




# The Chinese steel industry

A monthly report for worldsteel members



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## Executive summary

### Government policies and measures

On 24 January, the State Council issued guidance for a work plan on energy conservation and emission reduction during the 14th five-year plan (2021-2025). The objective of the work plan is to facilitate the development of a circular economy and the green transformation of the economy and society.

### Industry news digest

China Baowu Group has announced it has upgraded its corporate strategy with more ambitious business development aims in the years to come. The new strategy positions Baowu Group as a high-technology enterprise with business focusing on solutions for the supply of steel products and other advanced materials and relevant services together within the industrial ecosystem. Baowu Group's vision is to become a leader in the global steel and advanced materials industry.

CISA stated that the financial performance of its member companies in 2021 was the best in history thanks to the well-balanced domestic steel supply-demand situation and the stronger than expected overseas market. The average domestic steel price in January-November 2021 was 37.8% higher than in the same period of 2020. As a result, CISA's members reported a growth of 36.3% to RMB6.3 trillion (US\$997.8 billion) in turnover in January-November 2021.

Two state-owned Chinese steelmakers, Benxi Steel and Anyang Steel, are both diversifying their ownership by offering equity shares to privately-owned investors. Benxi Steel reported that a 5.0% stake of the company had been transferred to Fushun New Steel, which is owned by Jianlong Group (with a 71.7% stake). The change in shareholder means Benxi Steel is now jointly owned by Ansteel Group and Jianlong Group. Anyang Steel also announced that the owner of the company has decided to offer 80% of its stake for transfer to interested investors.

### Steel market

In January 2022, the composite steel price index<sup>3</sup> declined slightly by 0.41 points to 132.38 from 132.79 in December 2021. The index of rebar declined by 0.94 points to 132.39. The index of HRC increased by 1.15 points to 127.56, while the index of GI declined by 1.18 points to 116.04.

In the full year of 2021, apparent crude steel use decreased by 5.4% y-o-y to 991.71 Mt. Crude steel production in 2021 declined by 3.0% to 1032.79 Mt.

### Raw materials

Iron ore imports in the full year 2021 were 1124.32 Mt, down by 3.9% from 1169.51 Mt in 2020. Production of domestic ROM (run of mine) in the full year 2021 increased by 9.4% to 980.53 Mt.

### Macroeconomic indicators

The Chinese GDP grew by 4.0% in the fourth quarter and 8.1% in the full year 2021. Fixed assets investment in the urban areas grew by 4.9% in the full year 2021, compared to the growth of 2.9% in the whole of 2020. Total retail sales increased by 12.5% in the full year 2021, compared to the contraction of 3.9% in the whole of 2020.

### Steel demand drivers

The fixed asset investment in real estate development in urban areas rose by 4.4% y-o-y in the full year 2021, compared to an annual growth of 7.0% in 2020.

China's manufacturing Purchasing Managers' Index (PMI) in January 2022 declined slightly by 0.2 points to 50.1 from 50.3 in December 2021. Index for new orders in January 2022 decreased by 0.4 points to 49.3 compared to December 2021.

According to the China Federation of Logistics and Purchasing (CFLP), China's manufacturing PMI for the steel industry in January 2022 rose by 8.8 points to 47.5 from 38.7 in December 2021.

## Government policies and measures

### Action plan for energy conservation and emission reduction announced

On 24 January, the State Council issued guidance for a work plan on energy conservation and emission reduction during the 14th five-year plan (2021-2025). The objective of the work plan is to facilitate the development of a circular economy and the green transformation of the economy and society. Some key points of the plan related to steel are summarised as follows:

- Total energy consumption is to be controlled at a reasonable level and energy intensity per unit of GDP should be reduced by 13.5% in 2025 compared to the 2020 level. Water consumption per unit of industrial value-added should be reduced by 16.0% during the same period.
  - Emissions of COD (chemical oxygen demand), ammonia nitrogen, NOx and VOC's (volatile organic compounds) in 2025 should be reduced by at least 8%, 8%, 10% and 10%, respectively, compared to the levels in 2020.
  - Promote energy-saving transformation and in-depth treatment of pollutants with a special focus on steel, nonferrous metals, building materials and the petrochemical industry.
  - Promote energy-saving technologies such as high-efficiency rectification systems, high-temperature and high-pressure coke dry quenching and intensified oxygen-enriched smelting.
  - Encourage the shift of the steelmaking process from the blast furnace-converter route to the electric furnace route.
  - Promote the ultra-low emission transformation of steel, cement, coking industries and coal-fired boilers. By 2025, the technical renovation towards ultra-low emission standard for at least 530 Mt/a of steel production capacities should be completed. All coal-fired boilers in key areas of air pollution prevention should meet the ultra-low emission standard by 2025.
  - By 2025, through the implementation of energy conservation and carbon reduction actions, at least 30% of the production capacity and data centres in key industries such as steel, electrolytic aluminum, cement, flat glass, oil refining, ethylene, synthetic ammonia and calcium carbide should reach the benchmark level of energy efficiency in each sector.
- Facilitate the development of super-low energy buildings and green building standards will be applied to all new buildings in urban areas by 2025.
  - By 2025, non-fossil energy should account for around 20% of the annual energy consumption and annual sales of renewable energy vehicles should account for approximately 20% of new vehicles.

## Industry news digest

### Baowu Group upgrades corporate strategy

China Baowu Group, the largest steelmaker in the world, owned by the Chinese central government, announced in January it has upgraded its corporate strategy with more ambitious business development aims in the years to come.

The upgraded strategy was disclosed by the group Chairman Mr Chen Derong at Baowu's annual senior management meeting on 14 January. The new strategy positions Baowu Group as a high-technology enterprise with business focusing on solutions for the supply of steel products and other advanced materials and relevant services together within the industrial ecosystem. Baowu Group's vision is to become a leader in the global steel and advanced materials industry.

Some specific figures on Baowu Group's vision for 2035 were disclosed. Baowu aims to expand its crude steel capacity to over 100 Mt/a, which has already been achieved in 2020-2021. There is no specific goal for capacity in 2035. Both 200 Mt/a or 300 Mt/a are possible and the average productivity of employees is expected to increase to 4,000 tonnes of crude steel production per capita per year. Baowu Group also aims to increase its iron ore production capacity to over 100 Mt/a from currently 50 Mt/a.

Baowu Group's decarbonisation plan is to reduce CO<sub>2</sub> emissions per tonne of steel by 30% by 2035. To support the ambition, Baowu Group will lift the share of R&D expenses in its turnover to 5.0% by 2035. Scrap plays a critical role in Baowu Group's decarbonisation goal. Baowu Group is the largest steel scrap recycling company in China, with an existing annual recycling capacity of approximately 15 Mt/a. The upgraded strategy aims to increase the scrap recycling capacity to 100 Mt/a by 2035.

Internationalisation is an important part of Baowu Group's new strategy, which aims to become a great world-class enterprise. The target is to lift its transnational index to 20% by 2035. In September 2021, Baowu Group announced it will build an integrated steel plant in Saudi Arabia in partnership with the Saudi energy giant Aramco.

### CISA releases environmental performance for 2021

China Iron and Steel Association (CISA), the representative body of the Chinese steel industry, released the environmental performance of its members in 2021. According to the press release, most key environmental indicators have seen an improvement thanks to the massive investments over the past years.

Water reuse rate improved to 98.07% in 2021 from 98.01% in 2020. Fresh water intensity declined by 0.37% to 2.44 m<sup>3</sup> per tonne of crude steel in 2021. Total discharged waste water decreased by 7.57% and Chemical Oxygen Demand (COD) declined by 6.87%. The discharge of total cyanide and suspended solids in the discharged water dropped by 30.62% and 11.25%, respectively.

Gas production from blast furnace decreased by 3.05% while converters gas and coke ovens gas production grew by 0.74% and 2.87%, respectively. The reuse ratio of blast furnace gas, converters gas and coke oven gas declined slightly to 98.35%, 98.50% and 98.46%, respectively.

Total waste gas emissions grew by 3.40% in 2021. However, total SO<sub>2</sub>, fume, and dust content in the emitted waste gas decreased by 22.15%, 22.88% and 10.73%, respectively, thanks to the renovation to meet the ultra-low emission standard. The emission intensity of SO<sub>2</sub>, fume & dust, and NO<sub>x</sub> per tonne of crude steel decreased by 21.01%, 13.71% and 12.91%, respectively.

Blast furnace slag declined by 0.79% to 231.0 Mt in 2021, while steelmaking slag rose by 2.84% to 89.7 Mt. Reuse ratio of blast furnace slag and steelmaking slag improved by 0.15 percentage points and 0.08 percentage points to 99.38% and 99.15%, respectively. Generation of iron-containing sludge increased by 4.59 % to 40.4 Mt and the reuse ratio improved by 0.07 percentage points to 99.89%.

In 2021, China produced 1032.79 Mt of crude steel, down -3.0% compared to 2020. CISA's member companies account for approximately 80% of China's total steel production and their crude steel production grew slightly by 0.14% in 2021.

## Chinese steelmakers post the best ever financial performance

Although China's crude steel production declined by 3.0% in 2021, the Chinese steelmakers have reported the best ever financial performance in 2021. The performance was achieved in the context of severe steel production restrictions and the increasing pressure of decarbonisation amid slow economic growth throughout the year.

At its annual board meeting on 10 January, CISA stated that the financial performance of its member companies in 2021 was the best in history thanks to the well-balanced domestic steel supply-demand situation and the stronger than expected overseas market. The average domestic steel price in January-November 2021 was 37.8% higher than in the same period of 2020. As a result, CISA's members reported a growth of 36.3% to RMB6.3 trillion (US\$997.8 billion) in turnover in January-November 2021.

Meanwhile, the total EBIT of CISA members increased by 86.5% to RMB351.7 billion (US\$55.4 billion). The average profitability (EBIT to turnover ratio) of 5.5% was higher than the 4.0% in the same period of 2020. Nevertheless, the financial performance has been weakening since the fourth quarter with the monthly EBIT in November dropping to RMB9.2 billion (US\$1.4 billion), which was 64.0% less than the previous month. Some analysts have warned that a few steelmakers may report a net loss in December, and no significant improvement is expected for January and February due to the Chinese New Year holiday.

Some leading steelmakers have disclosed the preliminary results of their financial performance for the whole year of 2021. Ansteel Group's turnover was about 50.0% higher than that in 2020, but the EBIT jumped by 360% to a record high of over RMB30 billion (US\$4.7 billion). Baotou Steel's turnover was 47.6% higher than that in 2020, but the EBIT jumped by 545% to a record high of over RMB10.3 billion (US\$1.6 billion). Jianlong Group's turnover grew by 26.5%, but the EBIT increased by 31.7% to RMB8.4 billion (US\$1.3 billion).

## Two state-owned steelmakers diversify ownership

Two state-owned Chinese steelmakers, Benxi Steel and Anyang Steel, are both diversifying their ownership by offering equity shares to privately-owned investors. In January, the two steelmakers announced their shareholder diversification plan.

Benxi Steel, a 20 Mt/a integrated steelmaker located in Northeast China's Liaoning province, reported in early January that a 5.0% stake in the company had been transferred to Fushun New Steel. The deal accounts for only 5% of Benxi Steel's stake, but it presents a significant change

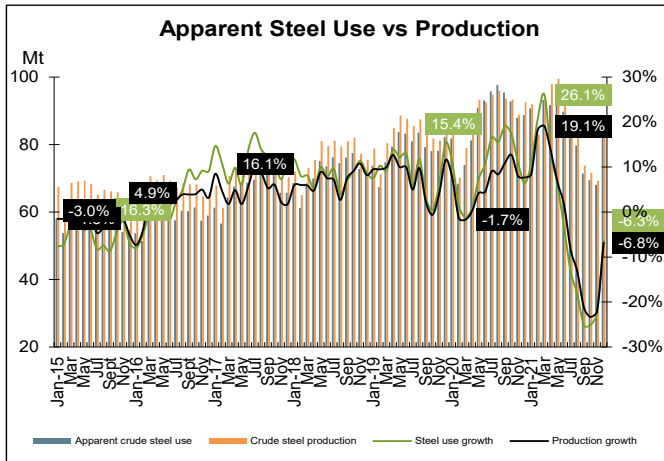
in the shareholder structure. Before the transaction, Ansteel Group, the fourth largest steelmaker in China owned by the central government, was the largest shareholder (51.0%) of Benxi Steel. After the transaction, Ansteel Group's stake is reduced to 48.45%, making it no longer the controlling shareholder of Benxi Steel. The remaining stake of 46.55% is owned by the provincial government of Liaoning.

In August 2021, Benxi Steel was merged into Ansteel Group by the government with 51% of its stake transferred to Ansteel Group free of charge, making Ansteel Group a controlling shareholder of Benxi Steel. The share transfer was confirmed and finalised with a new business certificate registered in mid-October 2021. Fushun New Steel is owned by Jianlong Group (with a 71.7% stake), the second largest privately-owned steelmaker in China. The change in shareholder means Benxi Steel is now jointly owned by Ansteel Group and Jianlong Group.

Anyang Steel, a 12 Mt/a integrated steelmaker located in Central China's Henan province, announced on 14 January that the owner of the company (the provincial government) has decided to offer 80% of its stake for transfer to interested investors. No information on the potential investors has been disclosed but according to media reports, three private steelmakers are likely to bid for the stake in Anyang Steel, i.e. Shagang Group, Fangda Group and Delong Group.

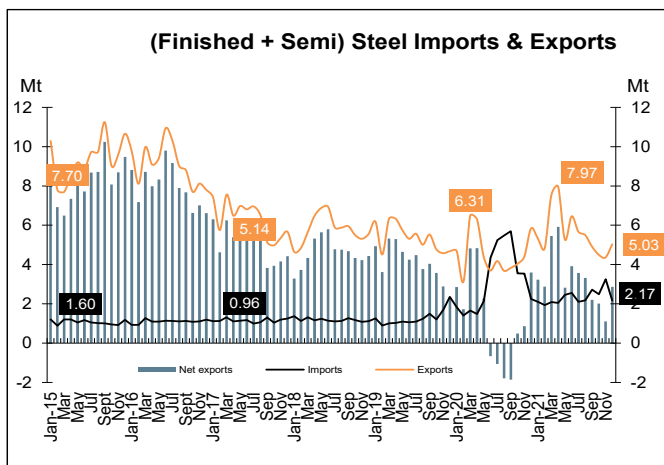
Anyang Steel is located in the northern city of Anyang but the capacity is being relocated to a southern city 300 km away.

## Steel market



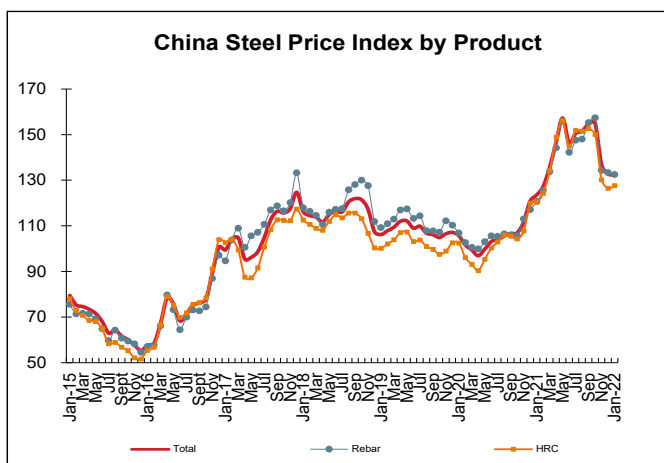
### Apparent steel use versus production

In the full year 2021, apparent crude steel use decreased by 5.4% y-o-y to 991.71 Mt. Crude steel production in 2021 declined by 3.0% y-o-y to 1032.79 Mt.



### (Finished & semi) steel imports and exports

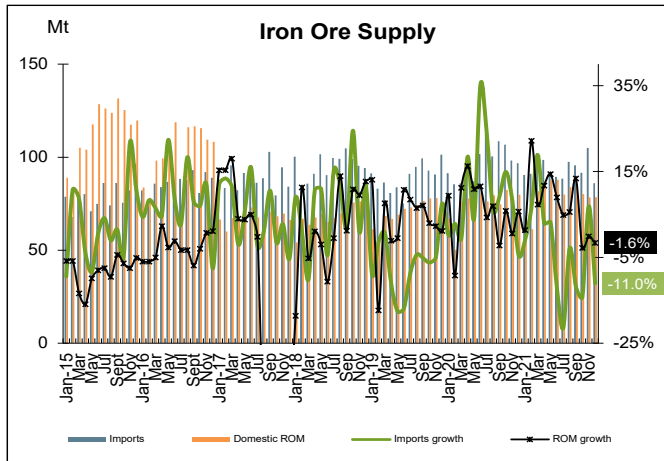
In the full year 2021, imports of semis and finished steel decreased by 27.3% y-o-y to 28.05 Mt, compared to 38.60 Mt in 2020. Exports of semis and finished steel in the full year 2021 increased by 24.7% y-o-y to 66.93 Mt. This suggests a net export of 38.88 Mt, a jump of 157.9% compared to 2020. The net export is equivalent to 3.8% of crude steel production 2021.



### China steel price index

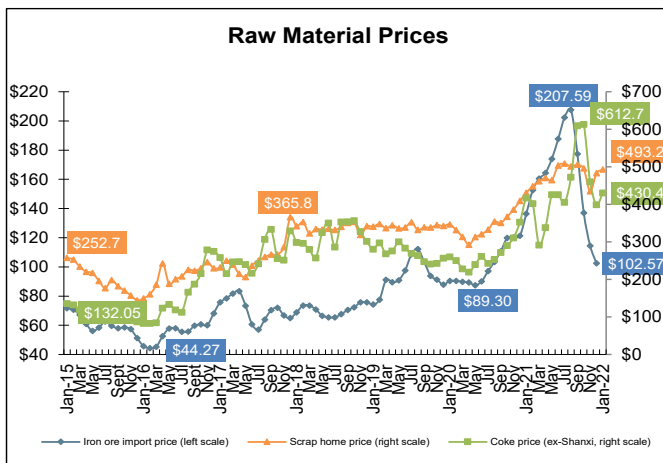
In January 2022, the composite steel price index declined slightly by 0.41 points to 132.38 from 132.79 in December 2021. The index of rebar declined by 0.94 points to 132.39. The index of HRC increased by 1.15 points to 127.56, while the index of GI declined by 1.18 points to 116.04.

## Raw materials, inventory, and capacity



### Iron ore supply

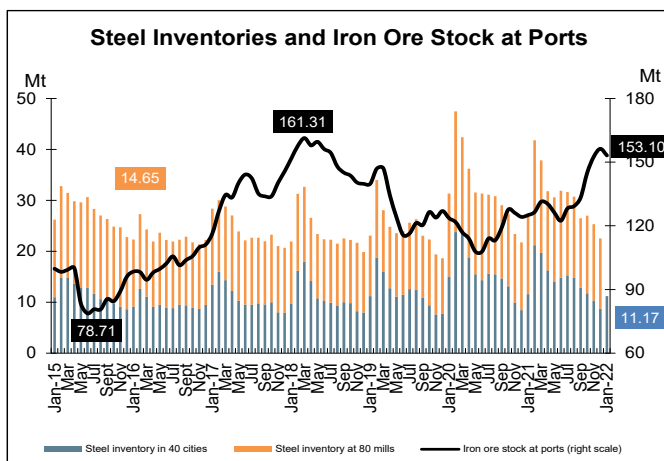
Iron ore imports in the full year of 2021 were 1124.32 Mt, down by 3.9% from 1169.51 Mt in 2020. Production of domestic ROM (run of mine) in 2021 increased by 9.4% to 980.53 Mt.



### Raw material prices

Average import prices<sup>4</sup> of iron ore in December decreased to US\$102.5/tonne CFR from US\$114.47/tonne CFR in November 2021. China's domestic coke price in late January 2022 rose to US\$430.38/tonne from US\$398.69/tonne in late December 2021.

The price of scrap in eastern China in late January 2022 rose slightly to US\$493.21/tonne from US\$483.46/tonne in late December 2021.



### Steel inventories and iron ore stocks at ports

Steel inventories<sup>5</sup> in the warehouses of 40 major cities in late January 2022 increased to 11.17 Mt from 8.75 Mt in late December 2021. In late December 2021, the steel inventories of 80 major mills declined slightly to 13.78 Mt from 14.97 Mt in November 2021. This compares to 13.31 Mt in late December 2020.

The stocks of iron ore at China's seaports in late January 2022 declined slightly to 153.10 Mt from 156.26 Mt in late December 2021.



## Raw materials, inventory, and capacity

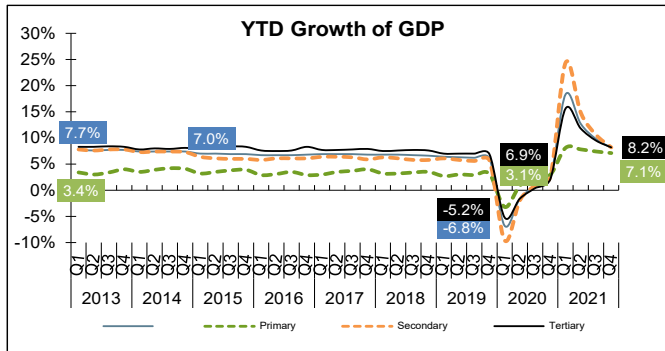
### **New facilities**

A total of 5.75 Mt/a of ironmaking, 2.40 Mt/a of crude steelmaking and 4.80 Mt/a of rolling capacities belonging to seven companies were reported to have been commissioned in January 2022.

### **Capacity closures**

No capacity was reported to have been closed in January 2022.

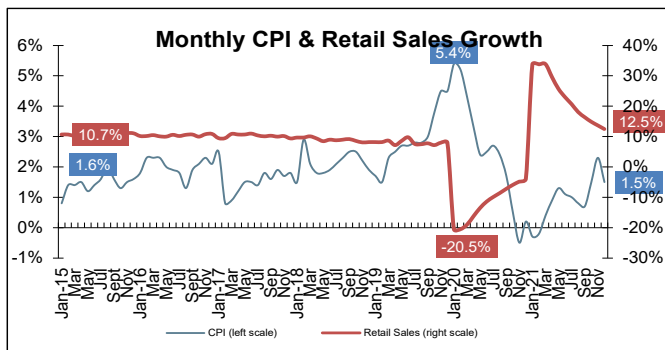
## Macroeconomic Indicators



### Economic growth

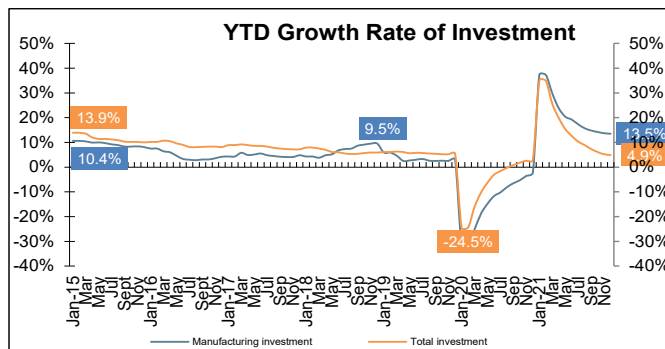
The Chinese economy grew by 8.1% in 2021, compared to 2.3% in 2020. Growth rates of primary industry, secondary industry and tertiary industry in 2021 were 7.1%, 8.2% and 8.2%, respectively. In the fourth quarter of 2021, the GDP growth slowed to 4.0%, compared to 6.5% in the fourth quarter of 2020.

In mid-January, the Chinese Academy of Sciences published its projection for China's economic outlook, which suggests that the Chinese GDP may grow by 5.5% in 2022. The secondary industry is projected to grow by 4.5%, while the primary and tertiary industry is expected to grow by 3.1% and 6.5%, respectively. This compares to the World Bank's latest forecast of China's GDP growth to be 5.1% in 2022.



### Monthly CPI and YTD retail sales growth

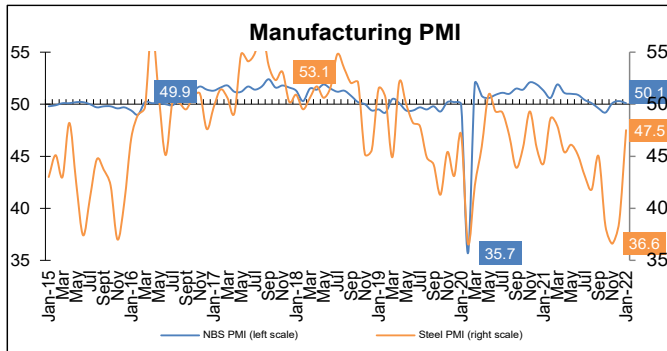
China's CPI inflation in December 2021 was 1.5%, compared to 0.2% in December 2020. The inflation was 0.9% in the full year 2021 compared to the Chinese government's target of 3.0% for 2021. The total retail sales of consumer goods increased by 12.5% in the full year of 2021, compared to a contraction of 3.9% in the whole of 2020.



### YTD investment growth

Fixed asset investment (FAI) in urban areas rose by 4.9% y-o-y in the full year 2021, compared to the growth rate of 2.9% in 2020. During the same period, investment in the secondary industry in urban areas rose by 11.3% y-o-y, while primary sector investment rose by 9.1% and service sector investment increased by 2.1% y-o-y.

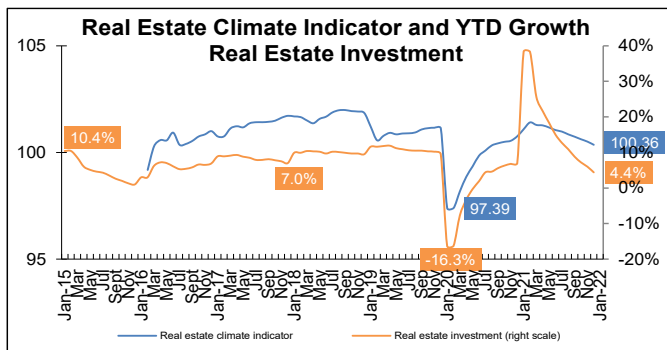
## Steel demand drivers



### Manufacturing PMI

China's manufacturing Purchasing Managers' Index (PMI) in January 2022 declined slightly by 0.2 points to 50.1 from 50.3 in December 2021. Index for new orders in January 2022 decreased by 0.4 points to 49.3 compared to December 2021.

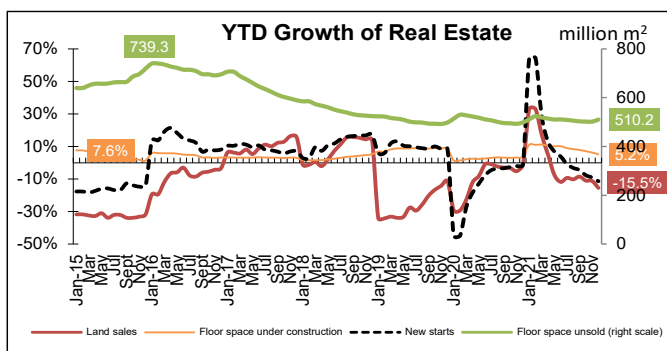
According to the China Federation of Logistics and Purchasing (CFLP), China's manufacturing PMI for the steel industry in January 2022 rose by 8.8 points to 47.5 from 38.7 in December 2021.



### Real Estate climate indicator and investment

The National Real Estate Climate Indicator in December 2021 slid slightly to 100.36 from 100.51 in November 2021.

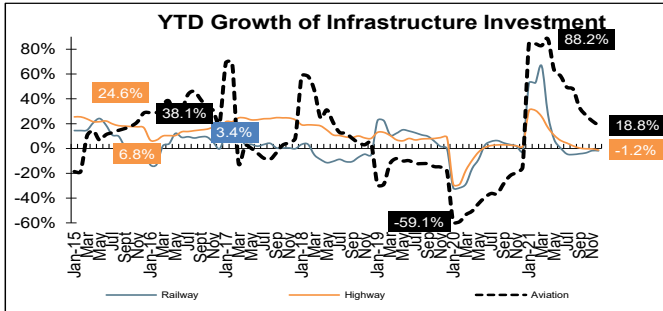
The fixed asset investment in real estate development in urban areas rose by 4.4% y-o-y in the full year of 2021, compared to an annual growth of 7.0% in 2020.



### YTD growth of real estate

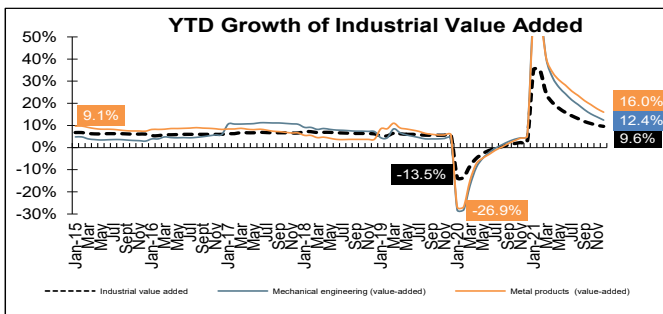
During the full year of 2021, floor space under construction grew by 5.2% y-o-y, higher than the annual growth rate of 3.7% in 2020. Meanwhile, the new starts of real estate declined by 11.4% y-o-y, compared to an annual contraction of 1.2% in 2020. Land acquisition decreased by 15.5% y-o-y, compared to -2.2% in the whole year of 2020. Floor spaces that have been built but remained unsold by the end of December 2021 rose slightly by 2.4% y-o-y to 510.23 million m<sup>2</sup> from the level in December 2020.

## Steel demand drivers



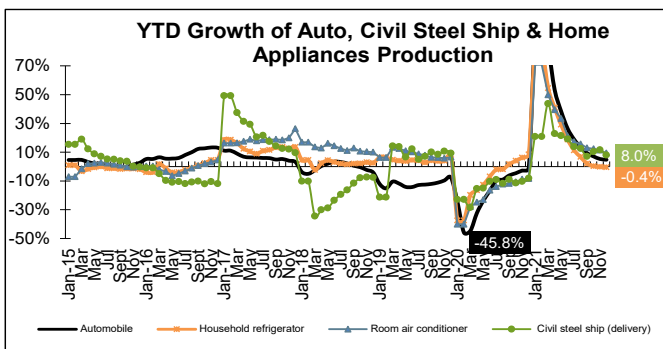
### YTD growth of infrastructure investment

During the full year of 2021, fixed asset investment in the railway decreased by 1.8% y-o-y, compared to a decline of 2.2% in the whole of 2020. During the same period, the investment in road transportation declined by 1.2%, compared to a growth rate of 1.8% in 2020. Fixed asset investment in civil aviation increased by 18.8%, compared to -15.1% in the whole of 2020.



### YTD growth in the machinery industry

During the full year of 2021, the value-added of industry rose by 9.6% y-o-y, compared to the annual growth of 2.4% in the whole of 2020. Value-added of the mechanical engineering industry grew by 12.4% during the full year of 2021, compared to a growth rate of 5.1% in the whole year of 2020. In the meantime, the value-added of metal products sector increased by 16.0% y-o-y, compared to a growth of 5.2% in the whole of 2020.



### YTD growth of auto and home appliances production

Automobile production increased by 4.8% y-o-y to 26.53 million units in the full year of 2021, compared to an annual contraction of 1.4% in 2020.

During the full year of 2021, delivery of civil steel ships increased by 8.0% y-o-y, compared to a decline of 8.2% y-o-y in 2020.

During the same period, production of household fridges decreased by 0.4% y-o-y compared to an annual growth of 8.4% in 2020. Air conditioner production increased by 9.4% y-o-y, compared to an annual decline of 8.3% in 2020.

## Abbreviations

BF	blast furnace	ROM	run of mine (raw ore before concentration or beneficiation)
BOF	basic oxygen furnace	SEPA	State Environment Protection Administration
CBRC	China Banking Regulatory Committee	SERC	State Electricity Regulatory Commission
CCCMC	China Chamber of Commerce of Metal, Mineral and Chemical Importers and Exporters	WTO	World Trade Organisation
CISA	China Iron and Steel Association	y-o-y	year-on-year
CDM	Clean Development Mechanism	YTD	year to date
CFR	cost and freight		
COD	chemical oxygen demand		
CPC	Communist Party of China		
CPI	consumer price index		
CRC	cold rolled coil		
EAF	electric arc furnace		
EBT	earnings before taxes		
GDP	gross domestic product		
FAI	fixed asset investment		
FOB	free on board		
GI	galvanised sheet		
HRC	hot rolled coil		
ISO	International Standards Organisation		
JV	joint venture		
km	kilometre		
kwh	kilowatt hours		
KVA	kilo volt ampere		
m	metre		
m <sup>2</sup>	square metres		
m <sup>3</sup>	cubic metres		
MLR	Ministry of Land and Resources		
Mt	megatonne, million metric tons		
Mt/a	megatonnes/annum		
NBS	National Bureau of Statistics		
NDRC	National Development and Reform Commission		
RMB	renminbi (currency, also called yuan)		

## Notes

The following notes are referred to on the previous pages:

1. Apparent crude steel use = domestic crude steel production + net semi steel imports + (net finished steel imports ÷ yield (95.00% for 2005 and 95.54% for 2006)). Production and trade information source: National Bureau of Statistics (NBS), China Customs General. Yield information source: industry consensus.
2. Methodology of annualising: (YTD statistics) / (YTD days) x 365
3. China steel price index is a monthly average based on CISA's weekly update.
4. Import prices of iron ore and export prices of coke are calculated from the Customs General's monthly statistics. Other raw materials prices and iron ore stock at ports are from [www.mysteel.com](http://www.mysteel.com). Scrap price is for the Shanghai market. All domestic prices are converted to US dollars/tonne based on exchange rate (middle price, monthly average).
5. Steel inventories of 80 mills are from CISA's monthly update. Inventories in 40 cities are from [www.mysteel.com](http://www.mysteel.com), representing steel stocks at major warehouses in China. These statistics do not reflect the whole picture of China; however, they could be a reference for inventory change.

### Reminder

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