

Reclaiming credibility in China's steel industry: Climate ambition, financial resilience, and market trust

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Reclaiming credibility in China's steel industry: Climate ambition, financial resilience, and market trust

Key findings

- Declining demand, rather than a structural shift to green steelmaking, drove emissions reductions in China's steel industry in 2025. Crude steel production fell below 1 billion tonnes (-4.4% YoY) for the first time since 2020, substantially larger than the reductions expected from the policy target.
- Reviving green steel ambitions demands a structural shift away from carbon-intensive blast furnace-basic oxygen furnace (BF-BOF). Raising the electric arc furnace (EAF) share to 15–20% by 2030 could reduce BF-BOF steel production by around 80–120 Mt, equivalent to Japan's annual steel output and approaching that of India.
- Steel sector decarbonisation could significantly outperform national benchmarks. Under a prioritised EAF transition, steel sector emissions, which peaked in 2020, could go on to fall to nearly 37% below peak levels by 2035, greatly outpacing China's updated Nationally Determined Contribution (NDC) target of a 7–10% drop for economy-wide net emissions.
- Persistent overcapacity and weak domestic demand have sharply eroded profitability in China's steel sector, while industry liabilities rose by over 1 trillion CNY (+20%) between 2020 and 2025. A prioritised EAF pathway of at least 20% by 2030 could support recovered profits of up to CNY 220 billion and reduce the asset-liability ratio to roughly 60–62%, shifting the sector to a more stable footing.
- China's share in the global steel trade surged from 13.3% to 29.2% between 2020 and 2025, intensifying its exposure to trade frictions. Enhancing the share of green steel will be crucial to strengthening the sector's global competitiveness, especially

amid tightening carbon-related trade measures, such as the EU's Carbon Border Adjustment Mechanism (CBAM).

China's steel sector can strengthen its credibility in climate commitments, financial liability, and global trade in the following ways:

- Accelerate blast furnace phase-down to ease supply pressures, improve market conditions, and directly reduce the sector's total emissions.
- Raise the EAF share to 20% by 2030, alongside stronger economic incentives to accelerate structural adjustment in the sector.
- Tighten financial support for inefficient steelmakers and operationalise exit mechanisms.
- Align climate, industrial, and trade policies to strengthen green competitiveness.

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1. Introduction

China's steel industry stands at a critical juncture. As the world's largest producer and exporter of steel, the sector plays a central role in both China's domestic decarbonisation pathway and the evolution of global steel markets.

In September 2020, China announced its commitment to peak carbon dioxide emissions before 2030, marking a major shift in the country's climate strategy. More recently, the country's updated Nationally Determined Contribution (NDC), released in September 2025, [pledged](#) that economy-wide net greenhouse gas emissions will fall 7–10% below the peak level by 2035. Accounting for roughly [16%](#) of China's annual total carbon dioxide emissions, the steel sector is widely seen as one of the most important industries for delivering progress toward these climate commitments.

At the same time, the sector is also facing mounting financial pressures and increasing scrutiny from global markets. Persistent [overcapacity](#), volatile profitability and rising leverage are heightening credit risks within parts of the industry, while a recent rebound in exports is reshaping global steel trade and contributing to renewed trade frictions with major importing regions.

Against this backdrop, the industry now faces a growing credibility challenge on multiple fronts. Progress toward the green steel transition has fallen short of policy expectations, financial resilience is under strain, and expanding exports are intensifying trade tensions with key partners.

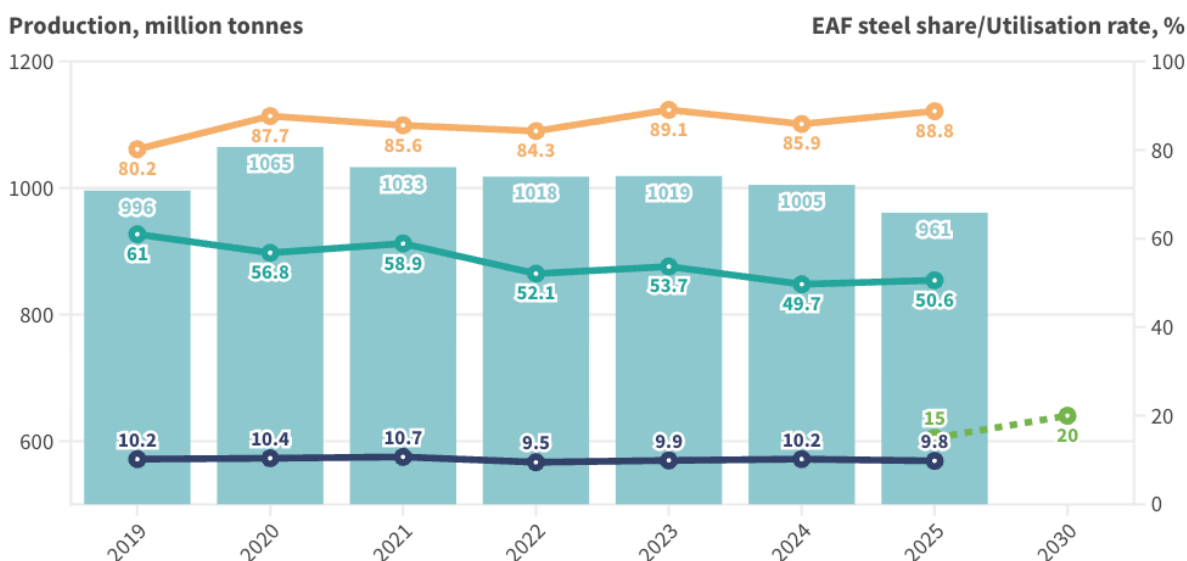
Together, these trends raise a broader question: whether China's steel sector can simultaneously deliver on its climate ambitions, maintain financial stability, and sustain constructive engagement with global markets. Restoring credibility will require structural adjustments that align climate commitments with financial discipline and evolving global trade dynamics.

2. Climate credibility: Delivering the green steel transition

China's steel sector plays a central role in the country's decarbonisation pathway. Policymakers have long identified the expansion of EAF steelmaking as a key route to lowering emissions, given its significantly lower carbon intensity compared with the traditional BF-BOF route.

China’s green steel transition: Policy ambition versus stalled EAF progress 2019-2030

■ EAF steel share (actual)
 ■ EAF steel share policy targets
 ■ EAF capacity utilisation rate
 ■ BF capacity utilisation rate
 ■ Crude steel production



Source: Custeel, WIND, World Steel Association, CREA analysis • Notes: BF=blast furnace, EAF=electric arc furnace. E=estimate. Persistently high BF utilisation suggests limited operating space for EAF expansion.



Figure 1 — China’s green steel transition: Policy ambition versus stalled EAF progress, 2019-2030

In recent years, policy efforts have increasingly focused on both controlling total steel output and promoting a structural shift toward lower-carbon production. Measures such as [capacity replacement](#) rules, [production controls](#), and targeted programmes under the Energy Saving and Carbon Reduction [Action Plan](#) for the Steel Industry aim to curb excess supply while accelerating efficiency improvements and the adoption of lower-carbon technologies. The action plan alone targets emissions reductions of approximately 53 million tonnes (Mt) CO₂ over 2024–2025.

Official production data suggest that China’s steel output may already be entering a phase of gradual decline. Crude steel production (Figure 1) fell from around 1,019 Mt in 2023 to 1,005 Mt in 2024, and further to 961 Mt in [2025](#), a 4.4% year-on-year (YoY) decrease, and the first time since 2020 that annual output dropped below one billion tonnes.

This decline has contributed to a reduction in steel sector emissions in 2024–2025. Based on average emissions intensity, lower output alone may have reduced emissions by

roughly 140–150 Mt CO₂ in two years compared with the 2023 level — significantly exceeding the 53 Mt CO₂ reduction target set under the action plan. This suggests that recent emissions reductions have been driven more by demand contraction than by policy-led structural decarbonisation.

However, some analysts have questioned whether the decline fully reflects underlying activity. A recent [Bloomberg](#) report suggested that actual steelmaking activity may have been stronger than official statistics indicate, citing evidence of unreported production and lower scrap usage than in earlier years. Regardless of the precise level of output, the key challenge for the sector lies less in the absolute level of production than in the structure of steelmaking itself.

In 2022, China's policy framework set a target of increasing the EAF share of steel production to [15%](#) by 2025 and to [20%](#) by 2030. Yet data suggest the EAF share remains close to 10% through 2025, highlighting the continued dominance of BF-BOF steelmaking (Figure 1).

While government interventions in recent years have focused on controlling total crude steel [output](#), the underlying production structure has changed little. As a result, China's steel sector enters the 15th Five-Year Plan (15th FYP) period in 2026–2030 with a widening gap between policy ambitions and structural progress.

2.1. The missed 2025 EAF milestone

The failure to reach the 2025 EAF milestone reflects deeper structural dynamics within the industry. Figure 1 illustrates this imbalance clearly. While crude steel output has been gradually constrained in recent years, the utilisation rate of BF capacity has remained persistently high. BF utilisation increased from around 80% in 2019 to nearly 90% in recent years, while utilisation rates for EAF capacity declined from about 60% to around 50% over the same period.

This divergence reflects the economic dynamics of an industry characterised by persistent overcapacity. As steel prices weaken and profit margins narrow, integrated BF-BOF producers tend to maintain high operating rates due to large sunk investments and scale advantages. EAF producers, by contrast, often face high electricity costs and thinner margins, making them more responsive to market downturns.

In an environment of structural overcapacity and compressed margins, production adjustments have therefore fallen disproportionately on EAF producers, while BF operations continue to run at high utilisation rates. Instead of accelerating the transition

toward lower-emission production routes, the industry's adjustment mechanism has reinforced the dominance of BF steelmaking.

With the 2025 target already missed, achieving the previously discussed 2030 goal of 20% EAF steel will require a much more substantial restructuring of production during the 15th FYP period. The stalled transition toward EAF steelmaking, therefore, has implications beyond emissions: by slowing structural adjustment in the sector, it also contributes to the overcapacity and financial pressures now visible across the industry.

2.2. Rebuilding climate credibility: Implications for the 15th Five-Year Plan

The missed 2025 milestone does not necessarily imply that structural change in China's steel sector is unattainable. Rather, it highlights the need for stronger alignment between climate objectives and industrial restructuring during the 15th FYP period. With domestic steel demand expected to stabilise or gradually decline over the coming decade, the next phase of the sector's transition will depend less on incremental efficiency improvements and more on changes in the production structure itself.

To assess the trajectory of China's steel sector decarbonisation, this section draws on scenario projections from the China Iron and Steel Research Institute (CISRI), which have informed both earlier policy discussions and subsequent updates to the sector's transition outlook. Their [2021 study](#) formed the basis for key policy targets, including the expansion of EAF steelmaking.

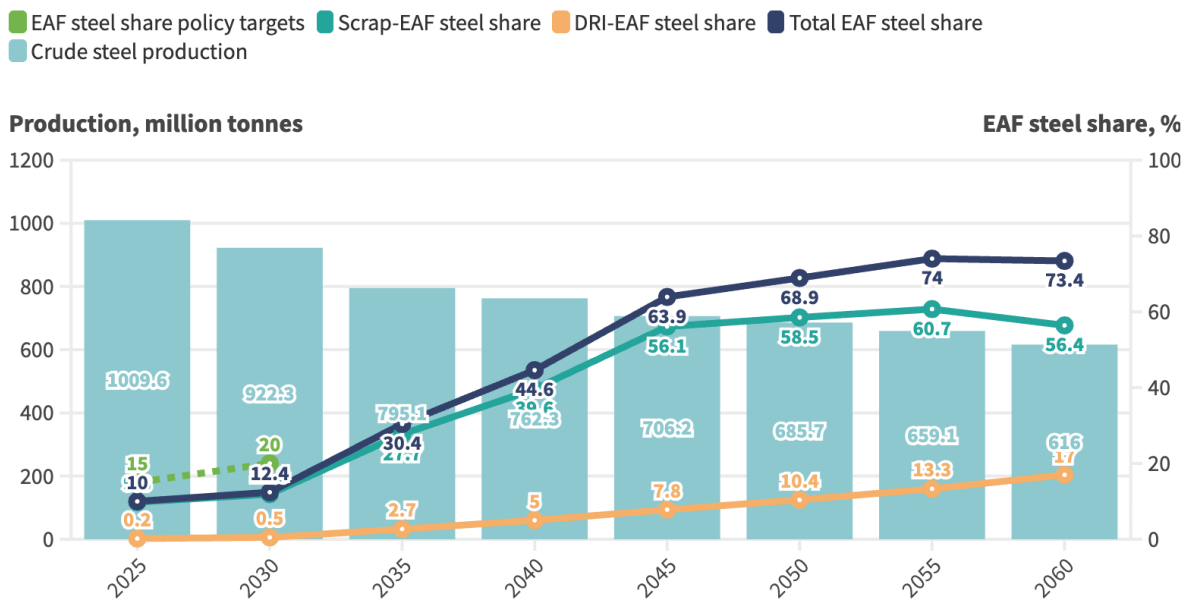
Their [updated 2025](#) study reflects more recent market conditions and implementation constraints, offering a more grounded assessment of the sector's transition pathway. As such, it provides a useful analytical baseline for assessing whether current trajectories are aligned with existing policy ambitions.

Figure 2 illustrates this transition pathway under CISRI's [updated 2025](#) study "low-output" scenario. Crude steel production declines gradually as China's construction-driven demand cycle matures, falling from around 1000 Mt in 2025 to about 922 Mt by 2030 and continuing to decrease thereafter. Within this trajectory, the share of EAF steel is projected to rise from roughly 10% in 2025 to about 12.4% by 2030, then accelerate to around 30% by 2035 and eventually reach more than 70% by 2060.

Despite this long-term transition, the near-term pace of structural change remains limited. The projected EAF share in 2030 still falls short of earlier policy expectations, highlighting a widening gap between policy ambition and realised progress in the near term.

This structural transition reflects two parallel trends. In the near term, most growth in EAF production is expected to come from scrap-based EAF steelmaking, as China’s scrap availability gradually increases with the maturation of the domestic steel stock. Over the longer term, direct reduced iron (DRI)–EAF production, including hydrogen-based pathways, is expected to play a growing role as the country approaches its carbon-neutrality timeline.

Declining output, rising EAF: China’s projected green steel transition 2025-2060



Source: China Iron and Steel Research Institute Group, CREA analysis • Notes: BF=blast furnace, EAF=electric arc furnace, DRI=direct reduced iron. Both scrap and DRI are feedstocks for EAF steelmaking and are associated with lower carbon intensity compared to the BF–BOF route. Total EAF steel share equals Scrap-EAF plus DRI-EAF.



Figure 2 — Declining output, rising EAF: China’s projected green steel transition, 2025-2060

However, as illustrated in Figure 2, DRI-EAF remains a secondary component of the overall steel production mix even in the long term. By 2060, DRI-EAF is projected to account for around 17% of total steel output, compared with over 50% from scrap-based EAF, indicating that the transition remains primarily driven by scrap availability rather than hydrogen-based pathways.

Given this gap, the analysis below explores how alternative structural pathways during the 15th FYP period could influence the evolution of China’s steel production system.

To illustrate the implications of different policy pathways, Table 1 presents four indicative scenarios for China’s steel production structure in 2030, all assuming crude steel output of 922 Mt, consistent with the CISRI low-output scenario. This allows for a comparison between current trajectories and more ambitious structural pathways.

Table 1 - Structural adjustment in China’s steel production under alternative EAF pathways, 2030

Scenario	2030 Crude Steel (Mt)	2030 EAF Share (%)	2030 EAF Output (Mt)	2030 EAF Output Change vs 2025 (Mt)	2030 BF-BOF Output (Mt)	2030 BF-BOF Output Change vs 2025 (Mt)
Scenario 1 – Stagnation (10%)	922.3	10.0	92.2	-3.8	830.1	-33.9
Scenario 2 – Baseline (to 12.4% by 2030)	922.3	12.4	114.4	18.4	807.9	-56.1
Scenario 3 – Reclaim 15% by 2030	922.3	15.0	138.3	42.3	784.0	-80.0
Scenario 4 – Reach 20% by 2030	922.3	20.0	184.5	88.5	737.8	-126.2

Notes:

1. Crude steel output follows the “low-output” scenario published by the China Iron and Steel Research Institute (CISRI), declining from the officially reported 2025 level of 960.8 Mt to 922.3 Mt in 2030.
2. EAF shares vary by scenario. Scenario 1 (Stagnation) assumes no structural adjustment, with the EAF share remaining at approximately 10% through 2030. Scenario 2 (Baseline) reflects CISRI’s projected EAF share of 12.4% in 2030 under the low-output pathway and is used here as a modest structural adjustment benchmark. Scenarios 3 and 4 illustrate alternative policy pathways in which the EAF share rises to 15% (recovering the missed 2025 policy target) or 20% (consistent with earlier policy discussions for 2030), respectively.
3. Changes relative to 2025 reflect shifts in production structure. The comparison illustrates how different EAF pathways imply substantial adjustments in BF-BOF output during the 15th Five-Year Plan period.

The first scenario assumes structural stagnation, with the EAF share remaining near its current level of about 10%. Under this pathway, EAF output would decline slightly to 92 Mt, while BF-BOF production would remain dominant at over 830 Mt.

A second baseline scenario, aligned with the CISRI projection, assumes the EAF share rises modestly to 12.4% by 2030, increasing EAF output to roughly 114 Mt. While representing

some structural adjustment, this pathway still implies that BF production would account for the vast majority of steelmaking.

Two more ambitious structural scenarios illustrate the implications of stronger policy support for EAF expansion. If the EAF share reaches 15% by 2030, effectively recovering the missed 2025 policy milestone, EAF output would rise to about 138 Mt, replacing roughly 80 Mt of BF-BOF production compared with 2025 levels. A pathway in which the EAF share increases to 20% by 2030, in line with policy ambitions for the end of the decade, would expand EAF output to around 185 Mt, implying a reduction of more than 120 Mt of BF-BOF steel output.

These scenarios highlight how even moderate shifts in production structure could significantly accelerate the phase-down of carbon-intensive BF-BOF steelmaking during the 15th FYP. Increasing the EAF share to 15–20% by 2030 could reduce coal-based steel production by around 80–120 Mt, equivalent to the annual steel output of [Japan](#), the world's third-largest steel producer, and approaching that of [India](#), the second-largest.

The implications of these structural pathways for the sector's emissions trajectory are illustrated in Figure 3, which shows that higher EAF shares could significantly accelerate emissions reductions relative to the current trajectory. Under the baseline scenario aligned with CISRI's projection of 12.4% EAF share by 2030, emissions from China's steel sector would decline from about 1787 Mt CO₂ in 2025 to roughly 1685 Mt CO₂ by 2030, reflecting both declining output and modest structural adjustment.

More ambitious structural changes could deliver substantially larger reductions. If the EAF share rises to 15% by 2030, emissions would fall further to around 1651 Mt CO₂. A stronger transition in which the EAF share reaches the official target of 20% would reduce emissions to approximately 1586 Mt CO₂, illustrating how shifts in the production mix can significantly accelerate emissions reductions even when total steel output declines only gradually.

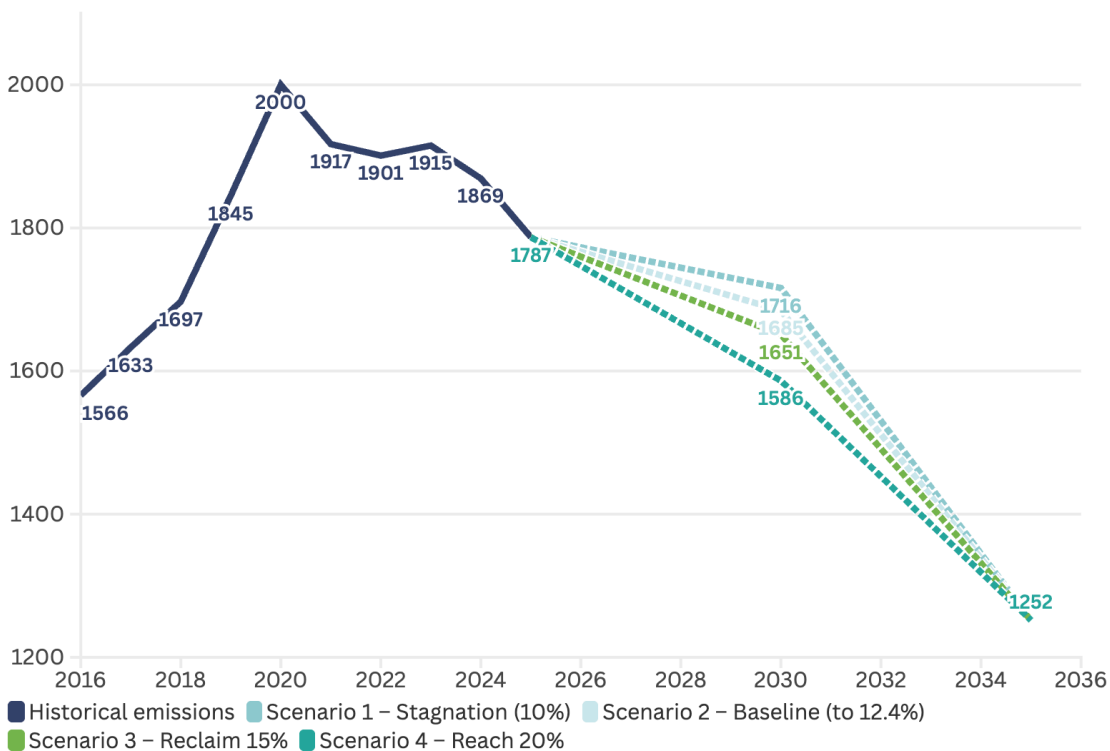
Viewed against the sector's historical peak, the scale of potential reductions becomes even clearer. China's steel sector emissions reached roughly 2 Gt CO₂ around 2020. Under the scenarios shown in Figure 3, emissions in 2030 would fall by approximately 14–21% below this peak level, depending on the pace of structural adjustment. By 2035, emissions could decline to around 1250 Mt CO₂, representing a nearly 37% reduction compared with the peak.

These reductions would [exceed](#) the pace implied by China's updated 2035 NDC, which pledges that economy-wide greenhouse gas emissions will fall 7–10% below peak levels by

2035. In this sense, the steel sector could play a leading role in driving China’s transition from emissions peaking toward sustained emissions decline.

China’s Steel CO₂ Emissions: Historical Trends and Alternative EAF Share Scenarios, 2016–2035

CO₂ emissions, million tonnes



Source: China Iron and Steel Research Institute (CISRI), CREA analysis • Notes: Emissions are estimated using simplified route-based intensity assumptions (BF–BOF: 2.0 tCO₂/t; EAF: 0.6 tCO₂/t). Scenarios reflect alternative EAF shares through 2030. All pathways converge in 2035 under the assumption of 30% EAF share and 795 Mt crude steel output, based on the CISRI low-production scenario.



Figure 3 – China’s steel CO₂ emissions: Historical trends and alternative EAF share scenarios, 2016-2035

The scale of these reductions is also striking in an international context. Under the 20% EAF scenario, emissions in China’s steel sector would fall by more than 400 Mt CO₂ by 2030 compared with the 2020 peak. By 2035, total reductions could approach 750 Mt CO₂. In other words, the potential emissions reduction in China’s steel sector alone would be equivalent to nearly two times the [annual emissions](#) of the EU steel industry by 2030, and almost three times by 2035.

Taken together, these results highlight the central role that production restructuring — particularly the expansion of EAF steelmaking and the gradual phase-down of BF-BOF output — could play in accelerating emissions reductions in China’s steel sector during the 15th FYP period and beyond.

More importantly, the analysis suggests that the steel sector has the potential to move faster than the economy-wide decarbonisation pathway implied by China’s national climate commitments. Delivering such structural change would not only reduce emissions at scale but also demonstrate that the sector can translate policy ambitions into measurable outcomes. In this sense, accelerating the shift toward EAF steelmaking is not simply a technological or industrial adjustment — it is central to restoring the climate credibility of China’s steel transition.

3. Financial credibility: Managing rising credit risks

The climate transition and the sector’s financial performance are closely intertwined. The slower-than-expected shift toward lower-emission production routes has prolonged the dominance of coal-based blast furnace steelmaking and allowed excess capacity to persist. In a context of slowing domestic demand, this structural imbalance has placed increasing pressure on profitability, balance sheets and cash flow across the industry.

As a result, the challenges facing China’s steel sector extend beyond its emissions trajectory. Over the past decade, the industry has also experienced growing financial pressures, driven by persistent overcapacity, volatile profitability and continued capital investment. While policy efforts since the mid-2010s have sought to stabilise the sector through [supply-side reforms](#) and output controls, underlying financial vulnerabilities remain evident across parts of the industry. As China’s steel demand growth slows and market conditions become more uncertain, managing rising credit risks has become an increasingly important dimension of the sector’s transition.

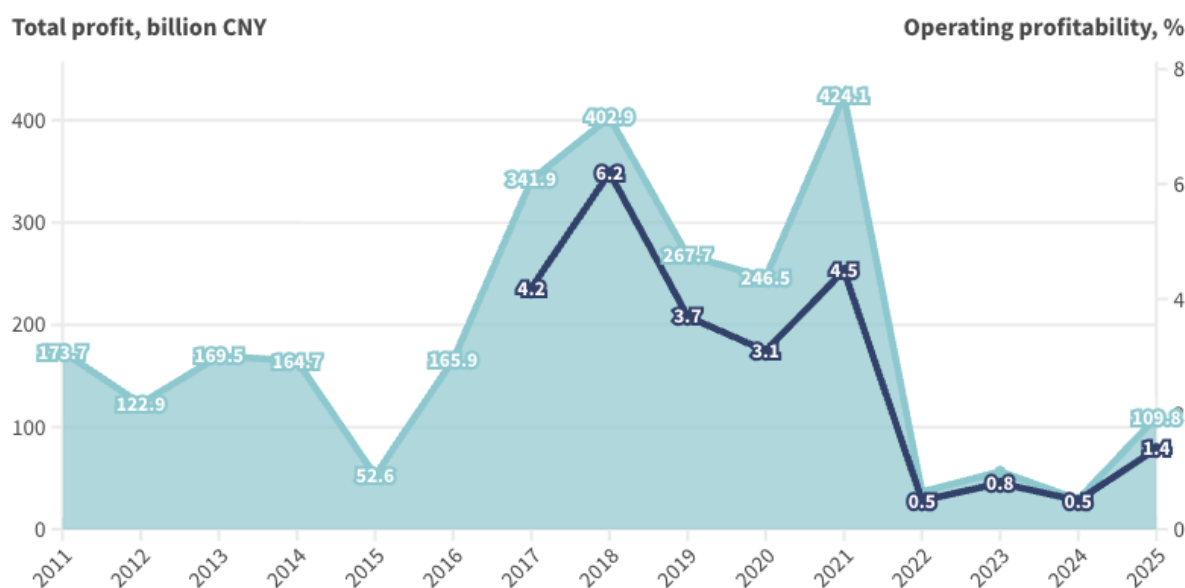
3.1. Profit volatility in a structurally oversupplied sector

Persistent overcapacity has made profitability in China’s steel sector highly sensitive to market cycles. As shown in Figure 4, both total profits and operating profitability have fluctuated sharply over the past decade in response to changes in steel prices, input costs and shifts in domestic demand.

Volatile profitability in China's steel sector

2011-2025 (yearly)

Operating profitability Total Profit



Source: WIND, National Bureau of Statistics of China, CREA analysis • Notes: Operating profitability data are available from 2017 onward.



Figure 4 – Volatile profitability in China's steel industry, 2011-2025

Profitability improved significantly following supply-side reforms in the mid-2010s. Total industry profits rose from CNY 165.9 billion in 2016 to over CNY 400 billion in 2018, while operating profitability reached 6.2%. After moderating in subsequent years, the sector posted another strong year in 2021, when total profits reached CNY 424.1 billion.

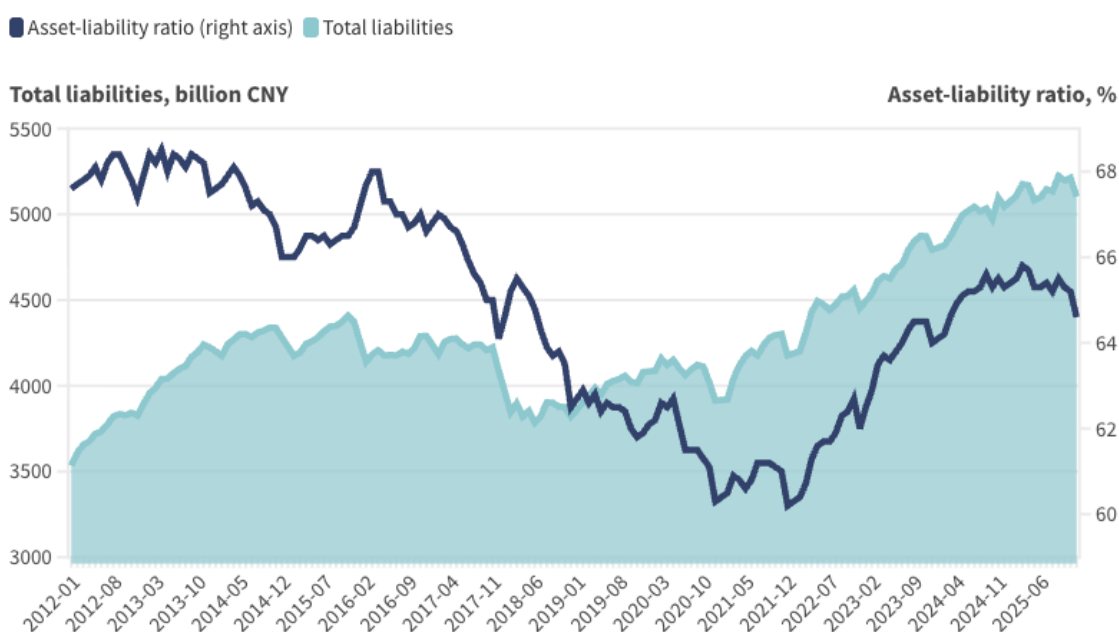
However, this improvement proved short-lived. Since 2022, China's steel sector has entered a new phase of severe overcapacity, as domestic demand — particularly from the property sector — has weakened while production capacity has remained high. Industry profits fell sharply to just CNY 36.6 billion in 2022, with operating profitability dropping to 0.5%, the lowest level in more than a decade.

Although profits partially recovered by 2025, reaching CNY 109.8 billion, they remain only about one-quarter of the peak level recorded in 2021. Available revenue and cost data suggest that this rebound has been driven primarily by declines in production costs that exceeded the fall in revenues, rather than by a meaningful recovery in steel demand.

Compared with the downturn of 2015–2016, the current period of overcapacity has also proven more persistent. Weak margins have already lasted more than four years, underscoring the depth of the structural imbalance between production capacity and demand. Without deeper structural adjustments, the sector risks remaining trapped in a cycle of short-lived profit recoveries followed by renewed financial pressure.

3.2. Rising debt and financial leverage

Debt expansion and leverage dynamics in China’s steel sector 2012-2025 (monthly, year-to-date)



Source: WIND, National Bureau of Statistics of China, CREA analysis



Figure 5 — Debt expansion and leverage dynamics in China’s steel industry, 2011-2025

The recent deterioration in profitability has been accompanied by a renewed expansion of debt across China’s steel sector. As shown in Figure 5, total industry liabilities have increased steadily in recent years, rising from around CNY 4 trillion in early 2020 to more than CNY 5 trillion by 2025, an increase of roughly 20%.

This expansion has also been reflected in rising financial leverage. After declining between 2016 and 2019 during the period of supply-side reforms and improved profitability, the sector’s asset-liability ratio began rising again after 2021, increasing from around 60% to roughly 65% in recent years as demand weakened and profit margins compressed.

A modest profit recovery in 2025 has contributed to a slight stabilisation in both total liabilities and leverage ratios. However, this improvement remains limited and does not materially reduce the sector's underlying financial risks. Debt levels remain elevated, while profitability remains far below historical peaks, leaving many producers with relatively high leverage.

These trends highlight how persistent overcapacity can translate into financial vulnerabilities. When profits weaken, high debt burdens quickly increase pressure on firms' balance sheets and debt-servicing capacity. At the same time, continued access to financing can allow inefficient capacity to remain in operation, slowing the pace of structural adjustment in the industry.

3.3. Investment remains elevated despite weakening market conditions

Investment trends offer insight into the financial dynamics of China's steel sector. As shown in Figure 6, fixed asset investment declined during the early phase of supply-side reforms, falling from CNY 506 billion in 2012 to around CNY 380 billion in 2017.

Investment rebounded strongly after 2018, supported by improved profitability, capacity-replacement mechanisms (under which new capacity is permitted only when equivalent or larger outdated capacity is closed), and policy-driven upgrades such as ultra-low-emissions retrofits. Notably, this expansion continued even as underlying demand growth began to weaken.

However, since 2021, investment has remained at historically high levels, hovering around CNY 790–806 billion annually, despite a sharp deterioration in the sector's profitability after 2022.

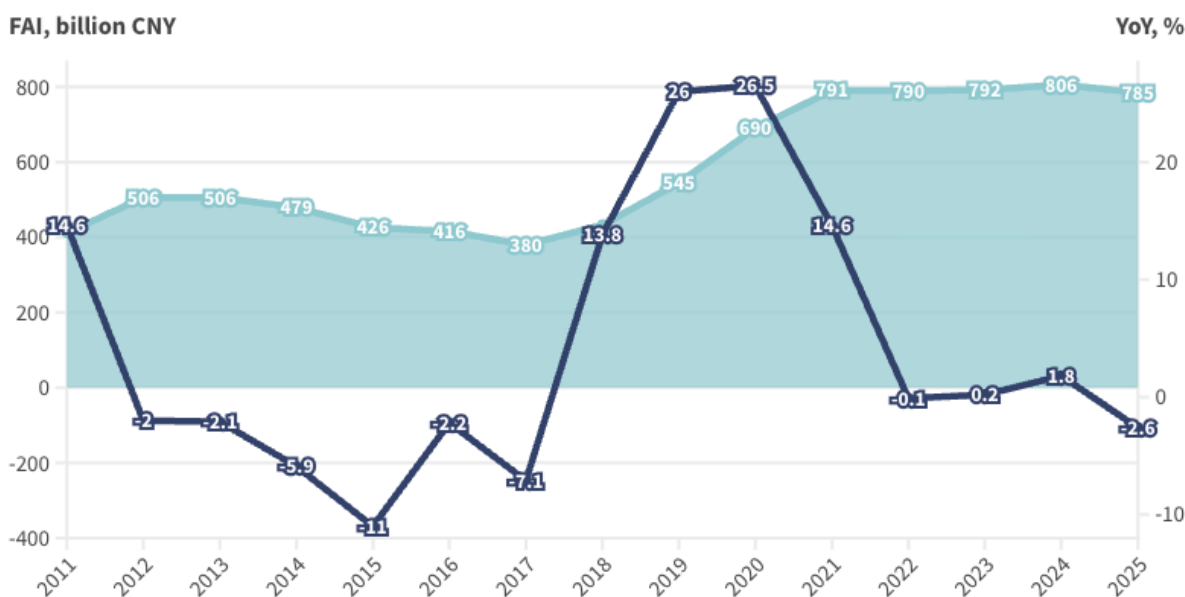
In 2025, however, a turning point becomes visible. Fixed asset investment in the steel sector declined slightly to around CNY 785 billion (-2.6% YoY), marking a break from the previous plateau. This moderation likely reflects both worsening market conditions and tightening policy signals, including the [suspension](#) of approvals for new steelmaking projects since August 2024.

Even so, the overall level of investment remains elevated by historical standards. Importantly, this does not solely reflect minor retrofits. While a significant share of spending has been [directed](#) toward environmental upgrades and efficiency improvements, investment in recent years has also included capacity replacement and, in some cases, [implicit expansion](#) under replacement schemes.

Persistent investment in China's steel sector

2011-2025 (yearly)

■ Fixed asset investment YoY ■ Fixed asset investment



Source: WIND, National Bureau of Statistics of China, CREA analysis



Figure 6 – Persistent investment in China's steel industry, 2011-2025

This persistence highlights a degree of investment inertia within the sector. Even under weak margins and rising debt, producers have continued to commit capital – supported by access to financing, local economic incentives, and the long asset life of steelmaking infrastructure.

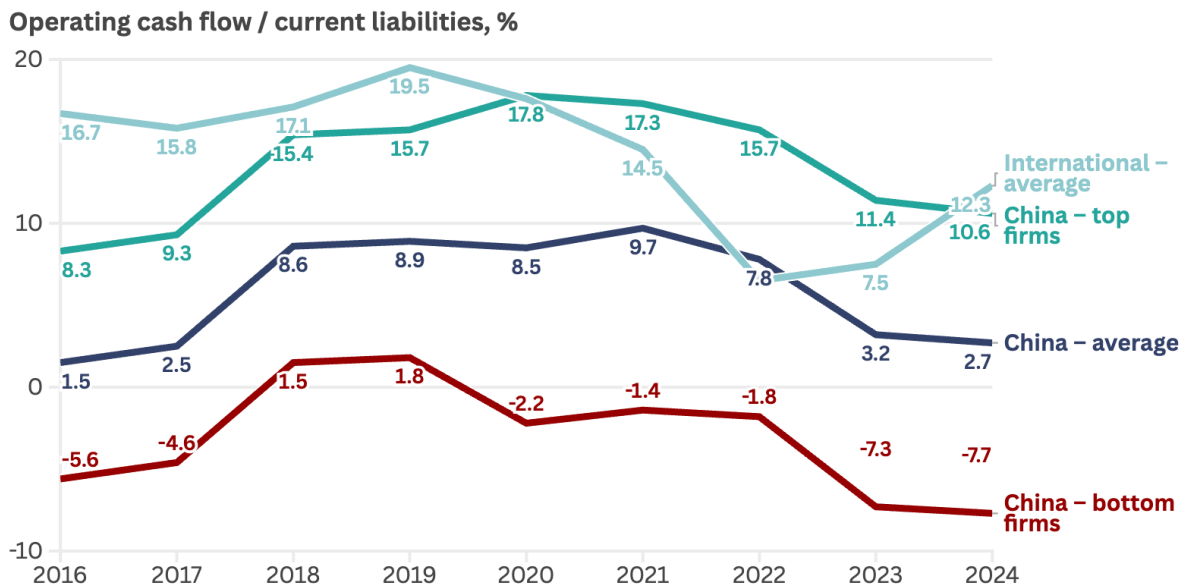
As a result, the coexistence of weak profitability, rising leverage and continued investment underscores a key structural challenge. Access to financing, local economic incentives and the long operating life of steelmaking assets can allow inefficient capacity to remain in operation. As a result, investment dynamics may inadvertently prolong structural overcapacity and delay the pace of industry consolidation.

3.4. Liquidity stress and uneven financial resilience

Operating cash flow provides a direct indicator of a firm's ability to meet short-term financial obligations. As shown in Figure 7, China's steel sector generally exhibits weaker cash-flow coverage of current liabilities than international peers.

Cash flow coverage of current liabilities in China's steel sector and international peers

2016–2024



Source: WIND, SASAC, CREA analysis • Notes: Cash flow coverage is measured as operating cash flow divided by current liabilities. Data available through 2024.



Figure 7 – Cash flow coverage of current liabilities in China's steel industry and international peers, 2016-2024

At the industry level, the ratio of operating cash flow to short-term liabilities remains low, indicating limited internal liquidity. The ratio (sector average) peaked at 9.7% in 2021 but fell sharply as market conditions weakened, dropping to 3.2% in 2023 and 2.7% in 2024. This decline reflects the deterioration in profitability observed since 2022 and indicates increasing reliance on external financing to maintain operations.

More importantly, the data reveal a widening divergence across firms. Leading producers maintain relatively stronger liquidity positions, with cash-flow coverage reaching around 10–11% in recent years, broadly comparable to international industry averages of roughly 12%. In contrast, lower-performing firms exhibit persistently weak or negative cash-flow coverage. For these producers, operating cash flow is insufficient to meet short-term liabilities, signalling heightened financial vulnerability.

This growing dispersion highlights the uneven nature of financial risks within the sector. While stronger firms remain financially resilient, weaker producers face increasing liquidity

pressure during downturns. As a result, credit risks in China's steel industry are becoming increasingly concentrated among less efficient firms rather than evenly distributed across the sector.

The implications of these dynamics extend beyond firm-level performance. Continued access to external financing — often supported by local financial institutions or implicit policy backing — can allow inefficient producers to remain in operation despite weak fundamentals. In the absence of effective financial discipline or exit mechanisms, such dynamics may slow capacity adjustment and contribute to the persistence of structural overcapacity.

In practice, however, exit can be difficult, as local governments often prioritise employment and economic stability. Discussions around establishing dedicated capacity exit mechanisms, including a [potential exit fund](#), suggest that policy attention to this issue is increasing.

Recent developments nevertheless suggest that adjustment pressures are increasing. In 2025, several large regional steel producers entered bankruptcy [restructuring](#), signalling that financial stress is beginning to translate into more tangible industry consolidation.

3.5 Structural adjustment as the key to restoring financial sustainability

Structural adjustment in China's steel sector could deliver not only emissions reductions but also a meaningful improvement in financial stability. The analysis in this report suggests that moving from the current EAF share of around 10% toward 15–20% by 2030 — combined with a corresponding reduction in blast furnace output — could significantly improve industry profitability while lowering leverage across the sector (Table 2).

In practice, the sector's climate transition and its financial sustainability are increasingly two sides of the same structural adjustment challenge. Persistent overcapacity has weakened profitability, increased leverage and created widening differences in liquidity across firms. As long as excess capacity remains in operation, short periods of stronger demand are unlikely to produce lasting improvements in financial performance.

The financial implications of structural adjustment become clearer when production scenarios are combined with indicative financial outcomes. Under a pathway in which the EAF share rises to 15% by 2030, blast furnace output would decline by roughly 80 Mt compared with 2025, helping rebalance supply in the domestic market. In this scenario, total industry profits could recover toward CNY 180–220 billion, close to a longer-term mid-cycle level, while the sector's asset–liability ratio could decline to around 61.5–63%.

Table 2 - Structural and financial outcomes under alternative EAF pathways, 2030

Scenario	2030 EAF Share (%)	2030 BF-BOF Output Change vs 2025 (Mt)	Indicative Total Profit by 2030 (CNY bn)	Indicative Asset-Liability Ratio by 2030	Financial Implication
Scenario 1 – Stagnation	10.0	-33.9	110–140	64–65%	Profitability remains weak; financial risks persist
Scenario 2 – Baseline	12.4	-56.1	140–180	63–64%	Moderate improvement in margins and cash flow
Scenario 3 – Reclaim 15% EAF	15.0	-80.0	180–220	61.5–63%	Profitability approaches long-term mid-cycle levels
Scenario 4 – Reach 20% EAF	20.0	-126.2	220–280	60–62%	Stronger financial recovery and lower leverage

Notes: Production scenarios follow the CISRI low-output pathway used in Table 1. Financial outcomes are indicative estimates based on historical relationships between supply balance, profitability and leverage in China’s steel sector. The estimates illustrate the potential financial effects of structural adjustment rather than precise forecasts.

A more ambitious 20% EAF pathway would imply a larger reduction in blast furnace output – around 126 Mt compared with 2025 – and a more substantial improvement in financial performance. Indicative estimates suggest that industry profits could rise toward CNY 220–280 billion by 2030, while the asset-liability ratio could decline toward 60–62%, easing financial pressures that have accumulated in recent years.

These estimates are illustrative rather than predictive, but they highlight an important point. Structural adjustment during the 15th FYP period could simultaneously reduce emissions, restore financial resilience and moderate export pressures. In this sense, accelerating the shift toward cleaner steelmaking routes is not only a climate objective – it is also central to stabilising the financial foundations of China’s steel industry.

4. External credibility: Rebuilding trust in global markets

The structural imbalances discussed above also have important implications beyond China’s domestic steel market. As excess capacity persists and domestic demand declines, a growing share of production has increasingly been directed toward export markets. This shift has expanded China’s presence in global steel trade and increased its exposure to trade frictions. As a result, developments in China’s steel exports have become an important dimension of the sector’s external credibility.

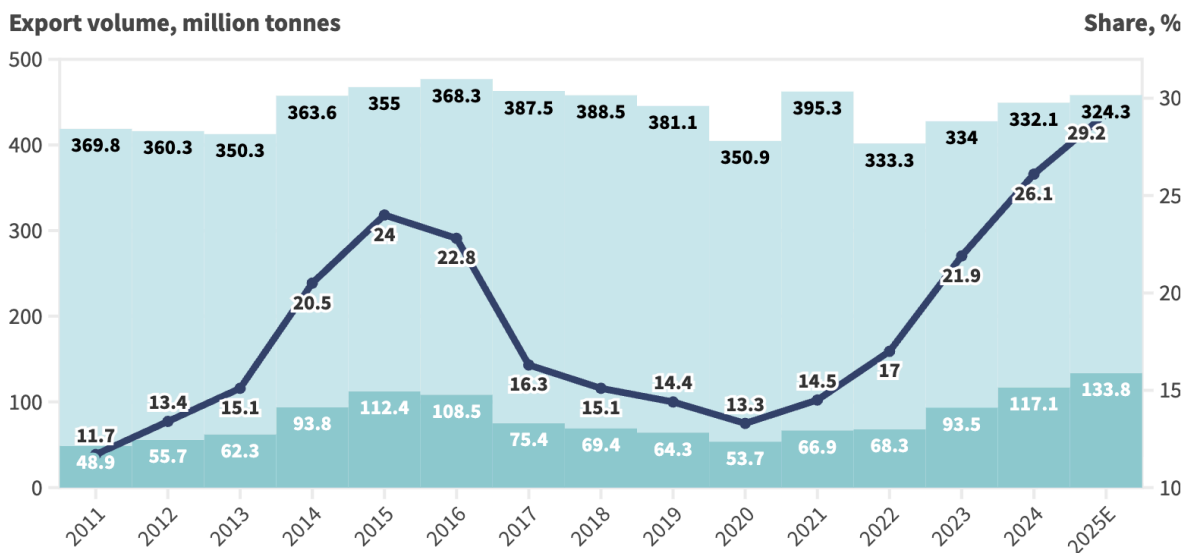
These developments are also increasingly relevant in the context of emerging climate-related trade measures, such as the EU’s Carbon Border Adjustment Mechanism (CBAM).

4.1. China’s growing footprint in global steel trade

China’s share of global steel exports rises sharply

2011–2025

■ China share (right axis) ■ China exports ■ Rest of world exports



Source: WIND, National Bureau of Statistics of China, CREA analysis • Notes: World steel trade refers to global exports of finished and semi-finished steel products. The 2025 value is estimated based on recent trends as full-year global data are not yet available.

Figure 8 — China’s share of global steel exports rises sharply, 2011-2025

China’s steel industry plays a central role in global markets. As the world’s largest producer, changes in China’s production and export patterns can significantly influence international steel trade.

After several years of relatively moderate export levels, China’s steel exports began to increase sharply after 2022. Exports rose from 68.3 million tonnes in 2022 to 93.5 million tonnes in 2023 and further to 117.1 million tonnes in 2024. In 2025, combined exports of steel products and semi-finished steel (billets) reached 133.8 million tonnes (Figure 8).

This surge has significantly expanded China’s presence in the global steel trade. China’s share of global steel exports rose from 17% in 2022 to 21.9% in 2023, 26.1% in 2024, and an estimated 29.2% in 2025. The latest level is above the peak observed during the export surge of the mid-2010s, when China accounted for roughly one quarter of global steel exports.

At the same time, global steel trade volumes have remained relatively stable. Between 2011 and 2024, global exports of finished and semi-finished steel generally fluctuated between 350 and 390 million tonnes per year. As a result, the recent rise in China’s market share has been driven mainly by faster export growth rather than by a significant expansion of global demand.

4.2. Trade frictions rebound alongside export growth

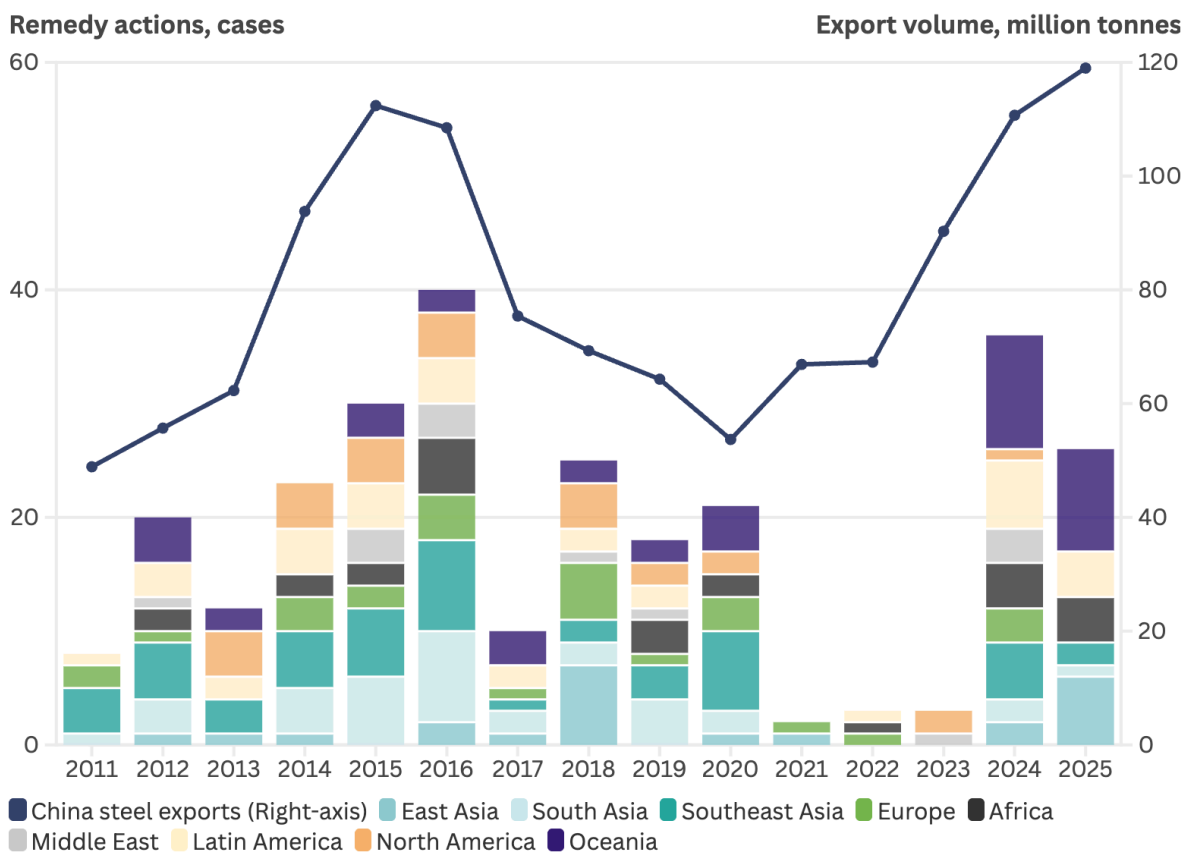
The rapid expansion of exports has begun to reshape international market dynamics. At a time when global steel demand is growing only slowly, rising shipments from the world’s largest producer can intensify competition in importing markets and place downward pressure on prices. As a result, concerns about import surges and market disruption have re-emerged across a number of trading partners.

These concerns have also become more prominent in international policy discussions. One visible indicator of these tensions is the rising number of trade remedy investigations targeting Chinese steel products. As shown in Figure 9, such investigations increased sharply during the previous export surge in the mid-2010s, peaking at around 40 new cases in 2015. Although the number of cases declined in the following years, trade actions have increased again alongside the recent rebound in Chinese exports.

In 2024, the number of new investigations targeting Chinese steel rose again to around 36 cases, while 2025 also recorded 26 cases. Many of these cases have been initiated by emerging economies in Southeast Asia, the Middle East, Africa and Latin America, regions that have become increasingly important destinations for Chinese steel exports.

Trade frictions rebound as China’s steel exports surge

Export volume vs. trade remedy cases by region, 2011–2025




Source: MOFCOM, CREA analysis • Notes: Refers to investigations initiated in each year; not all resulted in final measures. 

Figure 9 — Trade frictions rebound as China’s steel exports surge, 2011-2025

Recent policy developments suggest that Chinese authorities have also begun to respond to these pressures. At the end of 2025, the government reinstated a [steel export licensing](#) system to strengthen oversight of outbound shipments and improve the regulation of export flows. Early data indicate that exports have already begun to moderate. In the first two months of 2026, China’s steel exports [declined](#) by 8.1% year-on-year, reflecting the

combined effects of domestic policy adjustments and increasing pressure from external markets.

The interaction between domestic structural pressures and global market responses highlights a broader issue of external credibility. Rapid export growth can reinforce the perception among trading partners that structural imbalances in China's steel sector remain unresolved, increasing the likelihood of further trade restrictions. Addressing these tensions ultimately requires tackling the underlying drivers of export expansion. Persistent overcapacity and delayed structural adjustment within the domestic industry remain key factors behind rising export pressure. Accelerating capacity reduction and production restructuring would therefore not only help rebalance supply in the domestic market but also reduce reliance on export markets to absorb excess output. In this sense, structural adjustment can simultaneously support emissions reductions, improve financial stability and ease trade tensions in global steel markets.

5. Reclaiming credibility: Policy priorities for the 15th Five-Year Plan

Restoring credibility in China's steel sector will require coordinated action on capacity adjustment, green transition and financial discipline. The 15th FYP (2026–2030) provides a critical window to align climate goals with industrial restructuring and market stability.

At this stage, the 15th FYP sets high-level policy directions and indicative targets, while more detailed and binding measures will be defined in subsequent sectoral plans, including those for the steel industry, likely to be released in early 2027. This sequencing makes the current period particularly important for shaping expectations. Signals provided in the 15th FYP will be closely watched by international companies, investors and governments as indicators of the direction and credibility of China's industrial and climate policy framework.

5.1 Accelerate blast furnace phase-down to rebalance supply

Reducing blast furnace capacity is essential to restore balance in China's steel sector and create space for cleaner production routes. Our previous analysis [suggests](#) that around 350 Mtpa of blast furnace capacity may need to exit by 2030, equivalent to roughly one quarter of China's current steelmaking capacity. Prioritising the retirement of older, less efficient facilities would ease supply pressures, improve market conditions, and directly reduce the sector's total emissions.

5.2 Set clear EAF expansion targets and prioritise EAF development

Reviving the transition to EAF steelmaking should be a central priority during the 15th FYP period. Reaffirming the earlier policy ambition of raising the EAF share to [20%](#) by 2030, alongside stronger economic incentives, would help accelerate structural adjustment in the sector.

Rapid growth in renewable energy also creates new opportunities for EAF steelmaking. As a flexible, electricity-based production route, EAF steel can become a valuable demand-side partner in China's expanding renewable power system, helping integrate clean electricity while lowering the carbon intensity of steel production.

5.3 Tighten financial support for inefficient steelmakers and operationalise exit mechanisms

Stronger financial discipline will be essential to reduce excess capacity. Continued access to financing has allowed some inefficient producers to remain in operation despite weak profitability. Tightening credit conditions for low-efficiency producers and implementing the [capacity exit fund](#) currently under discussion could help facilitate the orderly closure or restructuring of financially vulnerable firms. Such measures would reduce excess supply and lower credit risk across the sector.

5.4 Align climate, industrial and trade policies to strengthen green competitiveness

Finally, stronger coordination between climate policy, industrial policy and trade strategy will be important for sustaining the sector's transition. Accelerating the development of China's carbon market — particularly by moving toward an absolute emissions cap for the steel sector — would provide clearer long-term investment signals and better align domestic climate policies with emerging climate-related trade measures.

At the same time, binding green trade and investment rules can help strengthen the international competitiveness of Chinese steel. Moving beyond high-level guidance toward clear, enforceable standards [aligned](#) with international frameworks would give companies greater certainty and practical pathways to scale up low-carbon steel production. Such measures could enhance the sector's green competitiveness while easing trade tensions linked to concerns about overcapacity and emissions performance.

6. Conclusion

China's steel sector is entering a decisive phase. As the world's largest steel producer and exporter, the trajectory of the industry will shape not only China's own decarbonisation pathway but also the evolution of global steel markets.

The analysis in this report shows that the sector now faces a broader test of credibility across three interconnected areas. Progress toward the green steel transition has slowed, with the share of electric arc furnace steel remaining well below earlier policy ambitions. At the same time, persistent overcapacity has contributed to volatile profitability, rising debt and uneven financial resilience across firms. Meanwhile, the recent surge in exports has expanded China's footprint in global markets and contributed to renewed trade frictions.

These challenges ultimately stem from the same underlying issue: structural imbalances within the industry. Addressing them requires accelerating capacity adjustment, restoring momentum toward cleaner production routes and strengthening financial discipline across the sector.

The 15th Five-Year Plan period (2026–2030), therefore, represents a critical window to advance these changes. Policy measures that combine capacity reduction, support for lower-emission steelmaking and stronger financial discipline could help place the sector on a more stable trajectory while reinforcing confidence among global trading partners.

If successful, this transition would demonstrate that large-scale industrial decarbonisation can proceed alongside financial resilience and constructive engagement with global markets — helping China's steel sector reclaim credibility in the next phase of its transformation.

Methodology

The steel production, finance, and export analysis data were compiled from China's National Bureau of Statistics, China Customs, the China Iron and Steel Association, State-owned Assets Supervision and Administration Commission of the State Council, and WIND.