Fung Business Intelligence Centre

PMI Quarterly on China Manufacturing

China Federation of Logistics & Purchasing

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PMI indicates signs of improvement in the manufacturing sector and the economy

- Output growth accelerates.
- Both new orders index and new export orders index return to expansion.
- Backlogs of orders continue to drop
- Inventory levels of finished goods and production inputs fall.
- Purchasing activities start to increase.
- Input prices index indicates bottoming out of prices of production inputs.
- Imports index returns to the expansionary zone.
- Employment in the manufacturing sector decreases at a slower pace.
- Suppliers' delivery reaccelerates
- Chinese manufacturers become more optimistic.

April 2016 Issue 24

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1. PMI indicates signs of improvement in the manufacturing sector and the economy

China's manufacturing PMI dropped from 49.4 in January to 49.0 in February. However, the PMI rebounded to 50.2 in March, returning to the expansionary zone for the first time since July last year. The latest PMI reading indicates signs of improvement in the manufacturing sector and the economy. (See exhibit 1)

It is noteworthy to recognize the discrepancy by size of enterprises. The PMI of 'large enterprises' fell from 50.3 in January to 49.9 in February. However, in March, the index rose to 51.5, above the critical 50-mark, indicating that 'large enterprises' have expanded again. The PMI of 'medium enterprises' went up from 46.1 in January to 49.0 in February and 49.1 in March, indicating that 'medium enterprises' have contracted at a slower pace recently. The PMI of 'small enterprises' dropped markedly from 49.0 in January to 44.4 in February. The index then showed a strong rebound to 48.1 in March, indicating slower contraction of 'small enterprises' in the month. (See exhibit 2)

In our view, the latest set of PMI data indicates signs of improvement in the manufacturing sector, largely attributable to the positive impact of the pro-growth policies carried out by the government. Both the new orders index and the new export orders index rose above the critical-50 mark in March, indicating an improvement in both domestic and export demand. Besides, the output index rebounded to a six-month high of 52.3 in March, showing relatively fast growth of output. For the first time since August 2014, the input prices index rose above the critical 50-mark in February, and further went up to a 37-month high of 55.3 in March. The latest trend of the index suggests that prices of production inputs have been bottoming out.

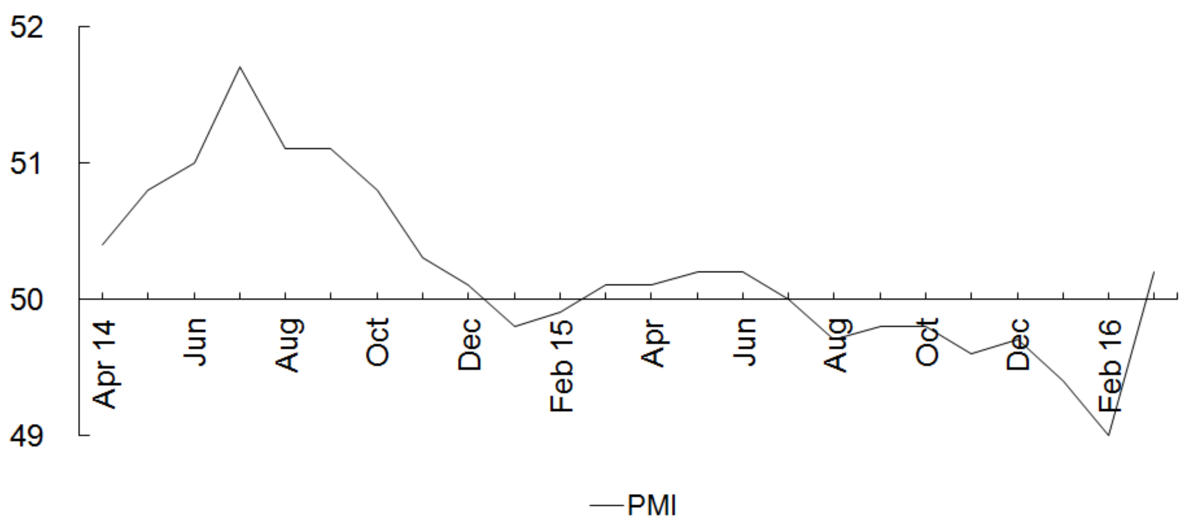
To prevent China's real GDP growth from falling below the government target of 6.5-7.0% yoy this year, the government is likely to further boost the economic growth in coming future. On the monetary front, China's central bank will ensure abundant liquidity and lower financing costs to support the real economy. On the fiscal front, the government will lower taxes and fees. According to the government, due to the measures to cut taxes and fees announced in the National People's Congress in March, enterprises and individuals will save more than 500 billion yuan this year. Meanwhile, the government will continue to push forward structural reforms, especially the 'supply-side reforms'.

In view of the signs of recovery in the property market and the positive impact of an accommodative monetary policy, we predict that China's economic growth will stabilize in 2Q16. Going forward, we expect the headline PMI to hover around 50 in 2Q16. We also forecast the real GDP growth to be around 6.8% yoy in 2Q16. In the coming months, industrial activities will be supported by the increase in public investment. That being said, challenges facing Chinese manufacturers remain, include wider exchange rate fluctuations, rising labour and environmental costs, slow growth of the global economy, foreign protectionism and weaker luxury spending. Overall, we expect the industrial production (VAIO) growth to go up slightly to around 6.5% yoy in 2Q16.

Exhibit 3 shows that the rebound in the headline PMI in March was mainly attributed to the rise in the output index (which weighs 25% in the computation of the headline PMI) and the new orders index (weighs 30%). Among the 11 sub-indices (i.e. excluding the suppliers' delivery time index), only output index stayed 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 stayed below 50 throughout the past three months. In March, except for the stocks of finished goods index, all sub-indices were higher than their respective levels in the previous month. (See exhibit 4)

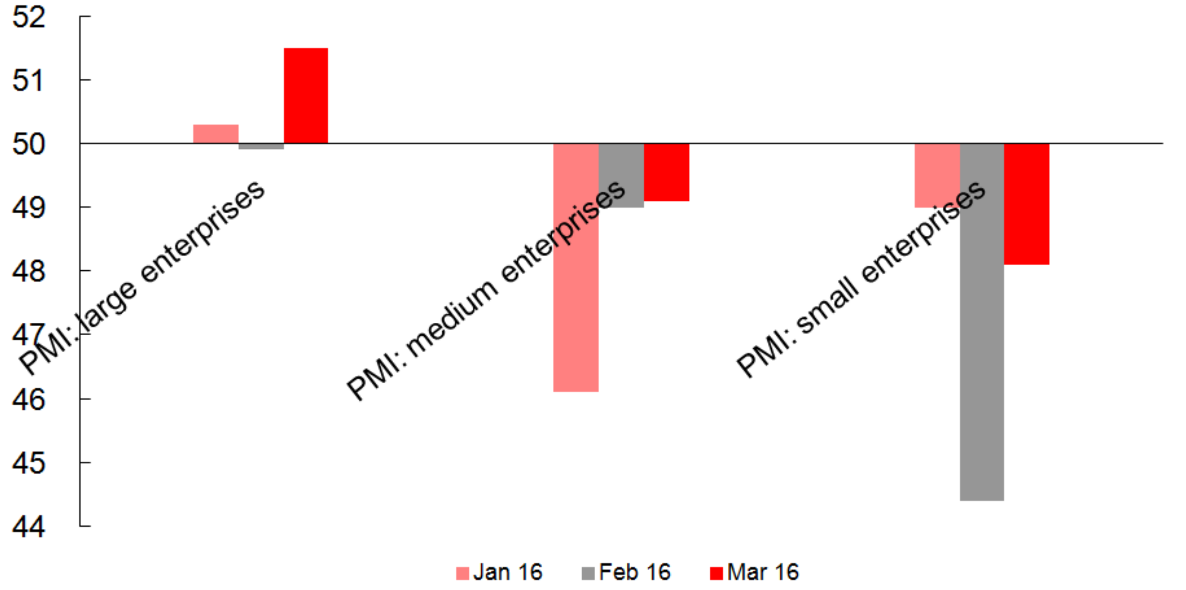
China's manufacturing PMI has so far done a satisfactory job in predicting economic growth. Exhibit 5 plots the quarterly real GDP yoy growth rates versus the monthly PMIs since its inception. It could be seen that the PMI demonstrates a fairly good track record of forecasting the growth trend of the economy at least over the next few months. Based on this chart we project that the real GDP growth will be around 6.8% yoy in 2Q16.

Exhibit 1: Headline PMI, April 2014 to March 2016



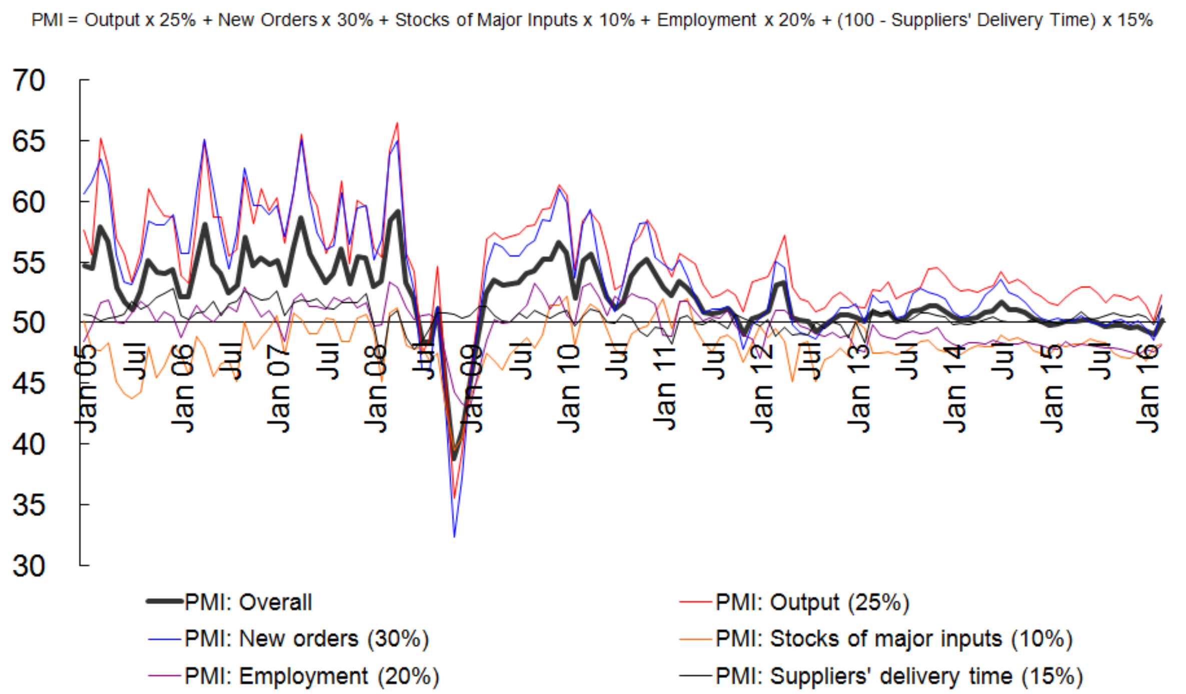
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 2: PMIs of large enterprises, medium enterprises and small enterprises, January to March 2016



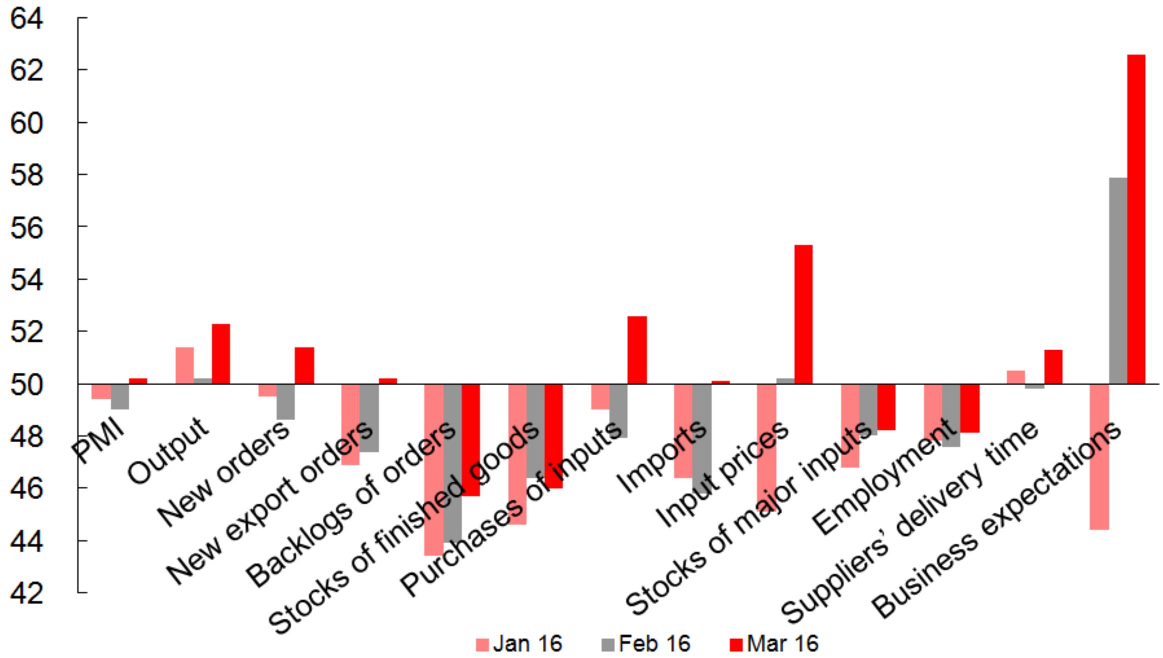
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 3: Headline PMI and sub-indices, January 2005 to March 2016



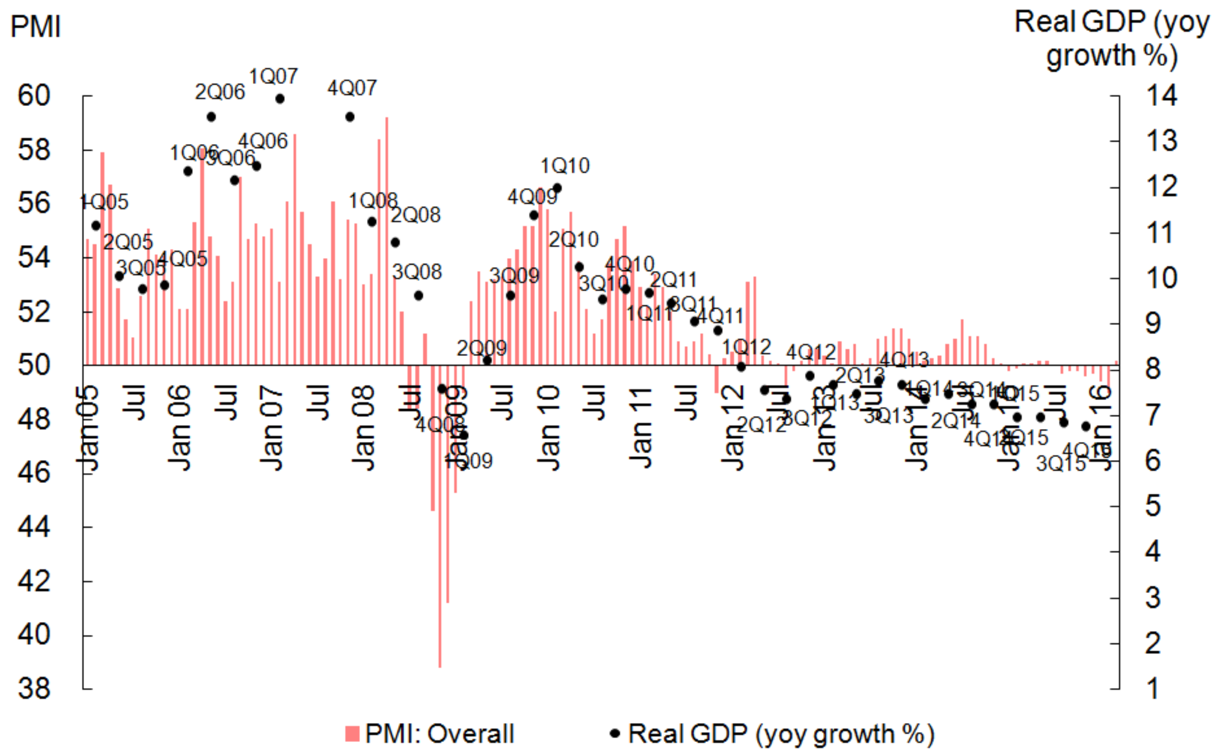
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 4: Headline PMI and all sub-indices, January to March 2016



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

Exhibit 5: Headline PMI and real GDP growth, January 2005 to March 2016



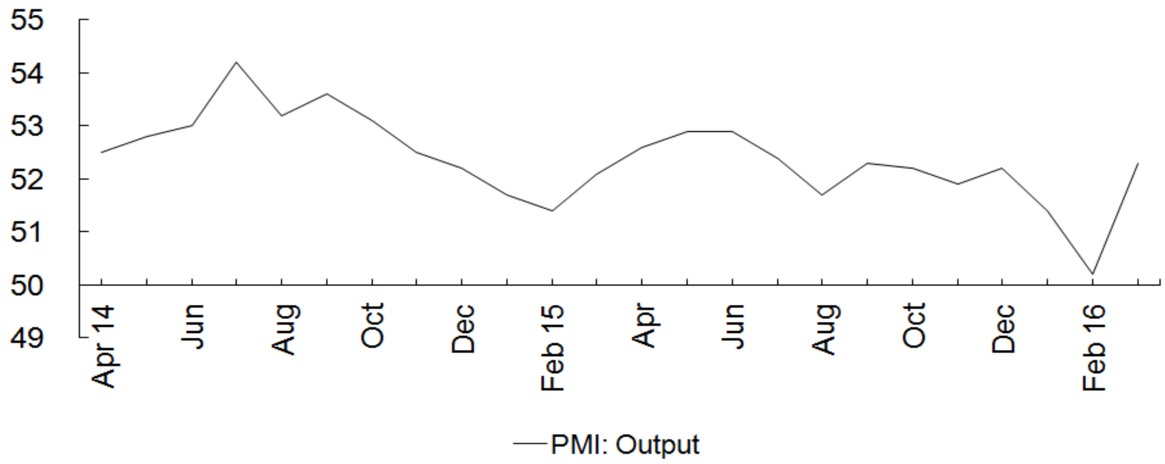
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

2. Output growth accelerates

The output index fell from 51.4 in January to 50.2 in February, before rebounding to a six-month high of 52.3 in March. (See exhibit 6) This indicates an acceleration in output growth in March, which may imply a recovery in industrial activities in China.

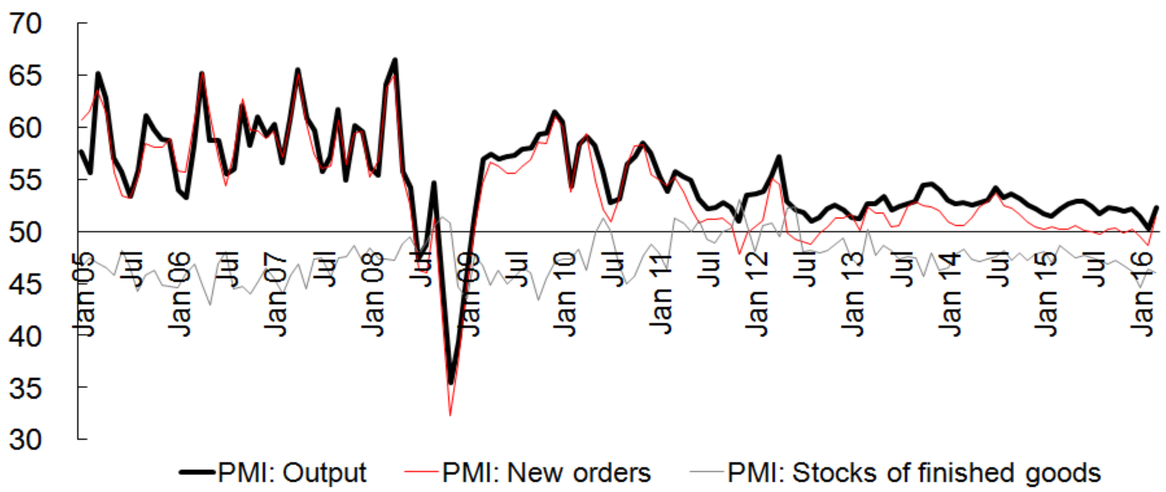
Exhibit 7 shows that the output growth was mainly fuelled by new orders growth instead of restocking activities, as the stocks of finished goods index has stayed in the contractionary zone for thirty six consecutive months. However, output may grow strongly later when manufacturers have finally run out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

Exhibit 6: Output index, April 2014 to March 2016



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

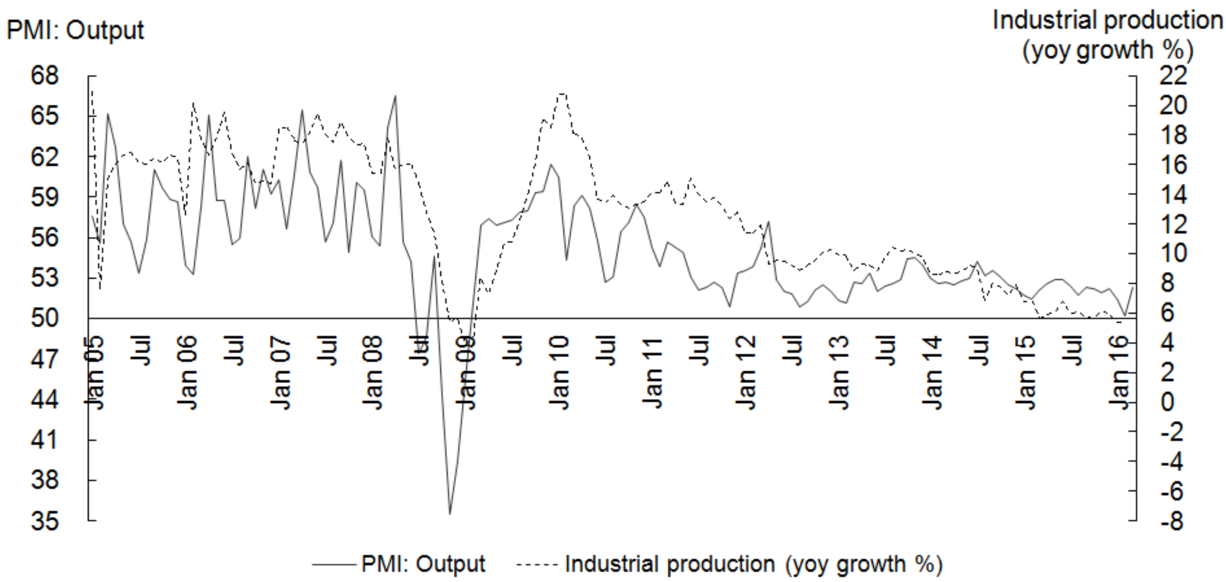
Exhibit 7: Output, new orders and stocks of finished goods, January 2005 to March 2016



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

Exhibit 8 demonstrates the correlation (with some lags) between the output index and the yoy growth of value-added of industrial output (VAIO). Looking ahead, we expect the VAIO growth to go up to around 6.5% yoy in 2Q16, as the output index has risen lately. In the coming months, industrial activities will be supported by the positive impact of an accommodative monetary policy and the increase in public investment. Challenges facing Chinese manufacturers, especially those in traditional industries, include wider fluctuations in exchange rate, rising labour and environmental costs, slow growth of the global economy, foreign protectionism and weaker luxury spending.

Exhibit 8: Output index and industrial production growth, January 2005 to March 2016



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

3. Both new orders index and new export orders index return to expansion

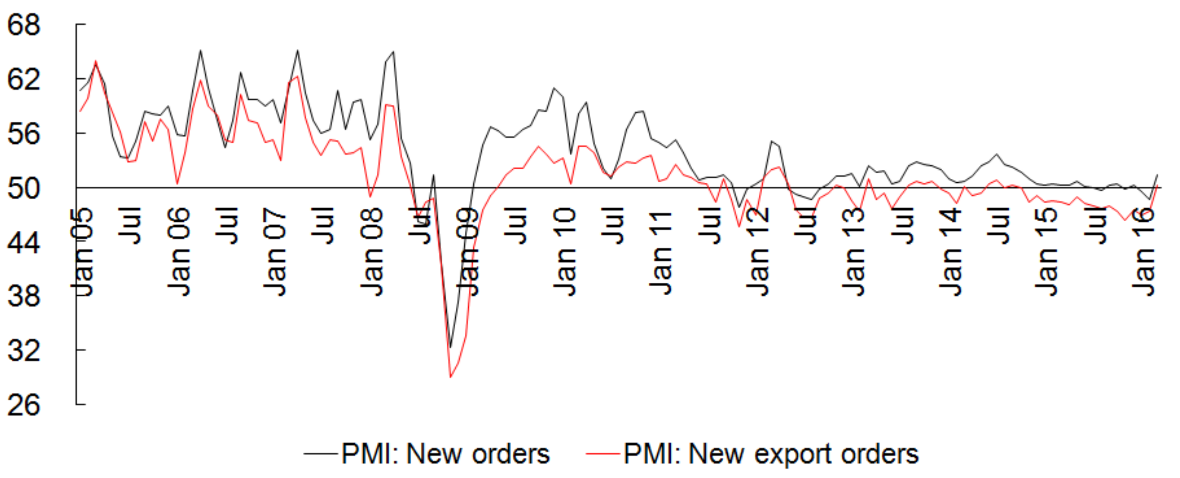
The new orders index dropped from 49.5 in January to 48.6 in February. Afterwards, in March, the index rebounded strongly to 51.4, returning to the expansionary zone. The index reading in March was the highest level since November 2014, showing that the overall new orders rose at a relatively fast pace in the month.[1]

Meanwhile, the new export orders index went up from 46.9 in January to 47.4 in February, and further to 50.2 in March. The index reading in March rose above the critical 50-mark for the first

[1] The ‘new orders index’ covers both domestic and export orders. That is to say, the manufacturers are not asked to differentiate between domestic and export orders when filling in questionnaires.

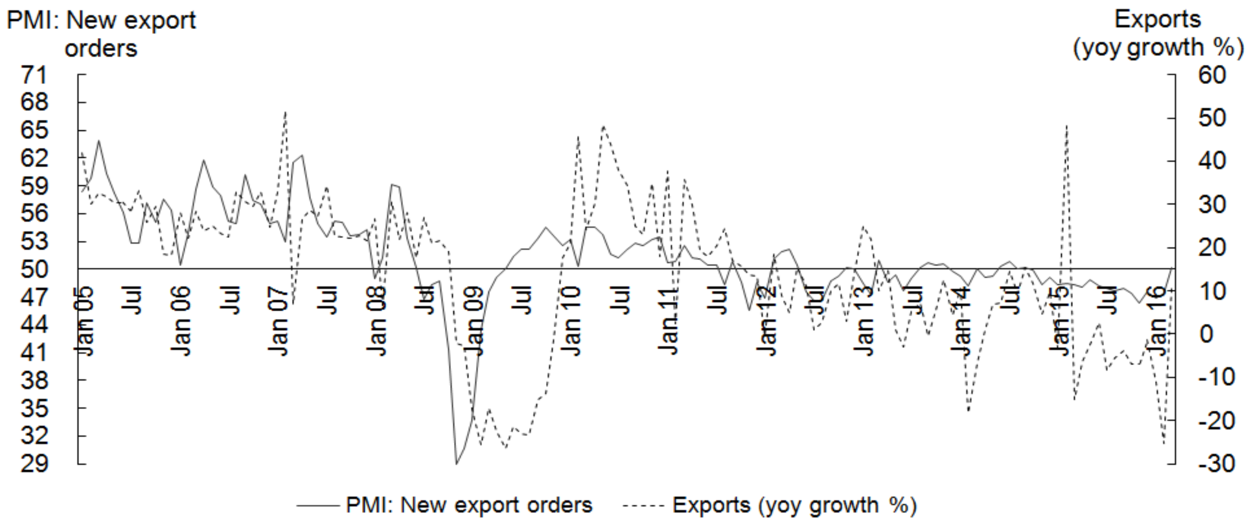
time since October 2014, suggesting that the mom growth of new export orders turned positive in the month. (See exhibit 9)

Exhibit 9: New orders index and new export orders index, January 2005 to March 2016



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

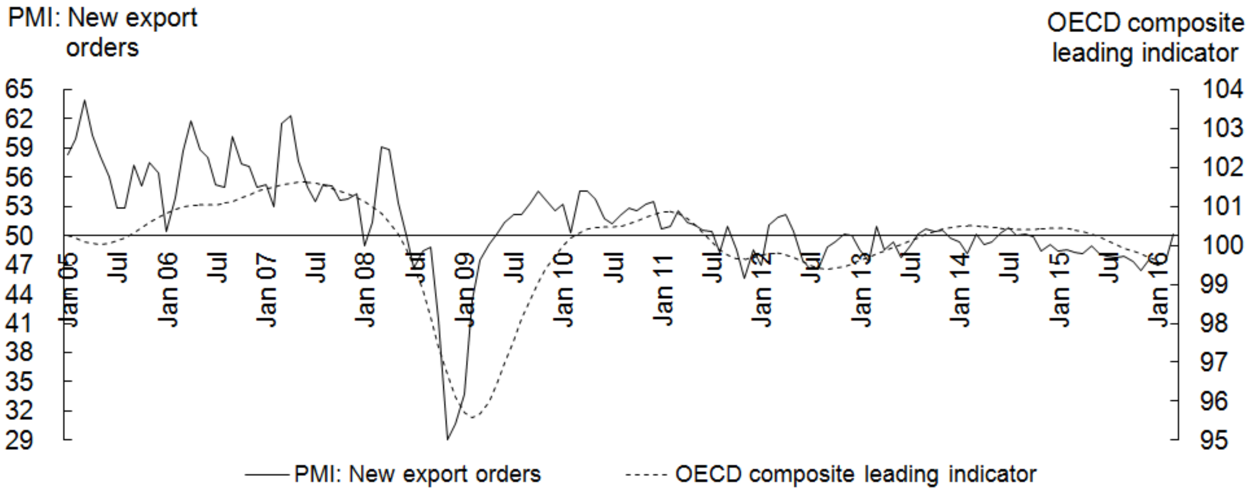
Exhibit 10: New export orders index and export growth, January 2005 to March 2016



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

Exhibit 10 plots the new export orders index against the yoy growth rates of China's exports. The correlation between the two indices is fairly high. For the first time since October 2014, the new export orders index returned to the expansionary zone in March. Therefore, our confidence for China's export prospects has improved. That being said, 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 indicator[2] has continued its downward trend in recent months, which suggests a still conservative outlook for China's exports. All in all, we expect that China's exports will continue to drop in 2Q16, though at a slower pace compared to the 9.6% yoy decline in 1Q16.

Exhibit 11: New export orders index and OECD composite leading indicator, January 2005 to March 2016



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

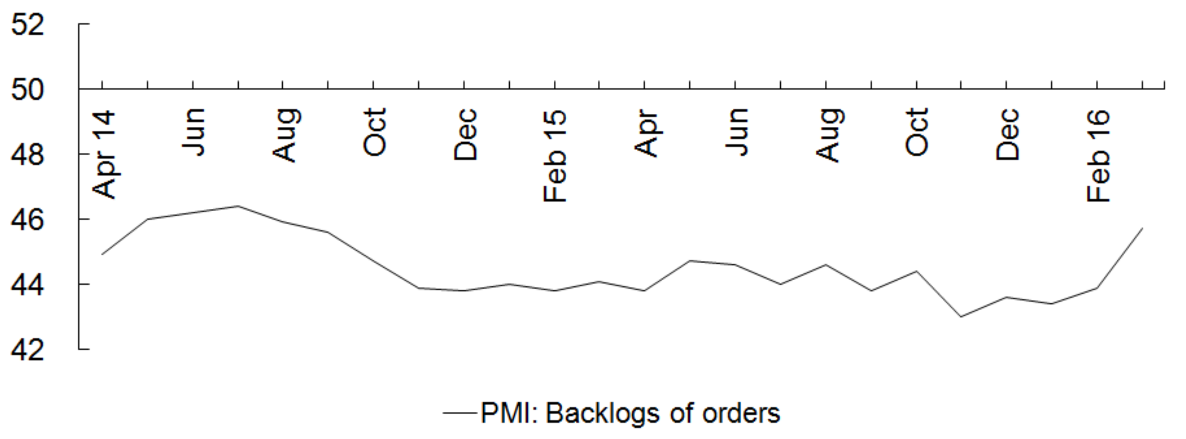
4. Backlogs of orders continue to drop

The backlogs of orders index rose from 43.4 in January to 43.9 in February and 45.7 in March, but was still well below the critical 50-mark. The index has been in the contractionary zone since April 2012, indicating that backlogs of orders have continued to drop. (See exhibit 12)

Looking ahead, we expect the index to go up further in the near term, as indicated by the apparently very high correlation between the sub-index and the headline PMI, and the recent rise in the headline PMI. (See exhibit 13)

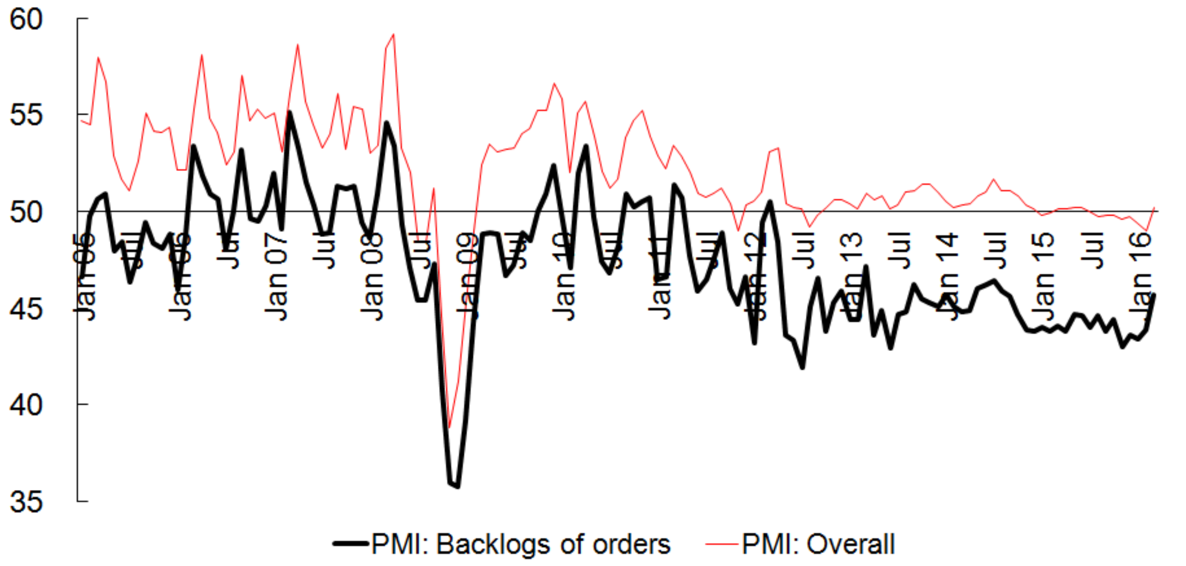
2 The OECD composite leading indicator, compiled by the Organization for Economic Cooperation and Development, is designed to provide early signals of turning points (peaks and troughs) between expansions and slowdowns of economic activity, and covers Australia, Austria, Belgium, Canada, Czech Republic, 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 12: Backlogs of orders index, April 2014 to March 2016



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

Exhibit 13: Backlogs of orders index and headline PMI, January 2005 to March 2016

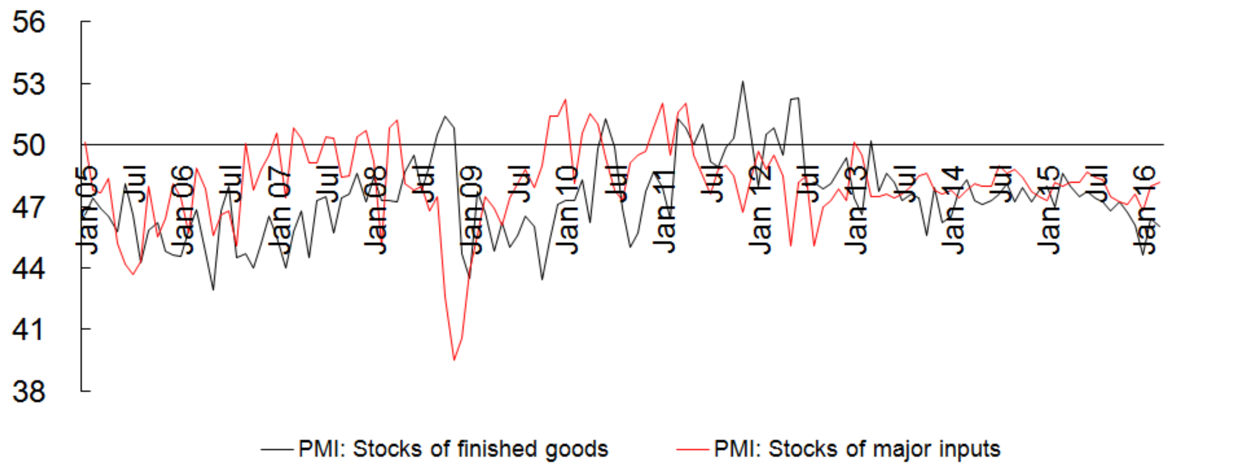


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

5. Inventory levels of finished goods and production inputs fall

The stocks of finished goods index registered 44.6, 46.4 and 46.0 in January, February and March respectively. The stocks of major inputs index rose from 46.8 in January to 48.0 in February and 48.2 in March. (Exhibit 14) Both indices stayed below the critical 50-mark in the past three months, indicating that the inventories of finished goods and production inputs held by manufacturers have been falling.

Exhibit 14: Stocks of finished goods index and stocks of major inputs index, January 2005 to March 2016



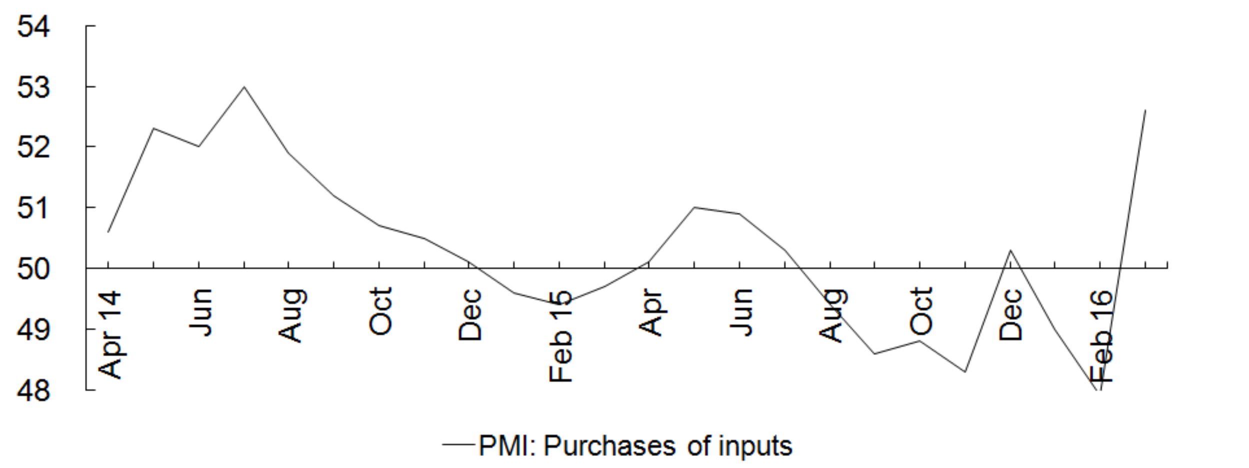
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

6. Purchasing activities start to increase

The purchases of inputs index went down from 49.0 in January to 47.9 in February. Nevertheless, the index rebounded strongly to a 20-month high of 52.6 in March, above the critical 50-mark, indicating that purchasing activities have started to increase recently. (Exhibit 15)

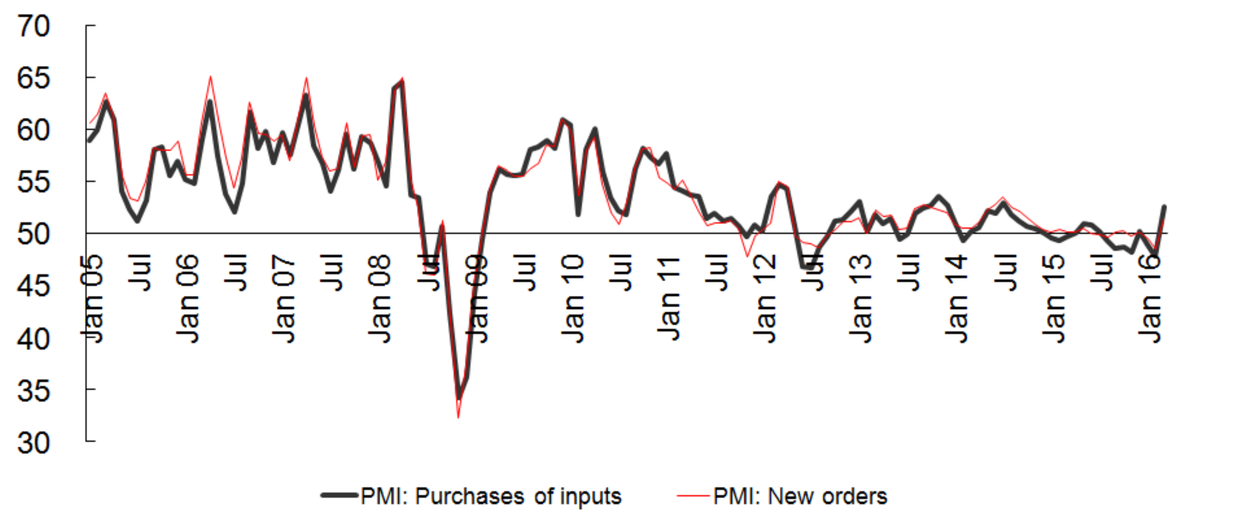
A number of factors affect the purchasing activities of manufacturers, among which the amount of new orders received by manufacturers has been the most important factor. Exhibit 16 plots the purchases of inputs index against the new orders index. The correlation between the two sub-indices is very strong. This is intuitively easy to explain – as manufacturers usually need to purchase extra inputs to cope with new orders. Looking ahead, we expect to see a continuous increase in purchasing activities. A major reason is that the new orders index rose above the critical 50-mark in March, indicating that the month-on-month growth of new orders has turned positive lately. The purchasing activities also reflect business confidence. Exhibit 17 shows the association between the purchases of inputs index and the business expectations index. Credit conditions could be another factor. Finally, exhibit 18 shows that input prices, as well as the expected trend of input prices, are also important considerations when making purchasing decisions.

Exhibit 15: Purchases of inputs index, April 2014 to March 2016



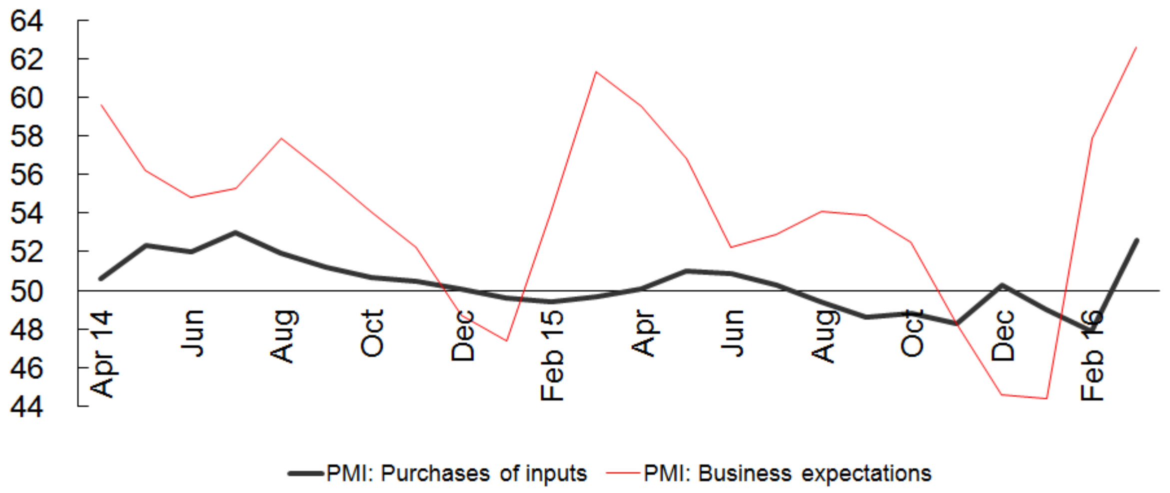
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 16: Purchases of inputs and new orders, January 2005 to March 2016



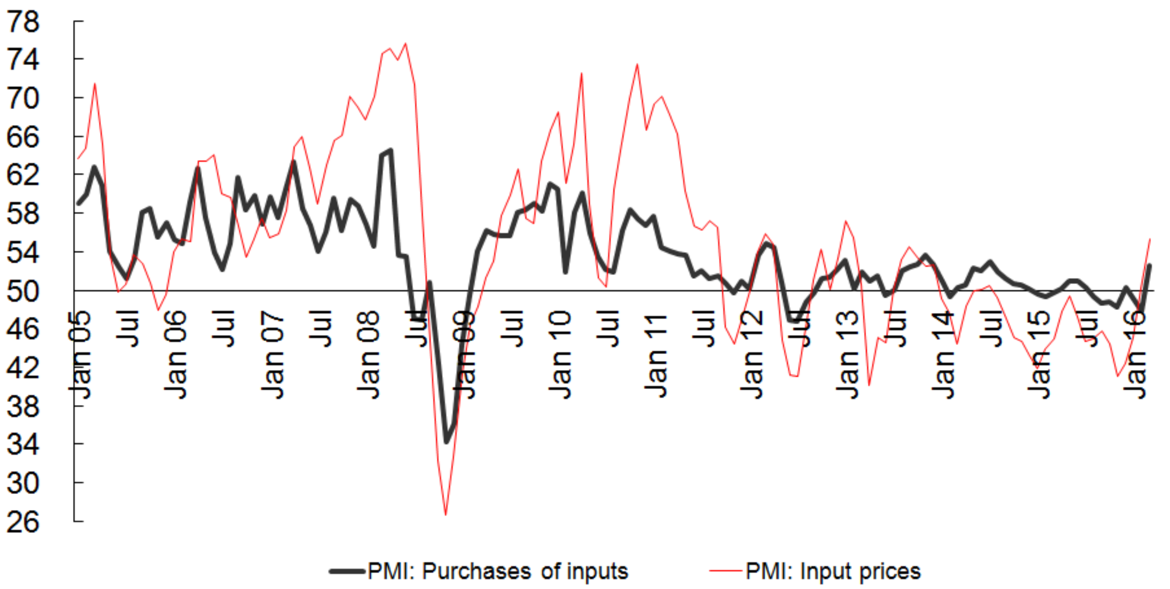
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 17: Purchases of inputs and business expectations, April 2014 to March 2016



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

Exhibit 18: Purchases of inputs and prices of major inputs, January 2005 to March 2016

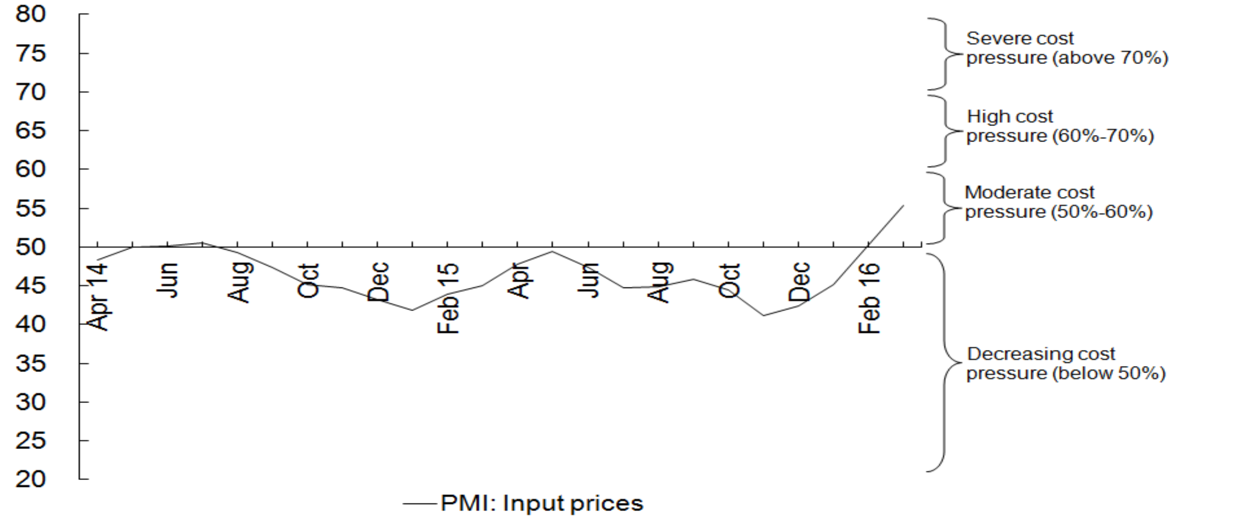


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

7. Input prices index indicates bottoming out of prices of production inputs

The input prices index has risen for four consecutive months, going up all the way from the recent low of 41.1 in December 2015 to 55.3 in March this year. (Exhibit 19) The index has stayed above 50 for two consecutive months, showing signs that prices of production inputs have been bottoming out. This can be attributed to the rebound in global commodity prices in recent months.

Exhibit 19: Input prices index, April 2014 to March 2016



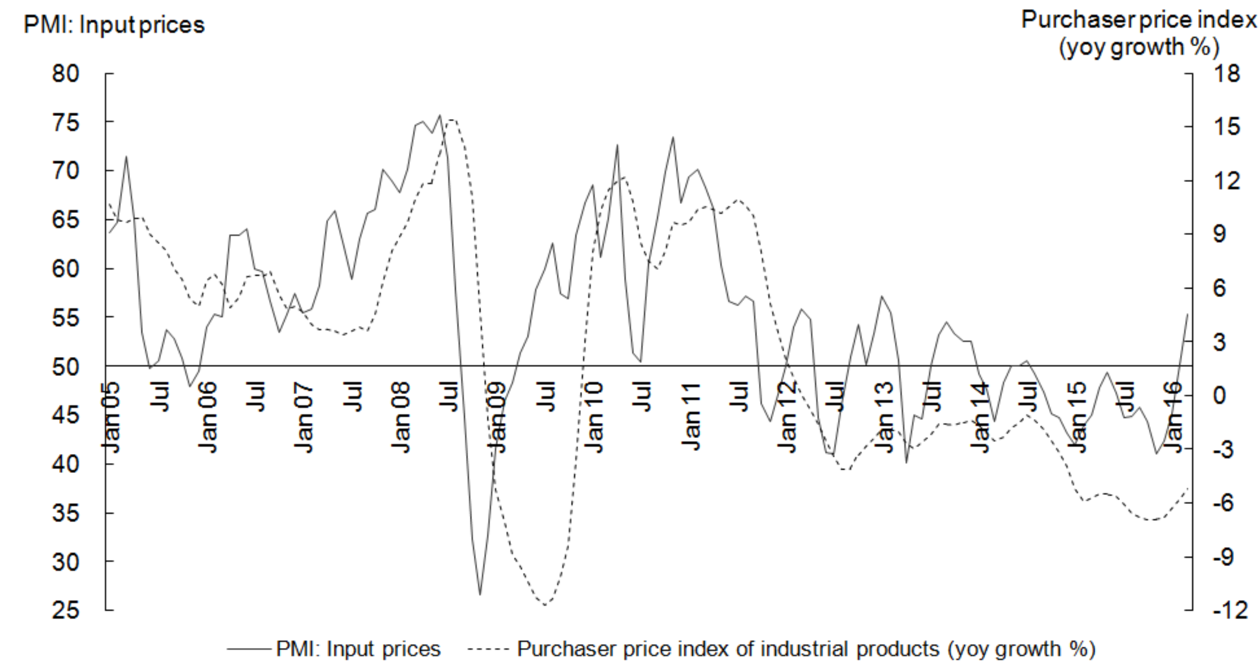
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 20 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 yoy growth of the producer price index (PPI)[3] in exhibit 21. Going forward, we expect the yoy growth rates for both the purchaser price index and the PPI to go up in near future. We also forecast the CPI growth to fluctuate between 2.0% and 2.5% yoy in 2Q16. Finally, to see the extent to which input costs of Chinese manufacturers are affected by global commodity prices, exhibit 22 puts together the input prices index and the Thomson Reuters/ CoreCommodity CRB index.[4]

3 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.

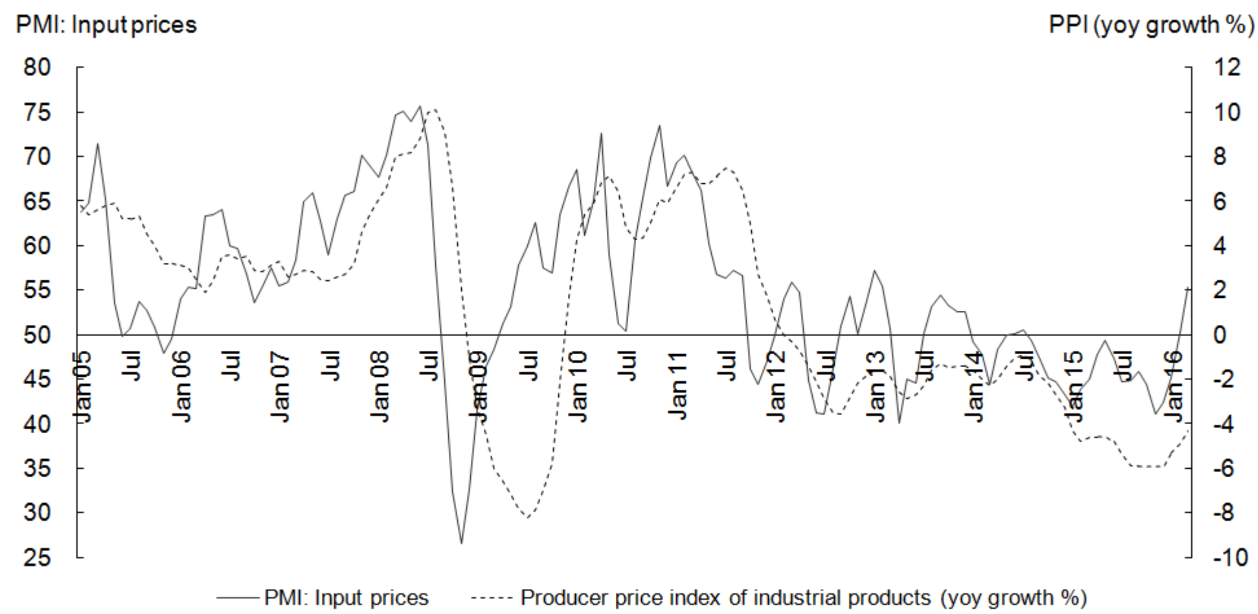
4 The Thomson Reuters/ CoreCommodity CRB Index, which comprises 19 commodities such as crude oil, aluminum, corn, cotton, gold, natural gas, soybeans, etc, has served as one of the most recognized measures of global commodities markets.

Exhibit 20: Input prices index and purchaser price index of industrial products, January 2005 to March 2016



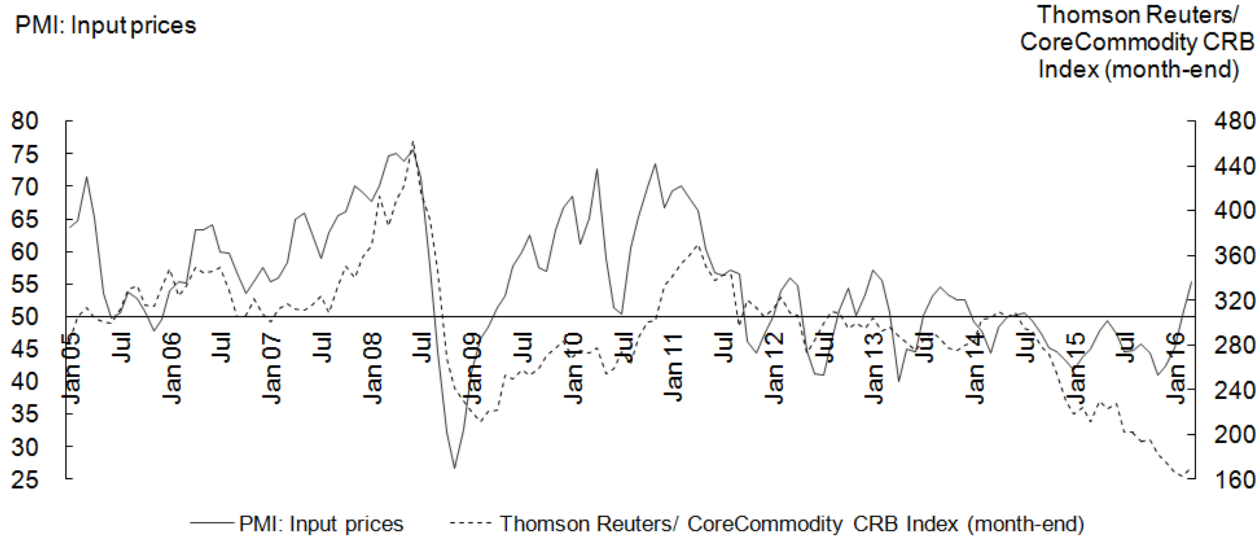
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 21: Input prices index and producer price index, January 2005 to March 2016



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

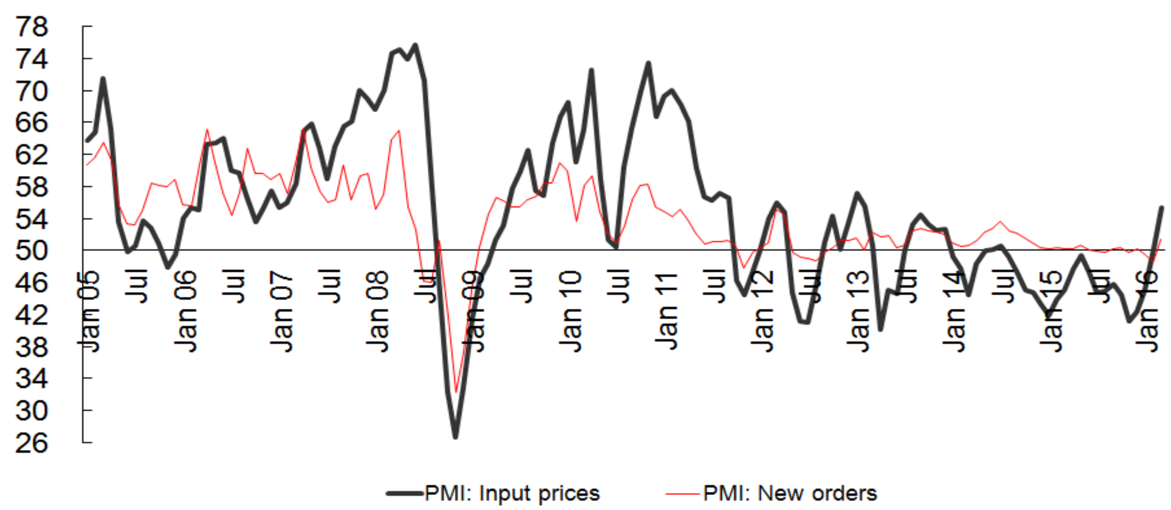
Exhibit 22: Input prices index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to March 2016



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

Exhibit 23 tries to give a convenient way of assessing and analyzing the profitability of Chinese manufacturers – since new orders represent source of new revenue and input prices represent production cost. If the former rises faster than the latter, profitability tends to improve, and vice versa. Recently, the new orders have started increasing, while input prices have risen at a faster pace. This may mean lower manufacturers' profit margins in the near future.

Exhibit 23: Input prices and new orders, January 2005 to March 2016

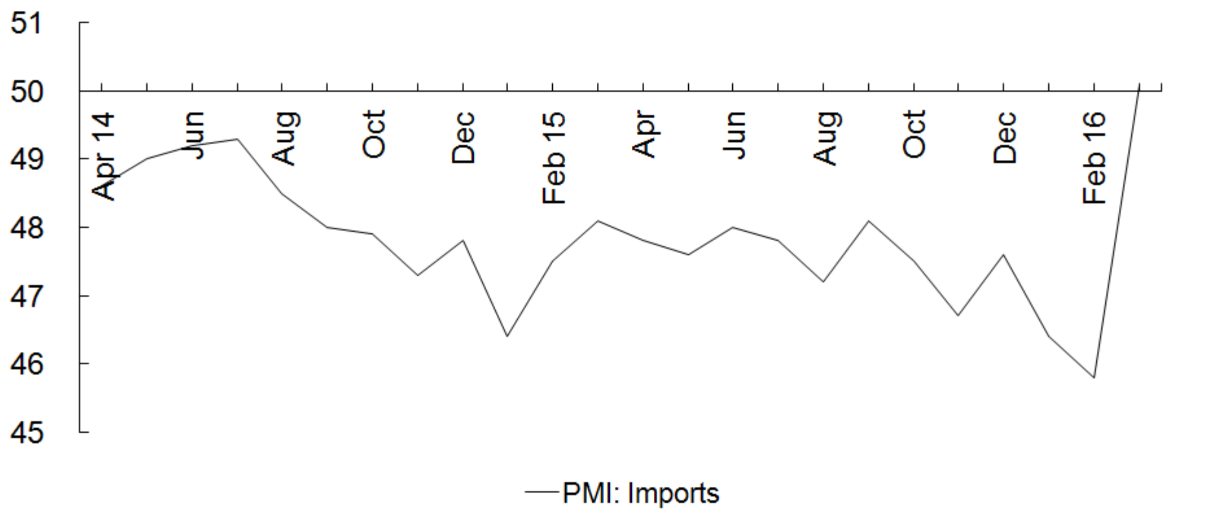


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

8. Imports index returns to the expansionary zone

The imports index slid from 46.4 in January to 45.8 in February, but then rebounded sharply to 50.1 in March, returning to the expansionary zone. This indicates that the domestic demand for raw materials and parts used in manufacturing has improved lately. (Exhibit 24)

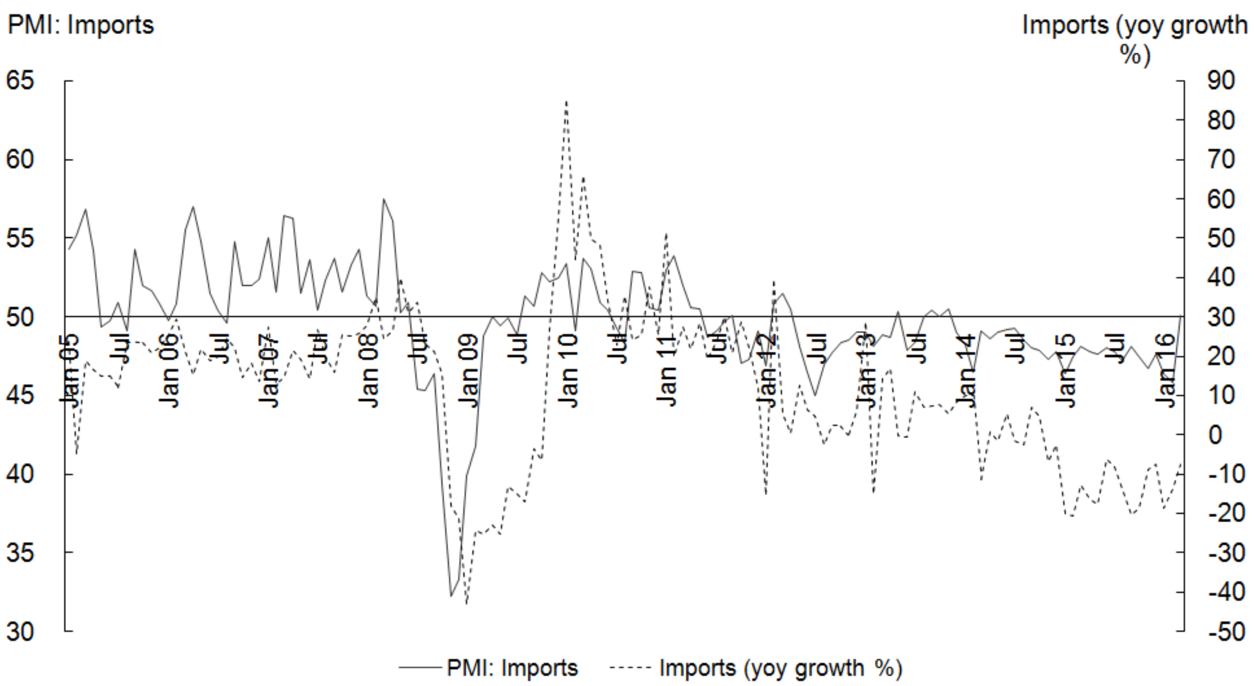
Exhibit 24: Imports index, April 2014 to March 2016



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

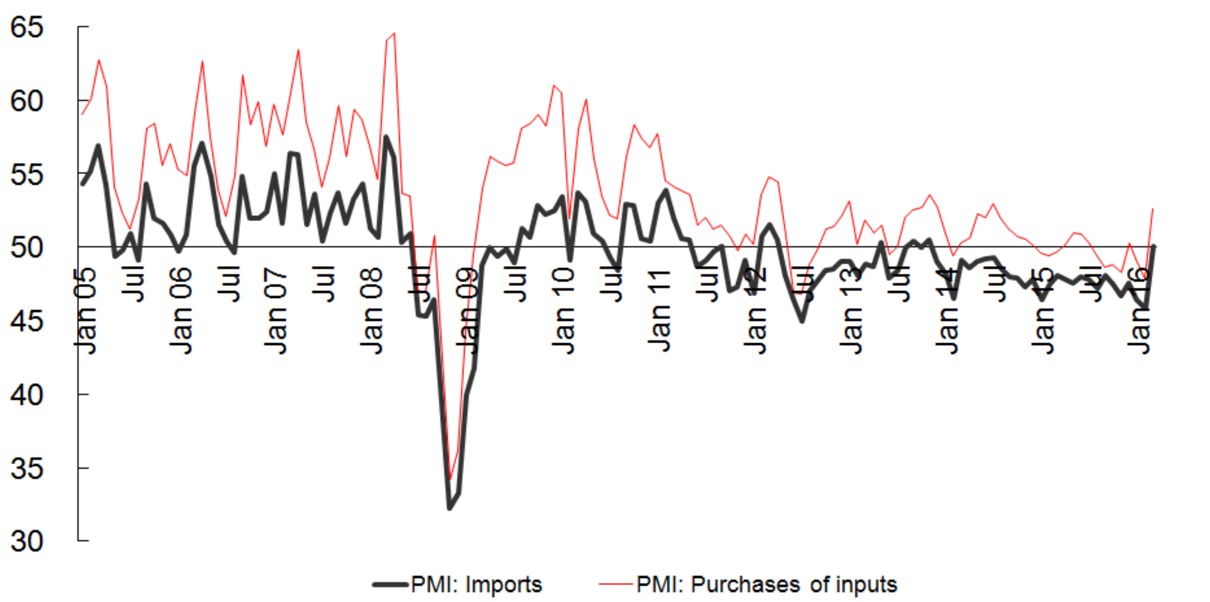
Exhibit 25 shows that the imports index is highly correlated (with some lags) to the import yoy growth rate. We expect imports to fall at a slower pace in 2Q16. Exhibit 26 illustrates the strong association between the imports index and the purchases of inputs index – as Chinese manufacturers purchase a large amount of production inputs and parts from overseas. Besides, China is a major importer of oil, iron ore and other raw materials. To see how heavily China's imports of inputs are affected by world commodity prices, we plot the imports index against the Thomson Reuters/ CoreCommodity CRB index. It is found that the imports index has been positively related to global commodity prices. (Exhibit 27)

Exhibit 25: Imports index and import growth, January 2005 to March 2016



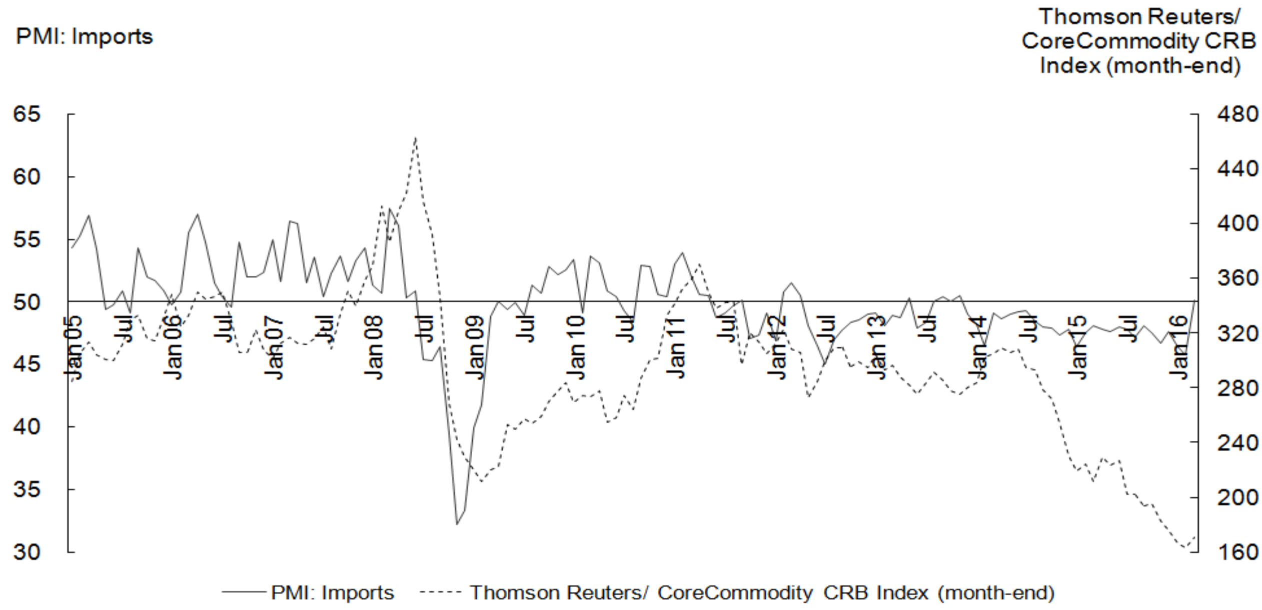
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs

Exhibit 26: Imports and purchases of inputs, January 2005 to March 2016



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

Exhibit 27: Imports index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to March 2016

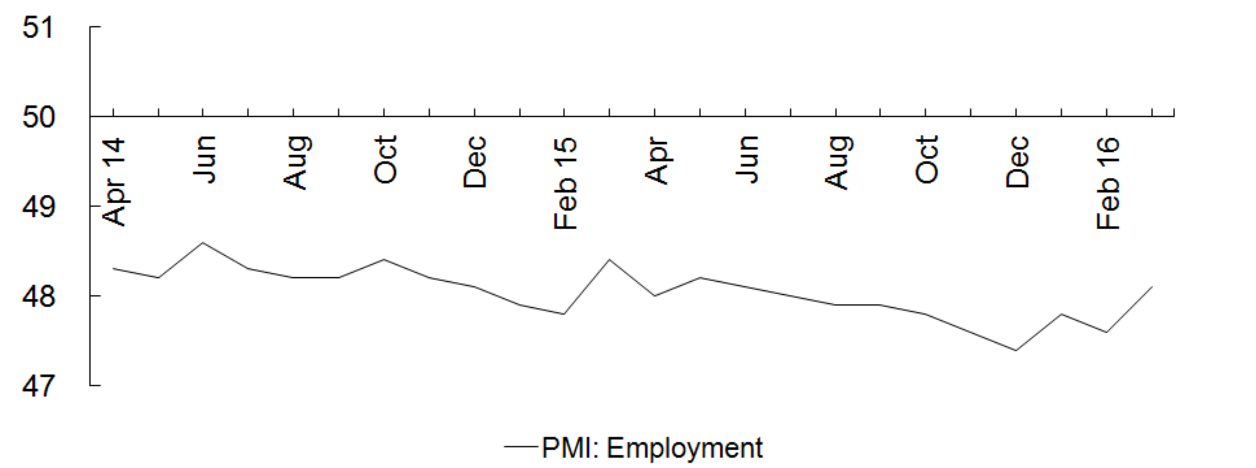


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Thomson Reuters

9. Employment in the manufacturing sector decreases at a slower pace

The employment index stayed below the neutral level of 50 in the past three months, indicating the continuous fall in employment in the manufacturing sector. That being said, the index picked up from 47.6 in February to 48.1 in March, the highest level since July last year, showing that the employment has decreased at a slower pace recently. (Exhibit 28)

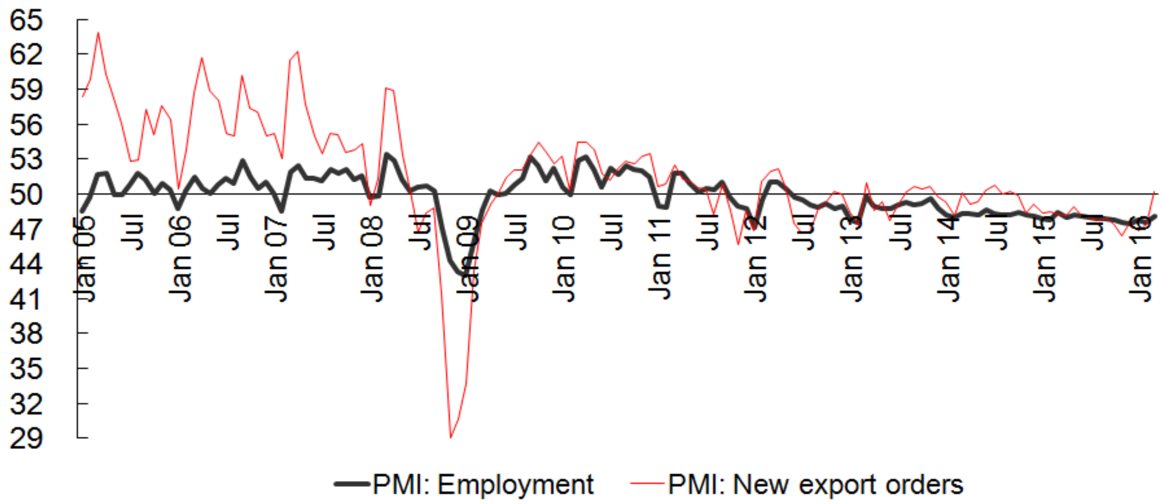
Exhibit 28: Employment index, April 2014 to March 2016



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

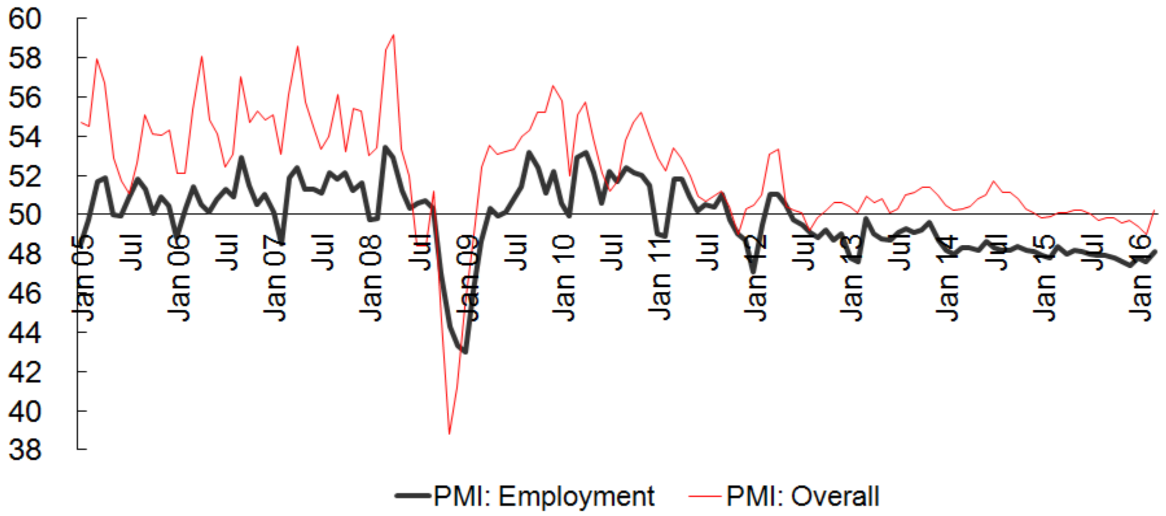
Exhibit 29 proves that the employment in China's manufacturing sector has relied heavily on the export sector. Exhibit 30 and 31 give our readers some ideas about the extent to which the employment situation improves or deteriorates with the manufacturing sector and the overall economy.

Exhibit 29: Employment and new export orders, January 2005 to March 2016



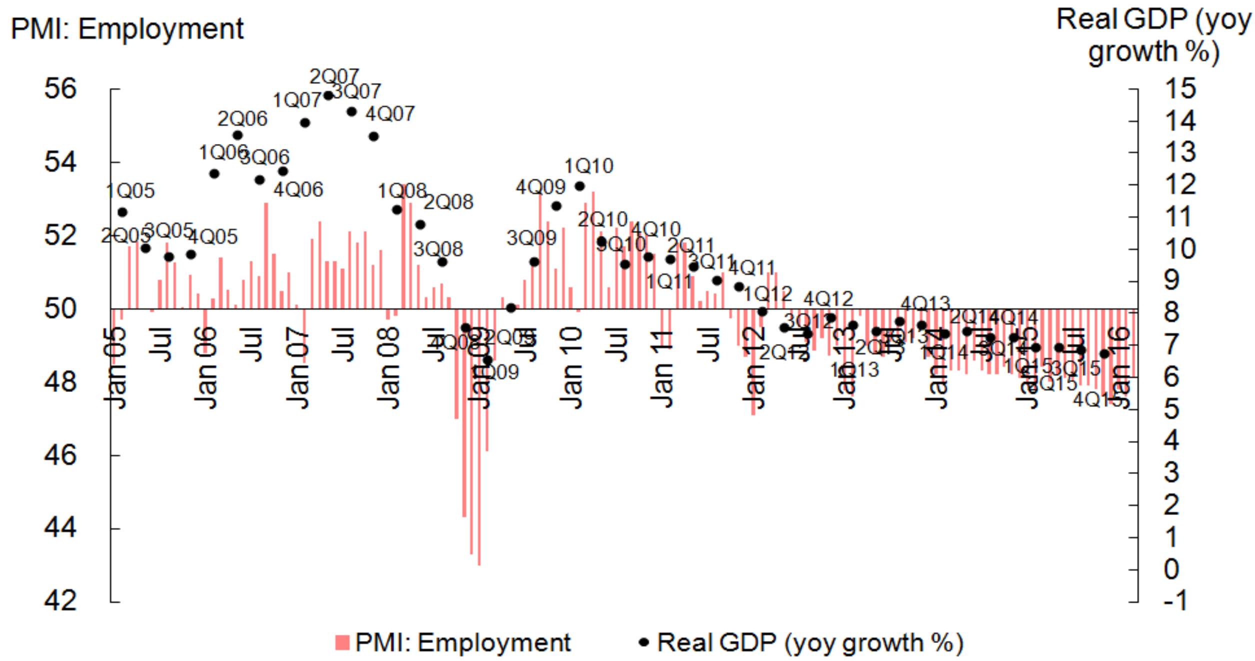
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 30: Employment index and headline PMI, January 2005 to March 2016



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

Exhibit 31: Employment index and real GDP growth, January 2005 to March 2016

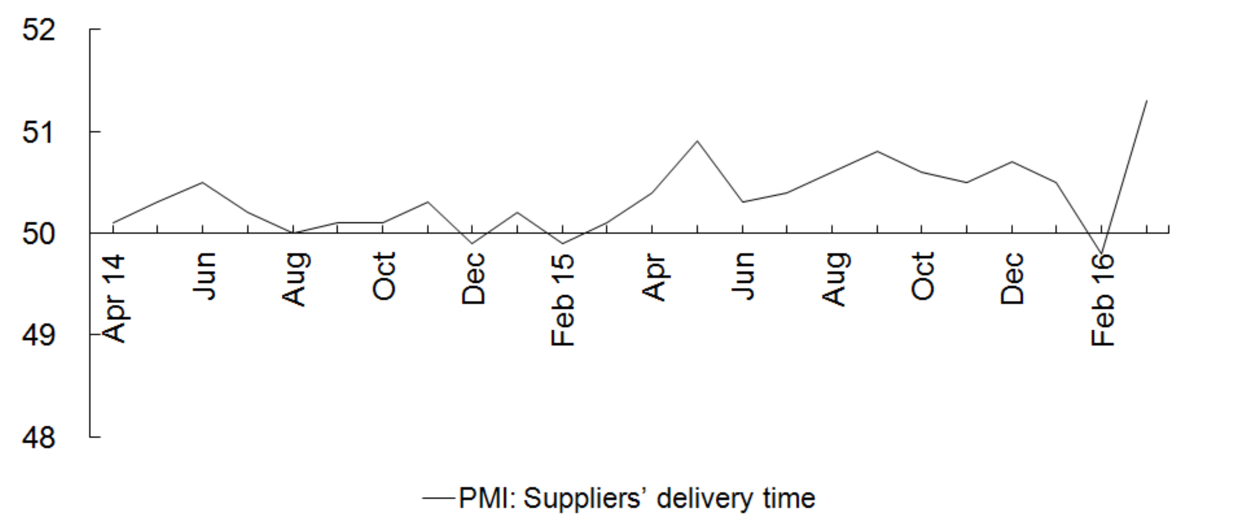


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

10. Suppliers' delivery reaccelerates

The suppliers' delivery time index fell from 50.5 in January to 49.8 in February. Nevertheless, the index rebounded to 51.3 in March, above the neutral level of 50, indicating a reacceleration in suppliers' delivery. (Exhibit 32)

Exhibit 32: Suppliers' delivery time index, April 2014 to March 2016

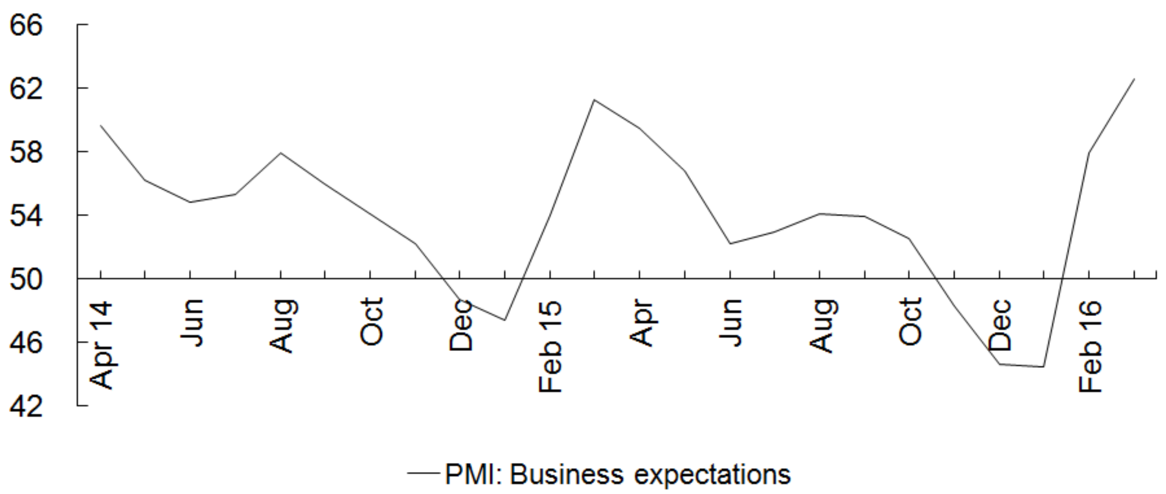


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

11. Chinese manufacturers become more optimistic

The business expectations index rose from the record low of 44.4 in January to 57.9 in February, and further to 62.6 in March, indicating that purchasing managers have become more optimistic about the near term outlook for their respective industries. (See exhibit 33)

Exhibit 33: Business expectations index, April 2014 to March 2016



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). The Fung Business Intelligence Centre 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 21 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 12 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, Employment, Suppliers' Delivery Time and Business Expectations. A 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 Group

The Fung Group is a privately held multinational group of companies headquartered in Hong Kong whose core businesses are trading, logistics, distribution and retailing. The Fung Group employs over 46,800 people across 40 economies worldwide, generating total revenue of over US$24.65 billion in 2014. Fung Holdings (1937) Limited, a privately held business entity headquartered in Hong Kong, is the major shareholder of the Fung group of companies.

Please visit www.funggroup.com for more about the Fung Group.

Fung Business Intelligence Centre (FBIC)

The Fung Business Intelligence Centre (FBIC) collects and analyses market data on sourcing, supply chains, distribution and retail. It also provides thought leadership on technology and other key issues shaping their future.

Headquartered in Hong Kong, FBIC leverages unique relationships and information networks to track and report on trends and developments in China and other Asian countries. In addition, its New York-based Global Retail & Technology research team follows broader retail and technology trends, specialising in how they intersect and building collaborative knowledge communities around the revolution occurring worldwide at the retail interface.

Since its establishment in 2000, the FBIC (formerly known as the Li & Fung Research Centre) has served as the knowledge bank and think tank for the Fung Group. Through regular research reports and other publications, it makes its market data, impartial analysis and expertise available to businesses, scholars and governments around the world. It also provides advice and consultancy services to colleagues and business partners of the Fung Group on issues related to doing business in China, ranging from market entry and company structure, to tax, licensing and other regulatory matters.

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