure to a market that is already

characterised by oversupply. Other countries may introduce trade barriers to protect their industries, resulting in further oversupply that would keep international prices low.

The long-term view on steel overcapacity and production

China’s falling population will demand less steel in the long-term as residential construction and urbanisation slows over the coming years. With weaker investment and declining demographics, we forecast China’s steel output to plateau out to 2030.

Kim Wei Koe noted: “Even if China succeeds in reining in steel production, global problems with overcapacity are likely to remain. This is because many emerging market economies, especially in Asia, plan to increase capacity by over 100 million tonnes over the next few years. What’s more, most of the new capacity will be traditional blast furnaces, significantly raising global sector emissions.”

Global population growth, especially in India, Indonesia and sub-Saharan Africa, will drive global metal demand for construction and infrastructure projects, as well as for goods such as cars and washing machines. The increase will offset China’s weakness over the medium to long run, but we are unlikely to see any one country replicate China’s rapid development and surging metal demand.

Ensuring a supply of raw materials is vital for metals producers

Supply chain disruptions caused by geopolitical tensions, trade restrictions and natural disasters significantly impact steel production. Securing raw materials including iron ore and coking coal is essential for maintaining production stability. As with the issue concerning energy security, markets with access to their own supplies will fare better in a world where supply chains are facing increasing challenges.

This is true of Australia, the USA and Canada, where supply chain security in the metals markets is not a major issue due to the local abundance of raw materials and minerals. However maintaining consistent supplies is a significant challenge for many markets in Asia and Europe.

The effect of tariffs on steel and metals producers

Deglobalisation and protectionist measures could influence domestic availability if trade frictions continue to escalate. In addition to the US steel and aluminium tariffs, the European Commission has proposed retaliatory safeguard quotas on scrap metal exports. Meanwhile countries including India, China and Argentina are implementing restrictions on critical mineral exports. Any intensification of current trade frictions could lead to renewed supply disruptions and resulting cost pressure, particularly for metals such as nickel.

How CBAM could affect supply chains

The EU’s Carbon Border Adjustment Mechanism (CBAM) means some existing supply chains will become ineligible for EU imports unless upstream suppliers can improve their internal practices and green credentials.

Kim Wei Koe said: “While many exporters in China, the Middle East and North Africa have already invested in decarbonisation and hydrogen-based steelmaking, priorities differ by region with other exporters yet to implement greener processes.”

As construction and manufacturing also look to adopt clean energy, we expect critical materials used in technologies such as electric batteries such as lithium, nickel and copper, to remain in high demand. This has the potential for shortages both within Europe and the wider global market where demand growth is likely to outpace production capacity. The same is true for scrap steel as more electric arc furnaces come online.

Sustainability and the drive for clean energy production of metals

Metals production is highly carbon intensive, requiring significant heat and energy, especially for smelting and refining metals. Coal comprises 77% of the sector's global energy mix. Steel production uses coking coal, further adding to greenhouse gas emissions. Iron and steel production accounts for 7% of the world's total carbon dioxide emissions.

What challenges does the clean energy transition present to the metals industry?

The biggest transition challenge lies in cost. Transitioning to greener production carries high capital costs, which can be compounded by difficulties in sourcing finance (especially for smaller and medium-sized businesses). Many could find it difficult to pass on higher costs to customers.

The businesses facing the most significant clean energy adaptations are the mills. These are typically much larger and long-established businesses. Smaller operations are more agile by their very nature and are likely to face lower transition costs. However, even after transformation, electricity costs are likely to remain an issue. A major challenge is whether national grids have the capacity to supply enough green electricity to power the plants.

The cost of transitioning to clean energy is likely to be significant for the industry in the EU due to local regulations requiring businesses to comply with a reduction in CO₂ emissions. However the industry doesn't have to bear the costs alone. Government funding and support includes (among others), EUR 600 million via Horizon Europe for the Clean Industrial Deal, and a EUR 1 billion pilot auction in 2025, focusing on decarbonising and electrifying key industrial processes. Although these initiatives can help supplement the industry's costs, they won't cover the full cost of the transition.

However, while European metal production currently uses large amounts of coal, the cost

increases associated with the transition to clean energy in the sector is less than that facing China and the US. This is because electricity generated in Europe already uses more renewables than either the US or China and is less carbon intensive. Therefore, the industry transition from coal to electricity will be less costly, particularly as Europe continues increasing its use of renewables.

AJ Cobos said: "Although there is no pressure by the government on metals and steel producers to move toward clean energy transition (such as EU regulations for CO₂ reduction), 70% of US steel is produced in electric arc furnaces." Indeed, US steel production is less carbon intensive than other areas, largely thanks to the domestic production of natural gas. Some steel plants and rolling mill operators are transitioning to hydrogen, which has been shown to reduce emissions by up to 95% compared to traditional steelmaking methods.

"Demand for low-emission steel presents a major growth opportunity for producers of green steel in Australia."



Jenn Doan

Does the clean energy transition present opportunities for the metals industry?

Increased demand for green metals and steel by automotive and also industries such as wind turbine production, means green producers can gain a competitive advantage over manufacturers that are slower to transition. Much of the infrastructure used in new forms of clean energy production uses metal.



Roughly 70% of the mass of wind turbines comprises steel, while 85% of solar PV components is aluminium.

Jenn Doan said: “Demand for low-emission steel presents a major growth opportunity for producers of green steel in Australia. Companies investing in green technology could gain competitive advantage in export markets. Australia’s access to high-quality iron ore and increasing investment in hydrogen-based steelmaking means the industry is well-positioned for global demand shifts.”

Germany and Italy are two markets that are well placed to benefit from increased demand for green steel. Germany is the largest steel producer in Europe. Although 75% of its capacity currently uses traditional furnaces, the government has committed to convert a third of domestic steel production to green technologies by 2030.

Italy is one of the largest steel and metal producers within the eurozone, and produces up to 75% of its steel in electric arc furnaces. Italy will benefit from green demand, especially once the carbon border adjustment mechanism is in place. The CBAM should also be beneficial to the UK which has an abundance of scrap metal and is a net exporter. That said, the UK lags behind Italy in terms of electric arc furnaces, and reduced access to EU markets weighs on the medium-term outlook.

Increased demand for electricity results in greater demand for metals: clean and dirty

An expansion in the volume of transmission lines needed to accommodate renewable generating capacity has resulted in greater demand for copper and aluminium. Additionally, EVs require roughly three times more copper than ICE vehicles and the batteries that power them use lithium, nickel and cobalt.

The increased demand for metals is likely to benefit China, which is the world’s largest metal producer, accounting for over half of global steel output. However, the majority of China’s steel production still uses blast furnaces. Consequently, its basic metals energy composition is coal intensive, contributing to 56% of the sector’s global carbon emissions.

Kim Wei Koe said: “The government has not yet strictly enforced its policy of curbing output for environmental reasons, as it wants to sustain economic growth. China has said it intends to lower the sector’s emissions by 2030; one way of achieving this is by replacing polluting blast furnaces with electric arc furnaces.” The percentage share of steel produced from electric furnaces has increased. Electric arc furnaces typically produce less steel than traditional methods, but the upgrades are more efficient, and total supply has risen.

A similar picture of demand growth can be seen in India where, like China, there are issues with ongoing carbon emissions. India is the fourth-largest global emitter of greenhouse gases, with its steel industry alone responsible for 12% of the country’s emissions. As steel production expands, supported by the availability of domestic coal, emissions are expected to increase until 2050.

Kim Wei Koe noted: “India’s government has set an ambitious goal of increasing steel production capacity to 300 million tons by 2030. This growth, if left unchecked, will contribute further to emissions unless significant investments are made in green steel production and clean energy sources.”



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