

PMI Quarterly on China Manufacturing

China Federation of Logistics & Purchasing

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PMI suggests stabilization of the economy

- Output growth accelerates.
- New orders index shows a recovery in domestic demand.
- Backlogs of orders continue to drop.
- Destocking activities quicken.
- Purchasing activities increase.
- Input prices index shows a small rebound.
- Imports of production inputs continue to contract.
- Employment in the manufacturing sector shrinks.
- Suppliers' delivery continue to accelerate.
- Chinese manufacturers become pessimistic.

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1. PMI suggests stabilization of the economy

After dropping from 49.8 in September and October to 49.6 in November, China's manufacturing PMI rose slightly to 49.7 in December, suggesting that industrial activities have stabilized at low levels. (See exhibit 1)

It is noteworthy to recognize the discrepancy by size of enterprises. The PMI of 'large enterprises' has stayed above the critical 50-mark in the past three months, registering 51.0, 51.2 and 50.9 in October, November and December respectively. This indicates that 'large enterprises' have continued to expand. The PMI of 'medium enterprises' fell from 48.7 in October to 48.3 in November. Afterwards, the index rebounded to 49.6 in December, but was still below 50. This indicates that 'medium enterprises' have been facing unfavourable situations. Meanwhile, the PMI of 'small enterprises' dropped from 46.6 in October to its recent low of 44.8 in November, and then rose slightly to 44.9 in December. The low readings in recent months indicate the tough situations facing 'small enterprises'. (See exhibit 2)

In our view, the rise in the PMI in December suggests that manufacturing activities and the economy in general have stabilized, supported by the earlier easing measures taken by the government. Several sub-indices show positive signs for the economy. For example, the new orders index rose by 0.4 pts from the previous month to 50.2 in December, above the critical 50-mark, indicating that the month-on-month growth of new orders has turned positive lately. Amid the improving demand, the output index rebounded to 52.2 in December, indicating a reacceleration in output growth. Besides, for the first time in five months, the purchases of inputs index rose above the critical 50-mark in December, indicating that purchasing activities have started to increase recently.

As export demand is set to remain weak, the government will continue its efforts to boost domestic demand in coming future, in our view. On the monetary front, we expect to see further interest rate reductions this year. On the fiscal front, the government is likely to increase fiscal expenditure and public investment in near future. Meanwhile, the government will push forward structural reforms, especially the 'supply-side reforms'. As part of its efforts to carry out the 'supply-side reforms', the government will focus on tackling problems of overcapacity, reducing housing inventories, and cutting taxes and fees on enterprises this year.

In the expectation of the continuous recovery in domestic demand, we predict that China's economic growth will stabilize in 1Q16. Going forward, we expect the headline PMI to hover around 50 in 1Q16. We also forecast the real GDP growth to be around 6.8% yoy in 1Q16. In the coming months, industrial activities will be supported by the positive impact of an

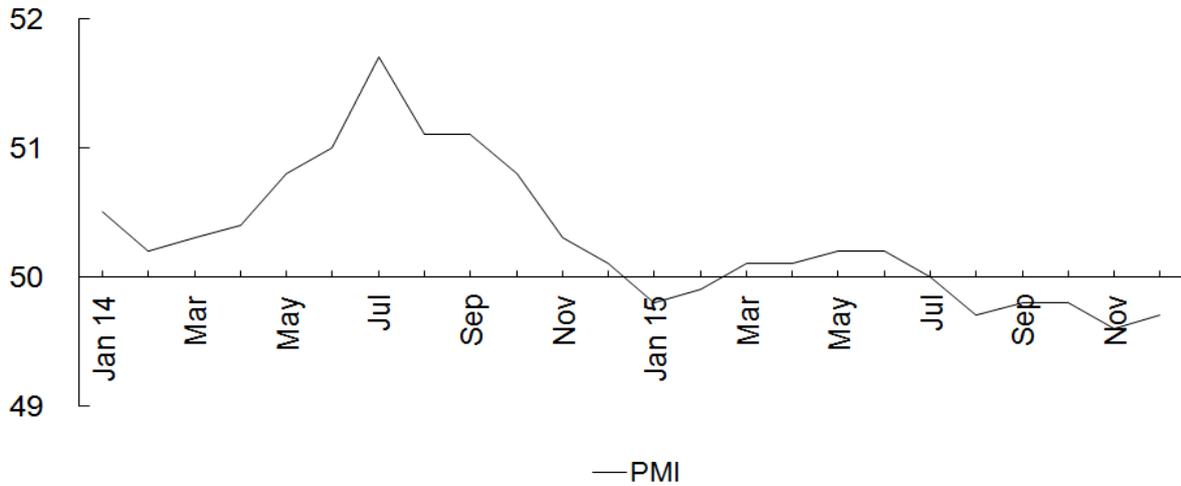
accommodative monetary policy and the increase in public investment. That being said, we do not expect to see a V-shaped recovery of the manufacturing sector this year, as the policy focus has shifted to ‘supply-side reforms’. Challenges facing Chinese manufacturers, especially those in traditional industries, include wider exchange rate fluctuations, the 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 1Q16.

Exhibit 3 shows that the slight improvement in the headline PMI in December 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%). In December, 9 of the 12 sub-indices were higher than their respective levels in the previous month, while only 3 sub-indices (i.e. stocks of finished goods, employment and business expectations) were lower than their respective levels in the previous month.

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. The indices of new export orders, backlogs of orders, stocks of finished goods, stocks of major inputs, imports, input prices and employment stayed below 50 throughout the past three months. (See exhibit 4)

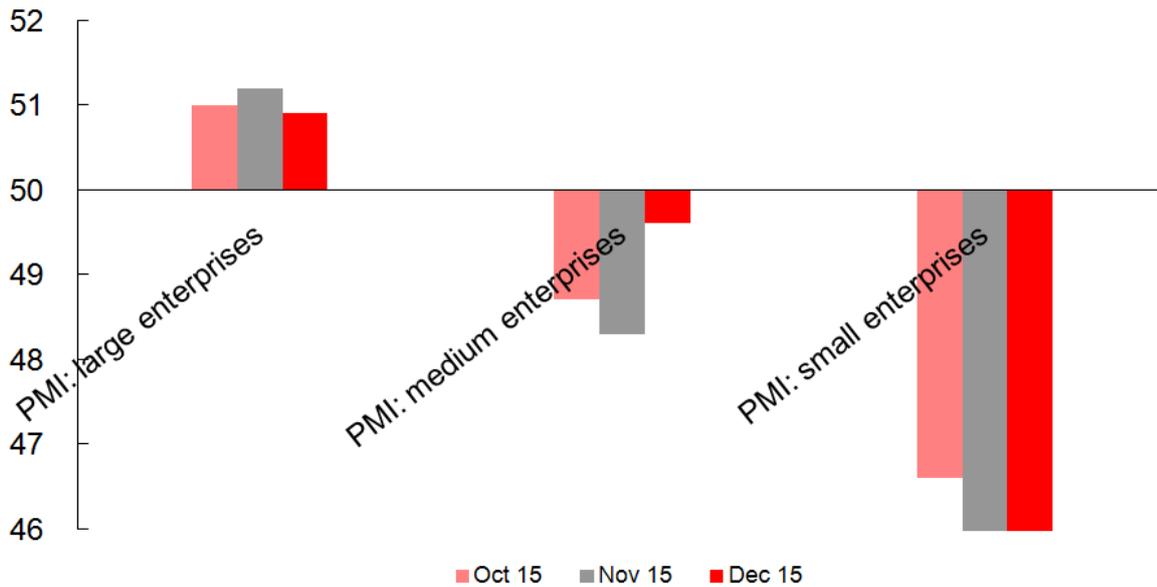
China’s manufacturing PMI has so far done a satisfactory job in predicting economic growth. Exhibit 5 plots the quarterly real GDP yoy growth rates versus the monthly PMIs since its inception. It could be seen that the PMI demonstrates a fairly good track record of forecasting the growth trend of the 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 1Q16.

Exhibit 1: Headline PMI, January 2014 to December 2015



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

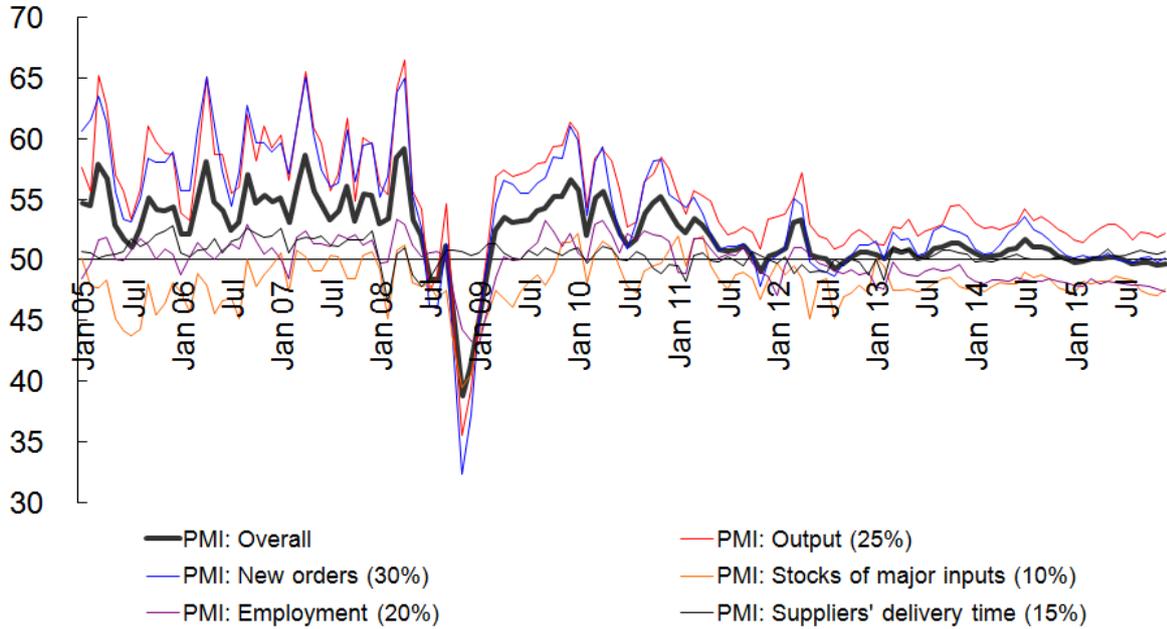
Exhibit 2: PMIs of large enterprises, medium enterprises and small enterprises, October to December 2015



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

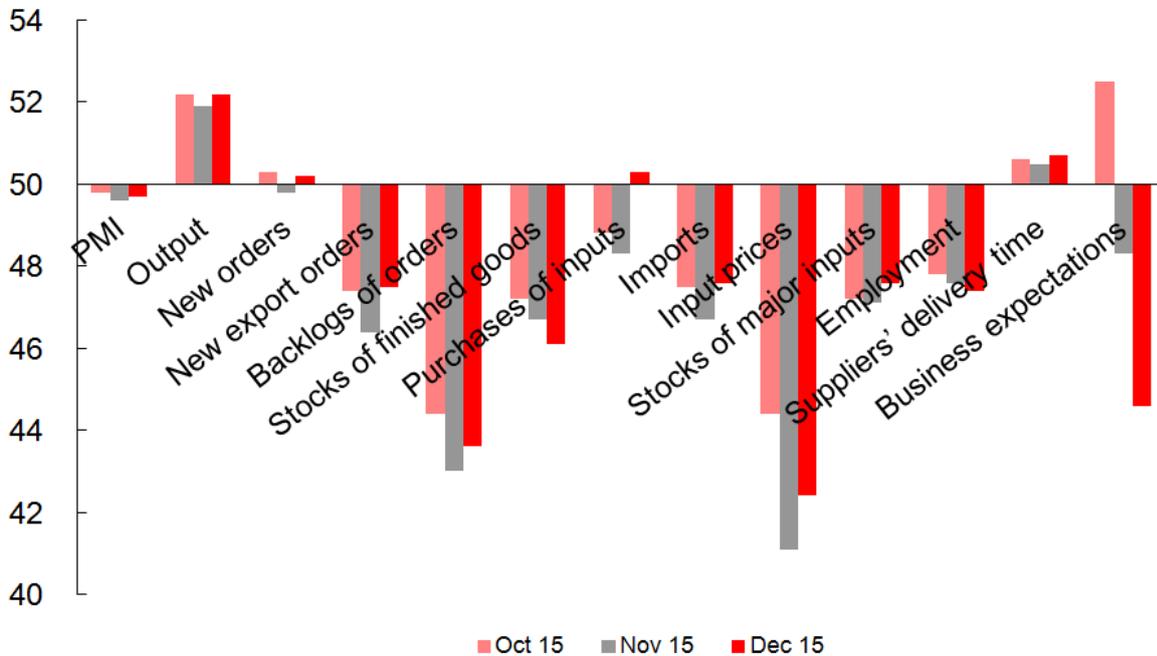
Exhibit 3: Headline PMI and sub-indices, January 2005 to December 2015

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



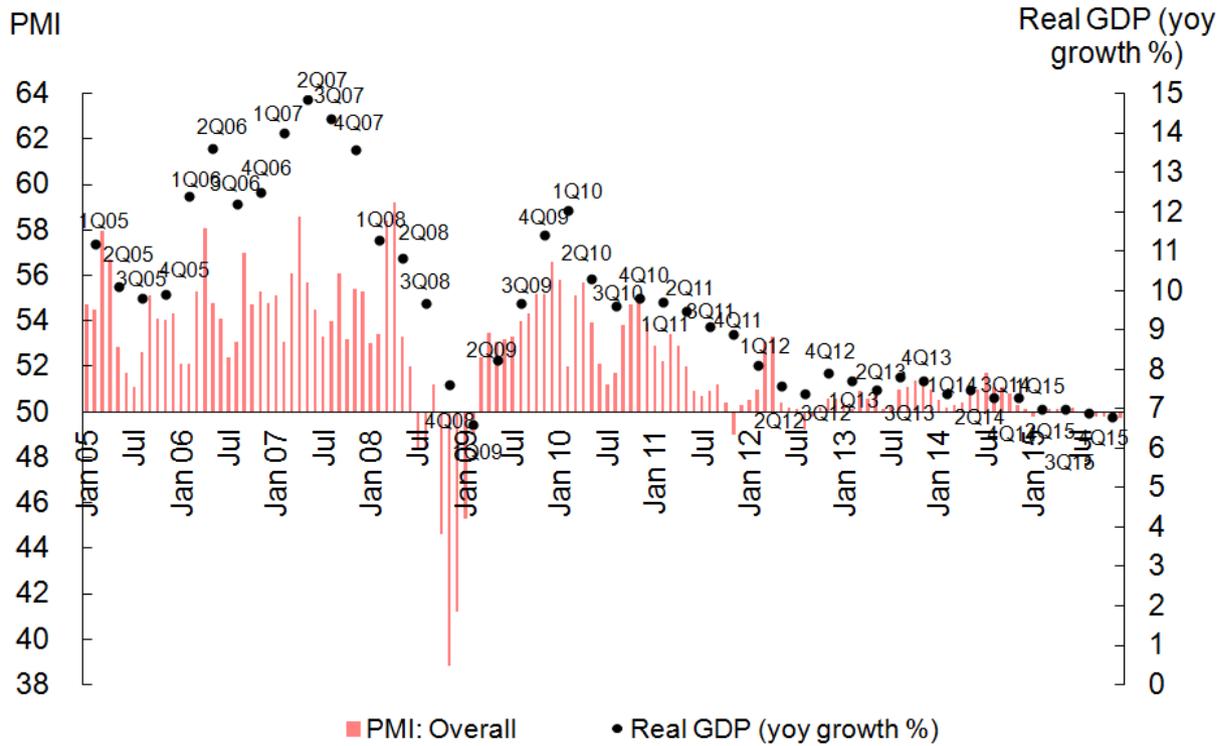
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 4: Headline PMI and all sub-indices, October to December 2015



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

Exhibit 5: Headline PMI and real GDP growth, January 2005 to December 2015



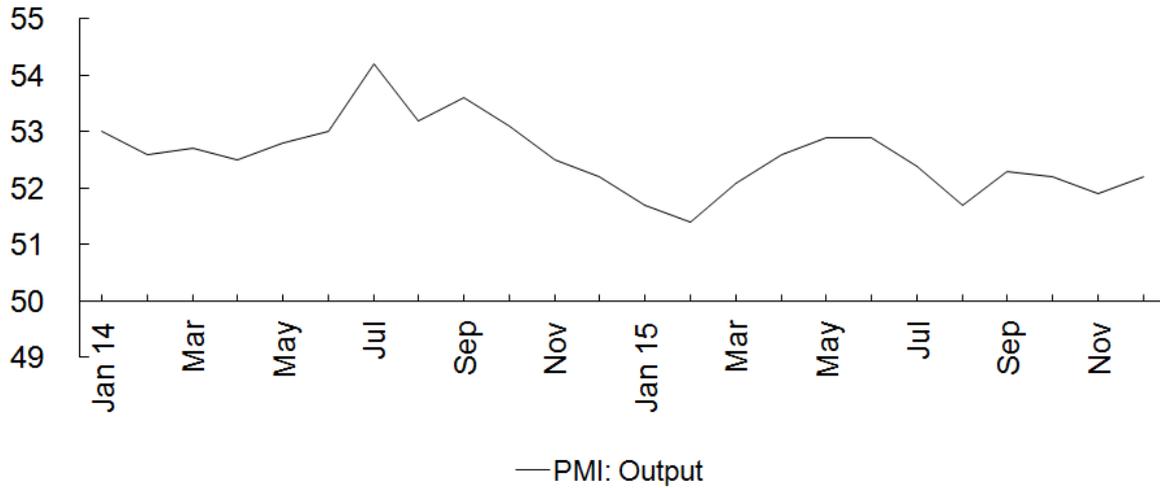
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

2. Output growth accelerates

The output index rebounded to 52.2 in December, after falling from 52.2 in October to 51.9 in November. The rise in the index in December indicates the recent acceleration in output growth. (See exhibit 6) This could be associated with the seasonal increase in production activities ahead of the Chinese New Year Holidays, as well as the positive month-on-month growth of new orders as indicated by the new orders index in December.

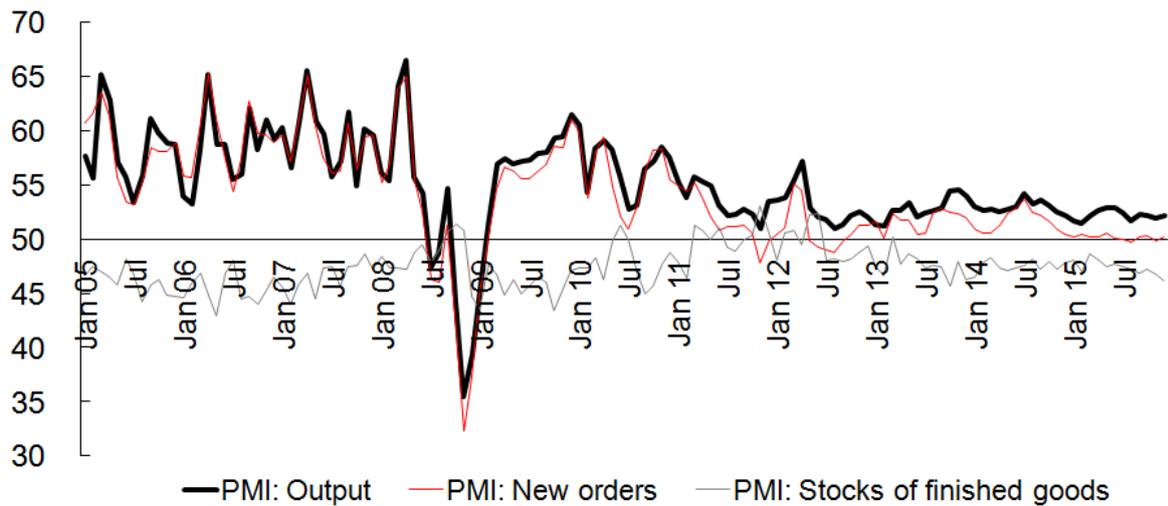
Exhibit 7 shows that the output growth was mainly fuelled by new orders growth instead of restocking activities, as the stocks of finished goods index has stayed in the contractionary zone for thirty three consecutive months. However, output may grow strongly later when manufacturers have finally run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

Exhibit 6: Output index, January 2014 to December 2015



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

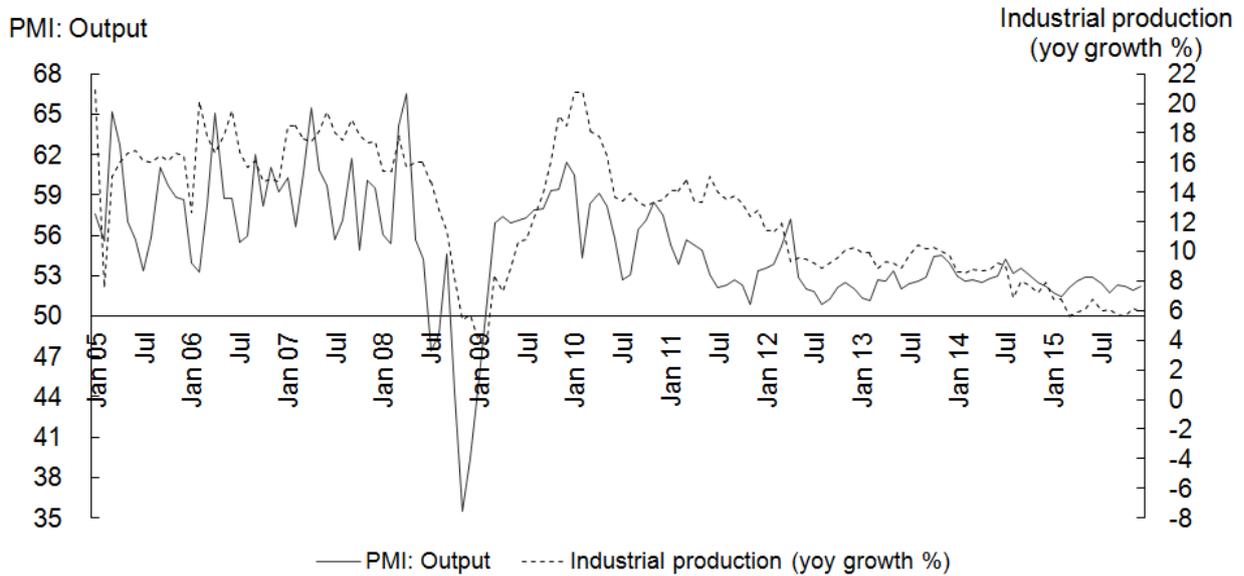
Exhibit 7: Output, new orders and stocks of finished goods, January 2005 to December 2015



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 slightly to around 6.5% yoy in 1Q16, 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, the 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 December 2015



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

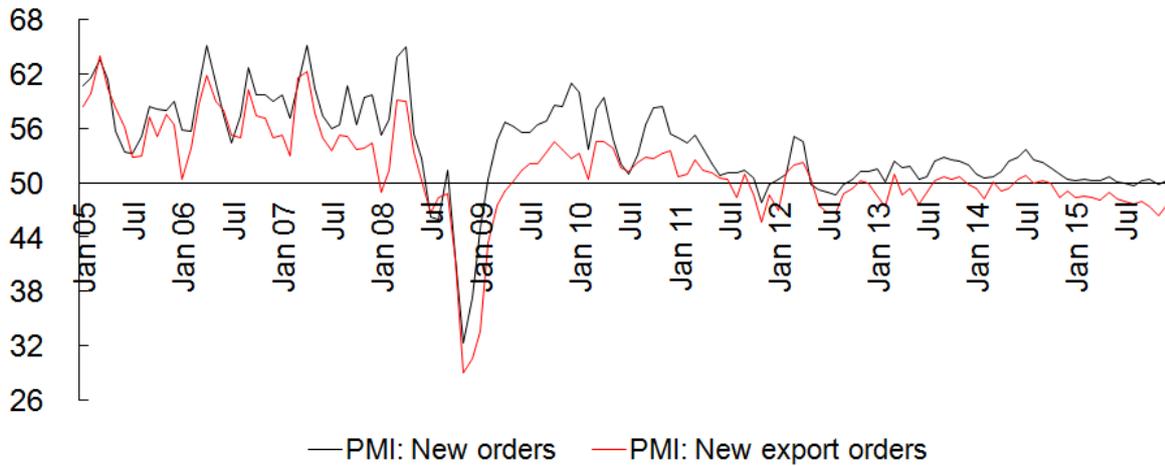
3. New orders index shows a recovery in domestic demand

After dropping from 50.3 in October to 49.8 in November, the new orders index rebounded to 50.2 in December, slightly higher than the critical 50-mark.¹ The index returned to the expansionary zone in December, indicating that the month-on-month growth of overall new orders turned positive in the month. In our view, this shows the recovery in the domestic demand for industrial products, thanks to the positive impact of policy easing measures.

Meanwhile, the new export orders index fell from 47.4 in October to the recent low of 46.4 in November, and then rebounded to 47.5 in December, still below the neutral level of 50. The December reading indicates that the new export orders have contracted at a slower pace lately. This may point to an improvement in the export situation going forward. (See exhibit 9)

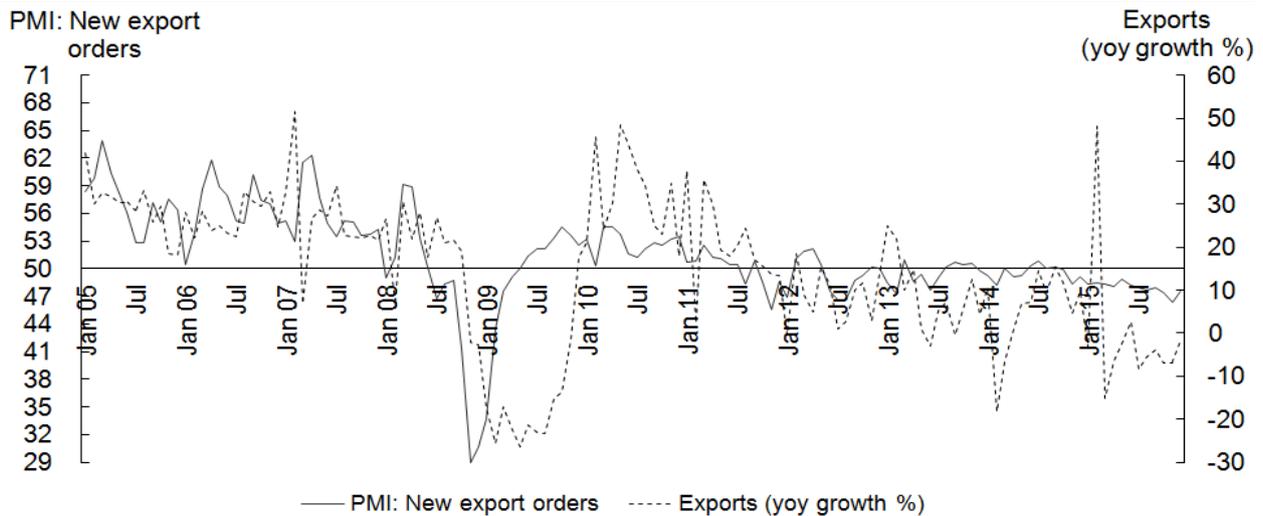
¹ The 'new orders index' covers both domestic and export orders. That is to say, the manufacturers are not asked to differentiate between domestic and export orders when filling in questionnaires.

Exhibit 9: New orders index and new export orders index, January 2005 to December 2015



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

Exhibit 10: New export orders index and export growth, January 2005 to December 2015



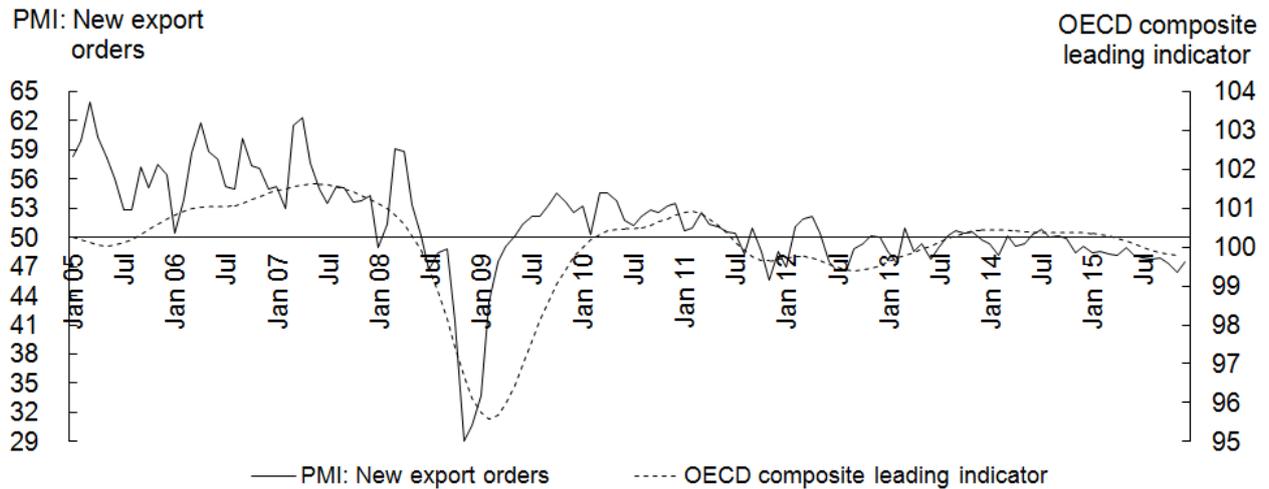
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs

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. As the new export orders index has dropped below the critical 50-mark since October 2014, we have been slightly pessimistic over China’s export outlook. Besides, 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 indicator² has continued its downward trend in recent months, which

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.

confirms our relatively pessimistic outlook for China’s exports. All in all, we expect that China’s exports will continue to drop, but at a slower pace, in 1Q16.

Exhibit 11: New export orders index and OECD composite leading indicator, January 2005 to December 2015



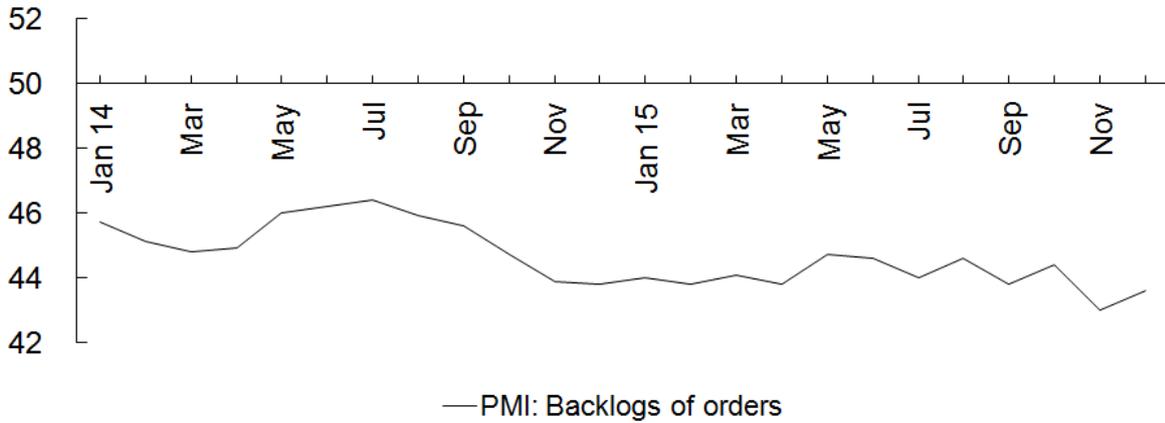
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Organization for Economic Cooperation and Development

4. Backlogs of orders continue to drop

The backlogs of orders index dropped from 44.4 in October to 43.0 in November, before rising to 43.6 in December. The index has been in the contractionary zone since April 2012, indicating that backlogs of orders have continued to drop. (See exhibit 12)

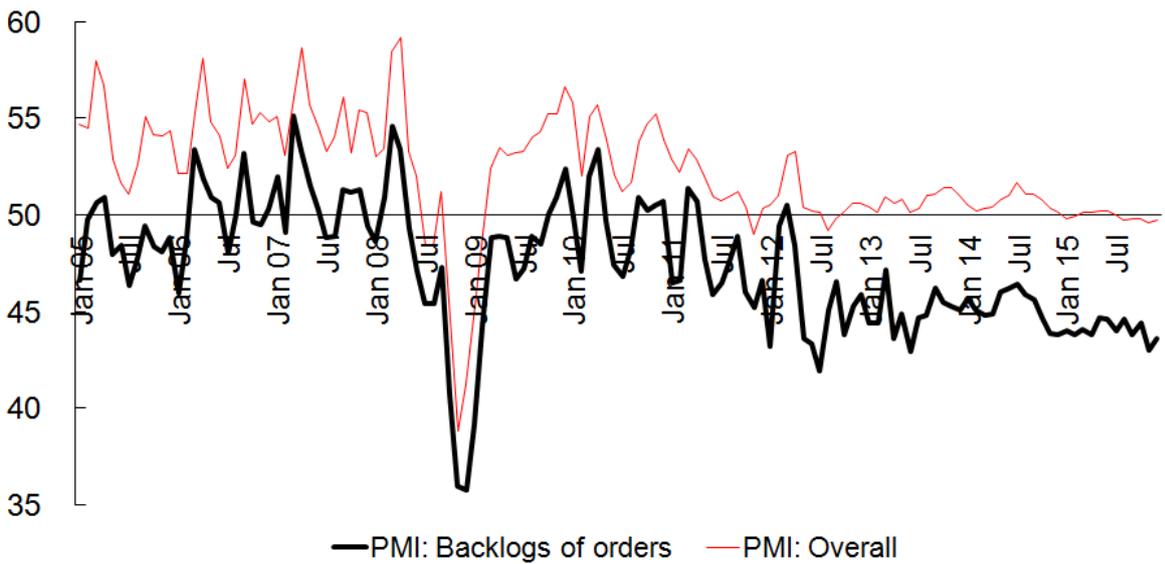
Looking ahead, we expect the index to stay relatively stable in the near term, as indicated by the apparently very high correlation between the sub-index and the headline PMI, and the recent stabilization of the headline PMI. (See exhibit 13)

Exhibit 12: Backlogs of orders index, January 2014 to December 2015



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

Exhibit 13: Backlogs of orders index and headline PMI, January 2005 to December 2015

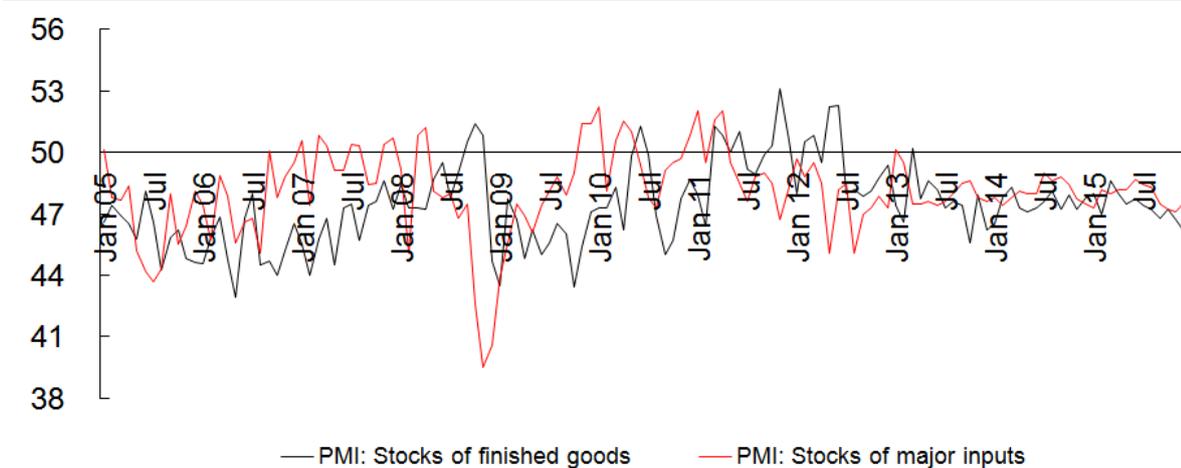


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

5. Destocking activities quicken

The stocks of finished goods index stayed below the neutral level of 50 in the past three months. The index dropped all the way from 47.2 in October to 46.1 in December, suggesting that destocking activities have quickened. Meanwhile, the stocks of major inputs index fluctuated in the narrow range of 47.1 and 47.6 throughout October to December, still below the critical 50-mark. Manufacturers have continued to reduce their stocks of production inputs. (Exhibit 14)

Exhibit 14: Stocks of finished goods index and stocks of major inputs index, January 2005 to December 2015



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

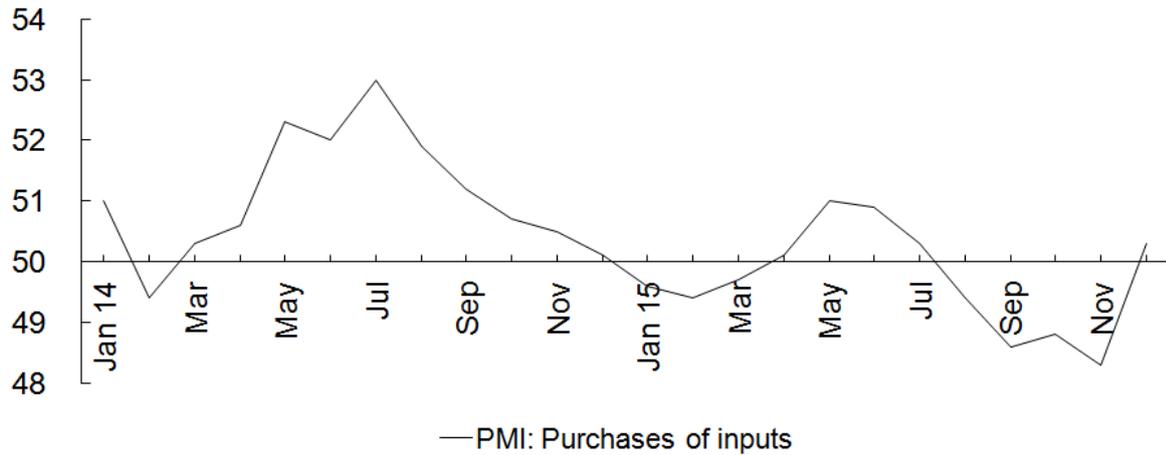
6. Purchasing activities increase

For the first time in five months, the purchases of inputs index was above the critical 50-mark in December. The index registered 48.8 in October and 48.3 in November, before rising strongly by 2.0 pts to 50.3 in December. (Exhibit 15) The latest index reading suggests that purchasing activities have started to increase recently.

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, as the new orders index rose above the critical 50-mark in December, indicating that the month-on-month growth of new orders has turned positive lately.

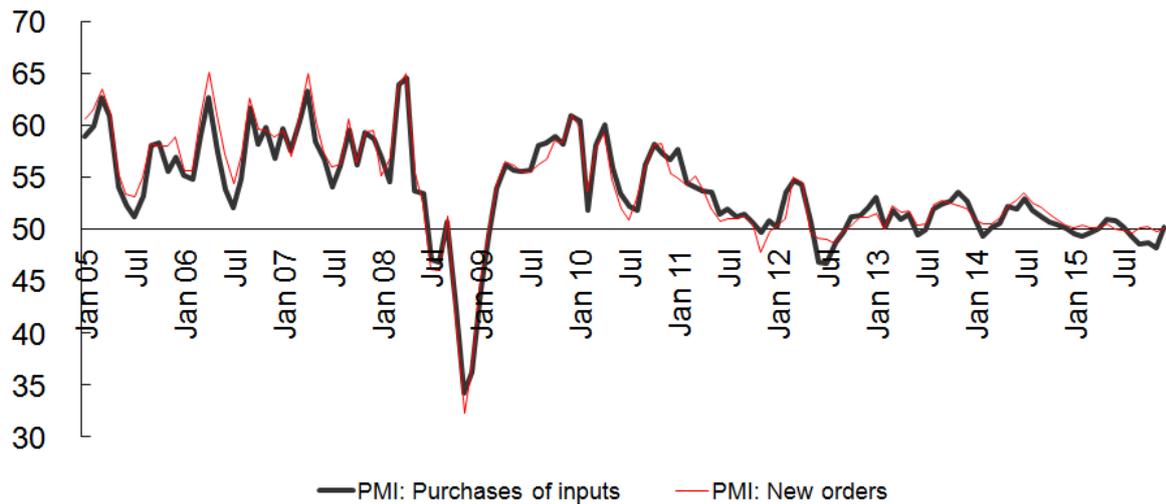
The purchasing activities also reflect business confidence. Exhibit 17 shows the association between the purchases of inputs index and the business expectations index. Credit conditions could be another factor. Finally, exhibit 18 shows that input prices, as well as the expected trend of input prices, are also important considerations when making purchasing decisions.

Exhibit 15: Purchases of inputs index, January 2014 to December 2015



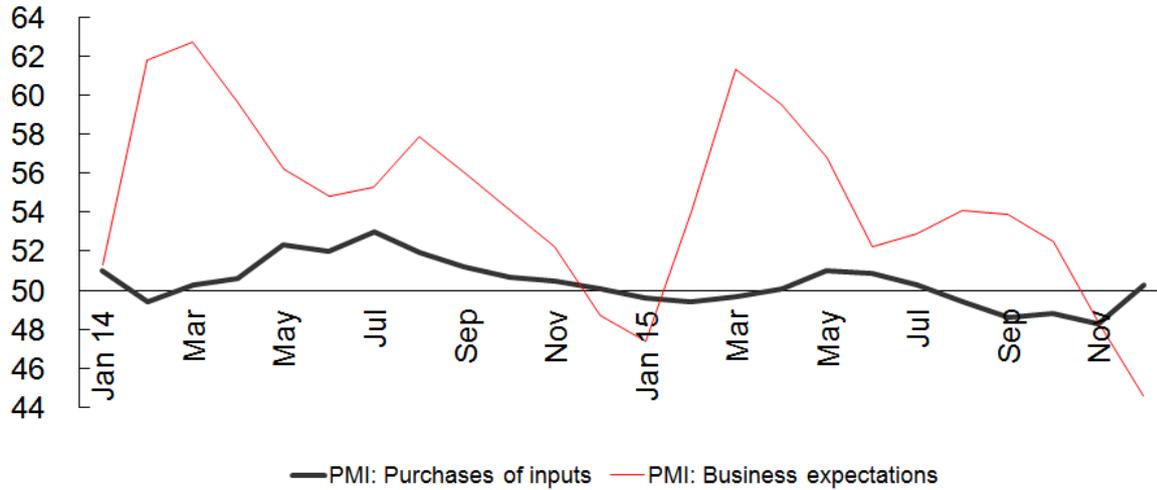
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 16: Purchases of inputs and new orders, January 2005 to December 2015



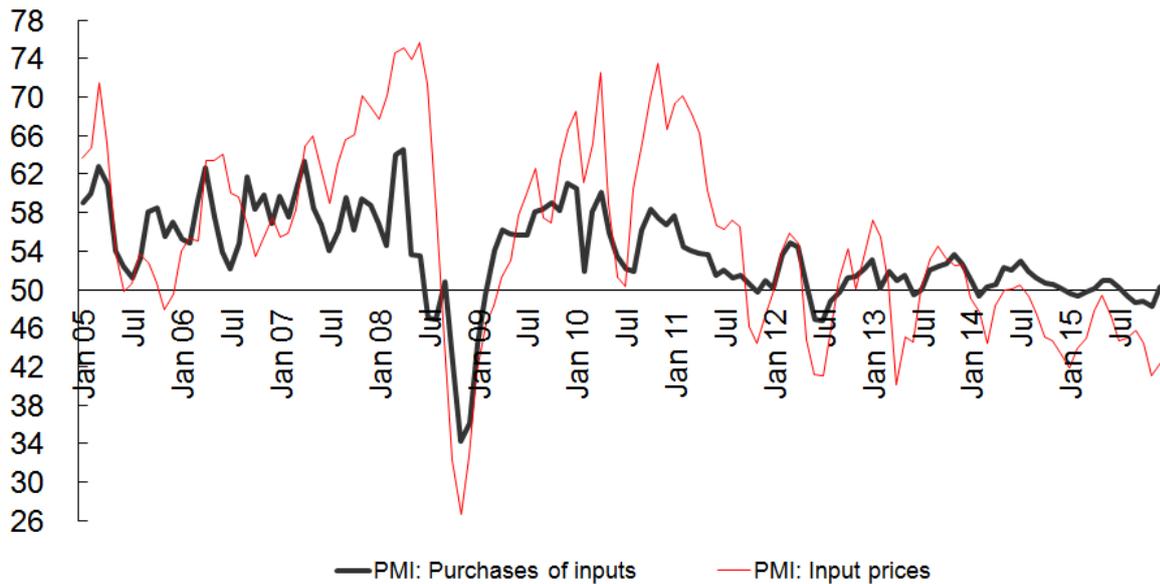
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 17: Purchases of inputs and business expectations, January 2014 to December 2015



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

Exhibit 18: Purchases of inputs and prices of major inputs, January 2005 to December 2015

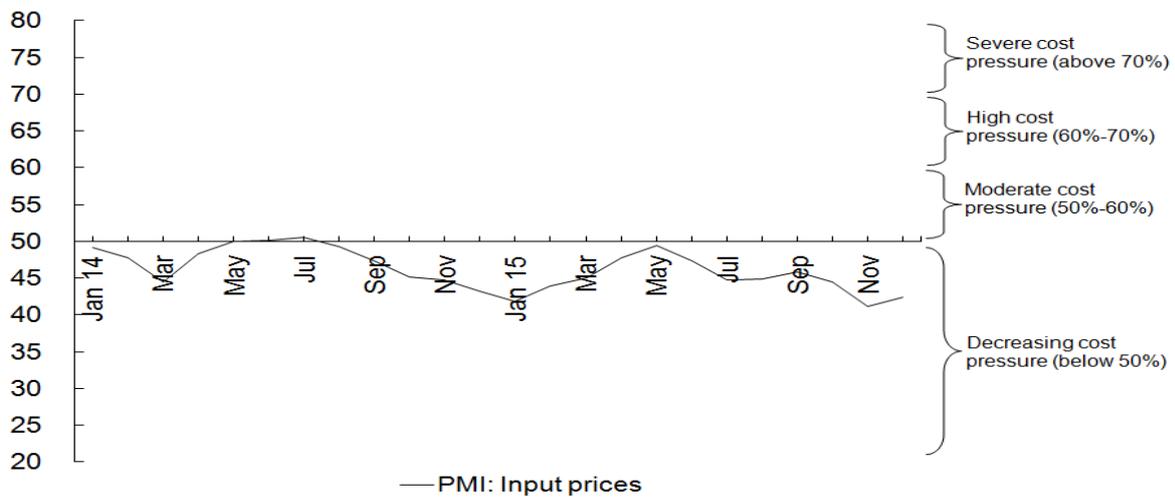


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

7. Input prices index shows a small rebound

After dropping from 44.4 in October to 41.1 in November, the lowest level since May 2013, the input prices index showed a rebound to 42.4 in December. (Exhibit 19) The December reading was still well below the critical 50-mark, indicating that the deflationary pressures on prices of production inputs persist; Manufacturers have continued to see a drop in their costs of raw materials.

Exhibit 19: Input prices index, January 2014 to December 2015



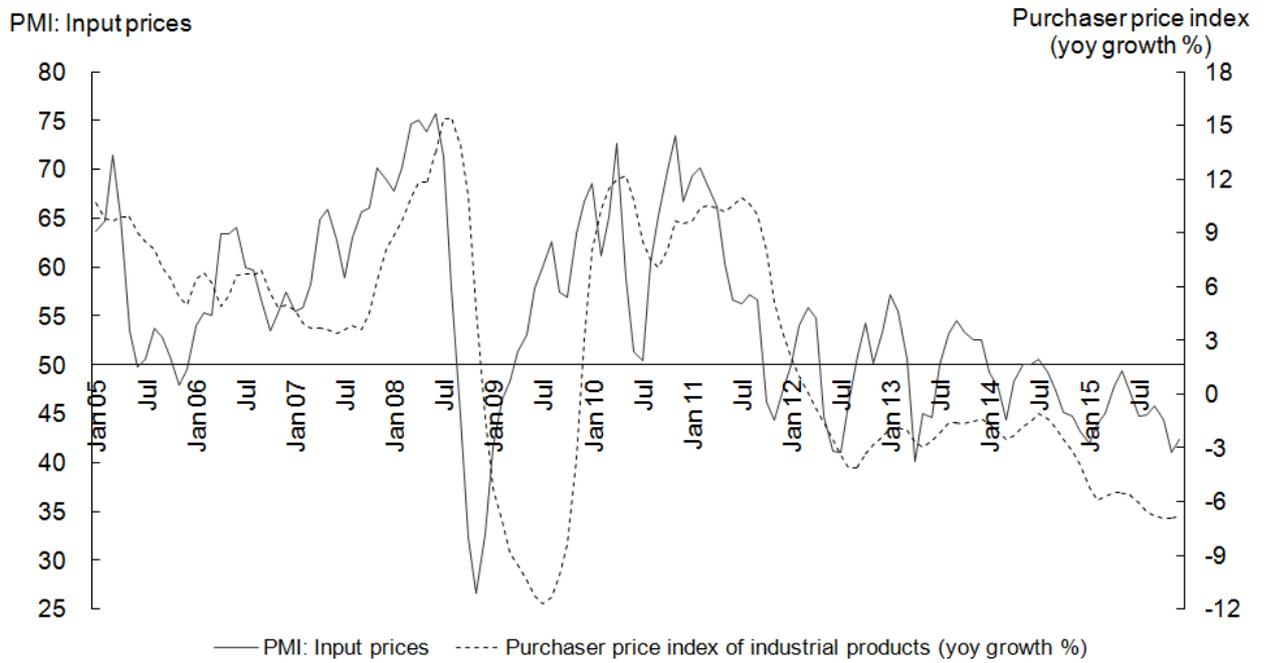
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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 stay low in near future. We also forecast the CPI growth to fluctuate between 1.3% and 2.0% yoy in 1Q16. 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.

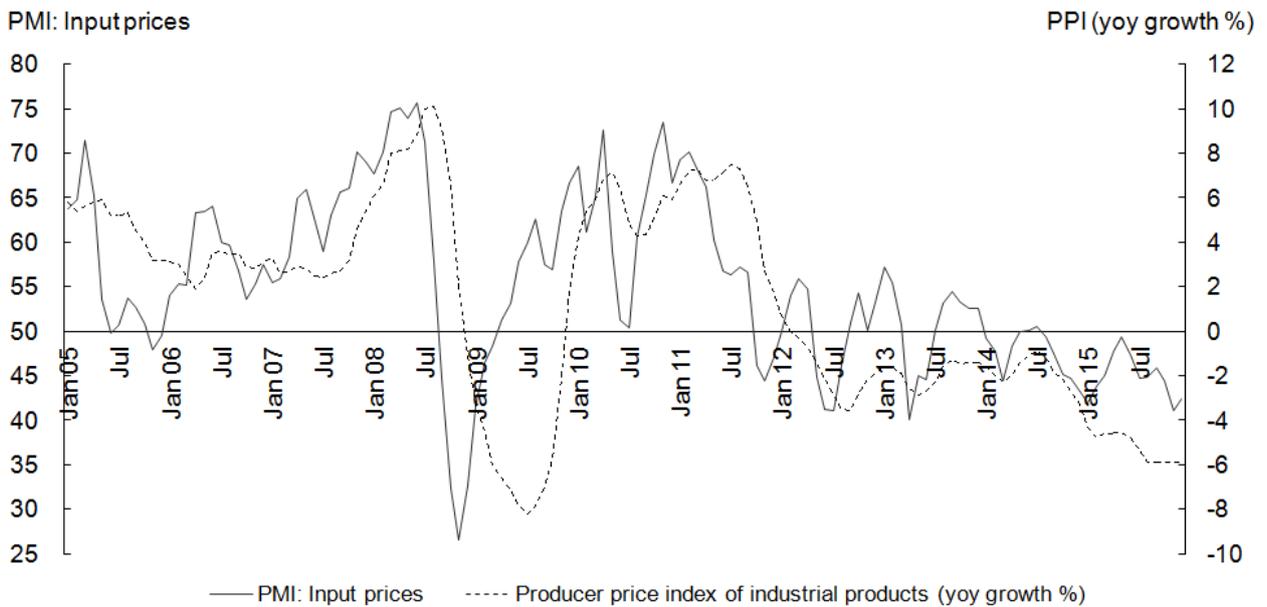
4 The Thomson Reuters/ CoreCommodity CRB Index, which comprises 19 commodities such as crude oil, aluminum, corn, cotton, gold, natural gas, soybeans, etc, has served as one of the most recognized measures of global commodities markets.

Exhibit 20: Input prices index and purchaser price index of industrial products, January 2005 to December 2015



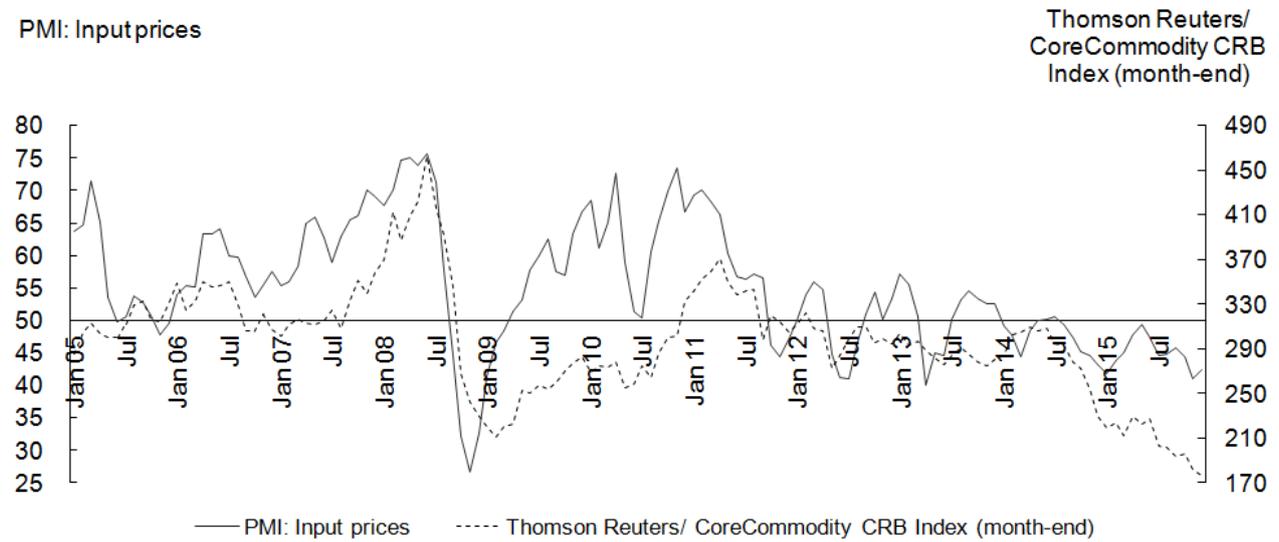
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 21: Input prices index and producer price index, January 2005 to December 2015



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

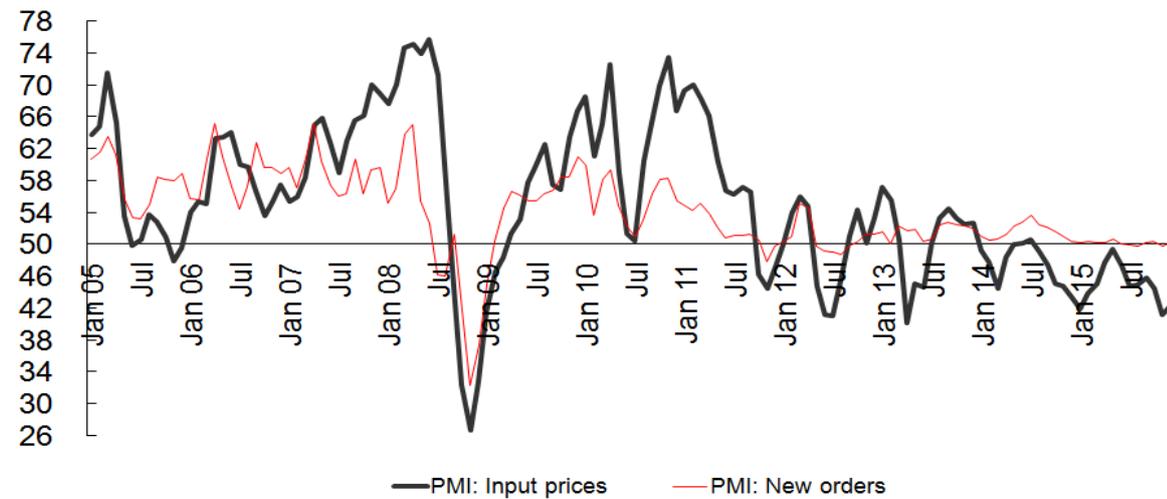
Exhibit 22: Input prices index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to December 2015



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 growth of new orders has turned positive, while input prices have continued the downward trend. This bodes well for manufacturers’ profit margins in the coming future.

Exhibit 23: Input prices and new orders, January 2005 to December 2015

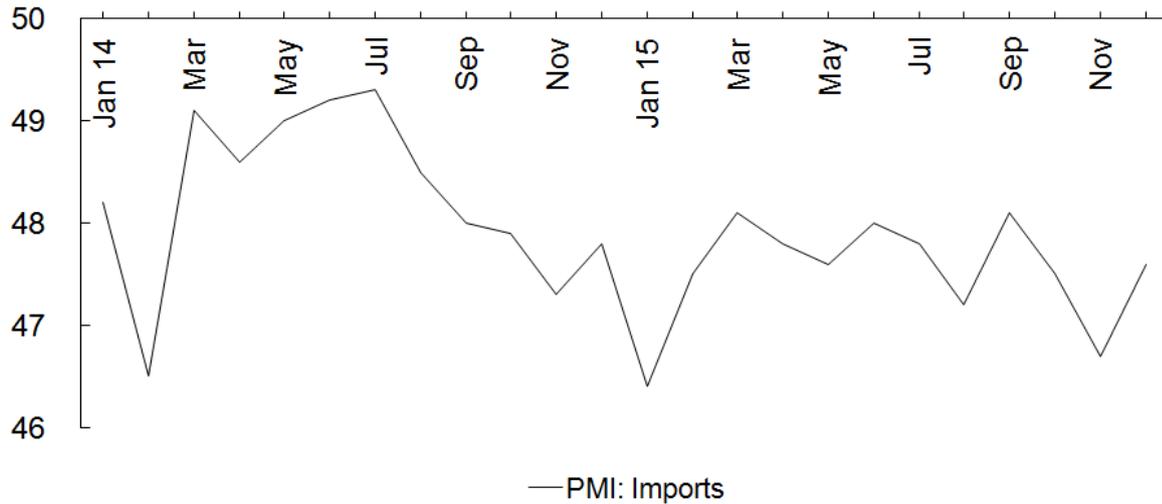


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

8. Imports of production inputs continue to contract

The imports index stayed between 46.7 and 47.6 in October to December, still below the critical 50-mark. This indicates that the domestic demand for raw materials and parts used in manufacturing has remained sluggish. (Exhibit 24)

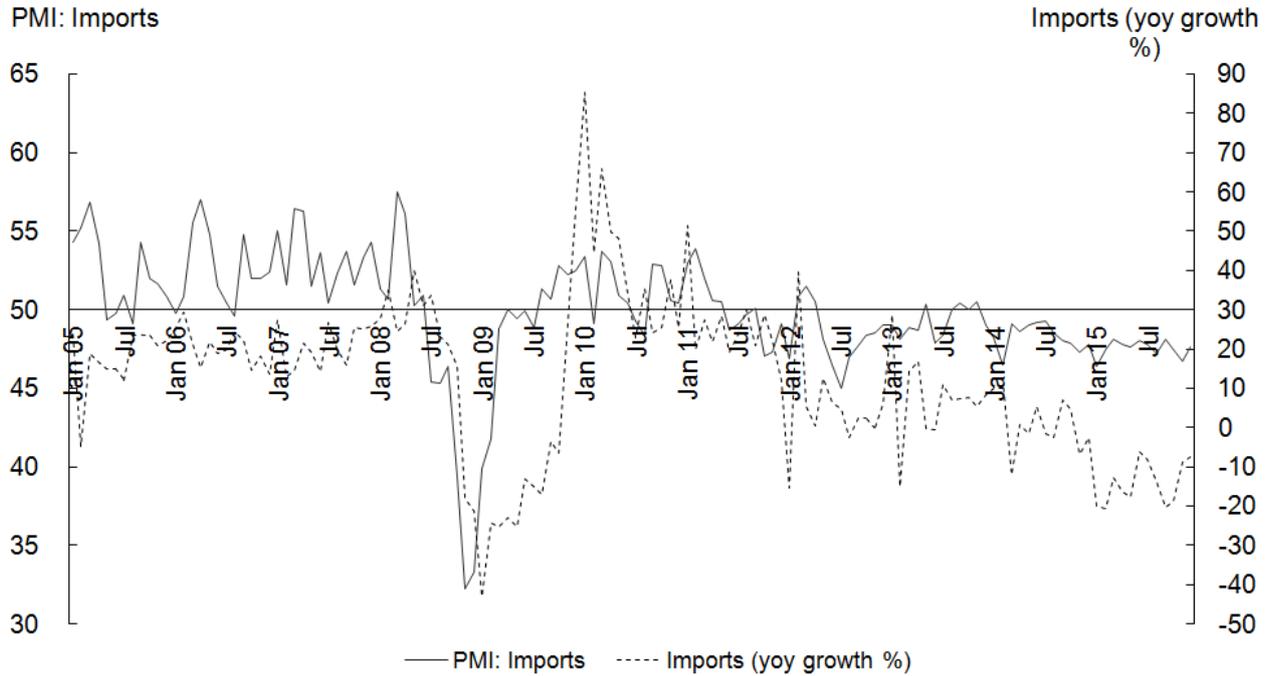
Exhibit 24: Imports index, January 2014 to December 2015



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

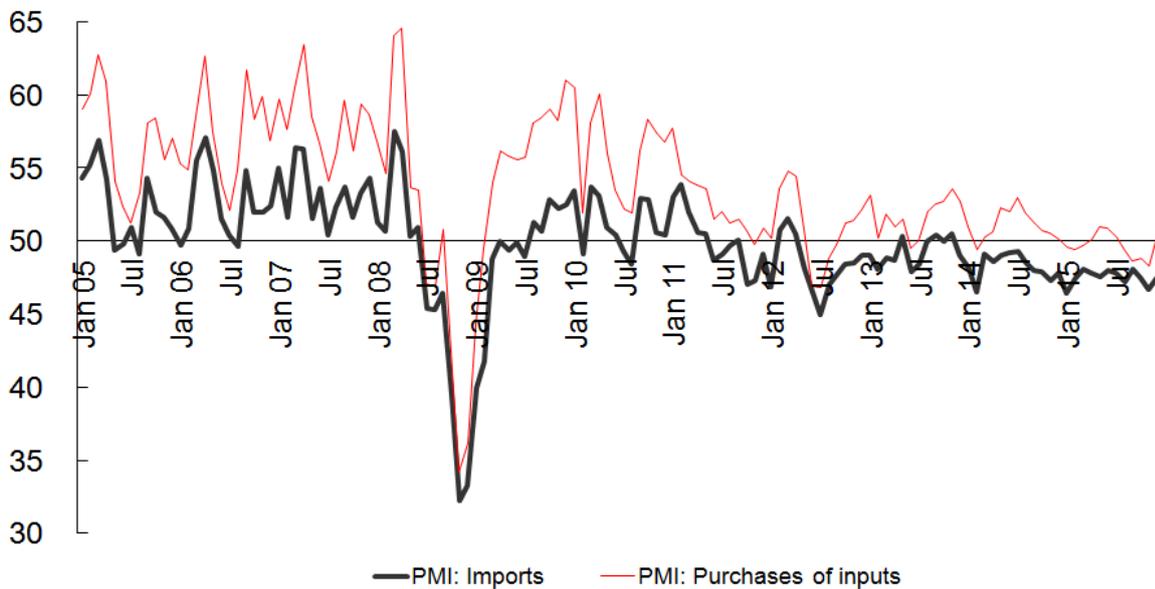
Exhibit 25 shows that the imports index is highly correlated (with some lags) to the import yoy growth rate. We expect import growth to stay weak in 1Q16. Exhibit 26 illustrates the strong association between the imports index and the purchases of inputs index – as Chinese manufacturers purchase a large 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 since inception. (Exhibit 27)

Exhibit 25: Imports index and import growth, January 2005 to December 2015



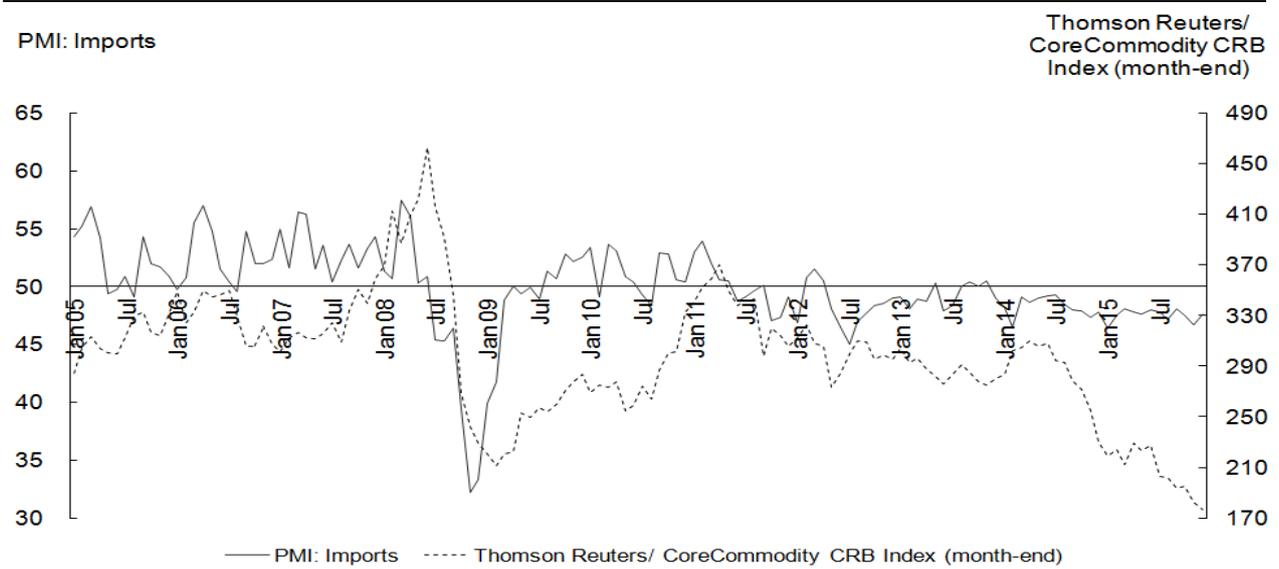
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs

Exhibit 26: Imports and purchases of inputs, January 2005 to December 2015



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

Exhibit 27: Imports index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to December 2015

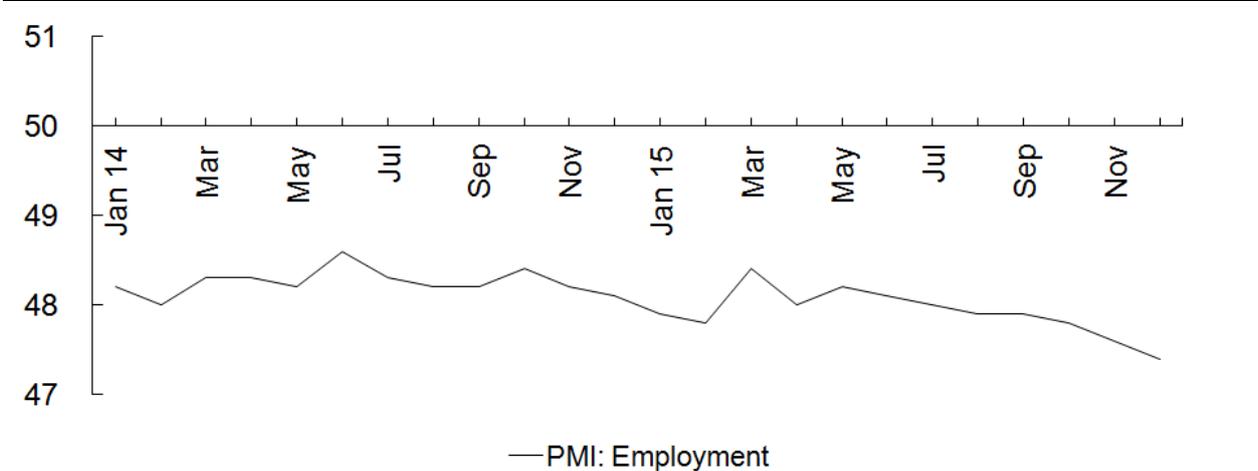


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Thomson Reuters

9. Employment in the manufacturing sector shrinks

The employment index dropped slightly from 47.8 in October to 47.6 in November, and further to 47.4 in December. The index has stayed below the neutral level of 50 for 43 consecutive months, indicating that employment in the manufacturing sector has continued to shrink. Also noteworthy is that the December index reading was the lowest since February 2012, suggesting the aggravating employment problem in the manufacturing sector. (Exhibit 28)

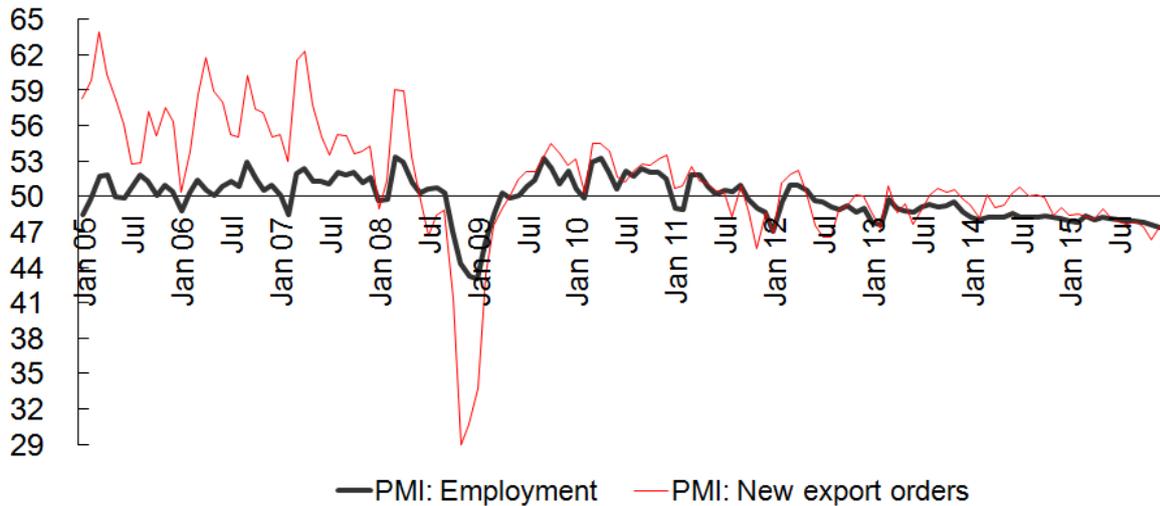
Exhibit 28: Employment index, January 2014 to December 2015



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

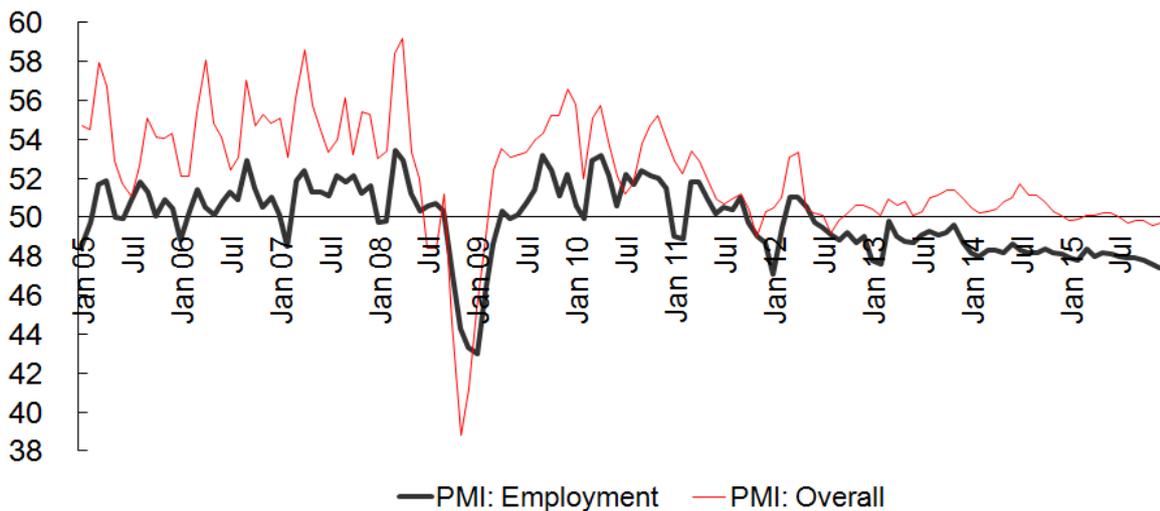
Exhibit 29 proves that the employment in China’s manufacturing sector has relied heavily on the export sector. Exhibit 30 and 31 give our readers some ideas about the extent to which the employment situation improves or deteriorates with the manufacturing sector and the overall economy.

Exhibit 29: Employment and new export orders, January 2005 to December 2015



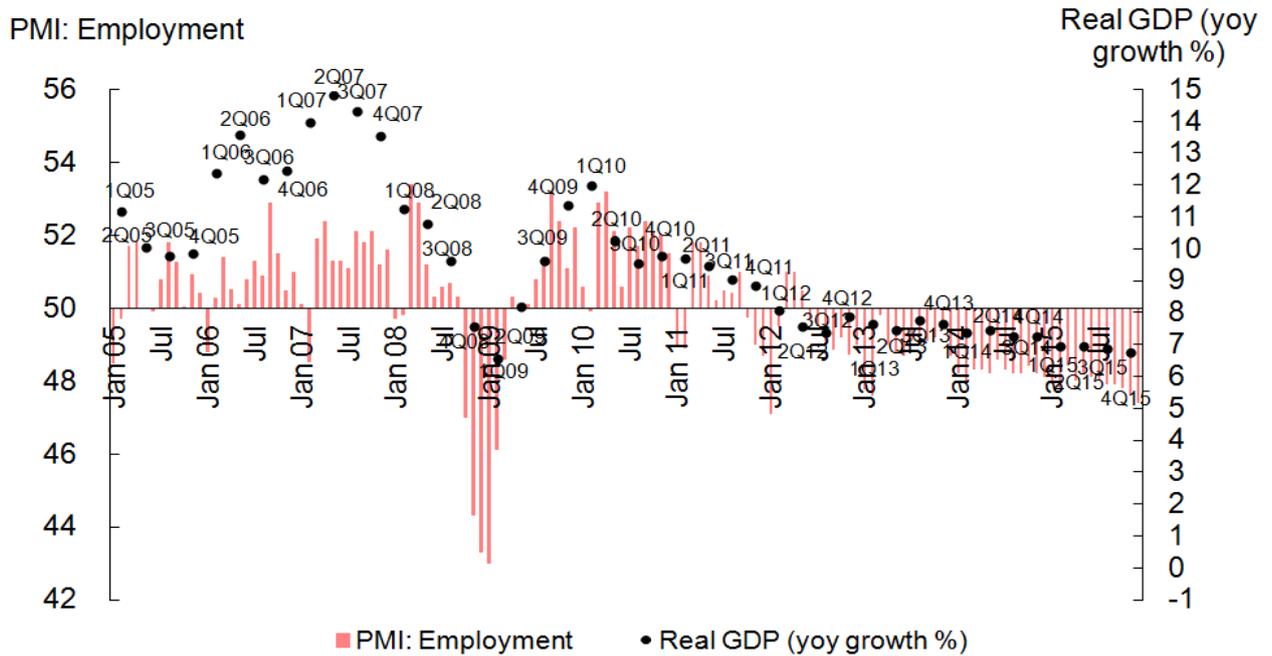
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 30: Employment index and headline PMI, January 2005 to December 2015



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

Exhibit 31: Employment index and real GDP growth, January 2005 to December 2015

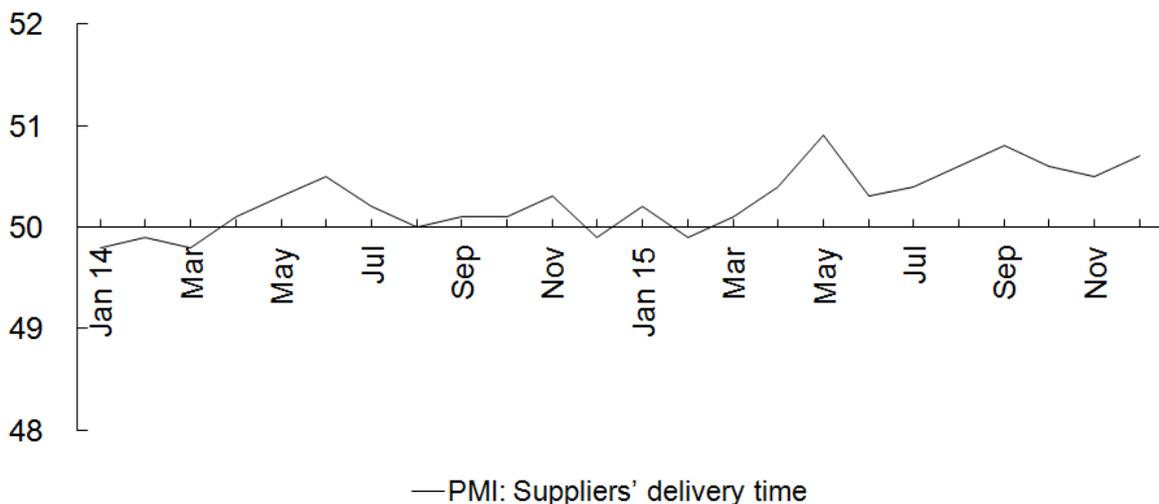


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

10. Suppliers' delivery continue to accelerate

The suppliers' delivery time index stayed above the neutral level of 50 in the past few months, registering 50.6, 50.5 and 50.7 in October, November and December respectively. The index readings suggest that suppliers' delivery has continued to accelerate. (Exhibit 32)

Exhibit 32: Suppliers' delivery time index, January 2014 to December 2015

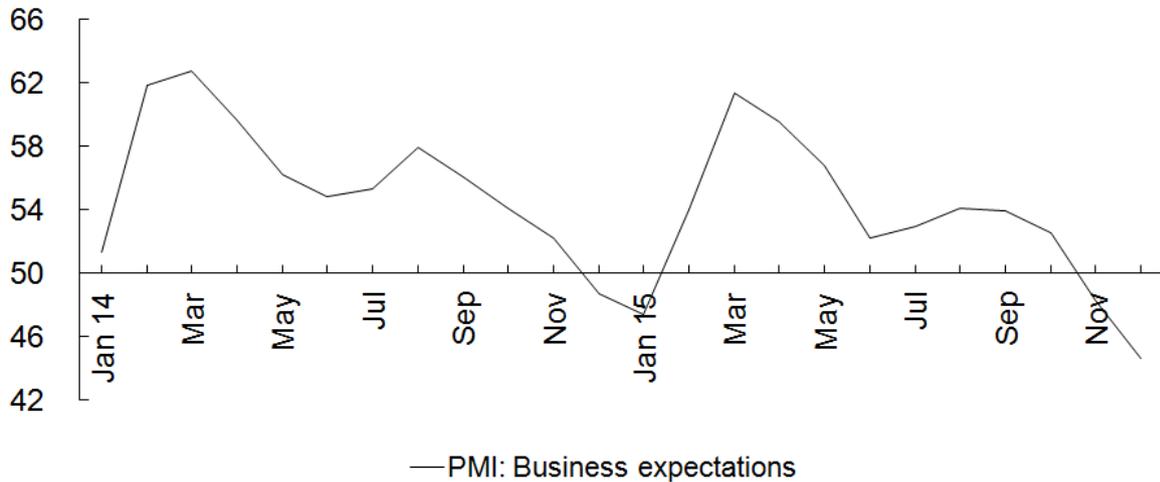


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

11. Chinese manufacturers become pessimistic

The business expectations index dropped all the way from 54.1 in August to 44.6 in December, the lowest on record since the sub-index was introduced in January 2013. (See exhibit 33) In fact, the index has been below the critical 50-mark since November last year, indicating that purchasing managers have become pessimistic about the near term outlook for their respective industries.

Exhibit 33: Business expectations index, January 2014 to December 2015



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.





www.fbicgroup.com

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