

PMI Quarterly on China Manufacturing

PMI 4Q20

Robust recovery of industrial production and economic activity

Policy Outlook

China to maintain 'necessary' policy support for economy and avoid sudden policy shifts

1Q21 Forecasts

Real GDP growth to top 18.0% yoy while PMI to fluctuate within 51.0 to 52.0

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PMI points to robust recovery of industrial production and economic activity in 4Q20

Our observations

- The recovery of small enterprises continues to lag behind that of large and medium enterprises.
- Output expands at a relatively rapid pace as overall demand picks up fast.
- New export orders increase amid a sustained recovery in external demand.
- Prices of production inputs surge, adding cost pressures on Chinese manufacturers.
- Manufacturers raise ex-factory prices of their products amid increasing cost pressures and improving sales environment.
- · Manufacturing employment remains steady.

Policy outlook

- China will maintain 'necessary' policy support for the economy and avoid sudden policy shifts.
- The proactive fiscal policy will be implemented in a manner that is of higher quality,
 more effective and more sustainable, and the intensity of expenditure will be
 maintained. Meanwhile, the prudent monetary policy will be pursued in a more flexible,
 tailored and appropriate way, with steps to ensure a stable macro leverage ratio.
- These policies will help alleviate the downward pressure on the Chinese economy and promote its continued recovery.

Our forecasts for 1Q21

- We project a further expansion of industrial production and economic activity in 1Q21.
- The headline PMI will stay above 50 and fluctuate within 51.0 to 52.0.
- Real GDP growth will top 18.0% yoy.
- VAIO growth will exceed 22.0% yoy.
- Exports will increase by 30.0% yoy.
- Year-on-year growth rates for both the purchaser price index and the PPI will rise further.

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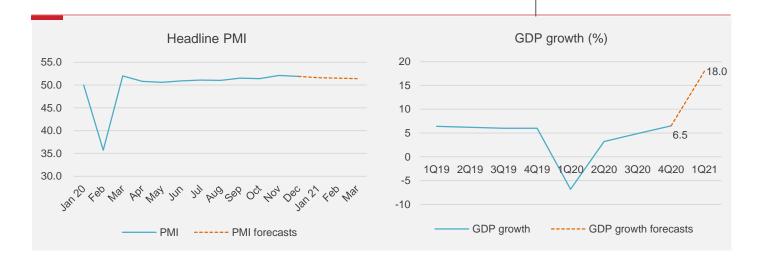
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1. PMI points to robust recovery of industrial production and economic activity

China's manufacturing sector and economy in 4Q20

China's manufacturing PMI rose from 51.7 in October to 52.1 in November, and then edged down to 51.9 in December. The headline PMI readings have stayed high in recent months, indicating that the manufacturing sector is continuing its robust recovery from the COVID-induced slowdown earlier in the year. (See exhibit 1)

Production activities have expanded at a relatively fast pace in recent months, as shown by the strong output index throughout October to December. The expansion was supported by a fast growth in overall new orders: The new orders index stayed high within the range of 52.8 to 53.9 throughout October to December.

Prices of industrial products have increased: The ex-factory prices index rose from 53.2 in October to 58.9 in December. The jump in product prices was partly attributed to the surge in the prices of materials: The input prices index went up continuously from 58.8 in October to 68.0 in December, well above the neutral level of 50.

Exhibit 2 shows the contributions of the sub-indices to the change in the headline PMI. The rise in the headline PMI in 4Q20 was due largely to the increase in the new orders index (which weighs 30% in the computation of the headline PMI). Among the 12 sub-indices (i.e. excluding the suppliers' delivery time index), the indices of output, new orders, new export orders, purchases of inputs, imports, input prices, ex-factory prices and business expectations have remained in the expansionary zone over the past three months. Meanwhile, the indices of backlogs of orders, stocks of finished goods, stocks of major inputs and employment have stayed in the contractionary zone over the same period. (See exhibit 3)

Policy outlook and forecasts for 1Q21

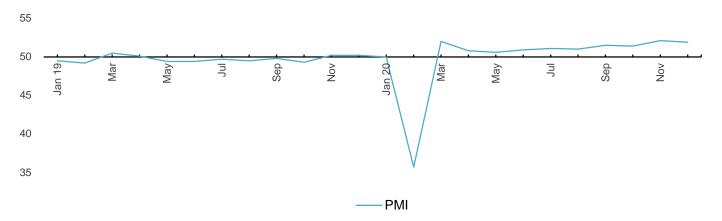
Looking ahead, the Chinese economy is still under downward pressure amid the COVID-19 global pandemic and the resulting global economic recession. The Central Economic Work Conference, a meeting which sets the tone for the economic tasks this year, was held on 16-18 December last year. According to a statement released after the meeting, the Chinese government will continue to pursue a proactive fiscal policy and a prudent monetary policy. It also pledged to maintain 'necessary' policy support for the economy and avoid sudden policy shifts. The proactive fiscal policy must be implemented in a manner that is of higher quality, more effective and more sustainable, and the intensity of expenditure must be maintained. Meanwhile, the prudent monetary policy must be pursued in a more flexible, tailored and appropriate way, with steps to ensure a stable macro leverage ratio. We believe that these policies will help alleviate the downward pressure on the Chinese economy and promote its continued recovery.

We expect that the combination of order shifts from alternative production countries and a lower base for comparison in the same period last year will provide a big lift to VAIO growth and economic growth in 1Q21.

China's economic recovery from COVID-19 is accelerating. The manufacturing sector is doing particularly well as international buyers are shifting their orders to China amid the COVID-19 outbreak in alternative production countries. Therefore, China's industrial production is set to expand further in the near term. Overall, we predict that the headline PMI will fluctuate within 51.0 to 52.0 in 1Q21. Meanwhile, the industrial production (VAIO) growth will exceed 22.0% yoy, due partly to a lower base for comparison in the same period last year.

Exhibit 4 plots the quarterly real GDP growth rates versus the monthly PMIs since July 2015. We project that China's real GDP growth will top 18.0% yoy in 1Q21 due partly to a lower comparison base in the same period last year.

Exhibit 1: Headline PMI, January 2019 to December 2020



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

Exhibit 2: Headline PMI and sub-indices, January 2005 to December 2020

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

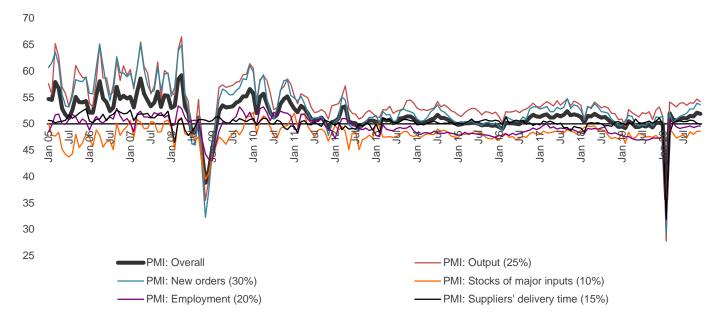
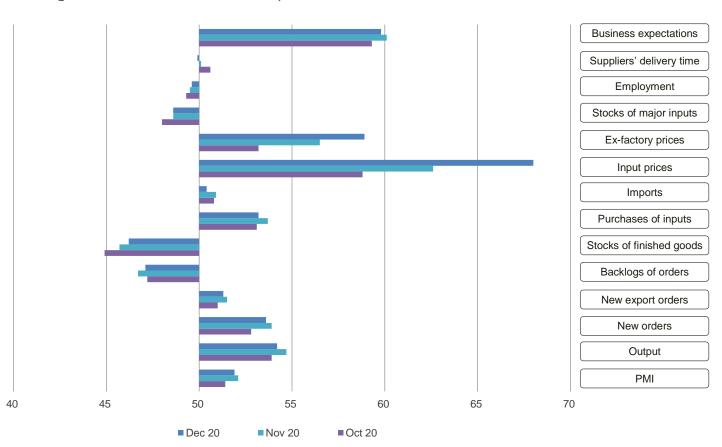
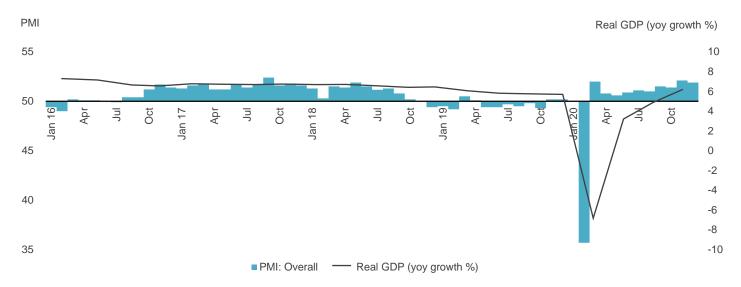


Exhibit 3: Headline PMI and all sub-indices, October to December 2020



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

Exhibit 4: Headline PMI and real GDP growth, January 2016 to December 2020



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

Recovery of large and medium enterprises continues

The PMI of 'large enterprises' stayed high within a narrow range of 52.6 to 53.0 throughout October to December, indicating a continued expansion of 'large enterprises'. The PMI of 'medium enterprises' rose from 50.6 in October to 52.0 in November and 52.7 in December, showing an accelerated recovery of 'medium enterprises' lately.

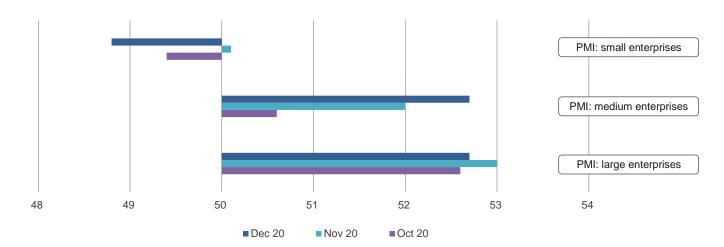
Small enterprises return to contraction

After rising from 49.4 in October to 50.1 in November, the PMI of 'small enterprises' dropped to 48.8 in December. The index reading fell below the critical 50-mark in December, indicating a rocky recovery of 'small enterprises'.

The recovery of small enterprises has lagged behind that of large and medium enterprises since June. (See exhibit 5)

The recovery of small enterprises has lagged behind that of large and medium enterprises since June.

Exhibit 5: PMIs of large enterprises, medium enterprises and small enterprises, October to December 2020



3. What the PMI tells us about manufacturing production

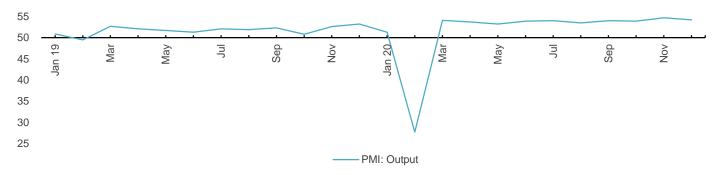
Manufacturing production expands at a relatively fast pace

The output index stayed high and fluctuated within a range of 53.9 to 54.7 throughout October to December, indicating that production activities have expanded at a relatively fast pace as the overall demand has continued to improve. (See exhibit 6)

New order growth fuels the growth in manufacturing production

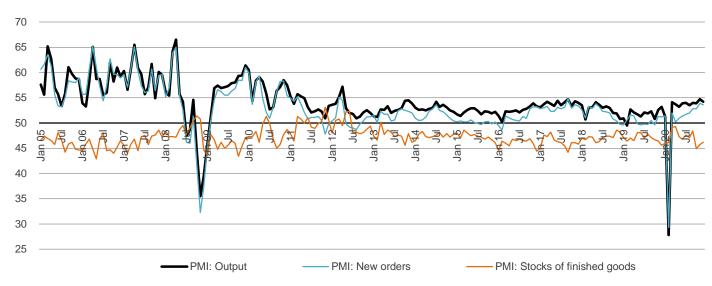
Exhibit 7 shows that the output growth in 4Q20 was mainly fuelled by new orders growth instead of restocking activities, as the stocks of finished goods index had stayed in the contractionary zone for 93 consecutive months as of December. However, output may grow strongly later when manufacturers finally run out of their inventory or regain confidence to restock.

Exhibit 6: Output index, January 2019 to December 2020



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

Exhibit 7: Output, new orders and stocks of finished goods, January 2005 to December 2020

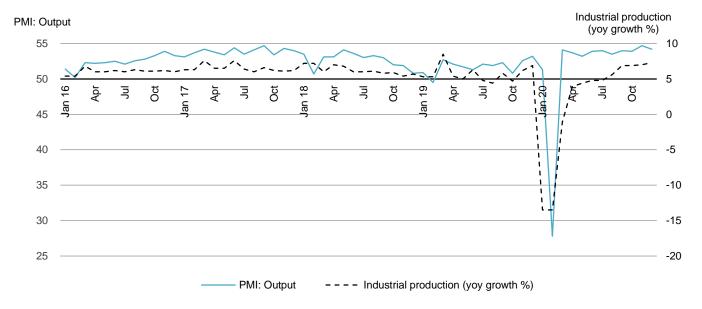


Growth in manufacturing production to surge in 1Q21

Exhibit 8 demonstrates the correlation (with some lags) between the output index and the year-on-year growth of value-added of industrial output (VAIO). China's manufacturing sector is benefiting from an improving domestic and external demand and order shifts from alternative production countries amid the COVID-19 pandemic. Together with a lower base for comparison in the same period last year, the VAIO growth is expected to top 22.0% yoy in 1Q21. Still, challenges facing Chinese manufacturers include a fragile external demand caused by the COVID-19 pandemic, ongoing trade frictions between China and the US, intense competition in the international market, electricity shortage in some regions, and strong government's determination to reduce industrial emissions.

We expect that the VAIO growth will top 22.0% yoy in 1Q21, amid an improving domestic and external demand, order shifts from alternative production countries, and a lower comparison base in the same period last year.

Exhibit 8: Output index and industrial production growth, January 2016 to December 2020



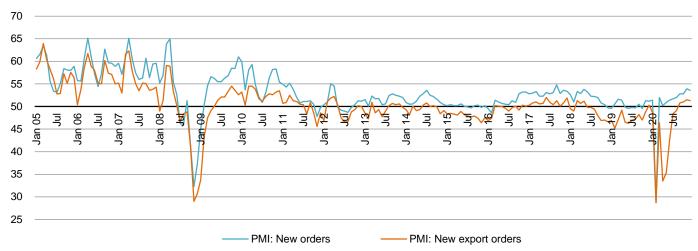
4. What the PMI tells us about the overall market demand

Overall market demand picks up fast

The new orders index stayed high within a range of 52.8 to 53.9 throughout October to December. The relatively fast growth of new orders indicates a fast pick up in the overall market demand lately.

Meanwhile, the new export orders also stayed in the expansionary zone in the quarter, hovering between 51.0 and 51.5. The latest figures indicate that new export orders have increased lately. (See exhibit 9)

Exhibit 9: New orders index and new export orders index, January 2005 to December 2020



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

Sustained recovery in external demand bodes well for exports in 1Q21

Exhibit 10 plots the new export orders index against the year-on-year growth rates of China's exports. The correlation between the two indices is fairly high. As the new export orders index has continued to stay above the critical 50-mark lately, we are optimistic about the near-term prospects of China's exports.

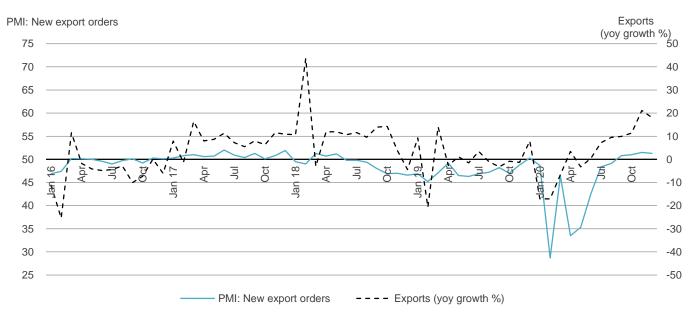
From exhibit 11 we can see that the new export orders index has been strongly correlated to the external economies, especially the developed economies. The OECD composite leading indicator¹ continued to pick up in 4Q20, suggesting a sustained recovery in external demand for China's exports. Combined with a lower base for comparison in the same period last year, we forecast that China's exports will surge by 30.0% yoy in 1Q21.

With a continued improvement in external demand, we are optimistic about the near-term prospects of China's exports.

Combined with a lower comparison base in the same period last year, we forecast that China's exports will surge by 30.0% yoy in 1Q21.

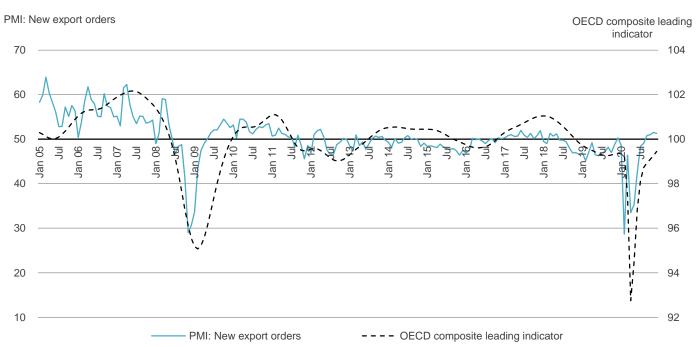
¹ The OECD composite leading indicator, compiled by the Organization for Economic Cooperation and Development, is designed to provide early signals of turning points (peaks and troughs) between expansions and slowdowns of economic activity, and covers Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

Exhibit 10: New export orders index and export growth, January 2016 to December 2020



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

Exhibit 11: New export orders index and OECD composite leading indicator, January 2005 to December 2020



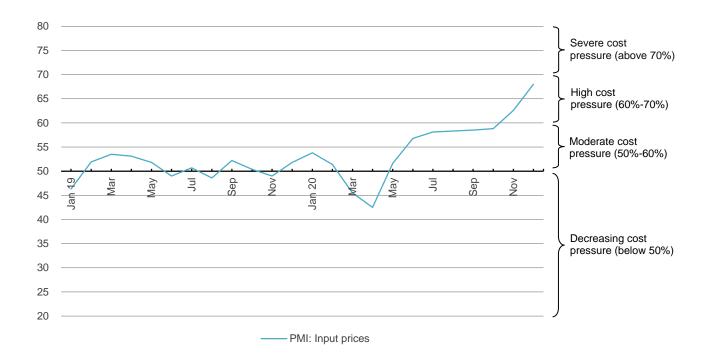
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Organization for Economic Cooperation and Development

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

Surge in upstream prices exerts high cost pressures on manufacturers

The input prices index went up from 58.8 in October to 62.6 in November and further to 68.0 in December. The index readings continued to go up in the quarter, indicating an accelerated increase in the prices of production inputs recently, which would raise the cost pressures on Chinese manufacturers. (Exhibit 12)

Exhibit 12: Input prices index, January 2019 to December 2020

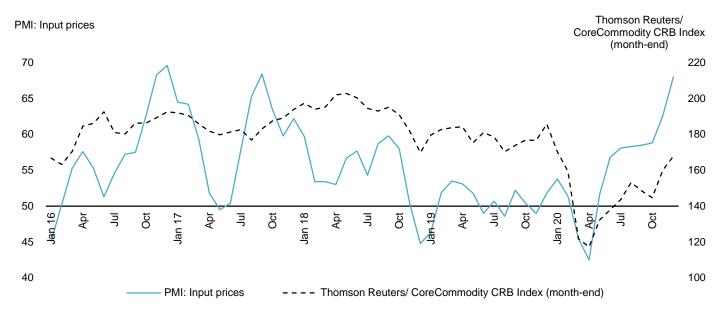


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

To see the extent to which input costs of Chinese manufacturers are affected by global commodity prices, exhibit 13 puts together the input prices index and the Thomson Reuters/ CoreCommodity CRB index.²

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 commodities markets.

Exhibit 13: Input prices index and Thomson Reuters/CoreCommodity CRB Index, January 2016 to December 2020



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

Manufacturers raise ex-factory prices of their products

The ex-factory prices index rose from 53.2 in October to 56.5 in November and 58.9 in December, indicating that Chinese manufacturers have continued to raise the ex-factory prices of their finished products lately amid rising cost pressures and improving sales environment.³ (Exhibit 14)





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

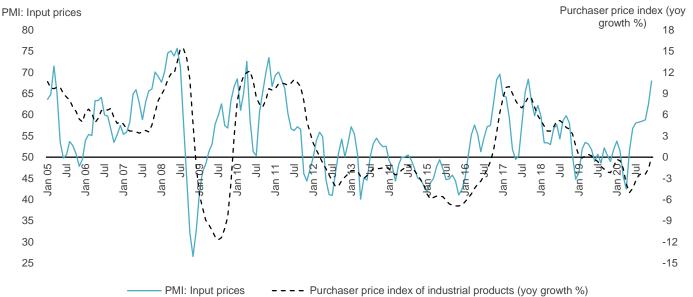
Purchaser price index and PPI to pick up further

Exhibit 15 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 16.

Going forward, we expect that the month-on-month growth rates for both the purchaser price index and the PPI will stay positive in the near term, and the year-on-year growth rates for both the purchaser price index and the PPI will rise further in 1Q21.

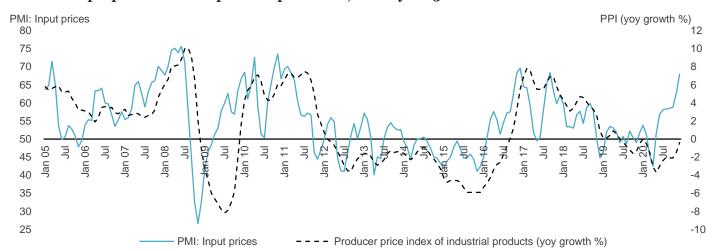
We expect that the mom growth rates for both the purchaser price index and the PPI will stay positive in the near term, and the yoy growth rates will rise further in 1Q21.

Exhibit 15: Input prices index and purchaser price index of industrial products, January 2005 to December 2020



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

Exhibit 16: Input prices index and producer price index, January 2005 to December 2020



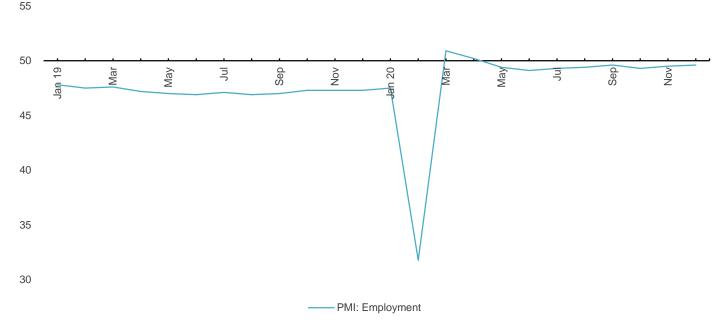
⁴The producer price index of industrial goods (PPI), compiled by China National Bureau of Statistics, measures the prices of industrial products when they are sold for the first time after production.

6. What the PMI tells us about manufacturing employment

Stabilization of employment index indicates steady employment situations in the manufacturing sector

The employment index registered 49.3 in October, 49.5 in November, and 49.6 in December respectively. The index has stabilized above 49, indicating the steady employment situations in the manufacturing sector in the past few months. (Exhibit 17)

Exhibit 17: Employment index, January 2019 to December 2020

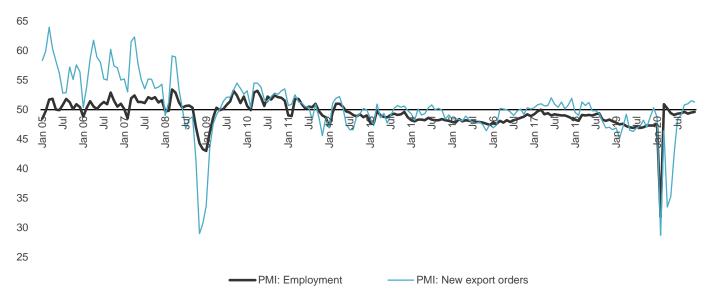


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 18 proves that the employment in China's manufacturing sector has relied heavily on the export sector. Exhibit 19 and 20 give our readers some ideas about the extent to which the employment situation improves or deteriorates with the manufacturing sector and the overall economy. Given a strong recovery in the export sector and the overall economy, we expect that the employment situations in the manufacturing sector will remain steady in 1Q21.

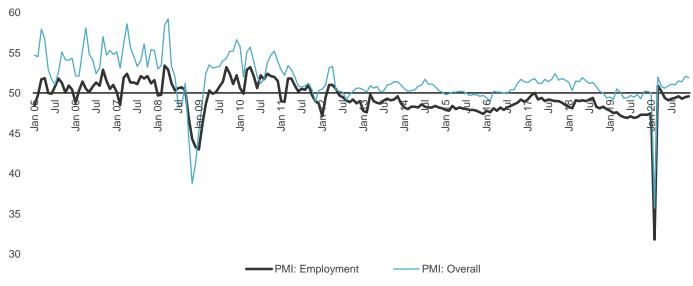
Given a strong recovery in the export sector and the overall economy, we expect the employment situations in the manufacturing sector to remain steady in 1Q21.

Exhibit 18: Employment and new export orders, January 2005 to December 2020



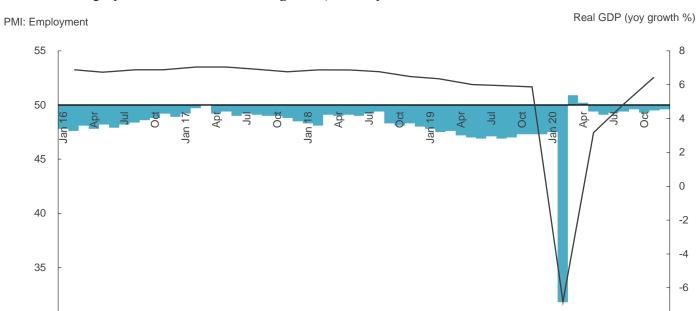
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 19: Employment index and headline PMI, January 2005 to December 2020



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Exhibit 20: Employment index and real GDP growth, January 2016 to December 2020



- Real GDP (yoy growth %)

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

■ PMI: Employment

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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 Organisations:

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 30,000 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.

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