

PMI Quarterly on China Manufacturing

China Federation of Logistics & Purchasing

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PMI shows signs of stabilization in the manufacturing sector and the economy

- Output index rises to 12-month high.
- Both new orders index and new export orders index trend downward.
- Backlogs of orders index stays in contractionary territory.
- Destocking activities continue.
- Purchases of inputs index falls.
- Input prices increase at a slower pace.
- Imports index drops below 50.
- Employment in the manufacturing sector continues to shrink.
- Suppliers' delivery accelerates.
- Chinese manufacturers become less optimistic.

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1. PMI shows signs of stabilization in the manufacturing sector and the economy

After having stayed in the contractionary zone for seven consecutive months, China's manufacturing PMI rose above the critical 50-mark in March. The PMI then stood at 50.1 in April and May, before edging down to 50.0 in June. The index readings in recent months show signs of stabilization in the manufacturing sector and the economy. That being said, the manufacturing sector and the economy are still not on solid footing, in our view. (See exhibit 1)

It is noteworthy to recognize the discrepancy by size of enterprises. The PMI of 'large enterprises' fell from 51.0 in April to 50.3 in May, before rebounding to 51.0 in June. The index stayed above the critical 50-mark in the past three months, indicating the continuous expansion of 'large enterprises'. Meanwhile, after having risen for four consecutive months, the PMI of 'medium enterprises' dropped to a three-month low of 49.1 in June, suggesting that the recovery of 'medium enterprises' is not stable. The PMI of 'small enterprises' rose from 46.9 in April to 48.6 in May, before dropping to 47.4 in June. The index stayed in the contractionary zone in the past three months, indicating the difficult situations facing 'small enterprises'. (See exhibit 2)

The PMI stayed between 50.0 and 50.1 throughout April to June, suggesting that the economy has been stabilizing. This could be attributed to the relatively strong growth of infrastructure investment and retail sales in recent months. Several sub-indices show positive signs for the economy. For example, the output index rose to a twelve-month high of 52.5 in June. Besides, the new orders index has stayed in the expansionary zone for four consecutive months from March to June. Nevertheless, the index has been on a downward trend in recent months, indicating the moderation in demand growth. Meanwhile, the purchases of inputs index fell from 51.2 in May to 50.5 in June, the lowest level in four months, indicating that the growth of purchasing activities has decelerated recently. This may also suggest that the business confidence has waned lately.

To keep stable economic growth, the Chinese government is likely to further boost the domestic demand in coming future. On the monetary front, the central bank will ensure abundant liquidity. On the fiscal front, the government will increase fiscal expenditure as well as infrastructure investment. All these efforts are set to maintain a stable macroeconomic environment that favours the implementation of reforms. It is noteworthy that one of the major policy focuses of the government is to push forward structural reforms, especially the 'supply-side reforms'; the five major tasks of 'supply-side reforms' include tackling the overcapacity problem, reducing housing inventories, de-leveraging, reducing costs on enterprises and shoring up weak areas.

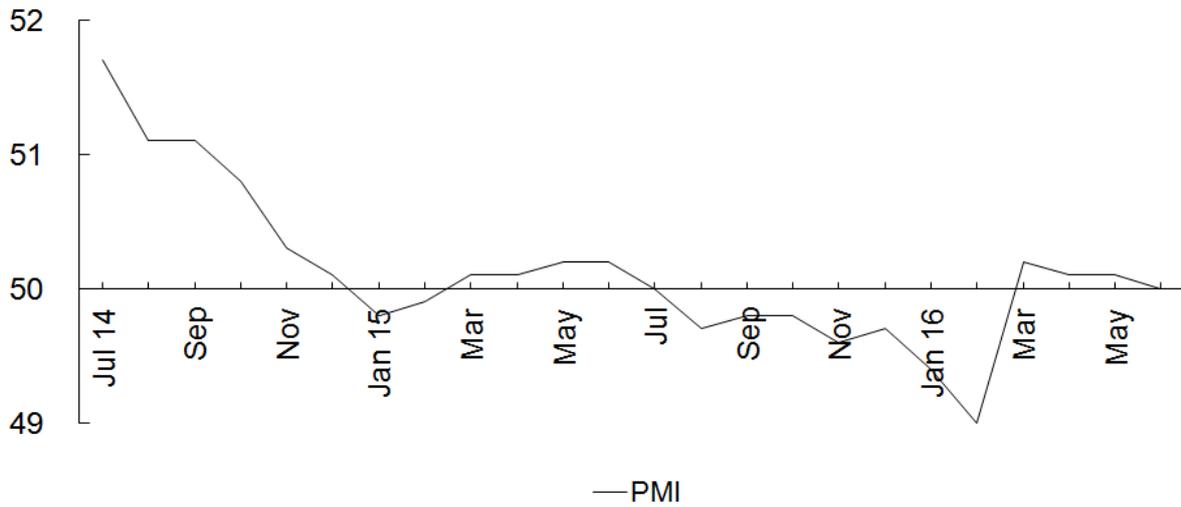
We predict that, as the positive impact of the booming property market and the government's

moves to lower taxes and fees unfolds, China's economic growth will be relatively stable, albeit with some fluctuations, in coming future. Going forward, we expect the headline PMI to hover around 50 in 3Q16. We also forecast the real GDP growth to be around 6.7% yoy in 3Q16. That being said, challenges facing Chinese manufacturers remain, including greater economic uncertainty caused by the 'Brexit' decision, increasing labour and environmental costs, intense competition in the international market, a rise in foreign trade protectionism and weaker luxury spending. Overall, we expect that the industrial production (VAIO) growth will stay stable or rebound a bit to 6.2% yoy in 3Q16.

Exhibit 3 shows that the slight drop in the headline PMI in June was attributed to the fall in the new orders index (which weighs 30% in the computation of the headline PMI), the stocks of major inputs index (weighs 10%), the employment index (weighs 20%) and the rise in the suppliers' delivery time index (weighs 15%). Among the 12 sub-indices, 6 stayed in the expansionary zone over the past three months (output, new orders, purchases of inputs, input prices, suppliers' delivery time and business expectations). Meanwhile, the indices of backlogs of orders, stocks of finished goods, imports, stocks of major inputs and employment stayed below 50 throughout the past three months. In June, except for the indices of output and suppliers' delivery time, all sub-indices were lower than their respective levels in the previous month. (See exhibit 4)

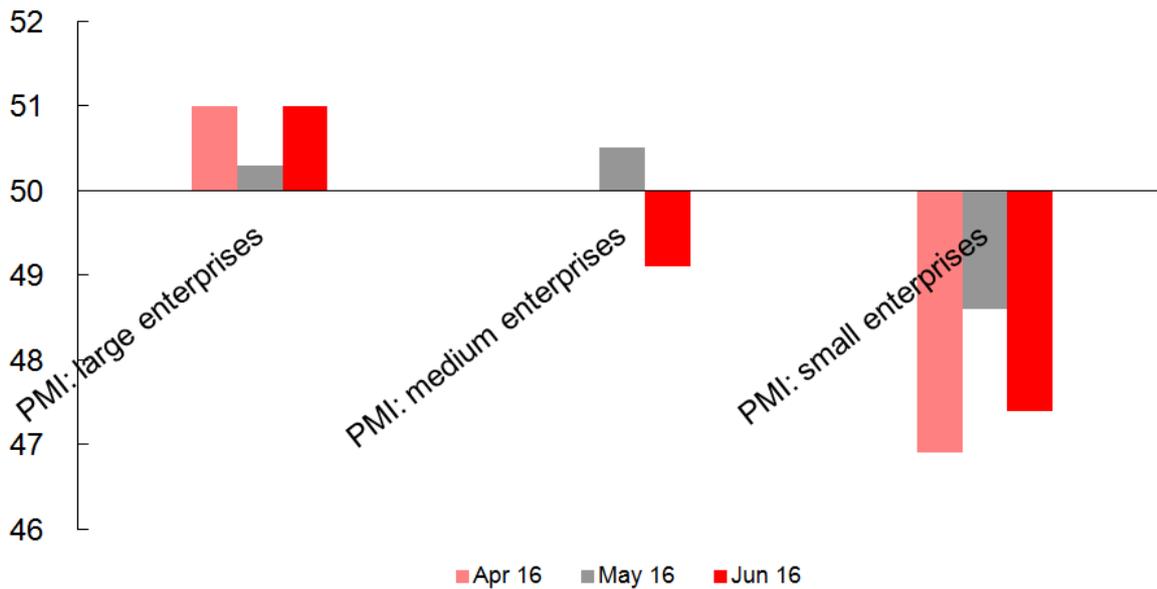
China's manufacturing PMI has so far done a satisfactory job in predicting economic growth. Exhibit 5 plots the quarterly real GDP yoy growth rates versus the monthly PMIs since its inception. It could be seen that the PMI demonstrates a fairly good track record of forecasting the growth trend of the economy at least over the next few months. Based on this chart we project that the real GDP growth will be around 6.7% yoy in 3Q16.

Exhibit 1: Headline PMI, July 2014 to June 2016



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

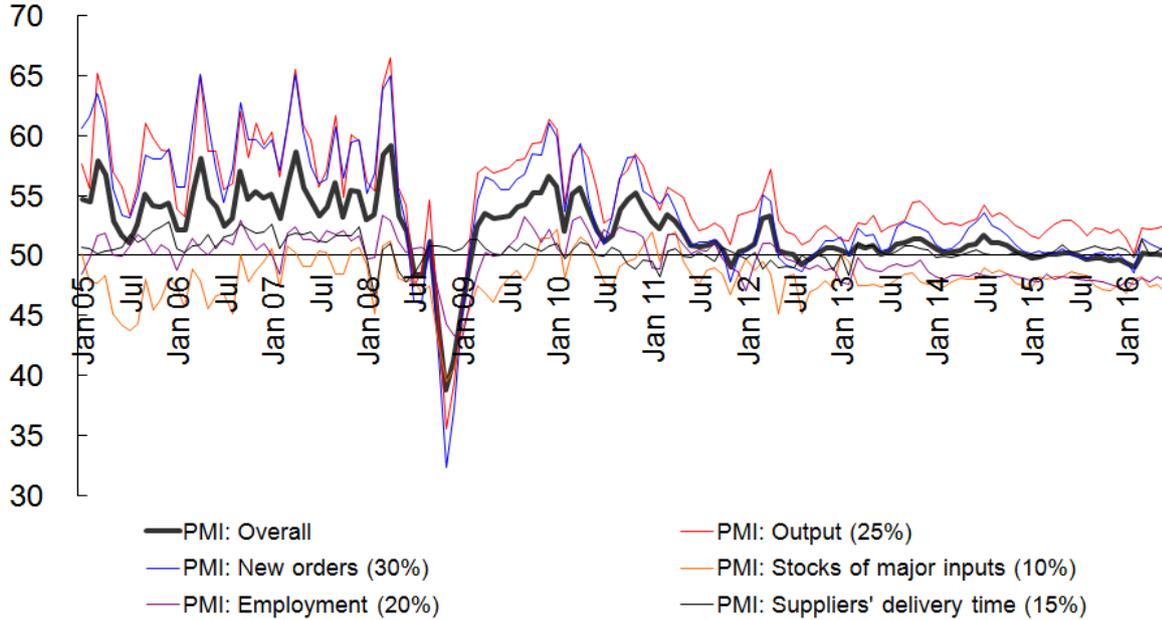
Exhibit 2: PMIs of large enterprises, medium enterprises and small enterprises, April to June 2016



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

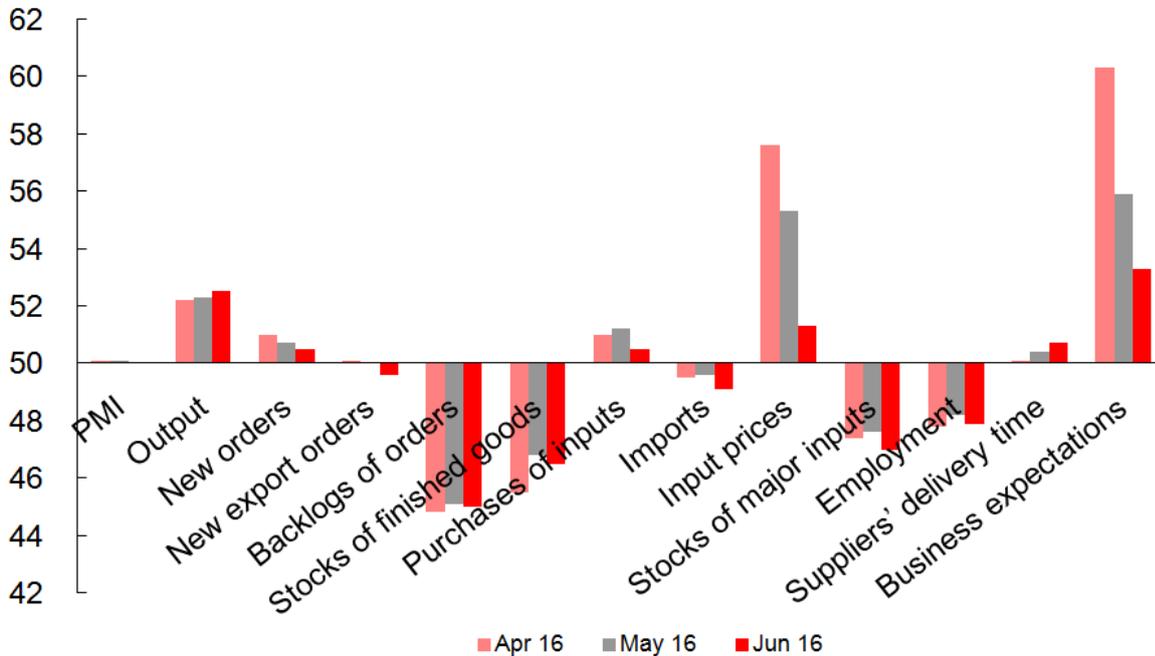
Exhibit 3: Headline PMI and sub-indices, January 2005 to June 2016

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



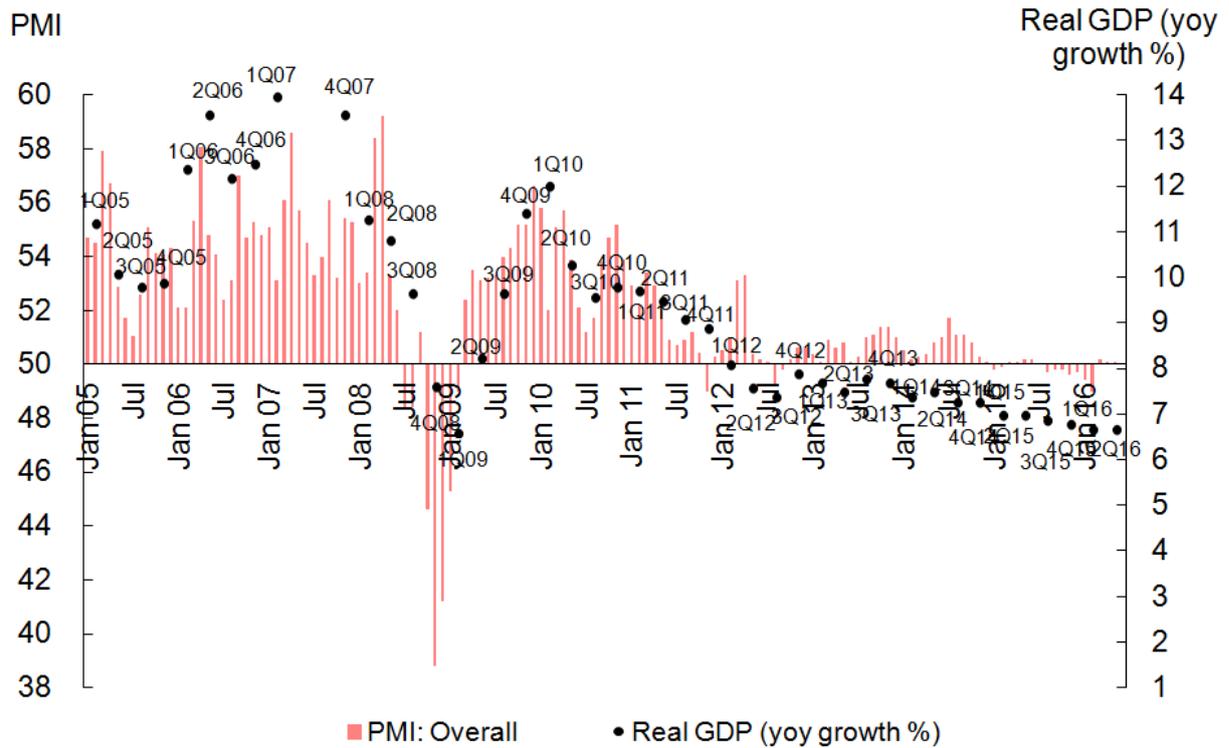
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 4: Headline PMI and all sub-indices, April to June 2016



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

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



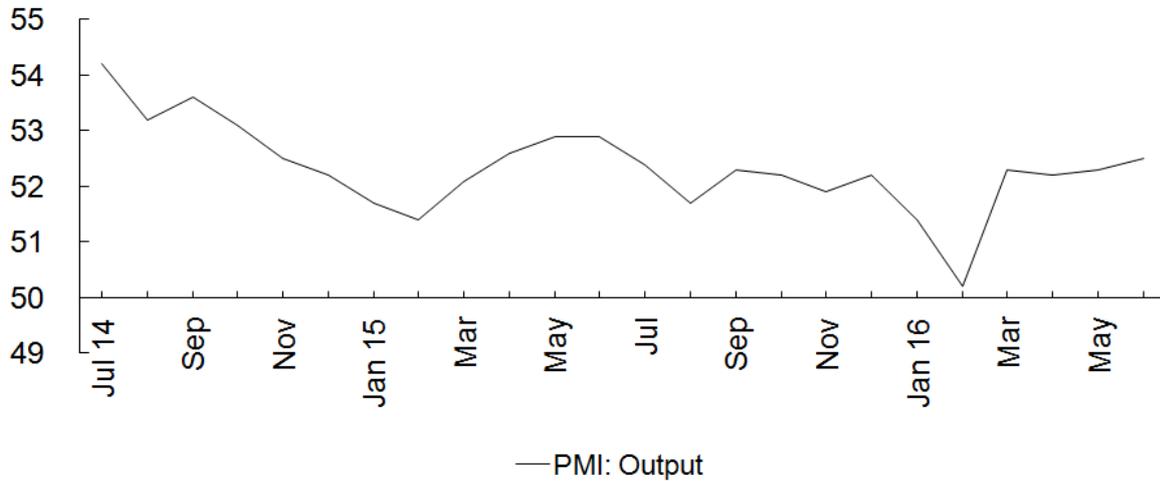
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

2. Output index rises to 12-month high

The output index edged up from 52.2 in April to 52.3 in May, and then rose to 52.5 in June, the highest level in 12 months. (See exhibit 6) In our view, the uptrend of the index suggests that output growth will stay largely stable in coming months.

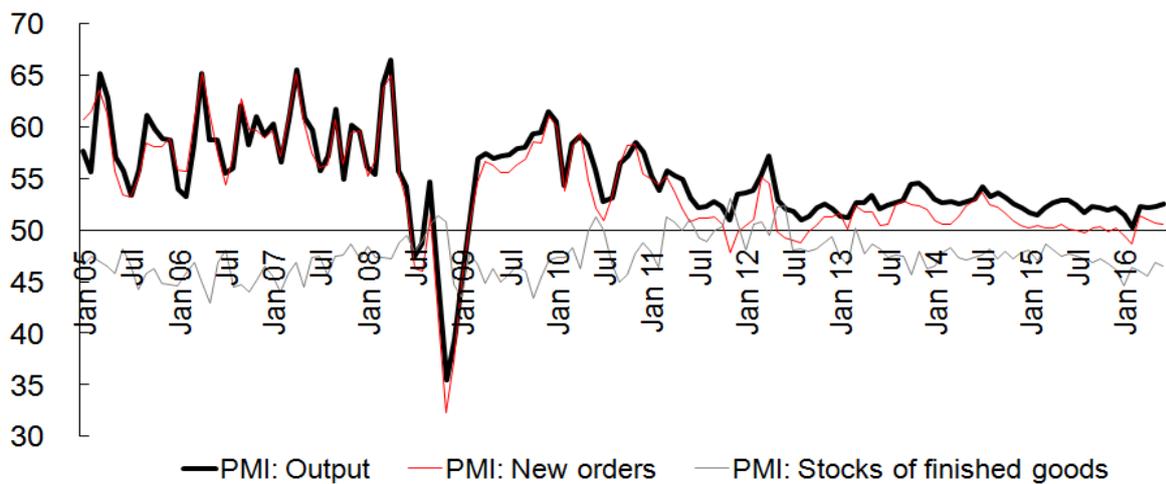
Exhibit 7 shows that the output growth was mainly fuelled by new orders growth instead of restocking activities, as the stocks of finished goods index has stayed in the contractionary zone for thirty nine consecutive months. However, output may grow strongly later when manufacturers have finally run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

Exhibit 6: Output index, July 2014 to June 2016



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

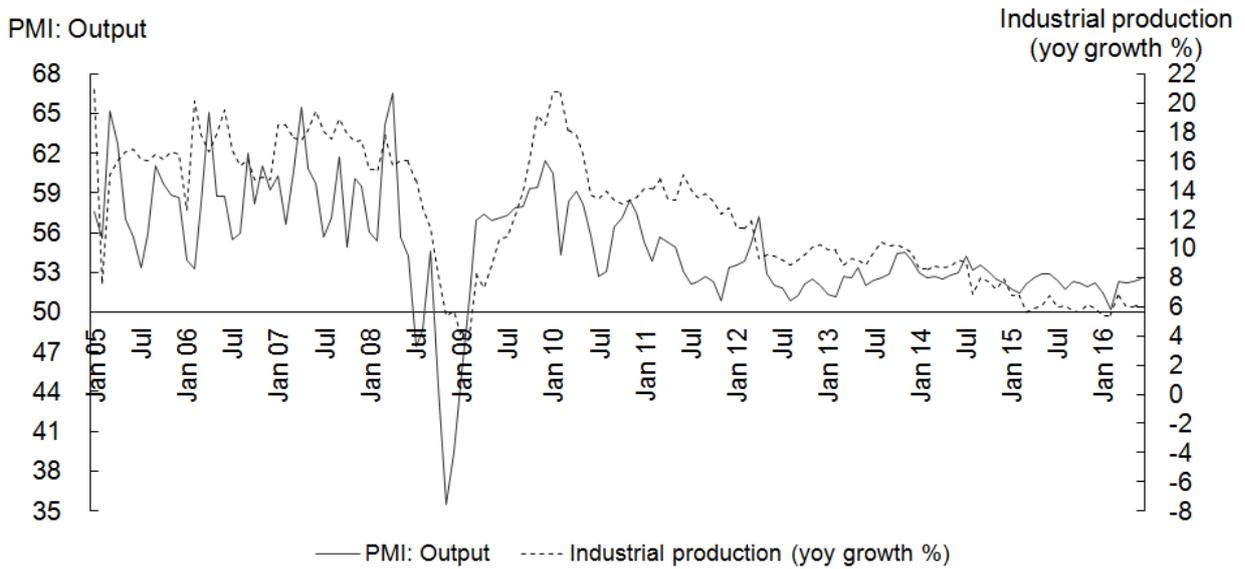
Exhibit 7: Output, new orders and stocks of finished goods, January 2005 to June 2016



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 that the VAIO growth will stay stable or rebound a bit to 6.2% yoy in 3Q16, as the output index has shown an uptrend lately. In the coming months, industrial activities will be supported by the positive impact of the booming property market and the government’s moves to lower taxes and fees. Challenges facing Chinese manufacturers, however, include greater economic uncertainty caused by the ‘Brexit’ decision, increasing labour and environmental costs, intense competition in the international market, a rise in foreign trade protectionism and weaker luxury spending.

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



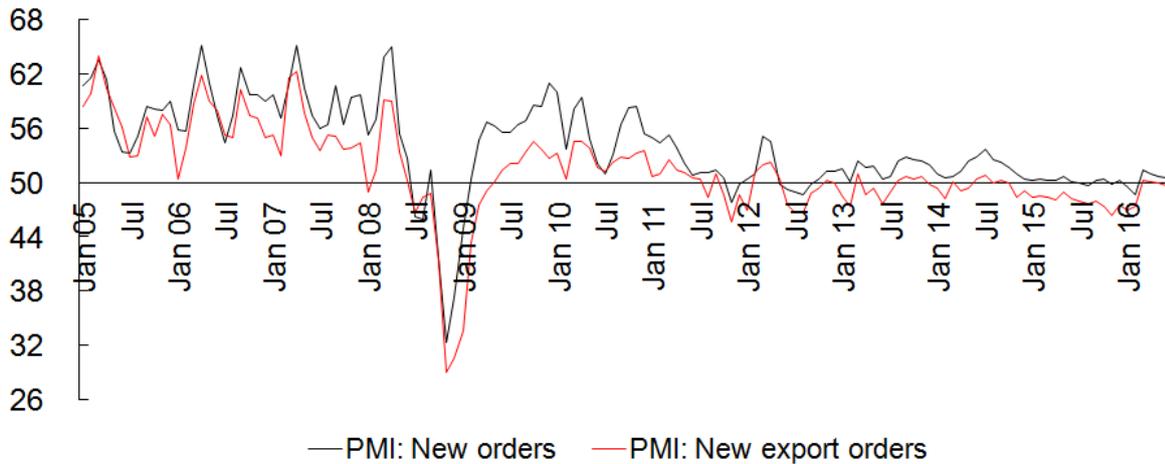
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

3. Both new orders index and new export orders index trend downward

The new orders index dropped from the recent peak of 51.4 in March to 51.0 in April and 50.7 in May. The index then fell further to 50.5 in June, indicating that the overall new orders have been increasing at a slower pace.¹ Meanwhile, the new export orders index went down slightly from 50.1 in April to 50.0 in May. In June, the index fell to 49.6, dipping into the contractionary zone for the first time in four months. (See exhibit 9)

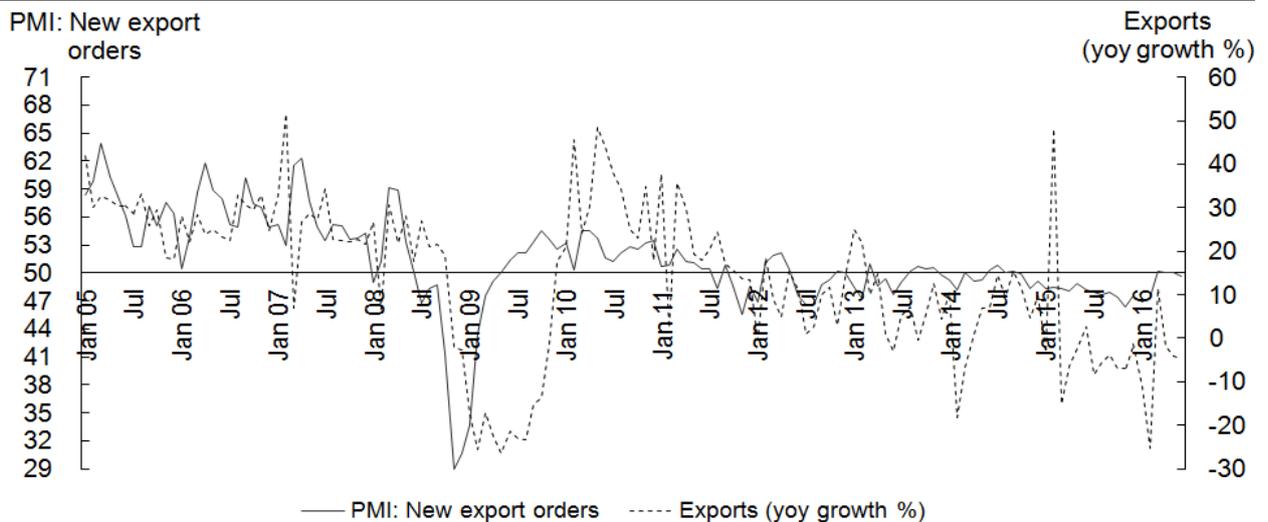
¹ The 'new orders index' covers both domestic and export orders. That is to say, the manufacturers are not asked to differentiate between domestic and export orders when filling in questionnaires.

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



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

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



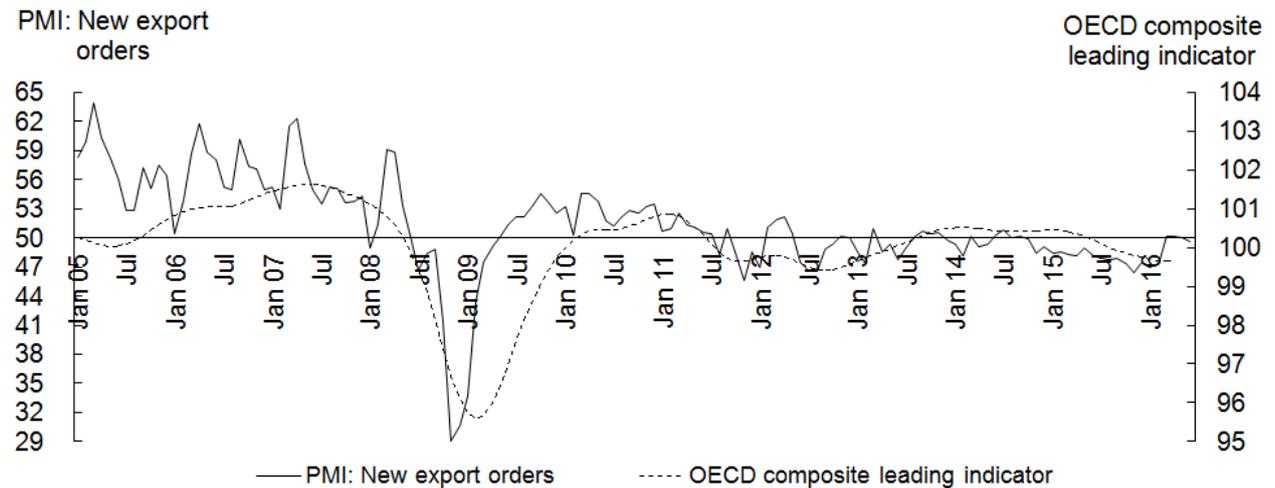
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs

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. As the new export orders index dipped into the contractionary zone in June, our confidence for China’s export prospects has waned. 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 to fall in recent months, suggesting a fragile global recovery. This implies higher uncertainty over China’s export outlook. All in all, we forecast that China’s

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.

exports will continue to post single-digit year-on-year drop in 3Q16.

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



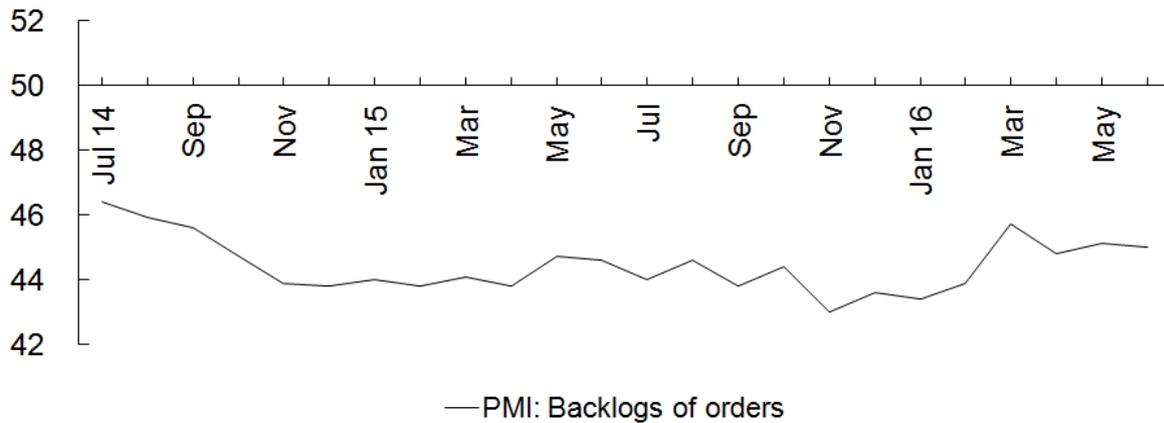
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Organization for Economic Cooperation and Development

4. Backlogs of orders index stays in contractionary territory

The backlogs of orders index rose from 44.8 in April to 45.1 in May, before edging down to 45.0 in June. The index has been in the contractionary zone since April 2012, indicating that backlogs of orders have continued to drop. (See exhibit 12)

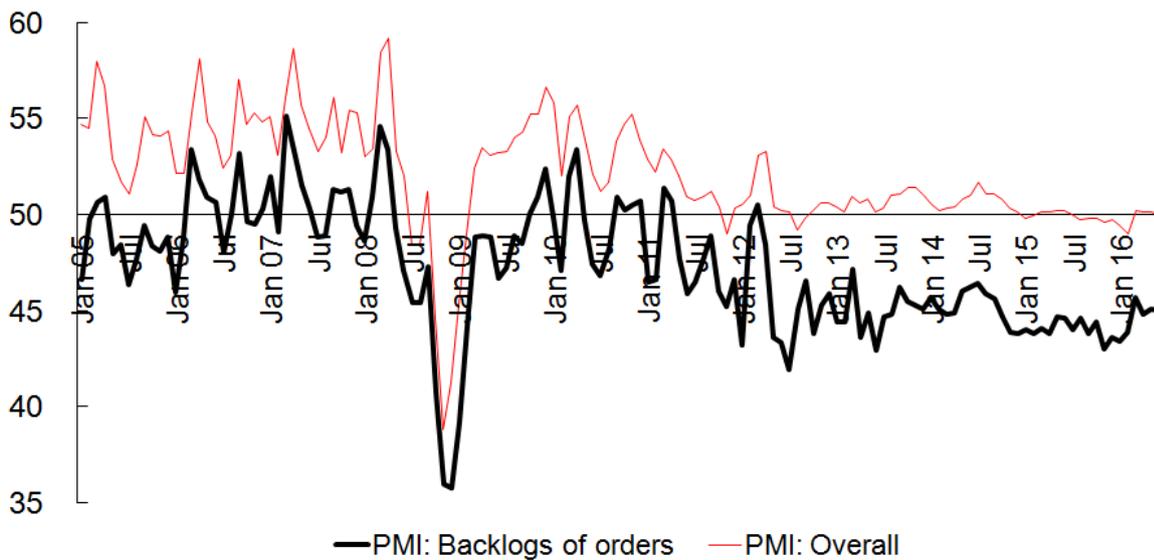
Looking ahead, we expect the index to post a slight drop in the near term, as indicated by the apparently very high correlation between the sub-index and the headline PMI, and the recent fall in the headline PMI. (See exhibit 13)

Exhibit 12: Backlogs of orders index, July 2014 to June 2016



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

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

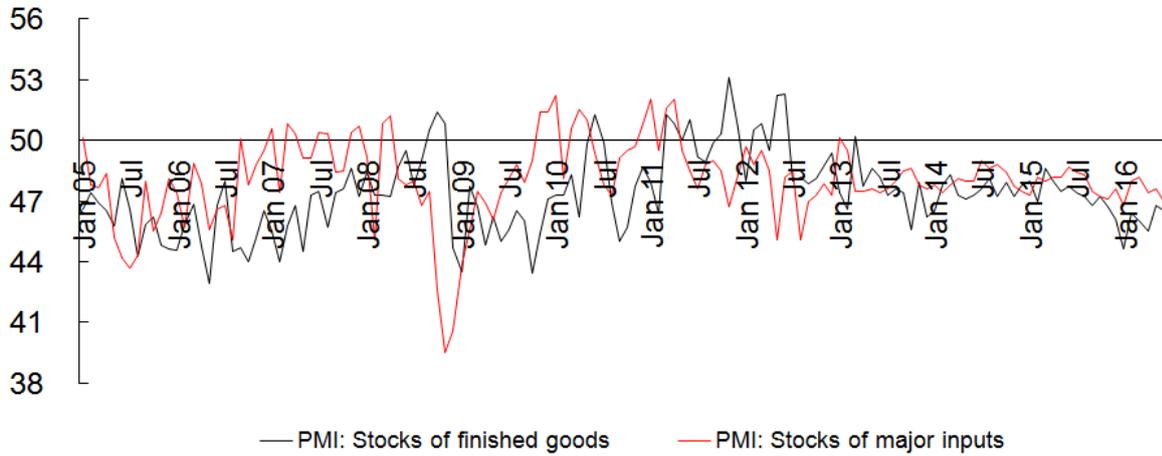


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

5. Destocking activities continue

The stocks of finished goods index registered 45.5, 46.8 and 46.5 in April, May and June respectively. The stocks of major inputs index stayed between 47.0 and 47.6 throughout April to June. (Exhibit 14) Both indices remained below the critical 50-mark in the past three months, indicating that destocking activities have continued.

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



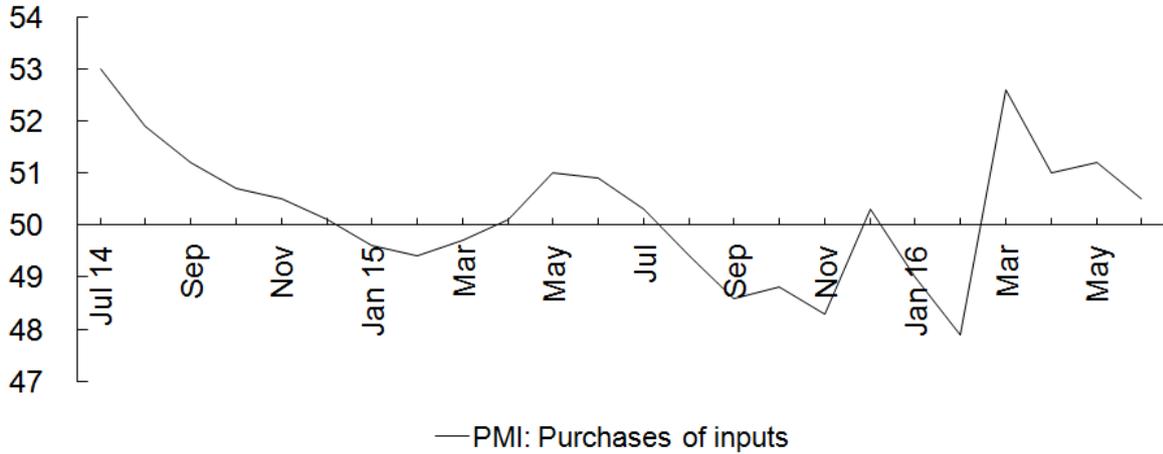
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

6. Purchases of inputs index falls

The purchases of inputs index went up from 51.0 in April to 51.2 in May, but then dropped to 50.5 in June, indicating that the growth of purchasing activities has moderated recently. (Exhibit 15) This could be associated with the moderation in domestic and export demand.

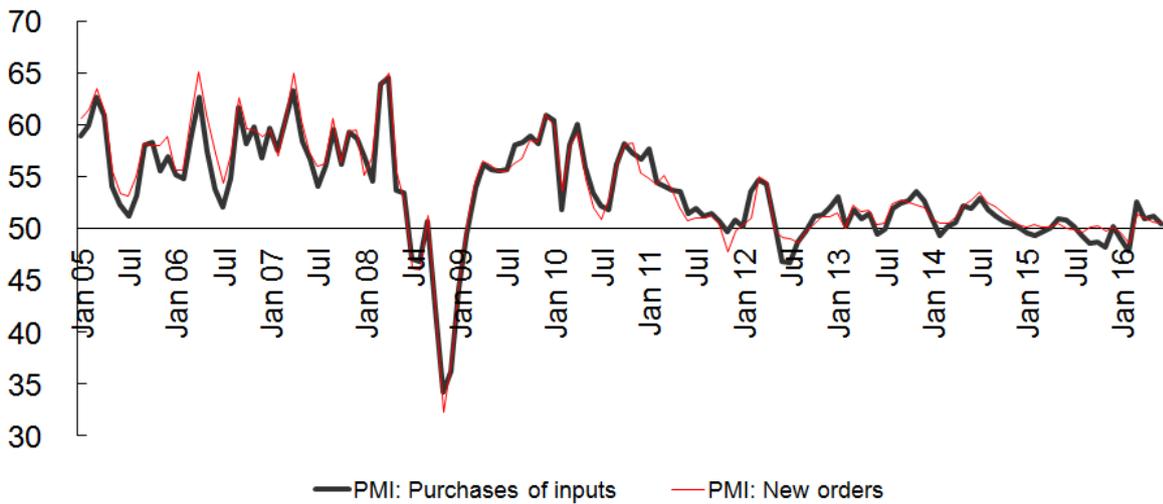
A number of factors affect the purchasing activities of manufacturers, among which the amount of new orders received by manufacturers has been the most important factor. Exhibit 16 plots the purchases of inputs index against the new orders index. The correlation between the two sub-indices is very strong. This is intuitively easy to explain – as manufacturers usually need to purchase extra inputs to cope with new orders. We expect to see continuous increase in purchases if the increase in new orders persists. 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, July 2014 to June 2016



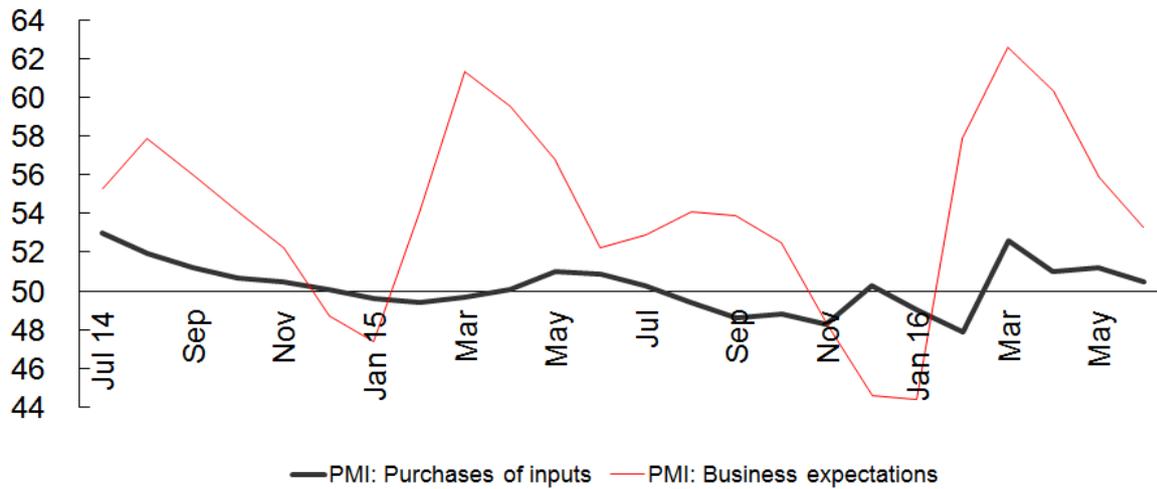
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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



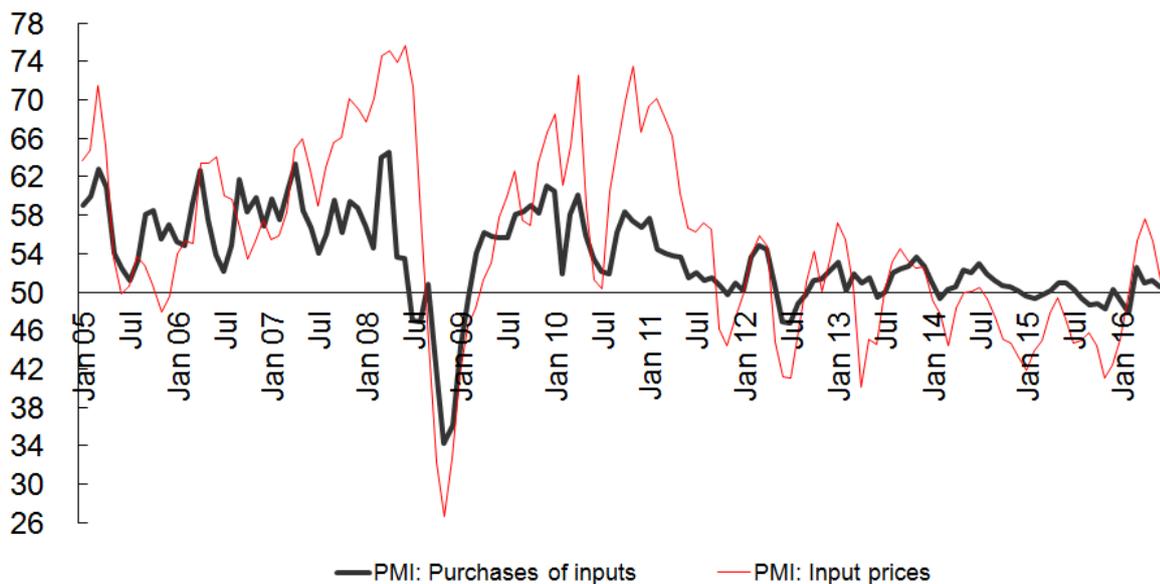
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

Exhibit 17: Purchases of inputs and business expectations, July 2014 to June 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 June 2016

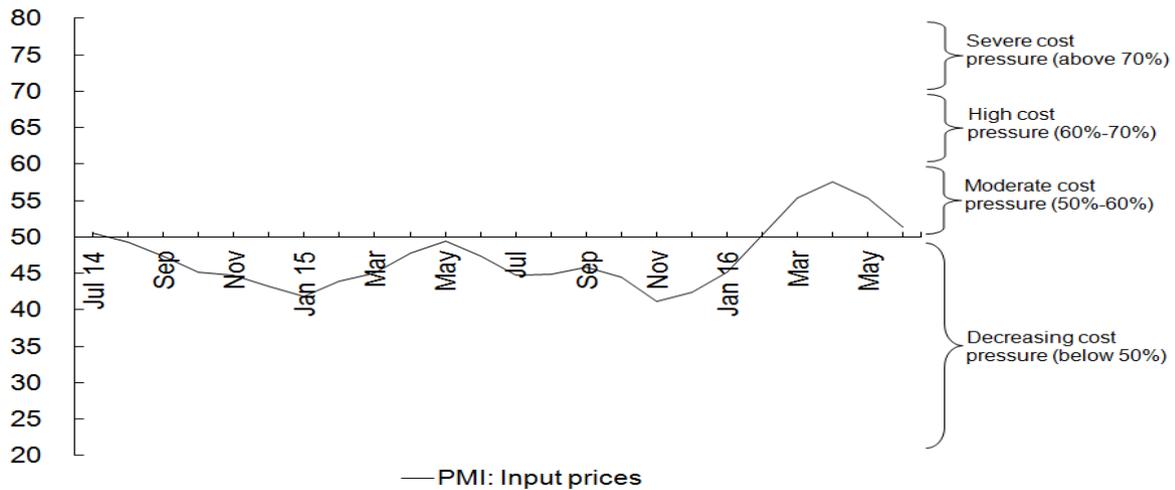


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

7. Input prices increase at a slower pace

The input prices index fell from 57.6 in April to 55.3 in May, before going down to 51.3 in June. (Exhibit 19) The downtrend of the index indicates that prices of production inputs have been rising at a slower pace. Upstream cost pressure on manufacturers has eased.

Exhibit 19: Input prices index, July 2014 to June 2016



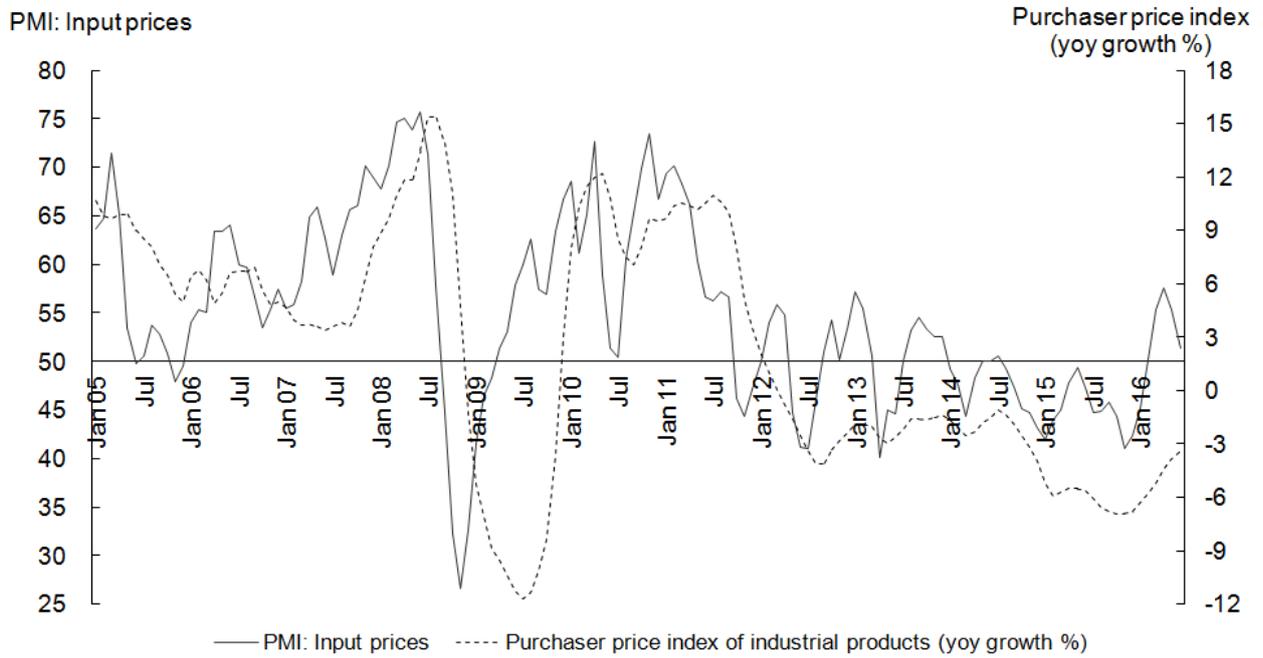
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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 remain in the negative territory in near future. We also forecast the CPI growth to fluctuate between 2.0% and 2.5% yoy in 3Q16. 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.

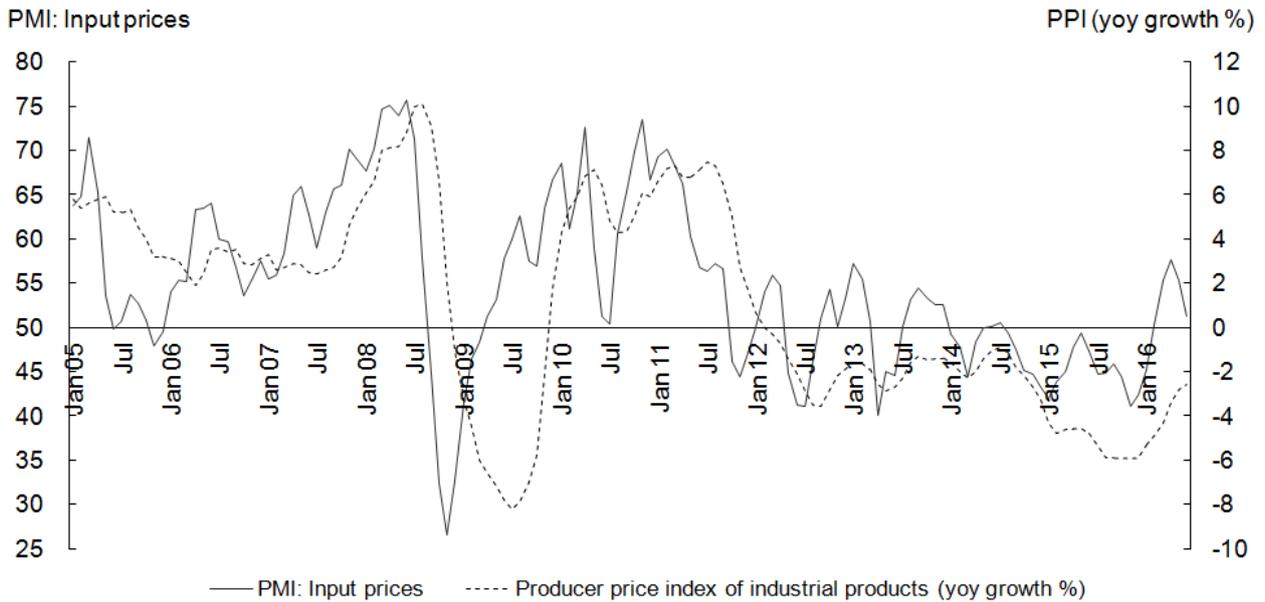
4 The Thomson Reuters/ CoreCommodity CRB Index, which comprises 19 commodities such as crude oil, aluminum, corn, cotton, gold, natural gas, soybeans, etc, has served as one of the most recognized measures of global commodities markets.

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



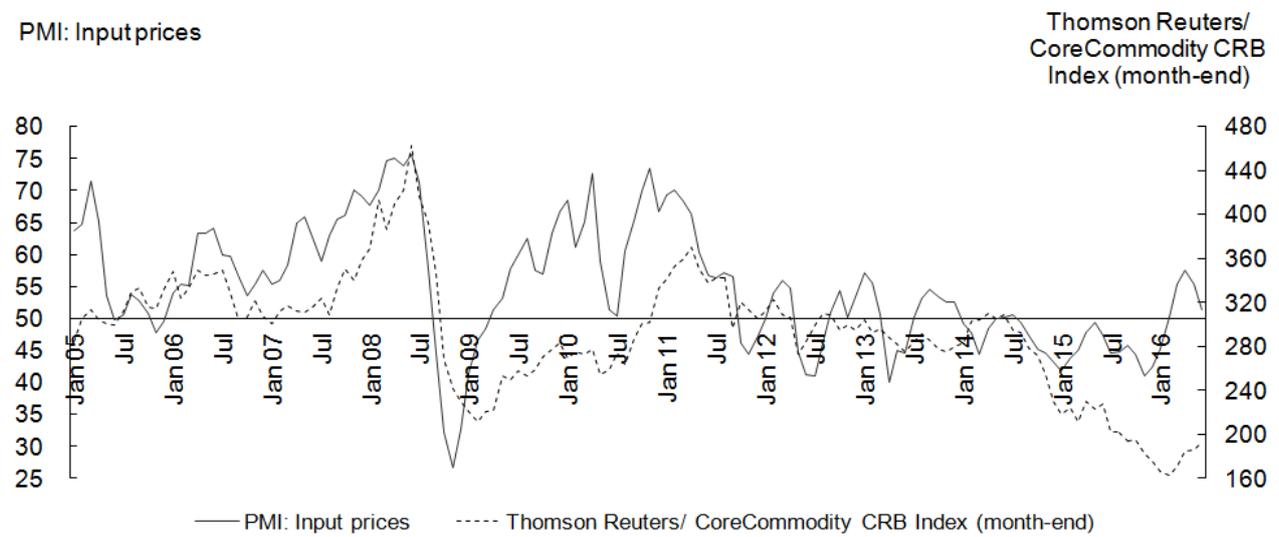
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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



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

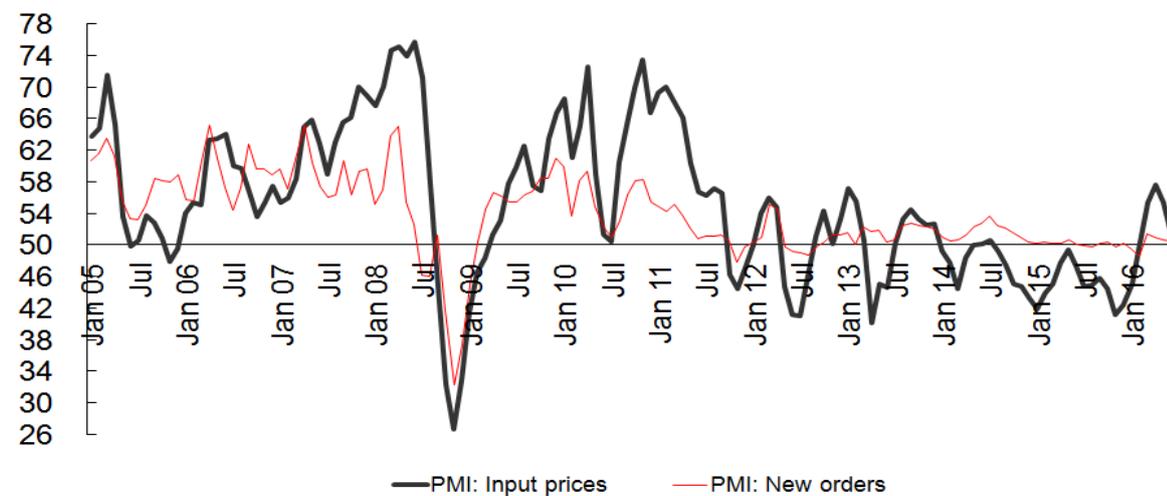
Exhibit 22: Input prices index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to June 2016



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. In recent months, input prices have risen faster than new orders. This may mean lower manufacturers’ profit margins in the near future.

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

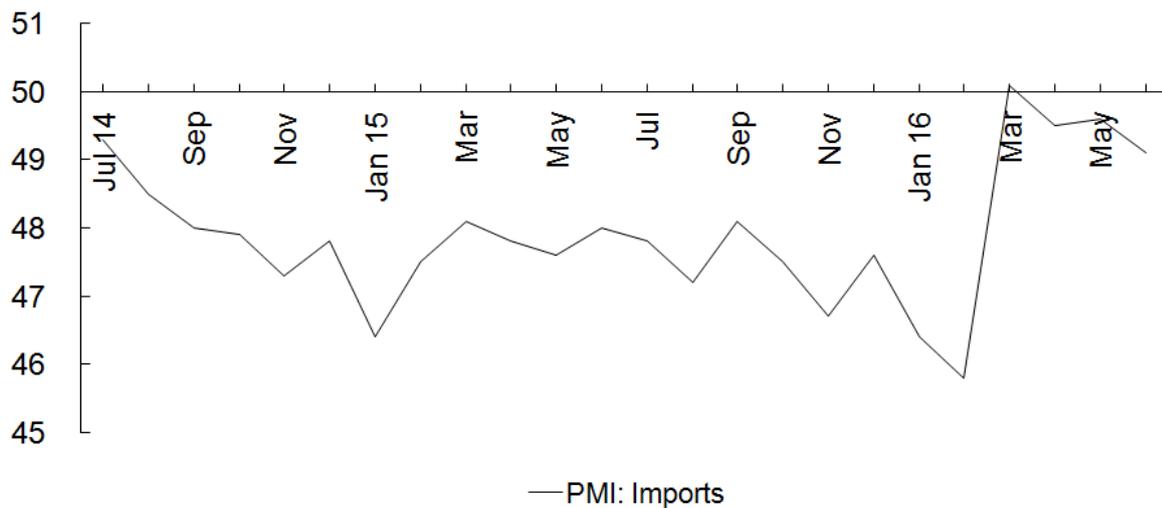


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

8. Imports index drops below 50

The imports index fell from 50.1 in March to 49.5 in April, returning to the contractionary zone. The index edged up to 49.6 in May, only to fall again to 49.1 in April. This indicates that the domestic demand for raw materials and parts used in manufacturing has weakened lately. (Exhibit 24)

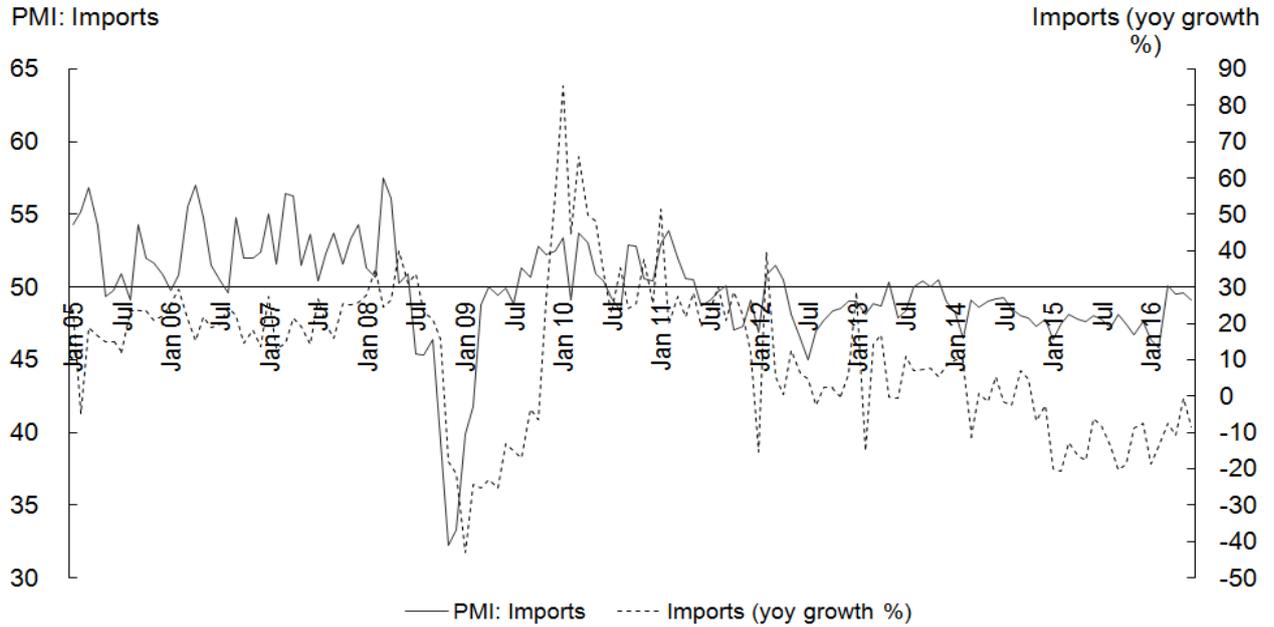
Exhibit 24: Imports index, July 2014 to June 2016



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

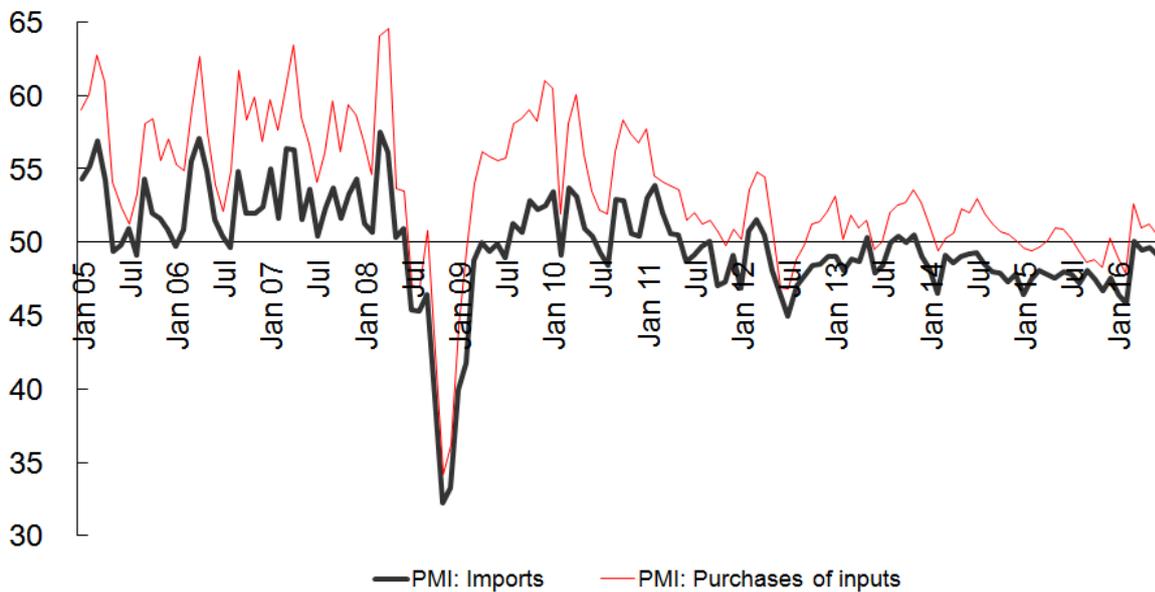
Exhibit 25 shows that the imports index is highly correlated (with some lags) to the import yoy growth rate. We expect imports to fall at a faster pace in 3Q16. Exhibit 26 illustrates the strong association between the imports index and the purchases of inputs index – as Chinese manufacturers purchase 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 June 2016



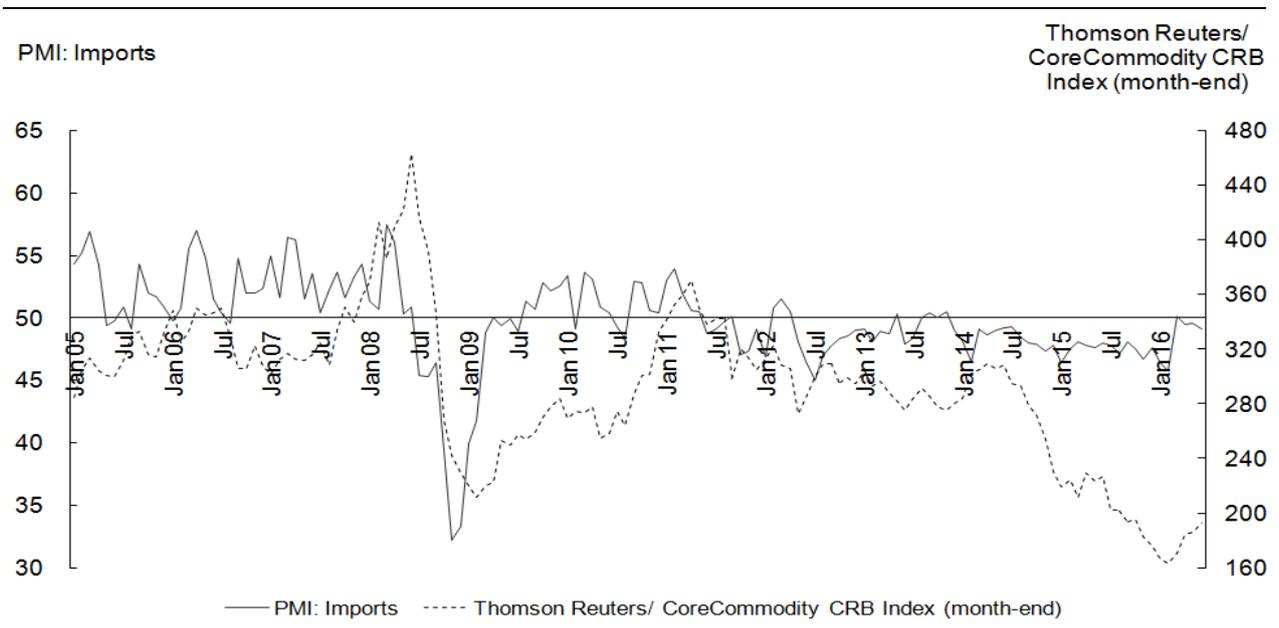
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs

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

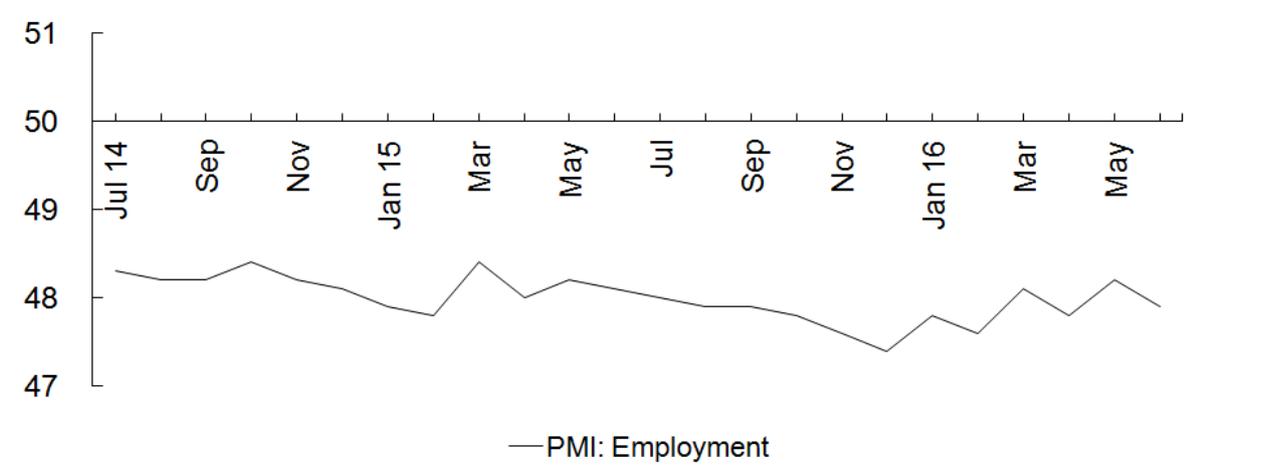


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Thomson Reuters

9. Employment in the manufacturing sector continues to shrink

The employment index stayed below the neutral level of 50 in the past three months, indicating that employment in the manufacturing sector has continued to shrink. The index fluctuated between 47.8 and 48.2 in April to June. (Exhibit 28)

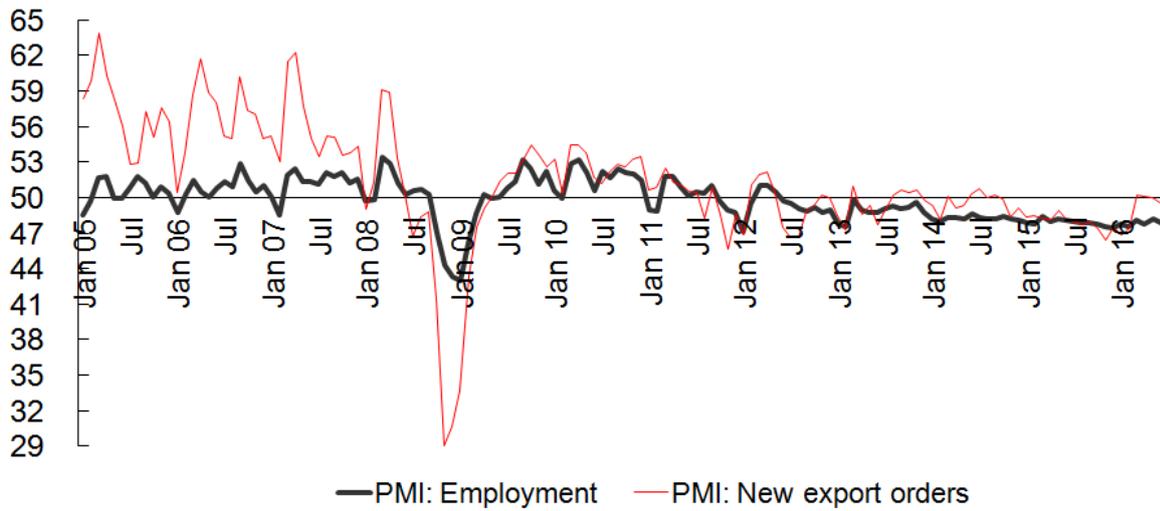
Exhibit 28: Employment index, June 2014 to July 2016



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

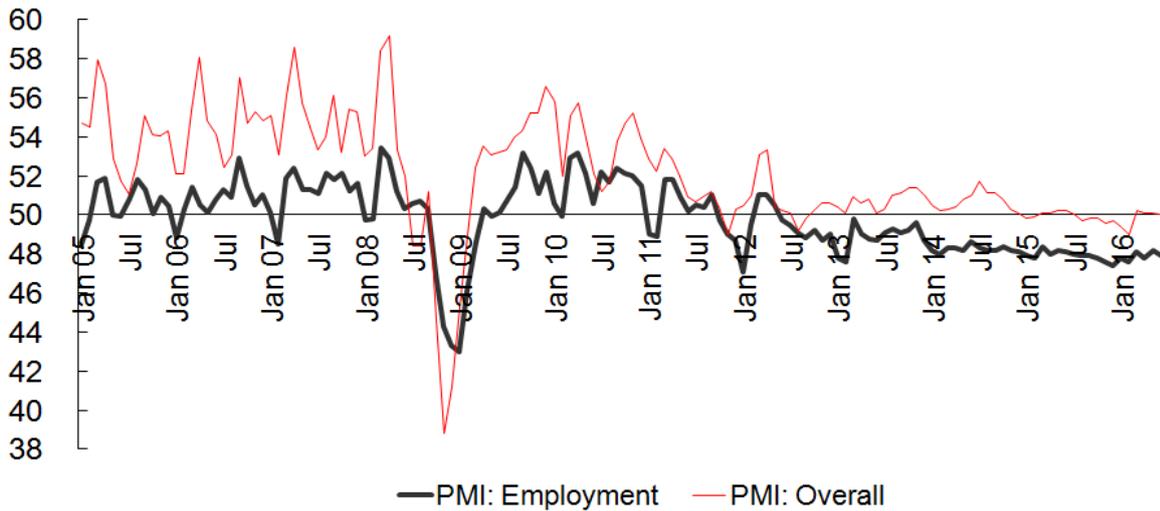
Exhibit 29 proves that the employment in China’s manufacturing sector has relied heavily on the export sector. Exhibit 30 and 31 give our readers some ideas about the extent to which the employment situation improves or deteriorates with the manufacturing sector and the overall economy.

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



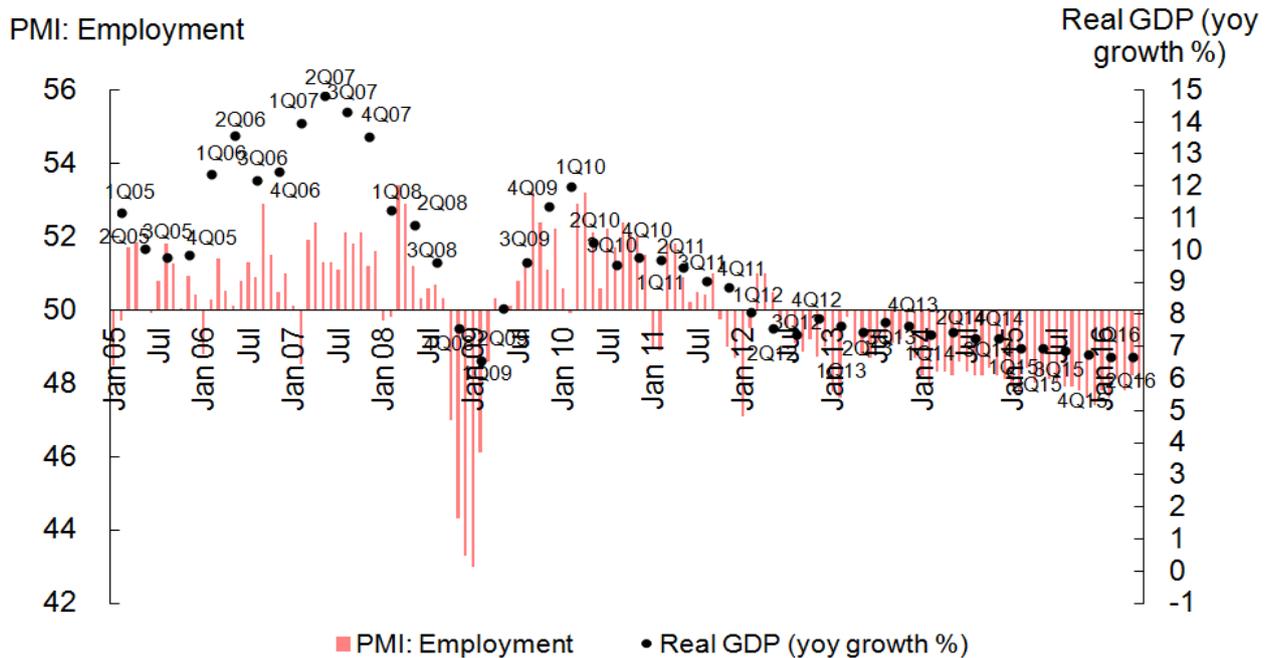
Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

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



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

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

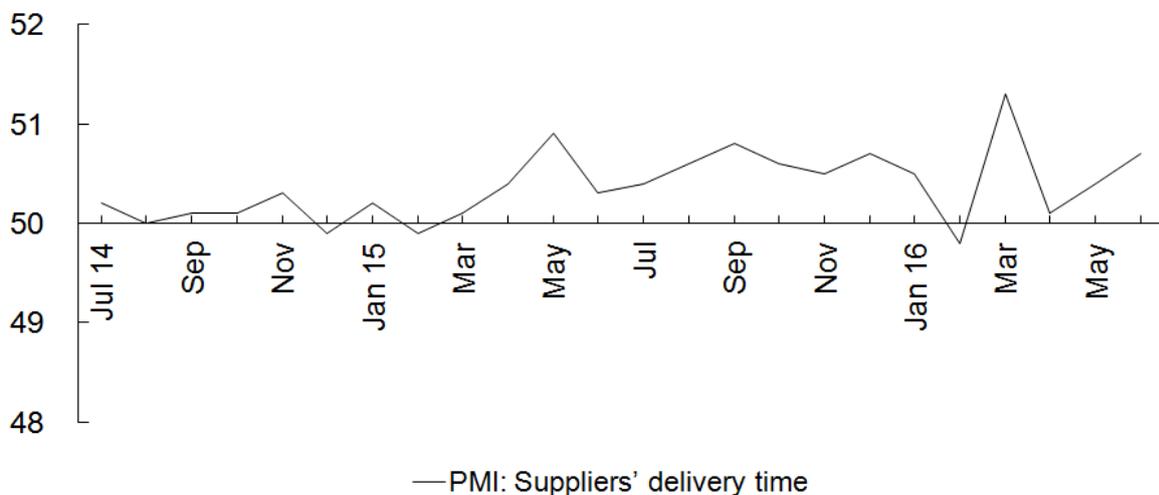


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

10. Suppliers’ delivery accelerates

The suppliers’ delivery time index rose from 50.1 in April to 50.4 in May, and further to 50.7 in June. The index stayed above the critical 50-mark in the past three months, indicating an acceleration in suppliers’ delivery. (Exhibit 32)

Exhibit 32: Suppliers’ delivery time index, July 2014 to June 2016

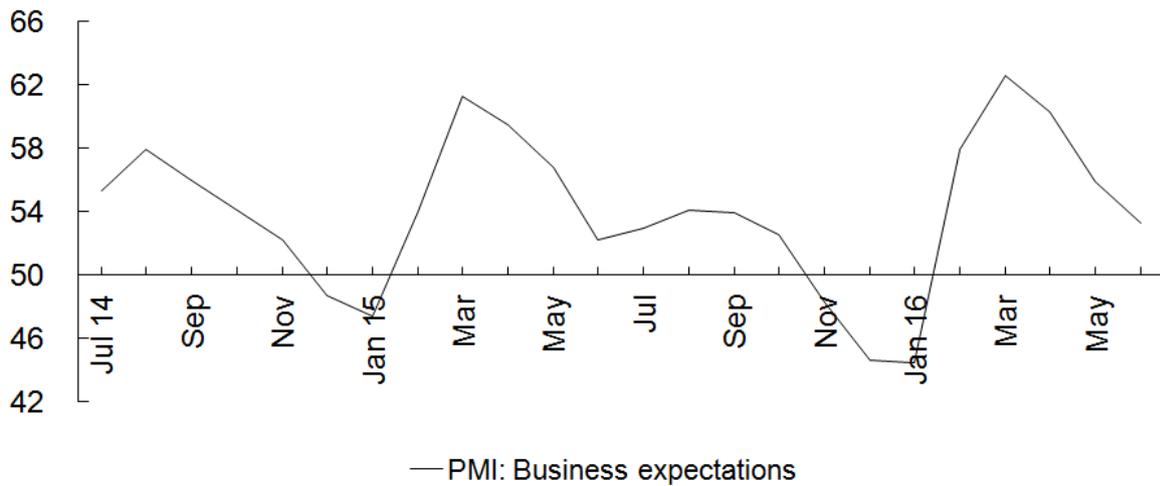


Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics

11. Chinese manufacturers become less optimistic

The business expectations index fell markedly from 60.3 in April to 55.9 in May, and dropped further to 53.3 in June, indicating that purchasing managers have become less optimistic about the near term outlook for their respective industries. (See exhibit 33)

Exhibit 33: Business expectations index, July 2014 to June 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 Business Intelligence

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

Headquartered in Hong Kong, it leverages unique relationships and information networks to track and report on these issues with a particular focus on business trends and developments in China and other Asian countries. Fung Business Intelligence makes its data, impartial analysis and specialist knowledge available to businesses, scholars and governments around the world 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 consultancy 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

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.



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