PMI Quarterly on China Manufacturing

PMI 4Q22
Heightened downward pressure on the manufacturing sector

Policy Outlook
China to step up policy support for economy

1Q23 Forecasts
Real GDP growth to rise to 3.5% yoy while PMI to rebound to above 50.0

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Issue 51

PMI points to heightened downward pressure on the manufacturing sector in 4Q22

Our observations

- Small and medium enterprises continue to fare worse than large enterprises.
- Manufacturing output contracts again.
- Overall market demand deteriorates at a faster pace.
- Manufacturers lower ex-factory prices of their products.
- Manufacturing employment shows increased fluctuations.

Policy outlook

- The Chinese government will actively step up policy support for the economy.
- The proactive fiscal policy should be stepped up for its effectiveness, with a better mix of tools including fiscal deficits, special-purpose bonds and interest subsidies, while the prudent monetary policy should be targeted and effective, with reasonable and sufficient liquidity to be maintained and stronger support from financial institutions for micro and small businesses, technology innovation and green development.

Our forecasts for 1Q23

- We project a recovery in manufacturing production and economic activity from February onwards.
- Headline PMI will rebound to above 50.
- Real GDP growth will rise to 3.5% yoy.
- VAIO growth will stay low at 1.0%-2.0% yoy.
- Exports will register a high single-digit year-on-year drop.
- Year-on-year growth rates for the purchaser price index and the PPI will continue to fall, due to a recent retreat in global commodity prices and a high comparison base in 1Q22.

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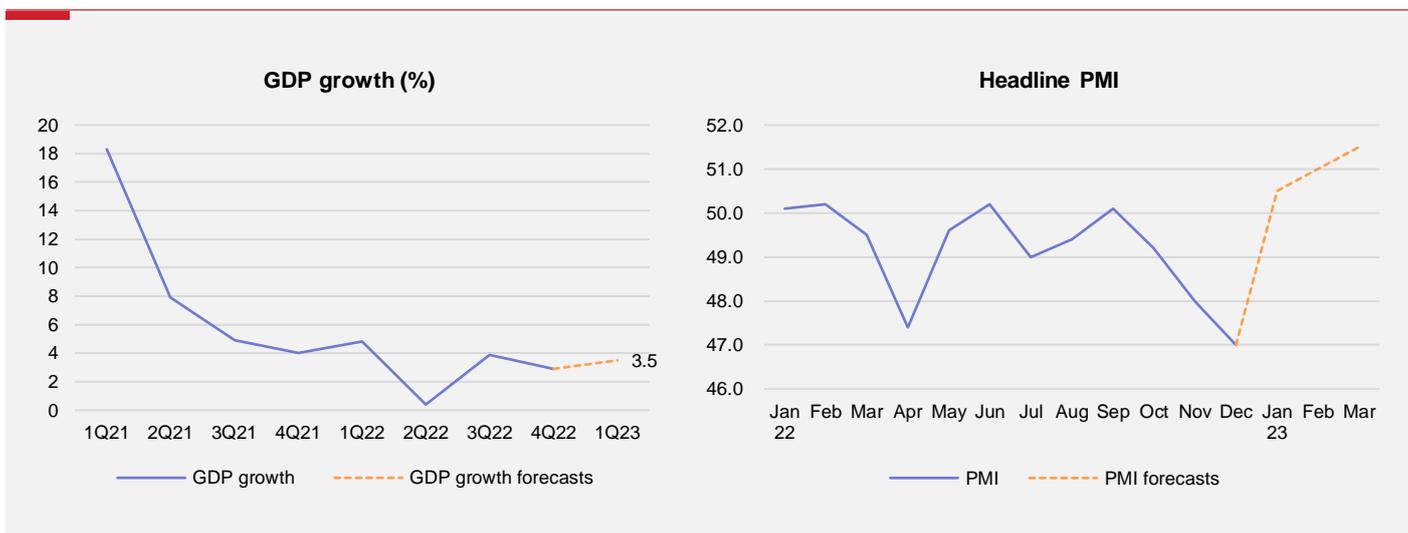F: (852) 2635 1598

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China Federation of Logistics & Purchasing

GDP growth (%)

Headline PMI

IN THIS ISSUE:

1. PMI points to heightened downward pressure on the manufacturing sector in 4Q22

China's manufacturing sector in 4Q22

China's manufacturing PMI declined from 49.2 in October to 48.0 in November and 47.0 in December. The headline PMI readings have stayed in the contractionary territory and continued to fall throughout the quarter, indicating heightened downward pressure on China's manufacturing sector. (See exhibit 1)

Manufacturing output has declined further, as the output index has remained below the critical 50-mark and continued to drop in the past three months. Meanwhile, the overall market demand has contracted at a faster pace lately as the new orders index fell further in recent months.

Prices of industrial products have declined lately, as the ex-factory prices index has remained below the neutral level of 50 since May 2022. Meanwhile, the prices of materials have increased recently: The input prices index has remained above the critical 50-mark throughout October to December.

Exhibit 2 shows the contributions of the sub-indices to the change in the headline PMI. The decrease in the headline PMI in 4Q22 was due largely to the drop in the new orders index (which weighs 30% in the computation of the headline PMI) and the output index (which weighs 25%). Among the 12 sub-indices (i.e., excluding the suppliers' delivery time index), only the input prices index has remained in the expansionary zone over the past three months. Meanwhile, all other sub-indices have stayed in the contractionary zone over the same period. (See exhibit 3)

Policy outlook

Looking ahead, we expect the Chinese government to actively step up policy support for the economy. The Central Economic Work Conference, a meeting which sets the tone for the economic tasks this year, was held on 15-16 December 2022. According to a statement released after the meeting, economic work this year would prioritize stability while pursuing progress. The meeting reiterated the policy stance of carrying out a proactive fiscal policy and a prudent monetary policy. The proactive fiscal policy should be stepped up for its effectiveness, with a better mix of tools including fiscal deficits, special-purpose bonds and interest subsidies. The prudent monetary policy should be targeted and effective, with reasonable and sufficient liquidity to be maintained and stronger support from financial institutions for micro and small businesses, technology innovation and green development.

These wordings signal that a more expansionary macro policy will be adopted in 2023, which will help revive the Chinese economy, in our view.

We project that China's real GDP growth will rise to 3.5% yoy in 1Q23, boosted by a potential recovery in economic activity from February onwards.

Forecasts for 1Q23

As many parts of China are already past their peak of COVID-19 infections, the disruption to industrial production has started to fade. However, unlike the previous two years, a large share of migrant workers has travelled back home for the Chinese New Year this year, which will keep industrial production growth low at 1.0%-2.0% yoy in 1Q23. Meanwhile, the headline PMI will rebound to above 50 in the quarter.

Exhibit 4 plots the quarterly real GDP growth rates versus the monthly PMIs since January 2018. We project that China's real GDP growth will go up to 3.5% yoy in 1Q23, boosted by a potential recovery in manufacturing production and economic activity from February onwards.
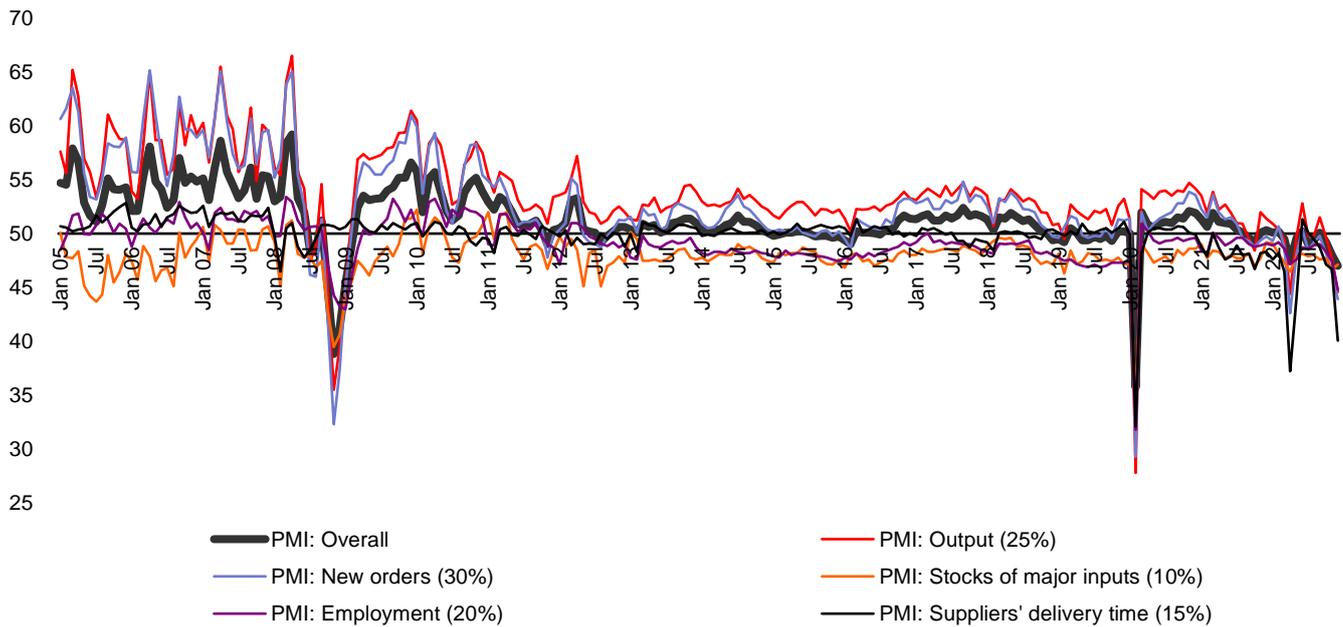
Exhibit 1: Headline PMI, January 2021 to December 2022
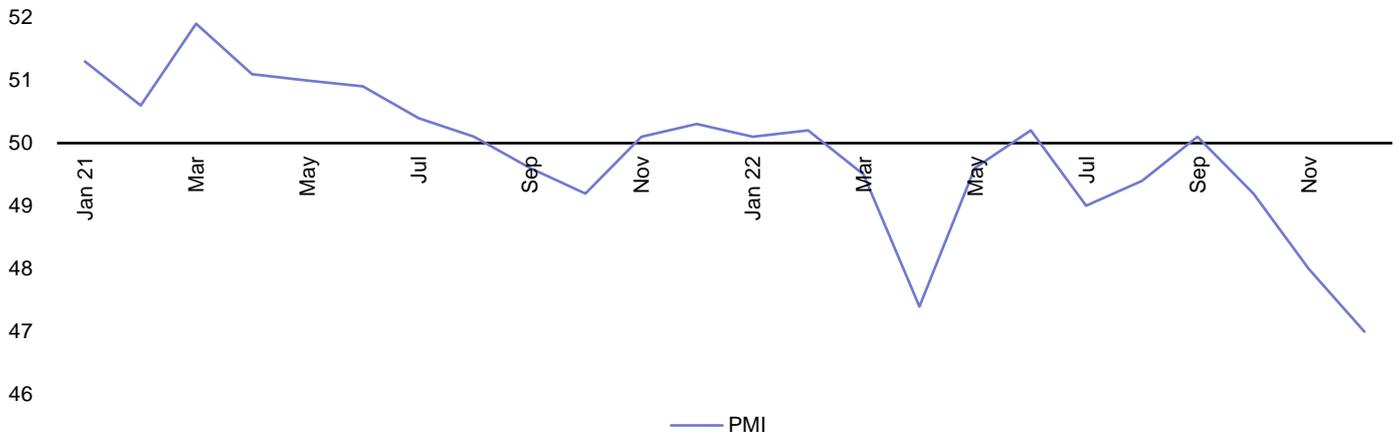
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics
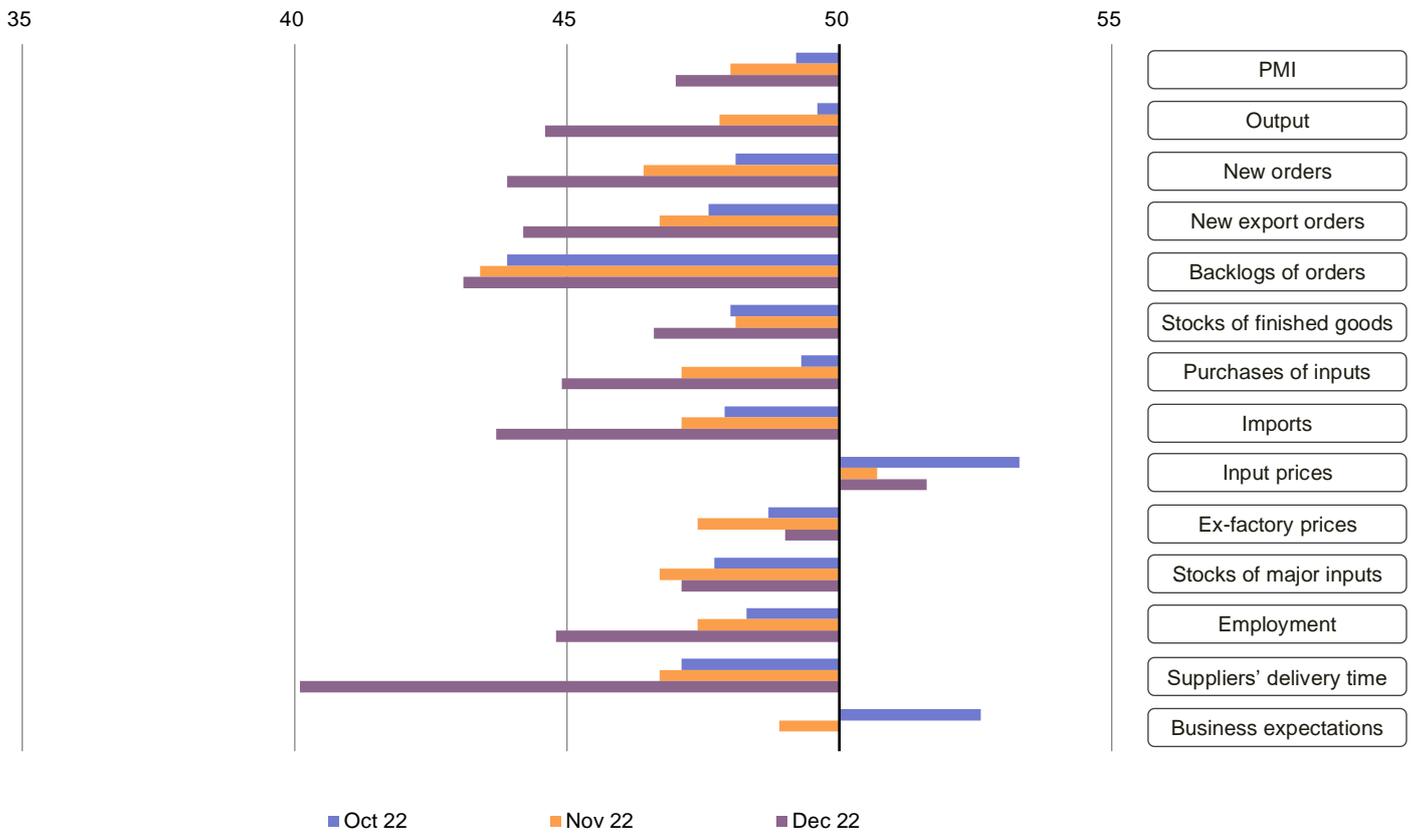
Exhibit 2: Headline PMI and sub-indices, January 2005 to December 2022

PMI = Output x 25% + New Orders x 30% + Stocks of Major Inputs x 10% + Employment x 20% + (100 - Suppliers' Delivery Time) x 15%
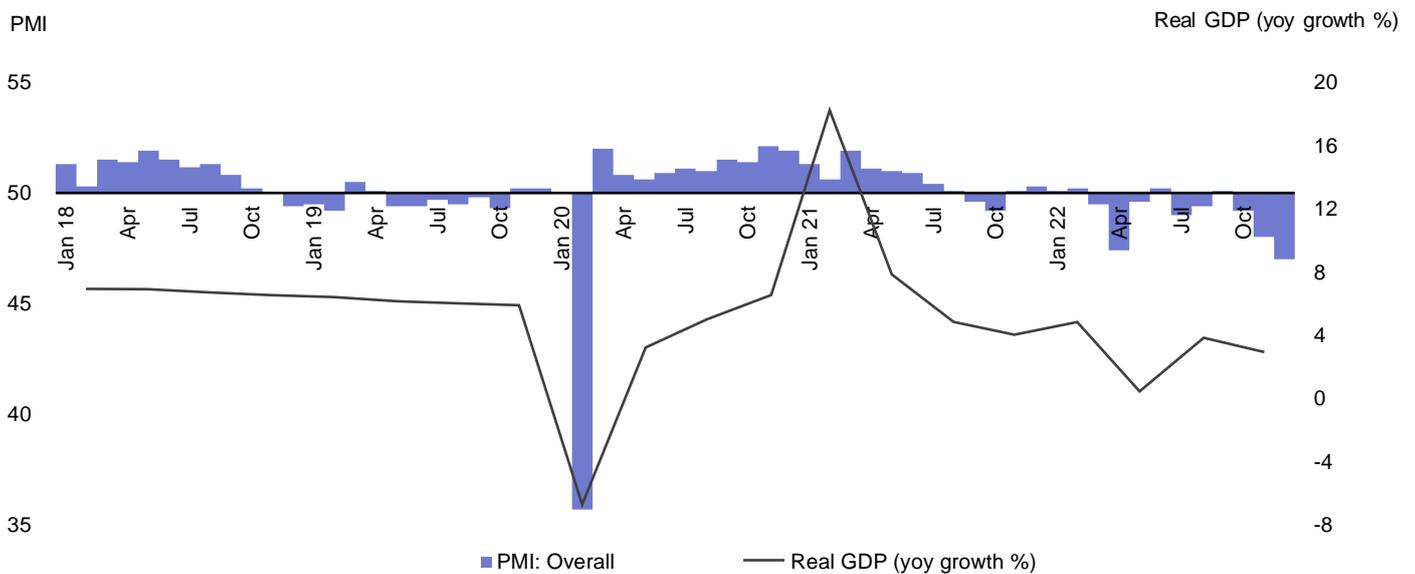

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 3: Headline PMI and all sub-indices, October to December 2022

Legend: ■ Oct 22 ■ Nov 22 ■ Dec 22

Categories (top to bottom):
PMI, Output, New orders, New export orders, Backlogs of orders, Stocks of finished goods, Purchases of inputs, Imports, Input prices, Ex-factory prices, Stocks of major inputs, Employment, Suppliers' delivery time, Business expectations

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 4: Headline PMI and real GDP growth, January 2018 to December 2022

Legend: ■ PMI: Overall — Real GDP (yoy growth %)

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

2. What the PMI tells us about the performance of enterprises of different sizes

**Large enterprises dip into contractionary zone**

The PMI of 'large enterprises' dropped from 50.1 in October to 49.1 in November and further to 48.3 in December. The latest index reading has dipped below the critical 50-mark, indicating a contraction of large enterprises.

Small and medium enterprises continue to contract

The PMI of 'medium enterprises' went down from 48.9 in October to 48.1 in November and 46.4 in December. Meanwhile, the PMI of 'small enterprises' fell from 48.2 in October to 45.6 in November and further to 44.7 in December. The index readings of both 'small enterprises' and 'medium enterprises' have continued to decline and stayed below the watershed mark of 50 throughout the quarter, indicating that small and medium enterprises have been facing difficulties in production and operations lately. (See exhibit 5)

The rate of contraction of small and medium enterprises has outpaced that of large enterprises in 4Q22. As small and medium enterprises have fared worse than large enterprises since the second half of 2020, boosting small and medium enterprises will be key to the recovery in the manufacturing sector in 2023.

Exhibit 5: PMIs of large enterprises, medium enterprises and small enterprises, October to December 2022
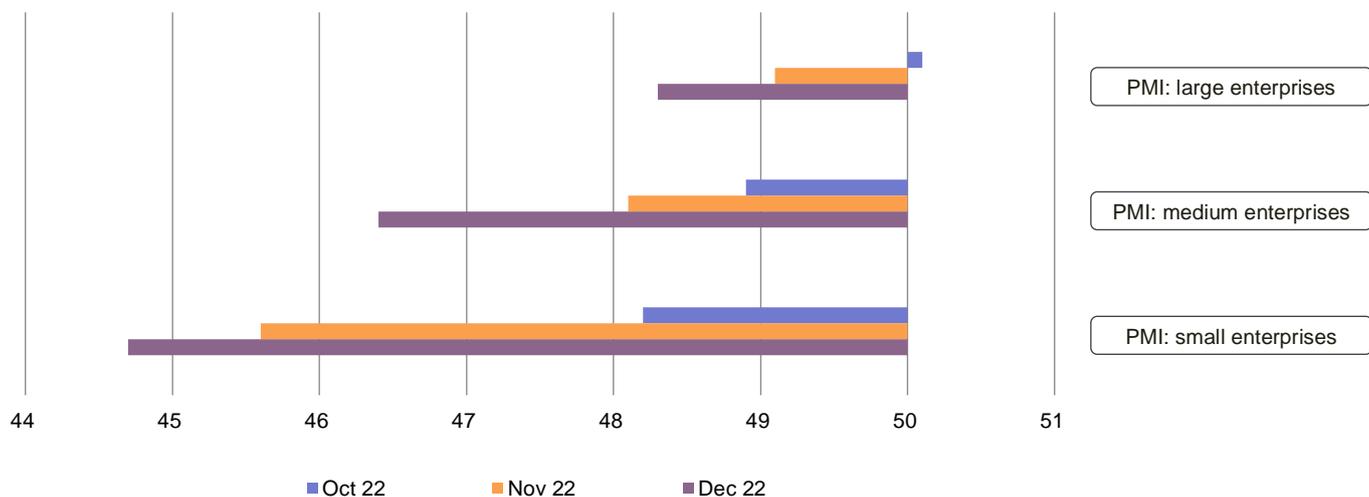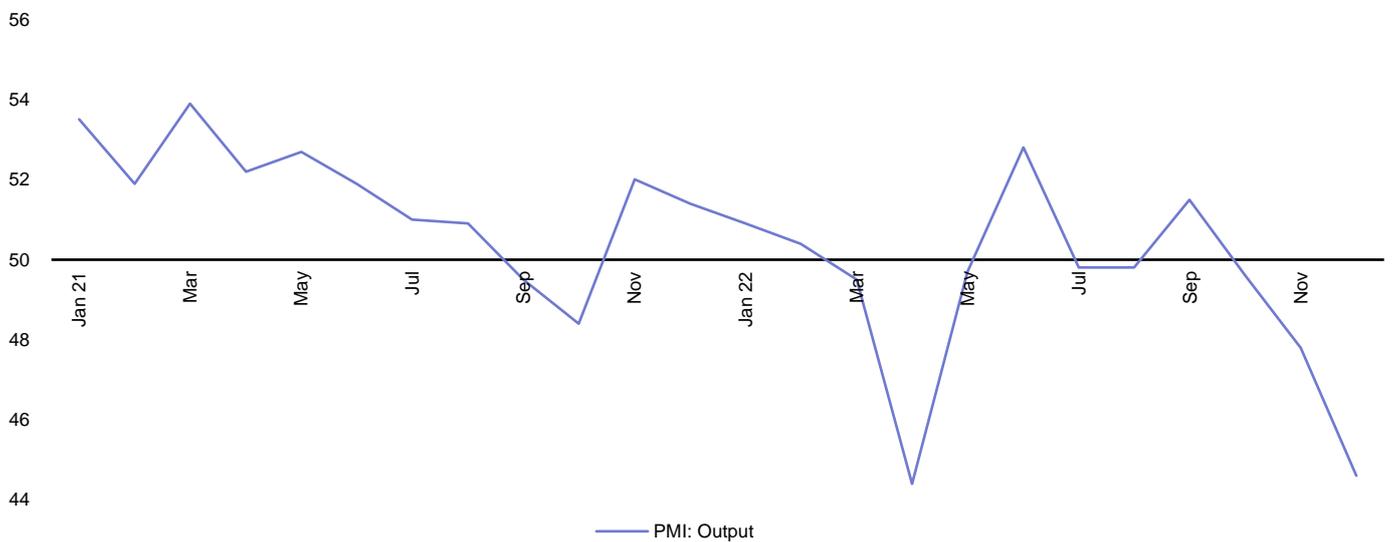

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

3. What the PMI tells us about manufacturing production

Manufacturing output contracts again

The output index dropped from 49.6 in October to 47.8 in November and further to 44.6 in December, staying in the contractionary territory for three consecutive months, indicating a continued contraction in manufacturing production. (See exhibit 6)

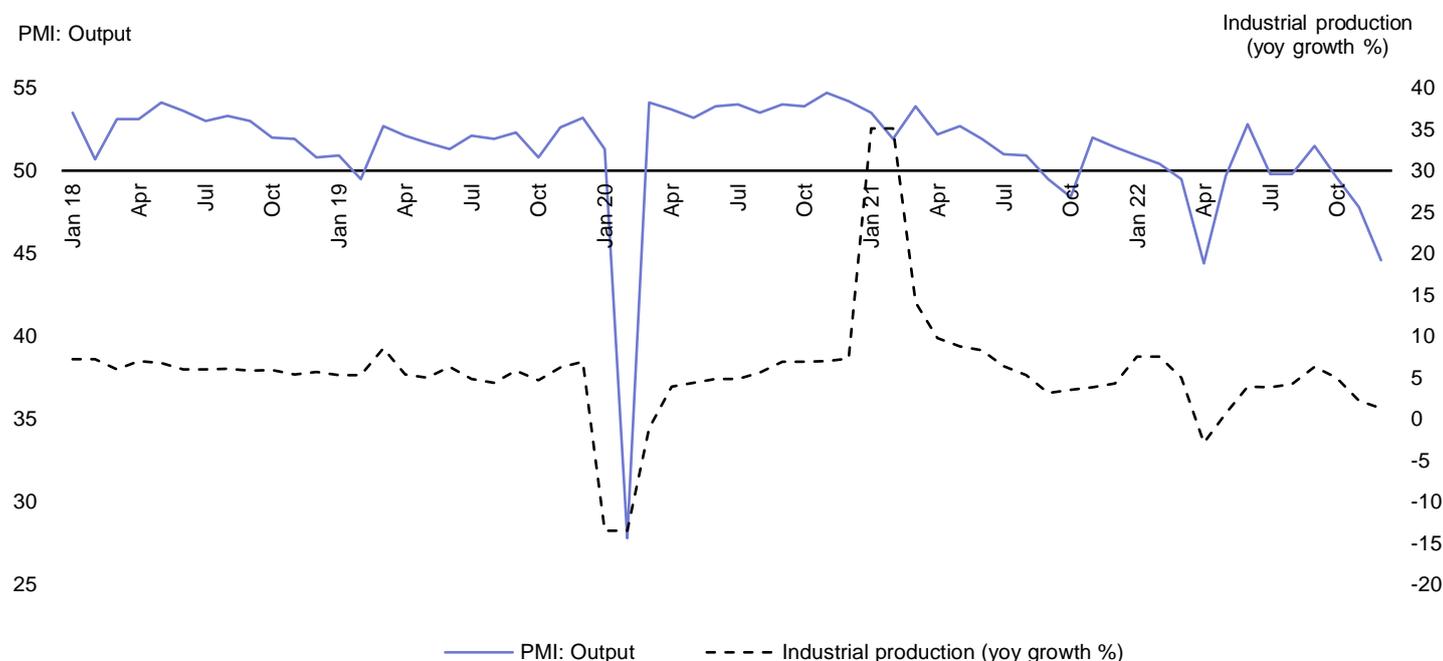**Exhibit 6: Output index, January 2020 to December 2022**

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Growth in manufacturing production to stay low in 1Q23

Exhibit 7 demonstrates the correlation (with some lags) between the output index and the year-on-year growth of value-added of industrial output (VAIO). Looking ahead, we expect that China's VAIO growth will stay low at 1.0-2.0% in 1Q23, as many migrant workers have travelled back home for the Chinese New Year this year, which will disrupt industrial production. Challenges facing Chinese manufacturers include the global economic downturn caused by the Russia–Ukraine conflict, ongoing trade frictions between China and the US, strong government's determination to reduce industrial carbon emissions, and intense competition in the international market.

We expect the VAIO growth to stay low at 1.0-2.0% yoy in 1Q23, as many migrant workers have travelled back home for the Chinese New Year this year.

Exhibit 7: Output index and industrial production growth, January 2018 to December 2022

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

4. What the PMI tells us about the overall market demand

Overall market demand deteriorates at a faster pace

The new orders index declined from 48.1 in October to 46.4 in November and further to 43.9 in December, indicating that new orders and the overall market demand have contracted at a faster pace lately.

Meanwhile, the new export orders went down from 47.6 in October to 46.7 in November and 44.2 in December, pointing to persistent downward pressure on China's exports. (See exhibit 8)

Exhibit 8: New orders index and new export orders index, January 2005 to December 2022
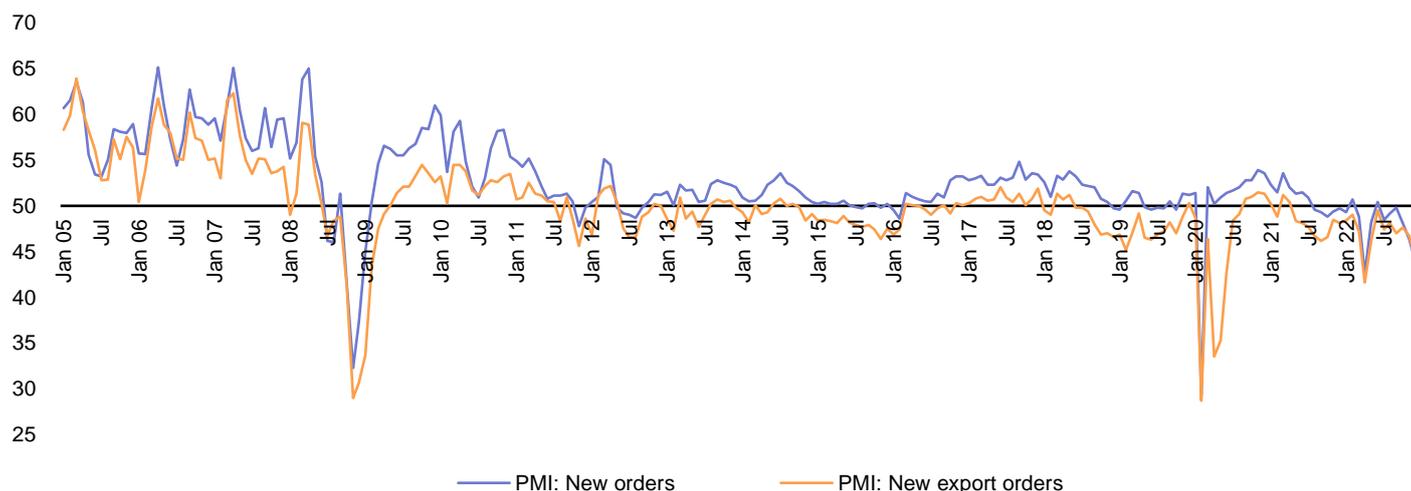
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

China's export to register a high single-digit year-on-year drop in 1Q23 amid slowdown in global economy and COVID-19 disruptions

Exhibit 9 plots the new export orders index against the year-on-year growth rates of China's exports. From exhibit 10 we can see that the new export orders index has been strongly correlated to the external economies. The OECD's G20 composite leading indicator[1] has been on a downward trend, suggesting a moderation in the growth of the global economy. Moreover, the domestic spread of COVID-19 disrupted production and exports in early 2023. All in all, we forecast that China's exports will register a high single-digit year-on-year drop in 1Q23.

With global growth slowing and the domestic spread of COVID-19 disrupting exports in early 2023, we forecast that China's exports will register a high single-digit year-on-year drop in 1Q23.

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1 The G20 composite leading indicator, compiled by the Organization for Economic Cooperation and Development (OECD), is designed to provide early signals of turning points (peaks and troughs) between expansions and slowdowns of economic activity, and covers Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, South Africa, Turkey, UK, and the US.

Exhibit 9: New export orders index and export growth, January 2018 to December 2022
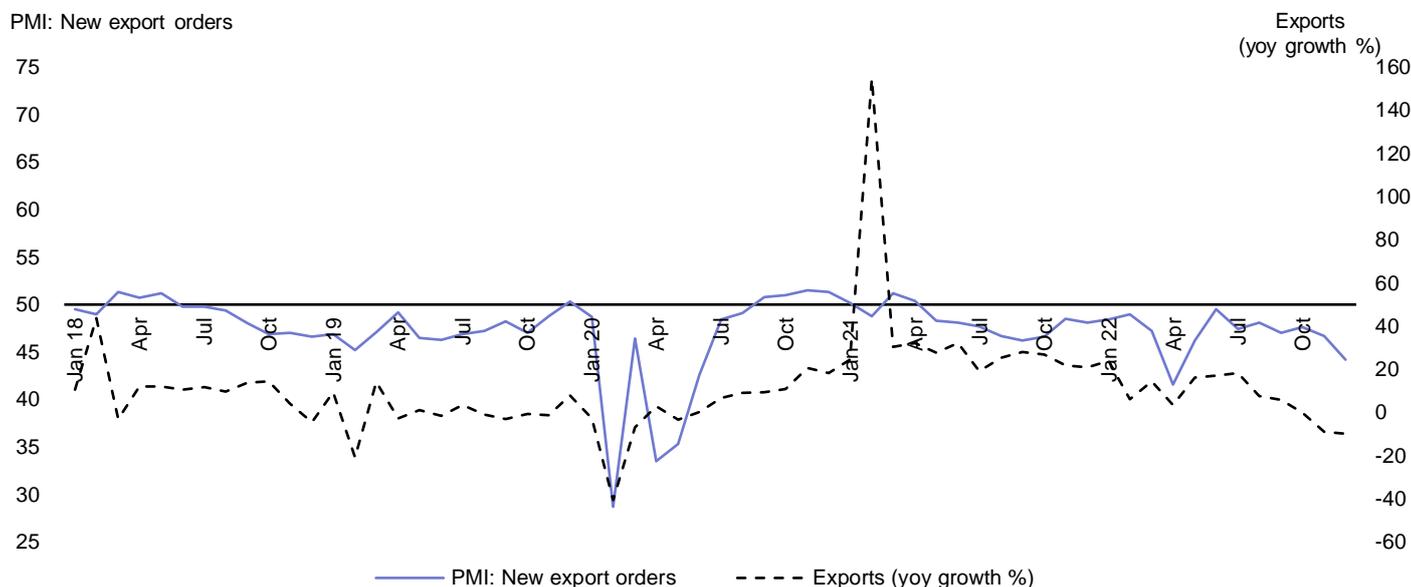
PMI: New export orders

Exports
(yoy growth %)

PMI: New export orders   - - - Exports (yoy growth %)

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs

Exhibit 10: New export orders index and G20 composite leading indicator, January 2005 to December 2022

PMI: New export orders

G20 composite leading
indicator

PMI: New export orders   - - - G20 composite leading indicator
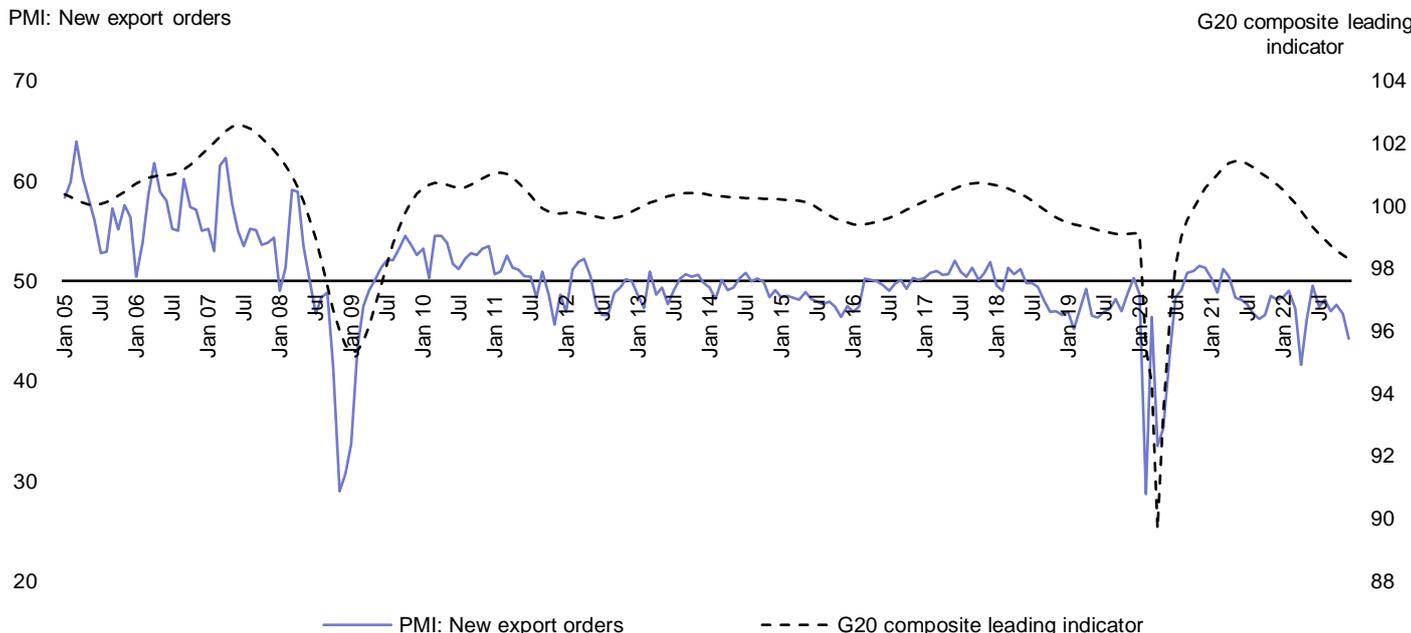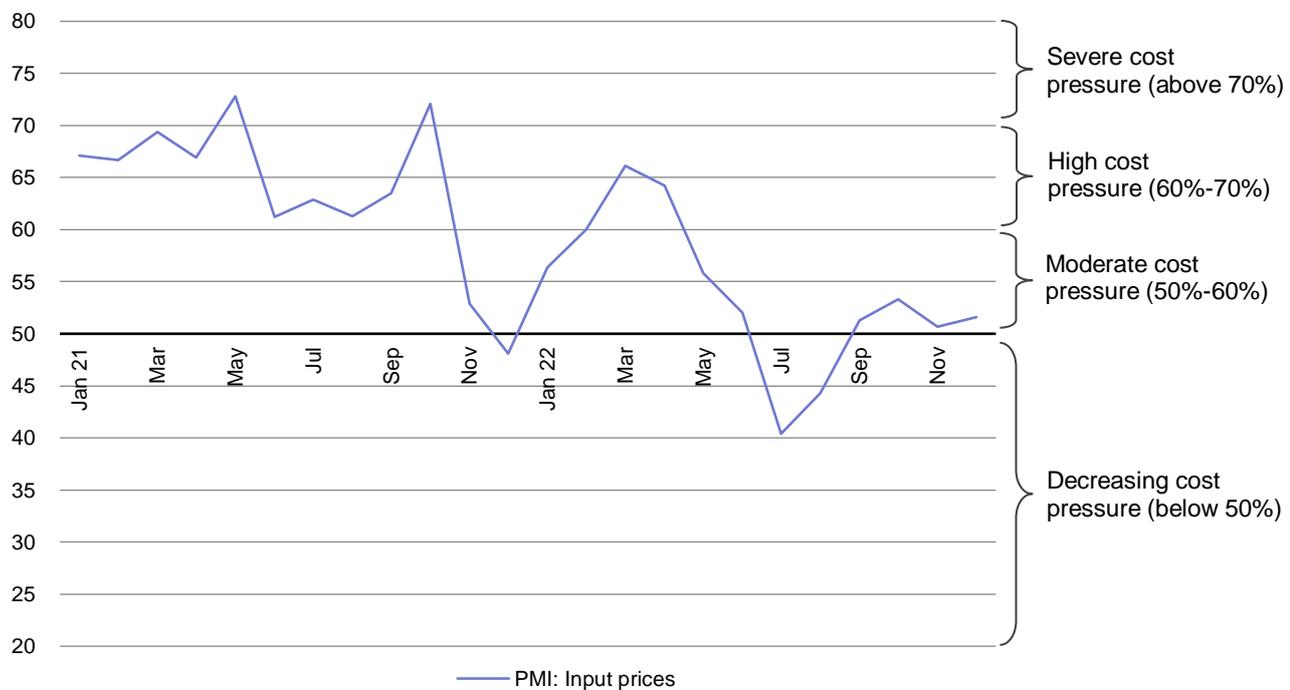
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Organization for Economic Cooperation and Development

5. What the PMI tells us about upstream and midstream prices

Rising upstream prices exerts moderate cost pressure on manufacturers

After falling from 53.3 in October to 50.7 in November, the input prices index rebounded to 51.6 in December. The index readings have stayed above the critical 50-mark, indicating a sustained increase in the prices of production inputs recently, which would continue to exert moderate cost pressure on Chinese manufacturers.

Exhibit 11: Input prices index, January 2021 to December 2022
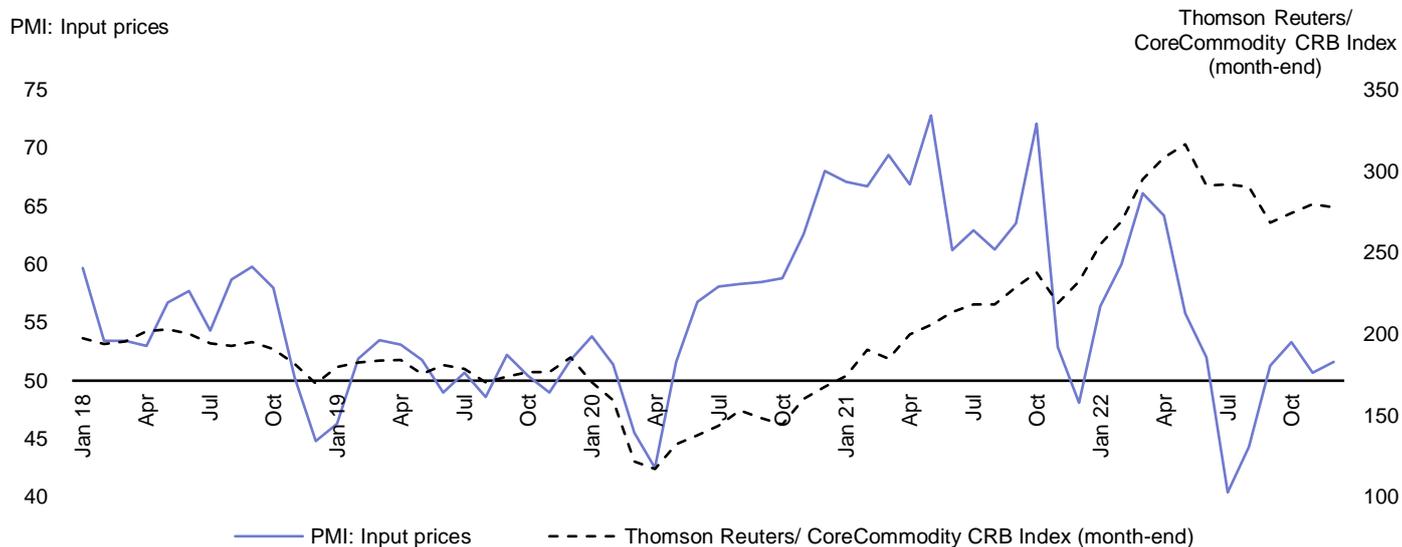

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

To see the extent to which input costs of Chinese manufacturers are affected by global commodity prices, exhibit 12 puts together the input prices index and the Thomson Reuters/ CoreCommodity CRB index.[2]

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2 The Thomson Reuters/ CoreCommodity CRB Index, which comprises 19 commodities such as crude oil, aluminum, corn, cotton, gold, natural gas, soybeans, etc, has served as one of the most recognized measures of global commodity prices.

**Exhibit 12: Input prices index and Thomson Reuters/ CoreCommodity CRB Index, January 2018 to December 2022**

PMI: Input prices

Thomson Reuters/
CoreCommodity CRB Index
(month-end)

— PMI: Input prices   - - - Thomson Reuters/ CoreCommodity CRB Index (month-end)

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Thomson Reuters

Manufacturers lower ex-factory prices of their products

After declining from 48.7 in October to 47.4 in November, the ex-factory prices index picked up to 49.0 in December. The index readings indicate that Chinese manufacturers have been lowering the ex-factory prices of their finished products lately. However, the recent rebound in the index could signal easing price-cut pressure on enterprises.[3]

Exhibit 13: Ex-factory prices index, January 2021 to December 2022

— PMI: Ex-factory prices
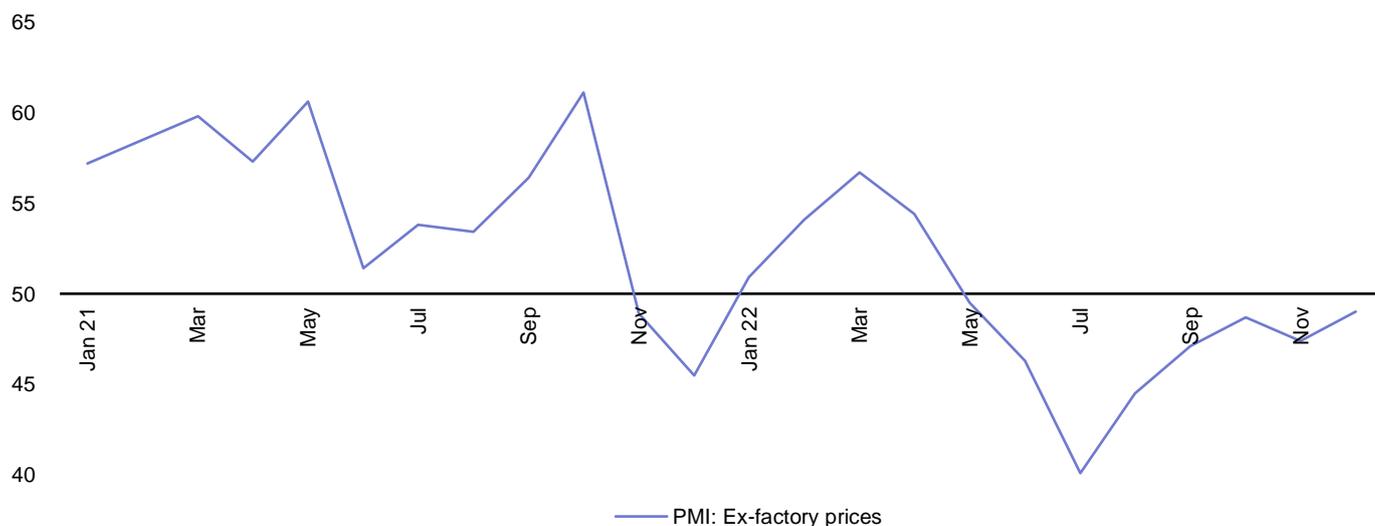
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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3 The ex-factory prices index has been released since January 2017.

Growth in input prices and ex-factory prices to fall in 1Q23

Exhibit 14 shows that the input prices index is useful as a leading indicator of upstream prices. To show the association between the input prices index and 'midstream' prices, we plot the input prices index against the year-on-year growth of the producer price index (PPI)[4] in exhibit 15.

Going forward, we expect that the year-on-year growth rates for both the purchaser price index and the PPI will continue to fall in 1Q23, due to a recent retreat in global commodity prices and a high comparison base in 1Q22.

We expect that the year-on-year growth rates for both the purchaser price index and the PPI will continue to fall in 1Q23, due to a recent retreat in global commodity prices and a high comparison base in 1Q22.

Exhibit 14: Input prices index and purchaser price index of industrial products, January 2005 to December 2022
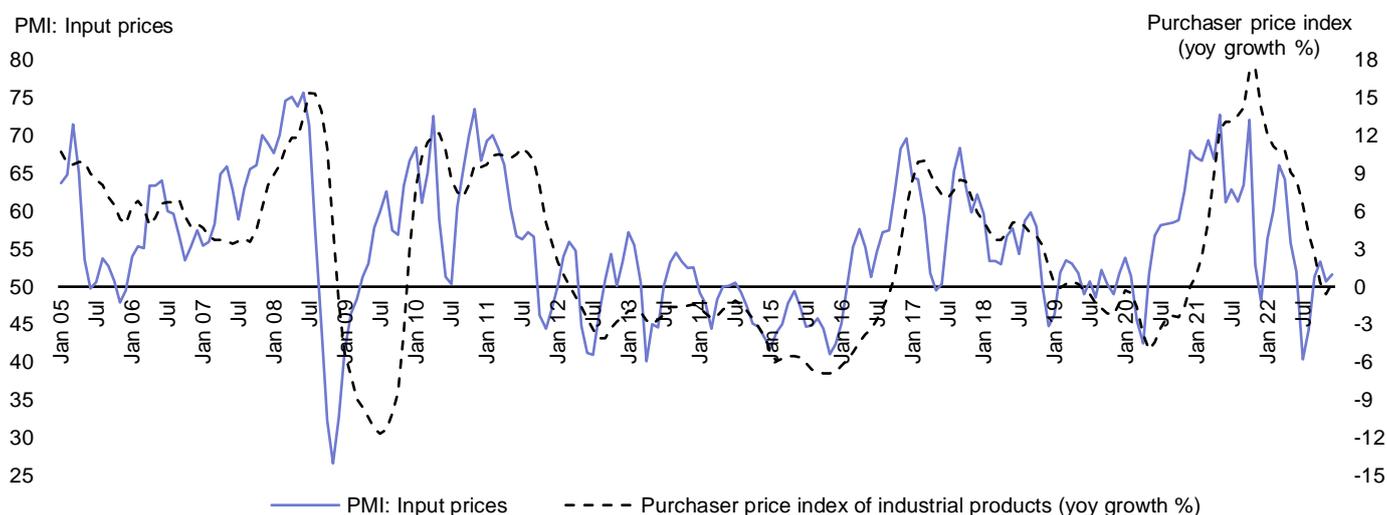
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 15: Input prices index and producer price index, January 2005 to December 2022
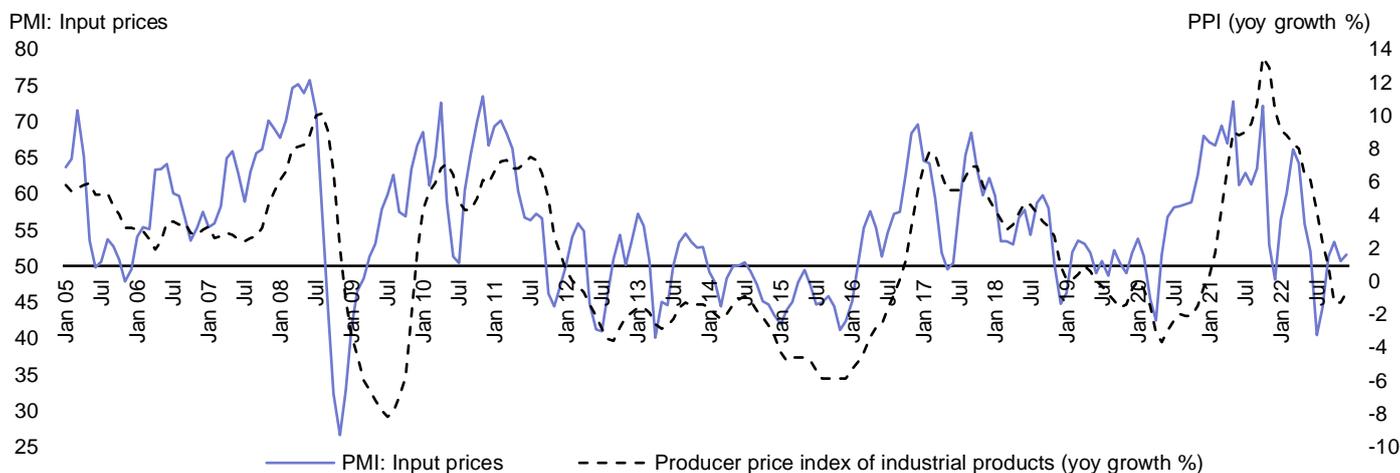
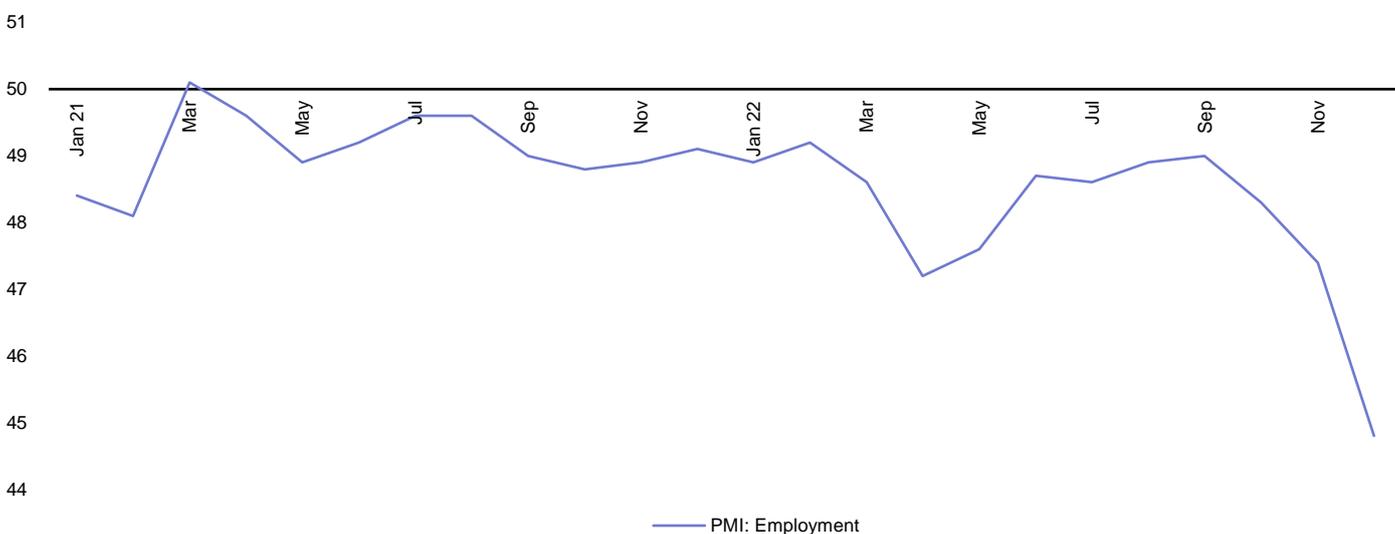Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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[4] The producer price index of industrial goods (PPI), compiled by China National Bureau of Statistics, measures the prices of industrial products when they are sold for the first time after production.

6. What the PMI tells us about manufacturing employment

Manufacturing employment shows increased fluctuations

As some workers temporarily left their jobs due to the recent COVID-19 surge, the employment index went down from 48.3 in October to 47.4 in November and further to 44.8 in December, indicating increased fluctuations in manufacturing employment. (Exhibit 16)

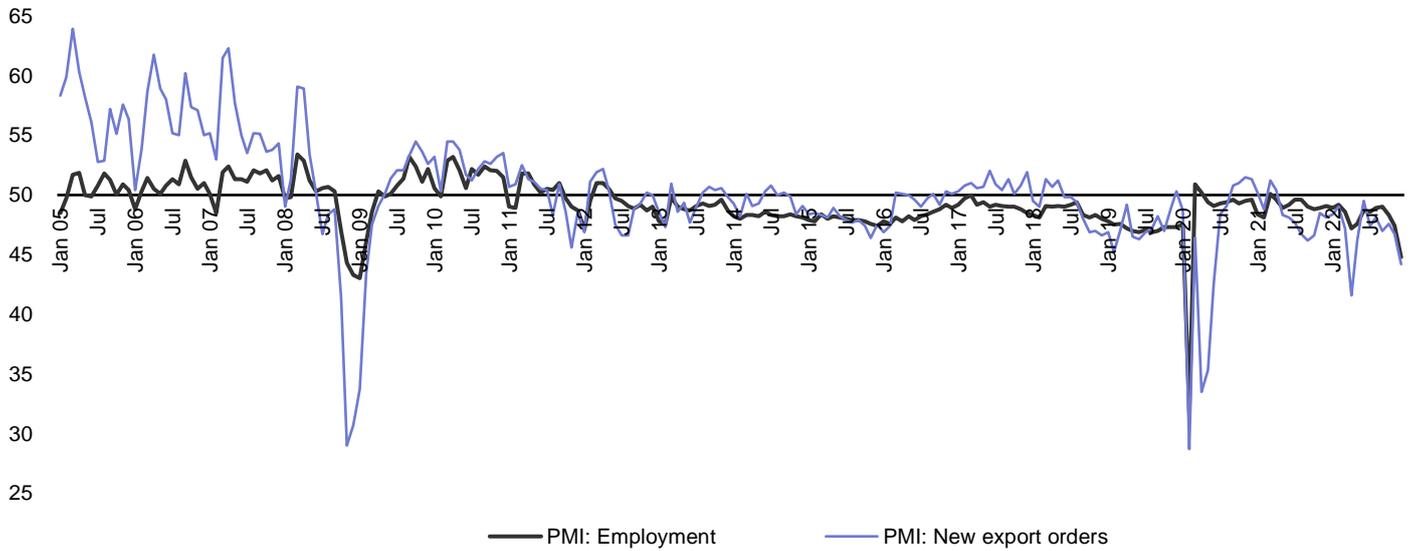**Exhibit 16: Employment index, January 2020 to December 2022**

PMI: Employment

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 17 shows that the employment in China's manufacturing sector has relied heavily on the export sector. Exhibit 18 and 19 give our readers some ideas about the extent to which the employment situation improves or deteriorates with the manufacturing sector and the overall economy. With a recovery in the Chinese economy in sight, we expect that the employment situation in the manufacturing sector will improve in the coming months.

With a recovery in the Chinese economy in sight, we expect that the employment situation in the manufacturing sector will improve in the coming months.

Exhibit 17: Employment and new export orders, January 2005 to December 2022

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics
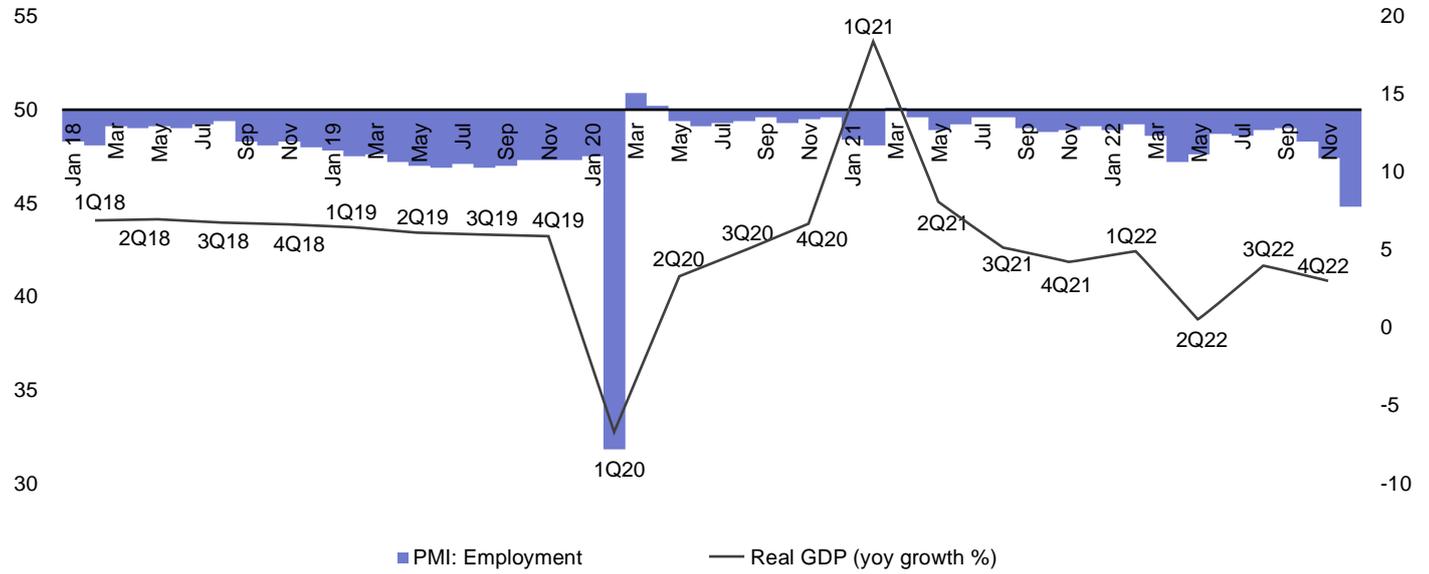
Exhibit 18: Employment index and headline PMI, January 2005 to December 2022
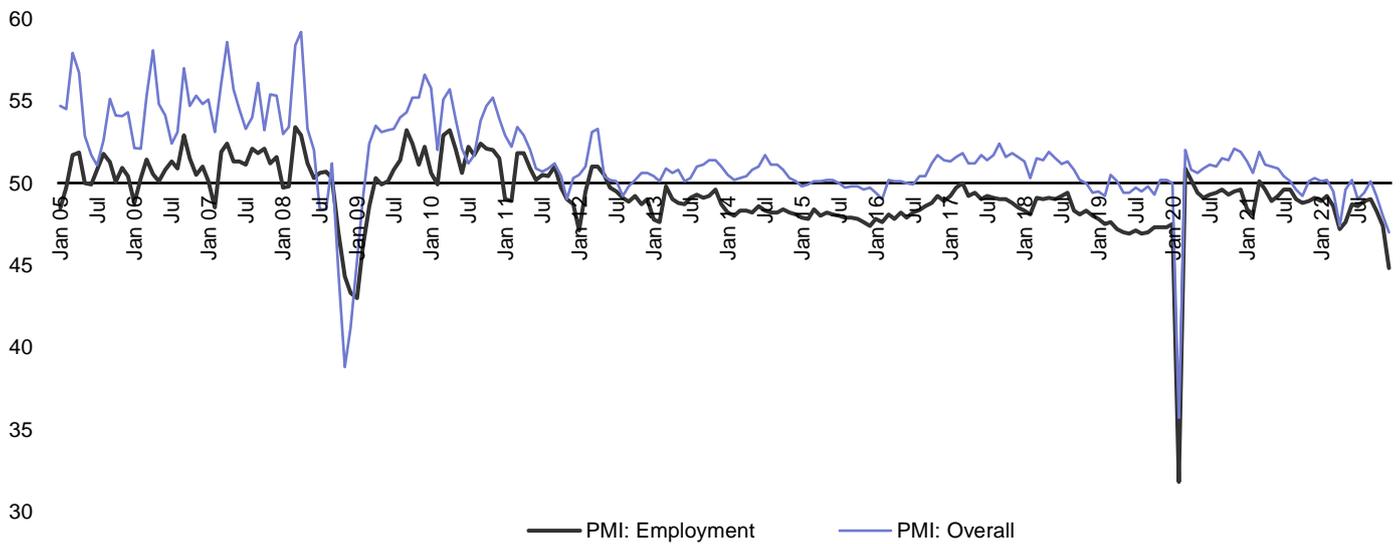
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 19: Employment index and real GDP growth, January 2018 to December 2022

PMI: Employment

■ PMI: Employment ─── Real GDP (yoy growth %)

Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

About China Manufacturing PMI:

China Manufacturing Purchasing Managers' Index (PMI) provides an early indication each month of economic activities in the Chinese manufacturing sector. It is jointly published by China Federation of Logistics & Purchasing (CFLP) and the National Bureau of Statistics (NBS). Fung Business Intelligence is responsible for drafting and disseminating the English PMI report.

Every month questionnaires are sent to 3,000 manufacturing enterprises all over China. The data presented herein is compiled from the enterprises' responses about their purchasing activities and supply situations. CFLP makes no representation regarding the data collection procedures, nor does it disclose any data of individual enterprises. The PMI should be compared to other economic data sources when used in decision-making.

3,000 manufacturing enterprises in 31 industries from Eastern, Northeastern, Central and Western China are surveyed. The sampling of the enterprises involves the use of Probability Proportional to Size Sampling (PPS), which means the selection of enterprises surveyed is largely based on each industry's contribution to GDP, and the representation of each geographical region.

There are 13 sub-indicators in the survey: Output, New Orders, New Export Orders, Backlogs of Orders, Stocks of Finished Goods, Purchases of Inputs, Imports, Input Prices, Stocks of Major Inputs, Ex-factory Prices, Employment, Suppliers' Delivery Time and Business Expectations. An index reading above 50 indicates an overall positive change in a sub-indicator; below 50, an overall negative change.

The PMI is a composite index based on the seasonally adjusted indices for five of the sub-indicators with varying weights: New Orders—30%; Output—25%; Employment—20%; Suppliers' Delivery Time—15%; and Stocks of Major Inputs—10%. A PMI reading above 50 indicates an overall expansion in the manufacturing sector; below 50, an overall contraction.

Currently there are more than twenty countries and regions conducting the PMI survey and compilation, based on an internationally standardized methodology.

About the Organizations:

China Federation of Logistics & Purchasing

China Federation of Logistics & Purchasing (CFLP) is the logistics and purchasing industry association approved by the State Council. CFLP's mission is to push forward the development of the logistics industry and the procurement businesses of both government and enterprises, as well as the circulation of factors of production in China. The government authorizes the CFLP to produce industry statistics and set industry standards. CFLP is also China's representative in the Asian-Pacific Logistics Federation (APLF) and the International Federation of Purchasing and Supply Management (IFPSM).

Fung Business Intelligence

Fung Business Intelligence collects, analyses and interprets global market data on sourcing, supply chains, distribution, retail and technology.

Headquartered in Hong Kong, it leverages unique relationships and information networks to monitor, research and report on these global issues with a particular focus on business trends and developments in China. Fung Business Intelligence makes its data, impartial analysis and specialist knowledge available to businesses, scholars and governments through regular research reports and business publications.

As the knowledge bank and think tank for the Fung Group, a Hong Kong-based multinational corporation, Fung Business Intelligence also provides expertise, advice and consulting services to the Group and its business partners on issues related to doing business in China, ranging from market entry and company structure, to tax, licensing and other regulatory matters.

Fung Business Intelligence was established in the year 2000.

Fung Group

Fung Holdings (1937) Limited, a privately-held business entity headquartered in Hong Kong, is the major shareholder of the Fung Group of companies, whose core businesses operate across the entire global supply chain for consumer goods including trading, logistics, distribution and retail. The Fung Group comprises over 26,000 people working in more than 40 economies worldwide. We have a rich history and heritage in export trading and global supply chain management that dates back to 1906 and traces the story of how Hong Kong and the Pearl River Delta emerged as one of the world's foremost manufacturing and trading regions. We are focused on both creating the Supply Chain of the Future to help brands and retailers navigate the digital economy as well as creating new opportunities, product categories and market expansion for brands on a global scale.

Listed entities of the Group include Global Brands Group Holding Limited (SEHK: 00787) and Convenience Retail Asia Limited (SEHK: 00831). Privately-held entities include Li & Fung Limited, LH Pegasus, Branded Lifestyle Holdings Limited, Fung Kids (Holdings) Limited, Toys "R" Us (Asia) and Suhyang Networks.

For more information, please visit http://www.funggroup.com.