# PMI Quarterly on China Manufacturing

## China Federation of Logistics & Purchasing

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## PMI points to growth stabilization

- Output index rises to the highest level in 43 months.
- Both new orders and new export orders indices climb as demand improves.
- Backlogs of orders index continues its upward trend.
- Stocks of finished goods drop at a faster pace.
- Growth in purchasing activities reaccelerates.
- Prices of production inputs rise slightly.
- Ex-factory prices continue to drop.
- Imports of raw materials and parts increase.
- Employment in manufacturing sector decreases at a slow pace.
- Suppliers' delivery slows.
- Confidence among purchasing managers improves.

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## 1. PMI points to growth stabilization

China's manufacturing PMI dropped from its recent peak of 51.8 in March to 51.2 in April. The index stayed unchanged at 51.2 in May, before rising to 51.7 in June, the second highest level this year. The index readings in recent months show signs that the growth in manufacturing sector and economic activities in China has largely stabilized. (See exhibit 1)

It is noteworthy to recognize the discrepancy by size of enterprises. The PMI of 'large enterprises' went down from 52.0 in April to 51.2 in May, and then rebounded strongly to 52.7 in June, indicating that 'large enterprises' have expanded at a relatively fast pace recently. Meanwhile, the PMI of 'medium enterprises' rose from 50.2 in April to 51.3 in May. The index dropped slightly to 50.5 in June, showing a moderation in the expansion of 'medium enterprises'. The PMI of 'small enterprises' climbed from 50.0 in April to 51.0 in May, returning to the expansionary zone for the first time since August 2014. Then, in June, the index fell to 50.1, but was still above 50, indicating a continuous expansion of 'small enterprises'. (See exhibit 2)

The PMI data in June suggest that the economy has expanded at a relatively fast pace lately. The output index rose to a 43-month high of 54.4 in June, indicating a rapid growth in output in the month. Besides, the new orders index went up to 53.1 in June, close to the recent peak of 53.3 in March this year, while the new export orders index climbed to 52.0 in June, the highest level since May 2012.[1] Both indices indicate the relatively strong domestic and the export demand. Meanwhile, the input prices index rebounded to 50.4 in June from 49.5 in May, indicating a slight rise in prices of production inputs. Against this backdrop, the ex-factory prices of finished goods have dropped at a slower pace lately: the ex-factory prices index was only marginally below the critical 50-mark in June.

Looking ahead, the Chinese government will strive to ensure the stability of the economy and the financial system. We predict that China's central bank will continue to maintain stable liquidity conditions. The government has also launched a series of measures to cut taxes. According to the State Council's announcement on 19 April, the number of value-added tax brackets would be reduced from 4 to 3, with the removal of the 13% tax bracket, and the value-added tax rates of agricultural products and natural gas would be cut from 13% to 11%, effective from 1 July. Besides, the coverage of small enterprises that can enjoy tax breaks would be expanded. These measures would reduce tax burden on enterprises, boding well for the development of the real economy. In the meantime, the government will continue to tackle the overcapacity problem, reduce housing inventories, bring down the financial leverage and costs of enterprises, shore up

[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.

weak areas, as well as deepen reforms in the fiscal and taxation system, the financial system, state-owned enterprises, state capital and the social system.

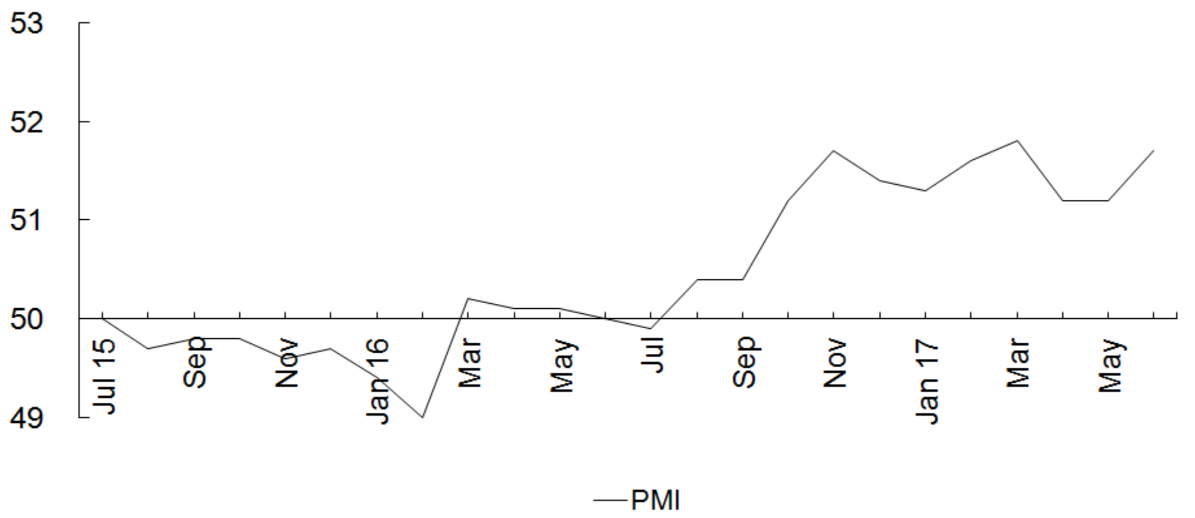
As domestic and export demand have improved, we predict that China's economy will maintain stable growth in near future. Going forward, we expect the headline PMI to hover around 51.5 in 3Q17. We also forecast that the real GDP growth will stay within the range of 6.5% to 7.0% in 3Q17. Challenges facing Chinese manufacturers, however, include the greater uncertainty in the US trade policies under Trump administration, intense competition in the international market, stronger government's efforts to enforce environmental regulations, increasing costs of labour and materials, and the weak demand for luxury products. Overall, we expect that the industrial production (VAIO) growth will be around 7% yoy in 3Q17.

Exhibit 3 shows that the uptick in the headline PMI in June was largely due 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 June, 10 of the 13 sub-indices were higher than their respective levels in the previous month, while 3 sub-indices (i.e. stocks of finished goods, employment and suppliers' delivery time) were lower than their respective levels in the previous month. (See exhibit 4)

Among the 13 sub-indices, 5 stayed in the expansionary zone over the past three months (i.e. output, new orders, new export orders, purchases of inputs and business expectations). Meanwhile, the indices of backlogs of orders, stocks of finished goods, stocks of major inputs, ex-factory prices and employment stayed below 50 over the same period.

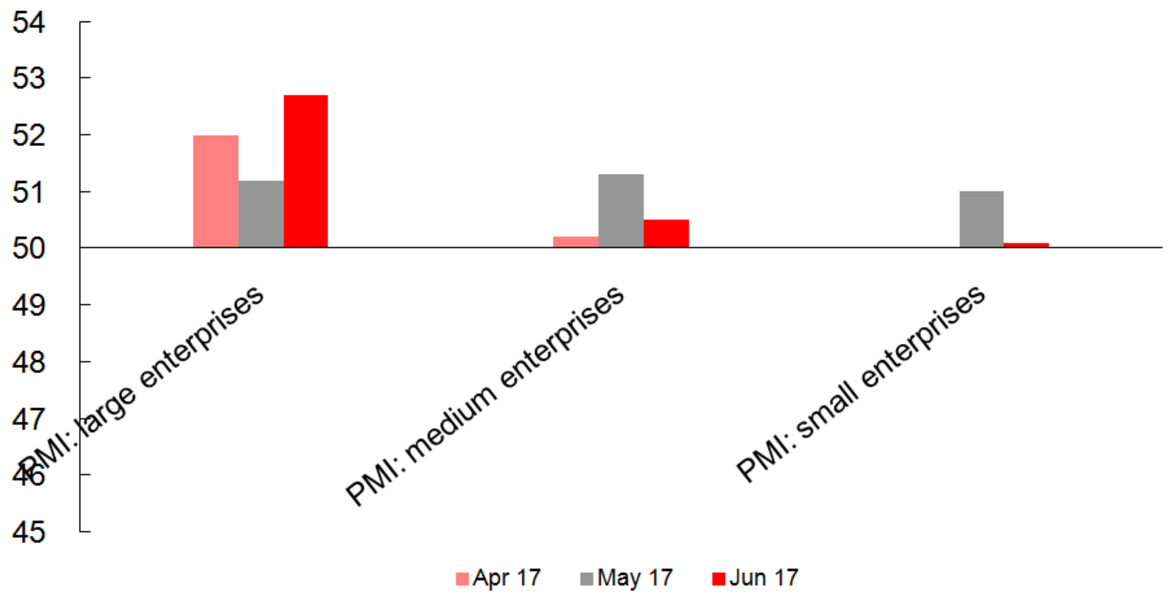
China's manufacturing PMI has so far done a satisfactory job in predicting economic growth. Exhibit 5 plots the quarterly real GDP yoy growth rates versus the monthly PMIs since its inception. It could be seen that the PMI demonstrates a fairly good track record of forecasting the growth trend of the economy at least over the next few months. Based on this chart we project that the real GDP growth will stay within the range of 6.5% to 7.0% in 3Q17.

**Exhibit 1: Headline PMI, July 2015 to June 2017**



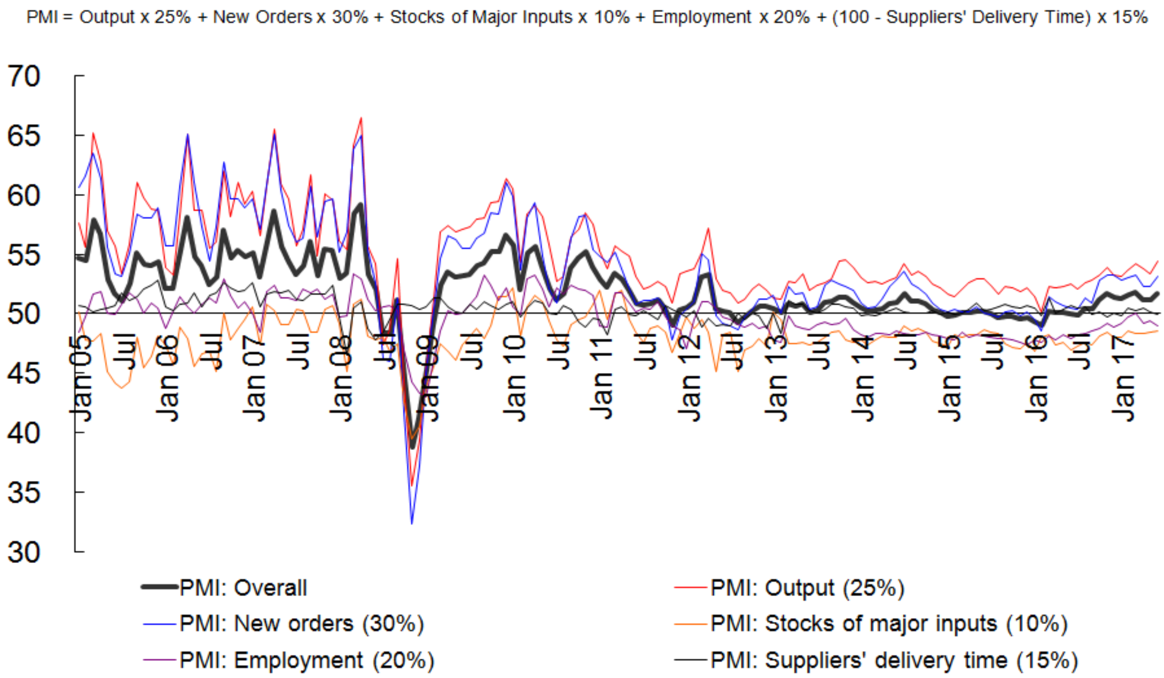

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 2: PMIs of large enterprises, medium enterprises and small enterprises, April to June 2017**



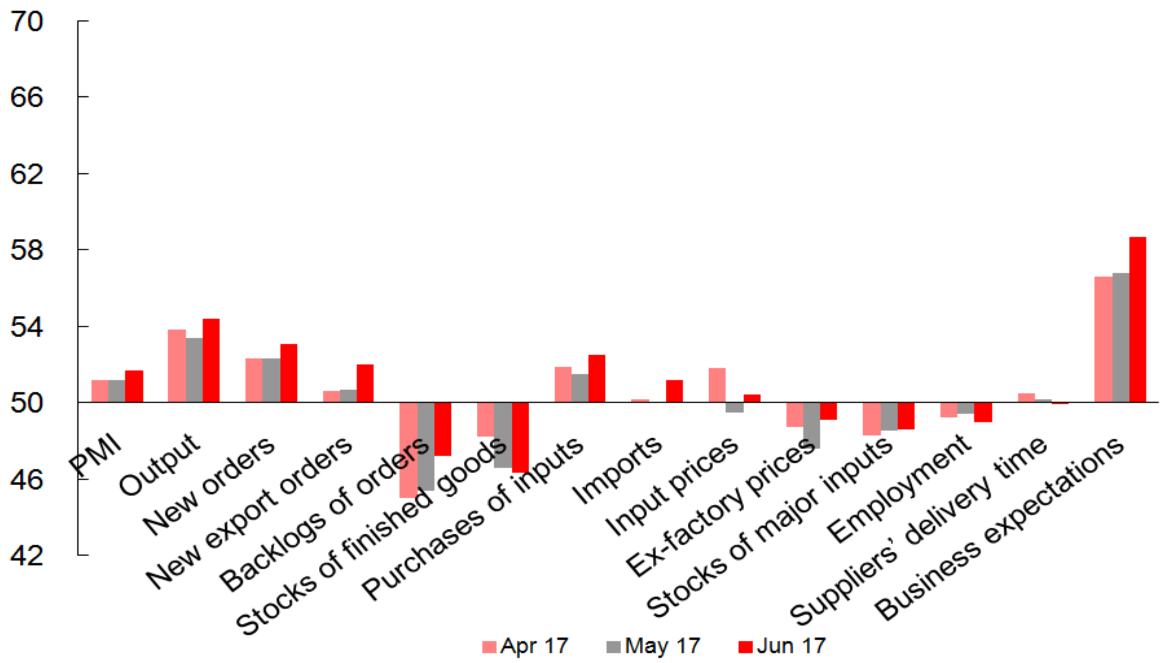

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 3: Headline PMI and sub-indices, January 2005 to June 2017**



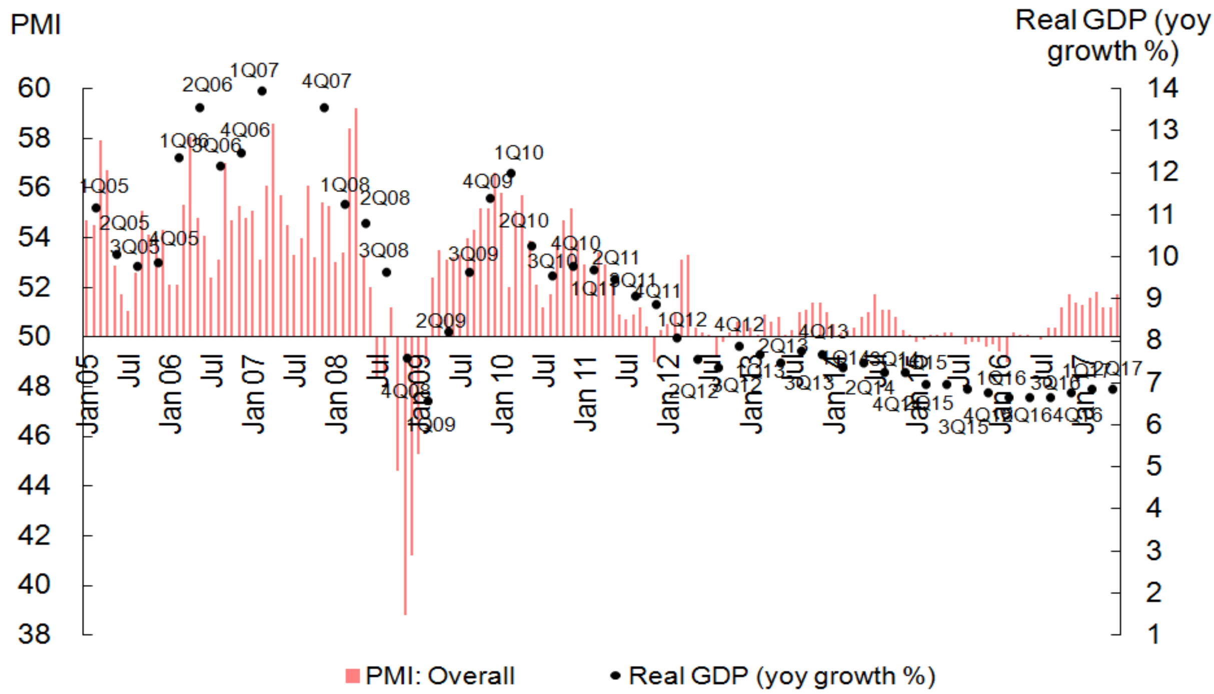

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 4: Headline PMI and all sub-indices, April to June 2017**




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

**Exhibit 5: Headline PMI and real GDP growth, January 2005 to June 2017**



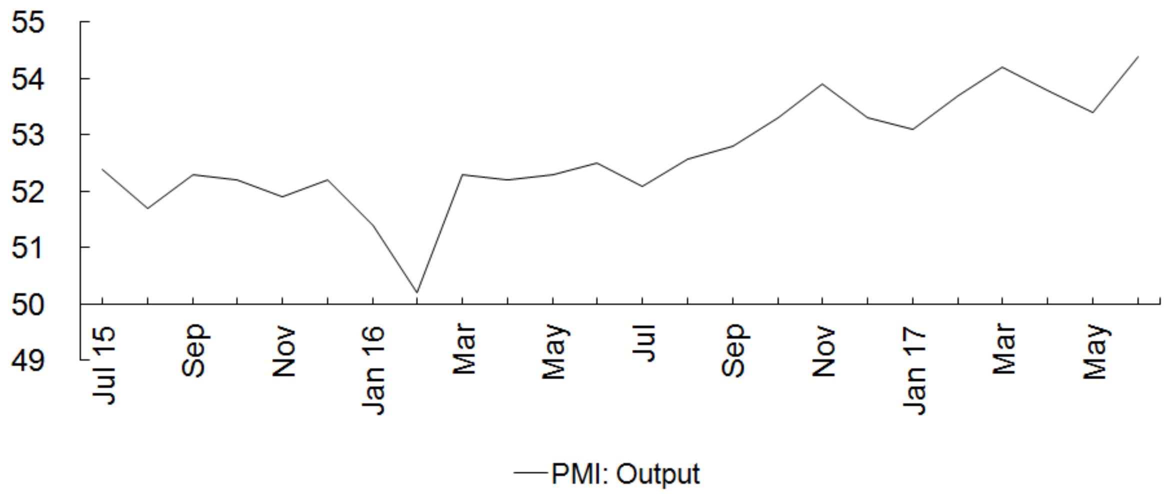

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 2. Output index rises to the highest level in 43 months

The output index moderated from 53.8 in April 53.4 in May, and then rebounded strongly to 54.4 in June, the highest level since December 2013. The latest reading indicates an acceleration in output growth in June. (See exhibit 6)

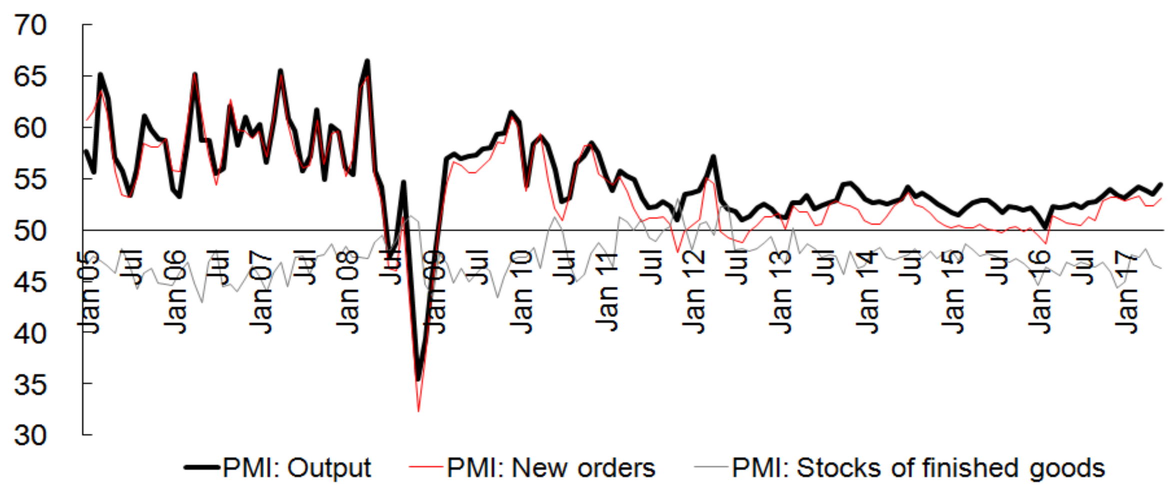
Exhibit 7 shows that the output growth was mainly fuelled by new orders growth instead of restocking activities, as the stocks of finished goods index has stayed in the contractionary zone for fifty one consecutive months. However, output may grow strongly later when manufacturers have finally run out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

**Exhibit 6: Output index, July 2015 to June 2017**




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

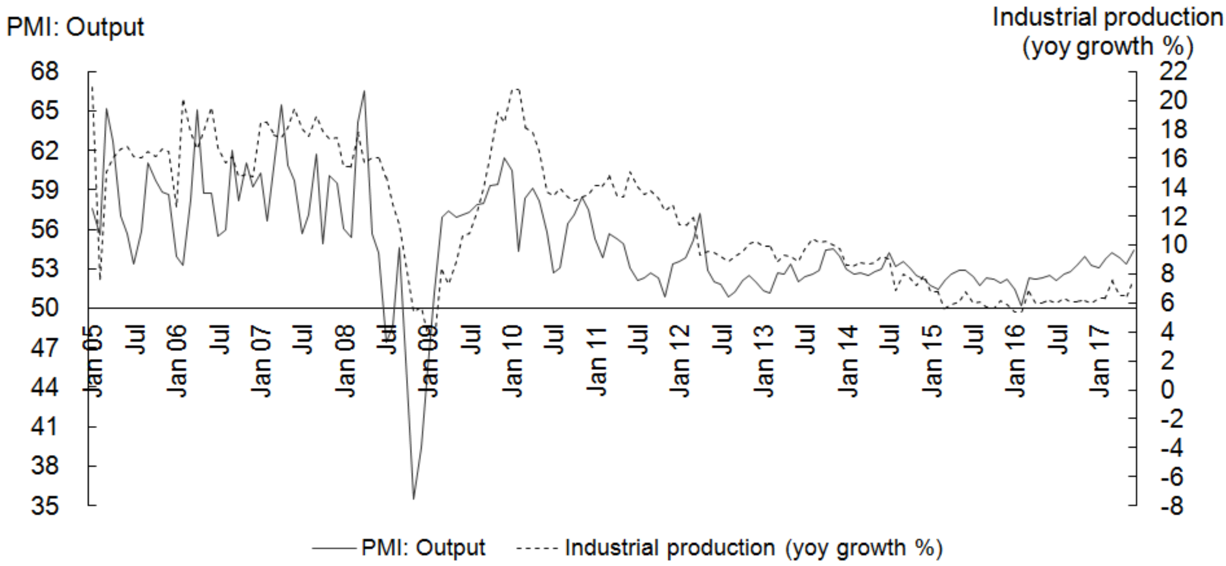
**Exhibit 7: Output, new orders and stocks of finished goods, January 2005 to June 2017**




*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 year-on-year growth of value-added of industrial output (VAIO). Looking ahead, we expect that the VAIO growth will be around 7% yoy in 3Q17. In the coming months, industrial activities will be supported by an improvement in demand. Challenges facing Chinese manufacturers, however, include the greater uncertainty in the US trade policies under Trump administration, intense competition in the international market, stronger government's efforts to enforce environmental regulations, increasing costs of labour and materials and the weak demand for luxury products.

**Exhibit 8: Output index and industrial production growth, January 2005 to June 2017**



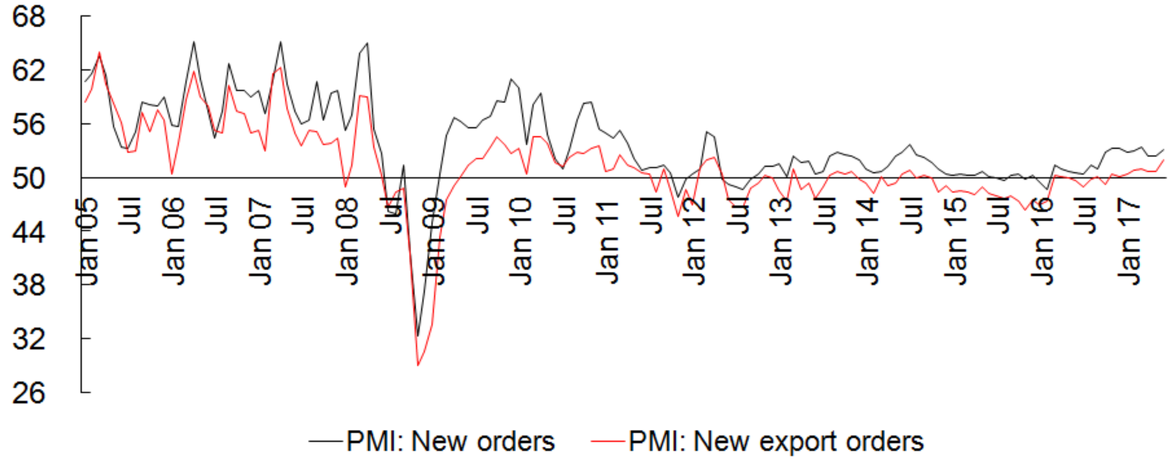

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 3. Both new orders and new export orders indices climb as demand improves

The new orders index registered 52.3 in April and May. In June, the index went up to 53.1, close to the recent peak of 53.3 in March this year, showing that the total new orders have expanded at a relatively fast pace recently.

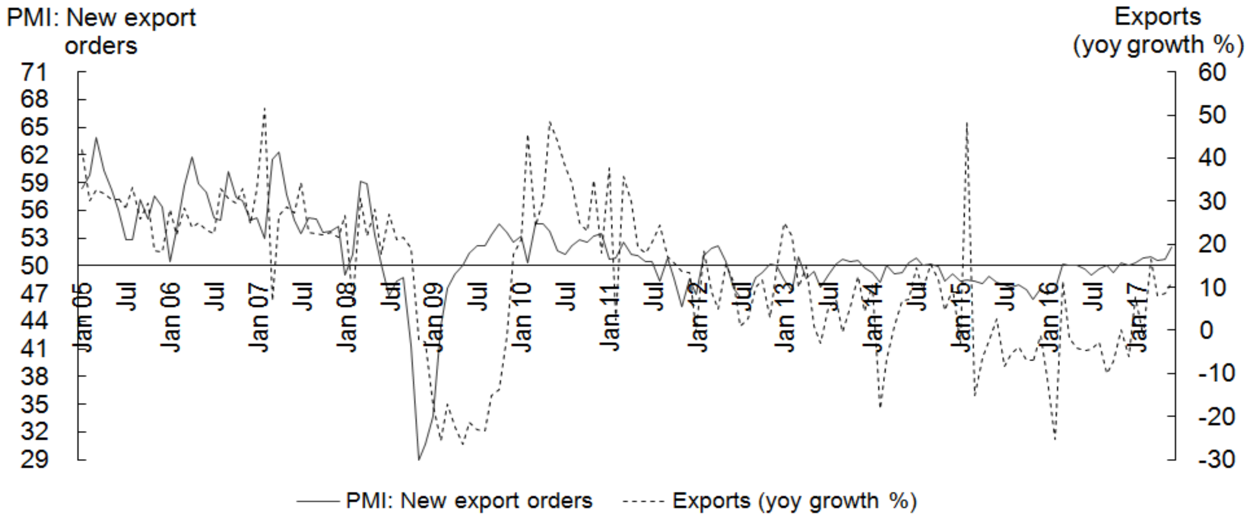
The new export orders index rose slightly from 50.6 in April to 50.7 in May, and climbed further to 52.0 in June, the highest level since May 2012. The index has stayed in the expansionary zone for eight consecutive months, showing that the new export orders have continued to expand. This indicates an improvement in export demand. (See exhibit 9)

**Exhibit 9: New orders index and new export orders index, January 2005 to June 2017**




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

**Exhibit 10: New export orders index and export growth, January 2005 to June 2017**



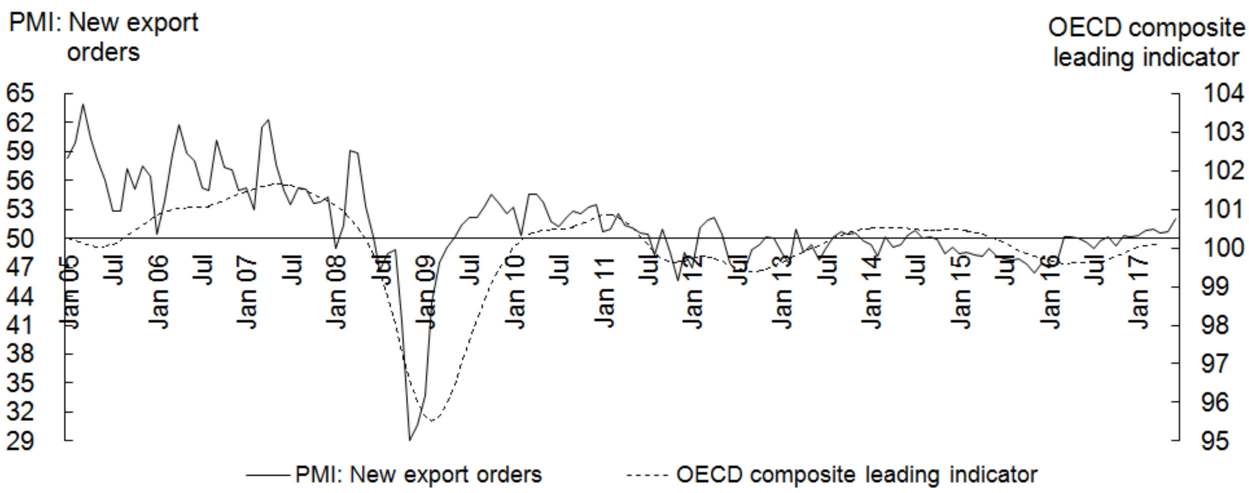

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs*

Exhibit 10 plots the new export orders index against the year-on-year growth rates of China's exports. The correlation between the two indices is fairly high. As the new export orders index in June rose to a 5-year high, we have been optimistic about the near-term prospects of China's exports. Moreover, 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 been on an upward trend since July last year, suggesting a continuous improvement in the global economy. All in all, we forecast that China's exports will

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.

show high single-digit year-on-year growth in 3Q17.

**Exhibit 11: New export orders index and OECD composite leading indicator, January 2005 to June 2017**



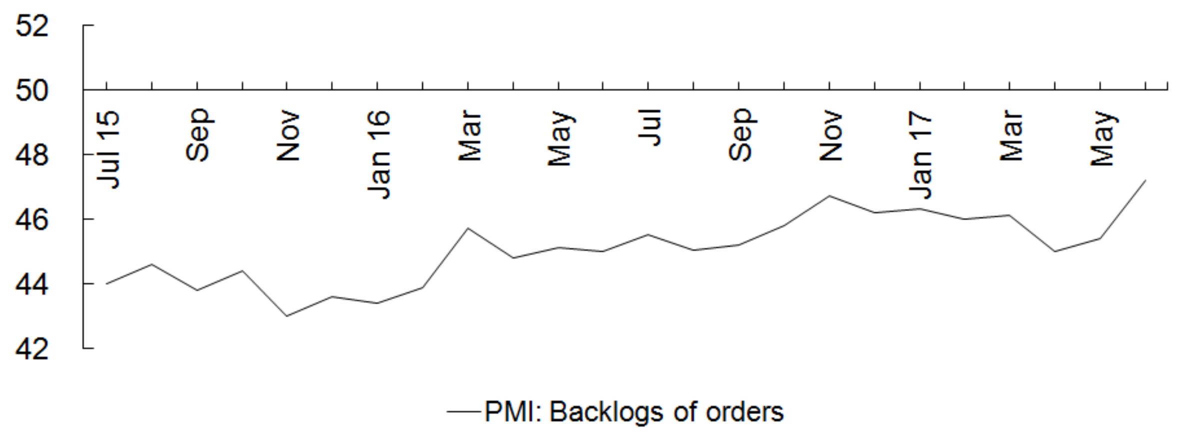

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Organization for Economic Cooperation and Development*

## 4. Backlogs of orders index continues its upward trend

The backlogs of orders index went up from 45.0 in April to 45.4 in May, before rising to 47.2 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)

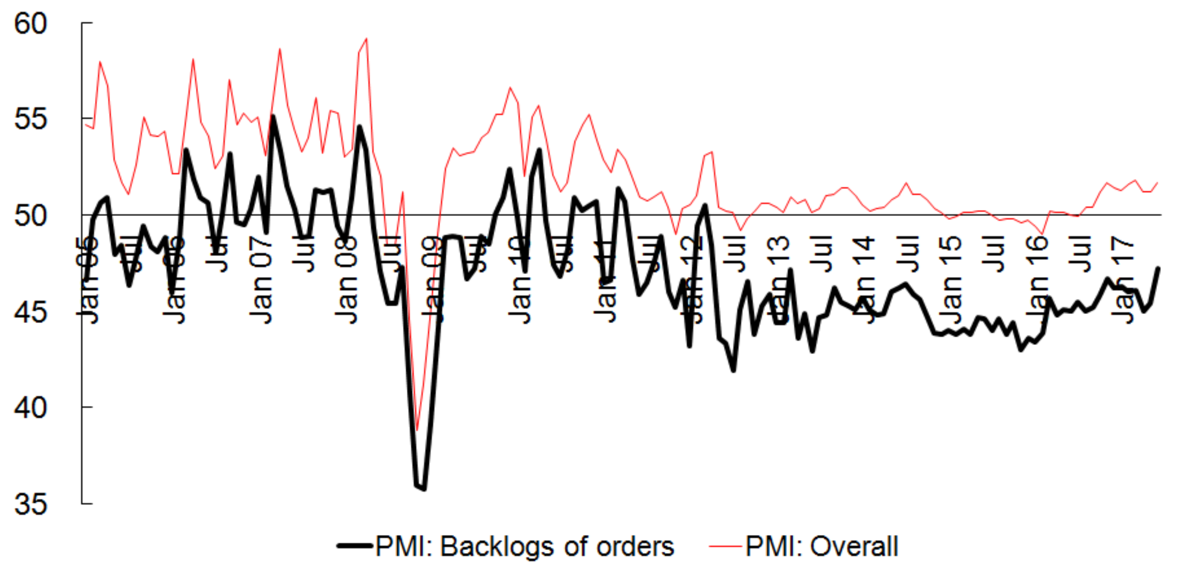
Looking ahead, we expect the index to go up in the near term, as indicated by the apparently very high correlation between the sub-index and the headline PMI, and the recent rise in the headline PMI. (See exhibit 13)

**Exhibit 12: Backlogs of orders index, July 2015 to June 2017**




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

**Exhibit 13: Backlogs of orders index and headline PMI, January 2005 to June 2017**



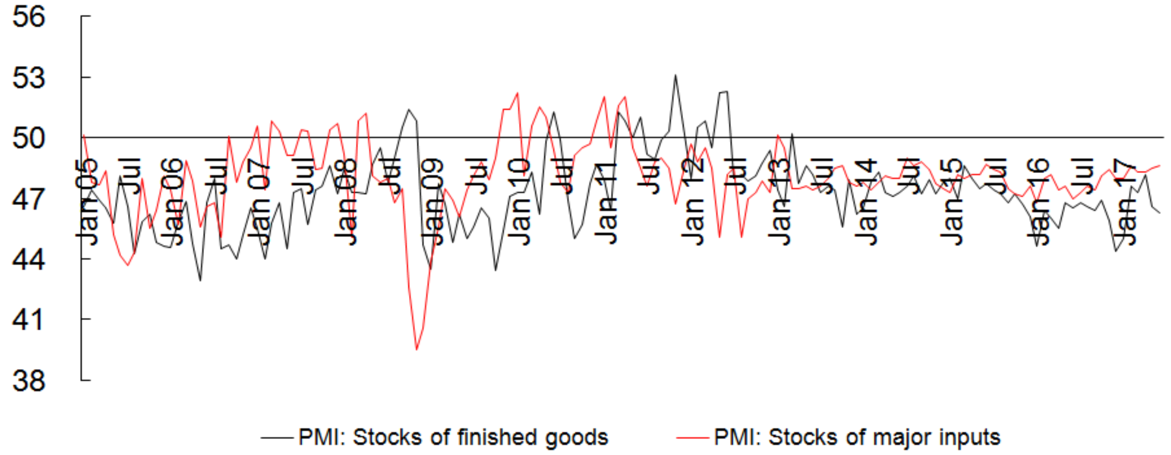

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 5. Stocks of finished goods drop at a faster pace

The stocks of finished goods index fell from 48.2 in April to 46.6 in May, and then went down to a five-month low of 46.3 in June. The downtrend indicates that the stocks of finished goods held by manufacturers have dropped at a faster pace recently.

The stocks of major inputs index rose slightly from 48.3 in April to 48.5 in May and 48.6 in June. (Exhibit 14) The index remained below the critical 50-mark in the past three months, indicating a continuous fall in the stocks of major inputs.

**Exhibit 14: Stocks of finished goods index and stocks of major inputs index, January 2005 to June 2017**



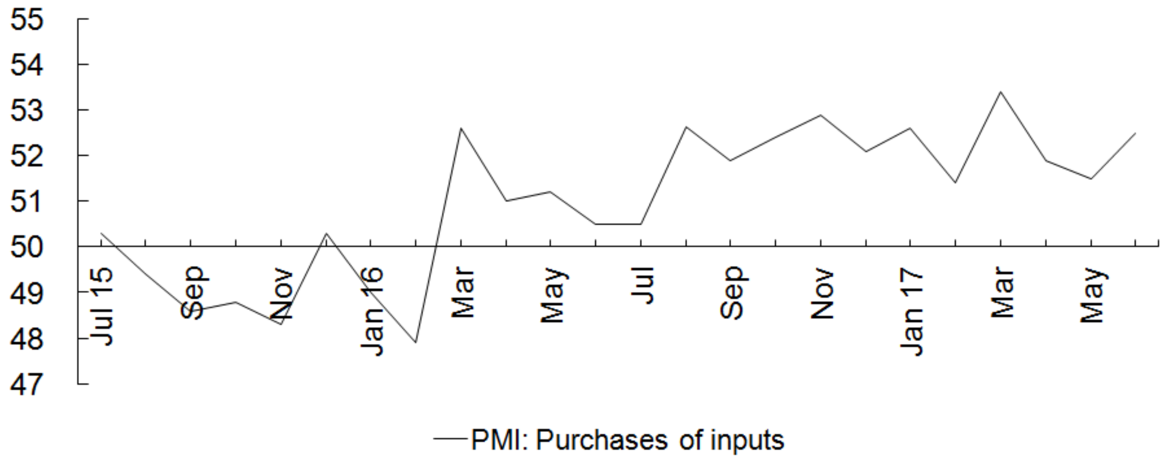

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 6. Growth in purchasing activities reaccelerates

The purchases of inputs index dropped from 51.9 in April to 51.5 in May. However, the index rebounded strongly to 52.5 in June, indicating a reacceleration in the growth in purchasing activities. (Exhibit 15)

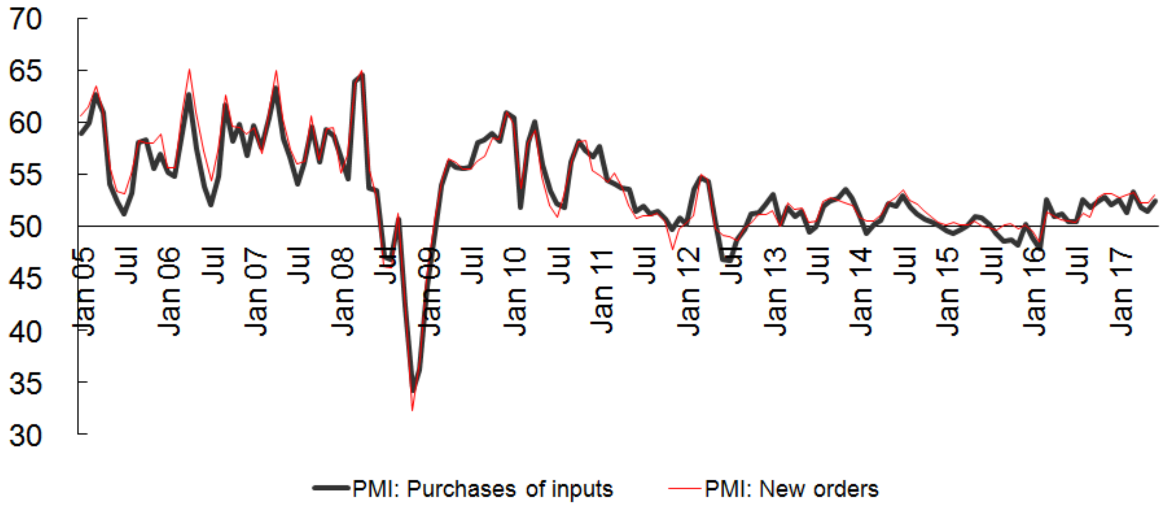
A number of factors affect the purchasing activities of manufacturers, among which the amount of new orders received by manufacturers has been the most important factor. Exhibit 16 plots the purchases of inputs index against the new orders index. The correlation between the two sub-indices is very strong. This is intuitively easy to explain – as manufacturers usually need to purchase extra inputs to cope with new orders. We expect to see a 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 2015 to June 2017**



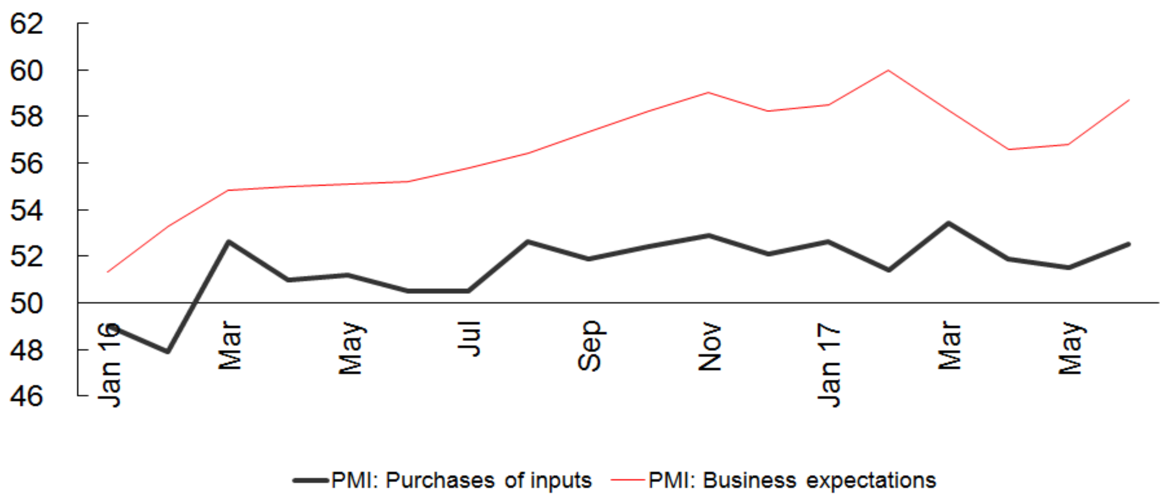

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 16: Purchases of inputs and new orders, January 2005 to June 2017**



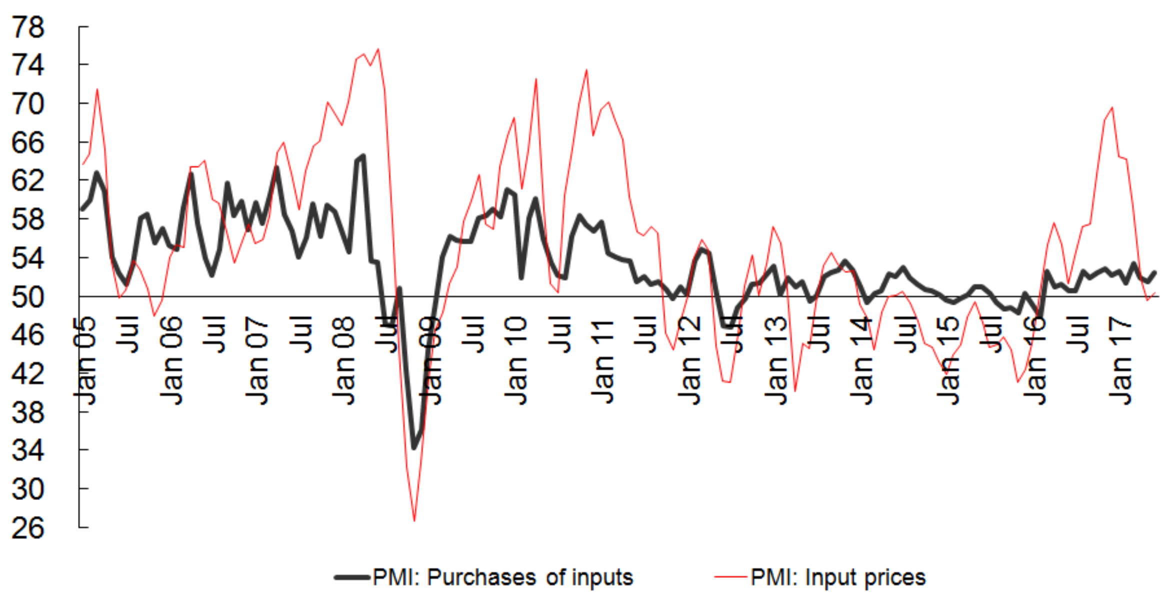

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 17: Purchases of inputs and business expectations, January 2016 to June 2017**




*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 2017**

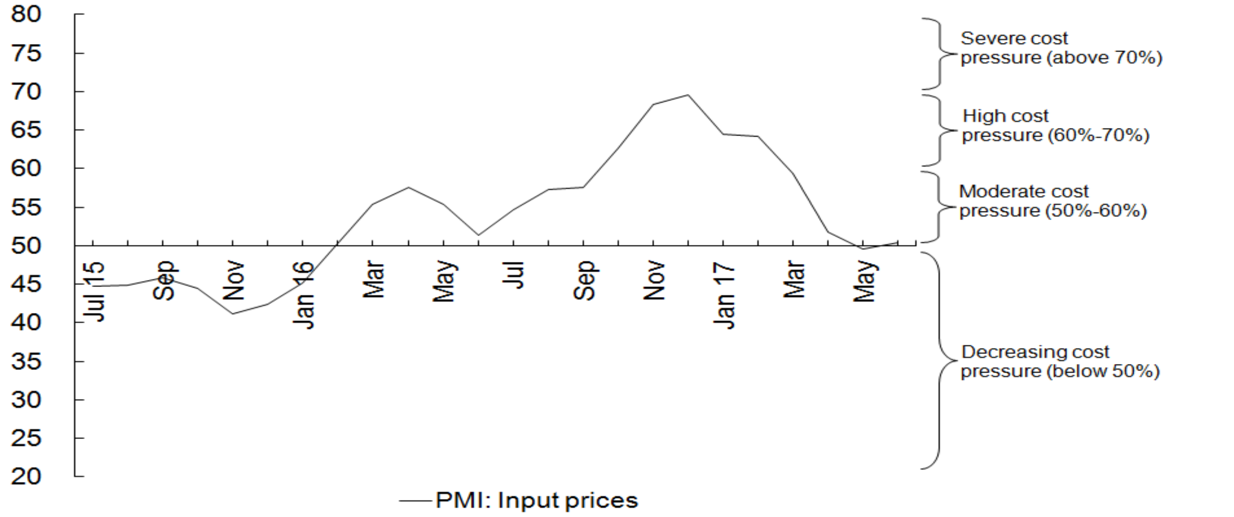



*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 7. Prices of production inputs rise slightly

The input prices index went down from 51.8 in April to 49.5 in May, falling below the critical 50-mark for the first time since February last year. Nevertheless, the index then rebounded to 50.4 in June, showing a slight rise in the prices of production inputs. (Exhibit 19)

**Exhibit 19: Input prices index, July 2015 to June 2017**

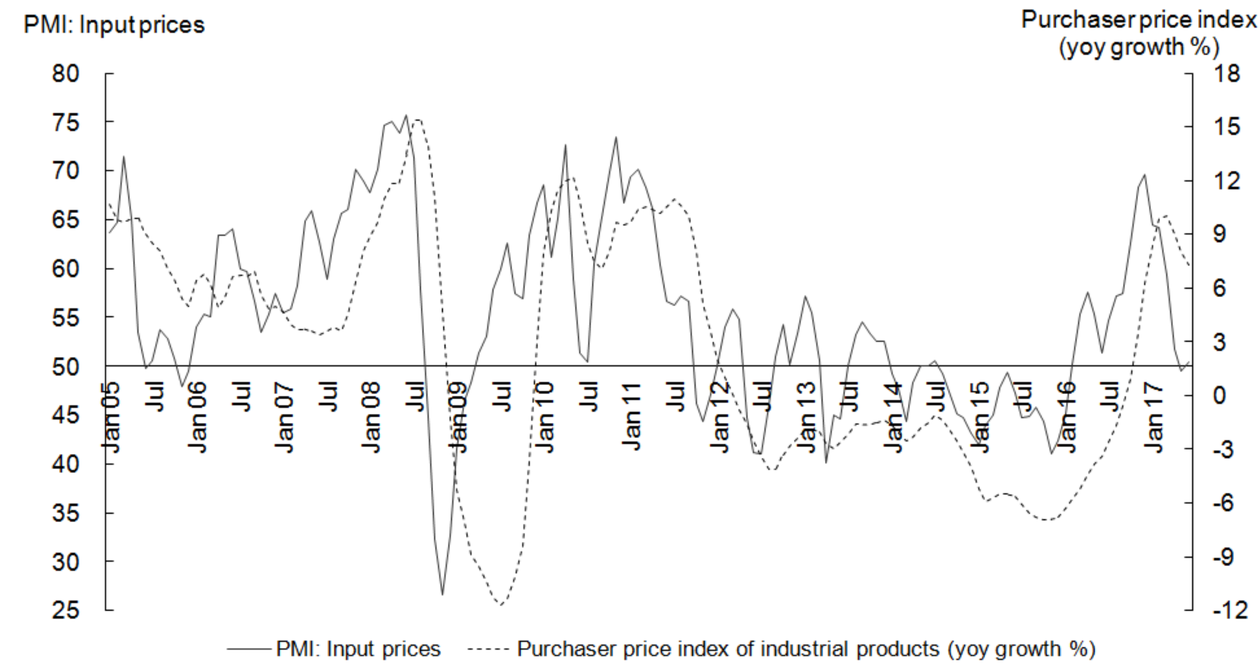



*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

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 year-on-year growth of the producer price index (PPI)[3] in exhibit 21. Going forward, we expect that the year-on-year growth rates for the producer price index (PPI) and purchaser price index will drop further in near future. We also forecast the CPI growth to go up slightly in 3Q17. 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]

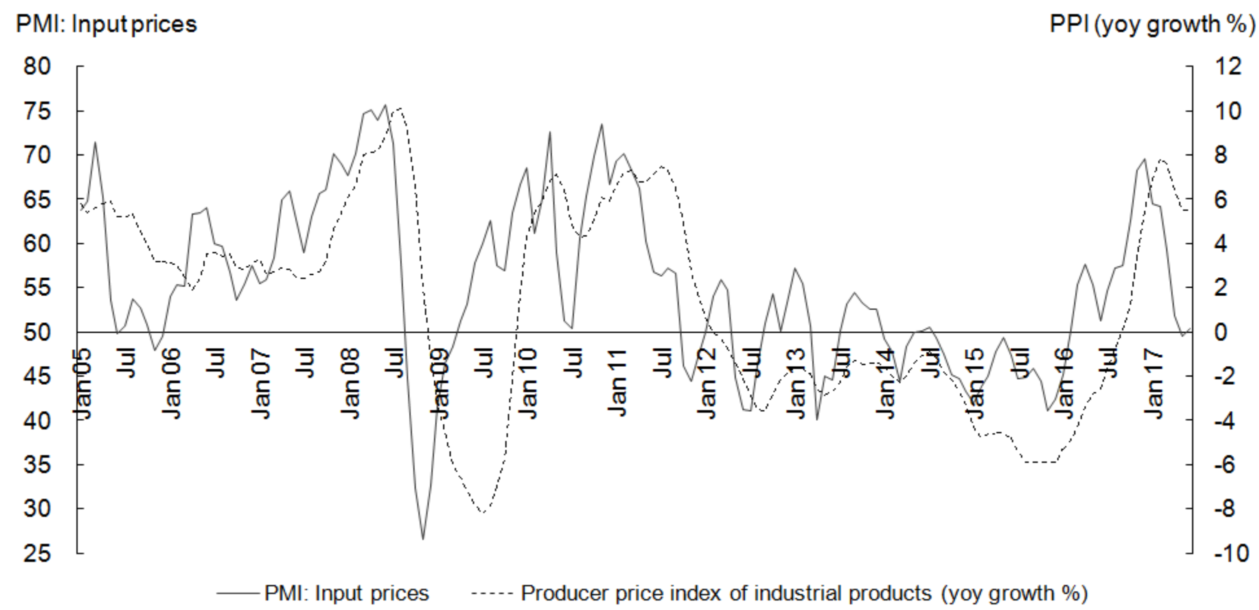
3 The producer price index of industrial goods (PPI), compiled by China National Bureau of Statistics, measures the prices of industrial products when they are sold for the first time after production.
4 The Thomson Reuters/ CoreCommodity CRB Index, which comprises 19 commodities such as crude oil, aluminum, 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 2017**



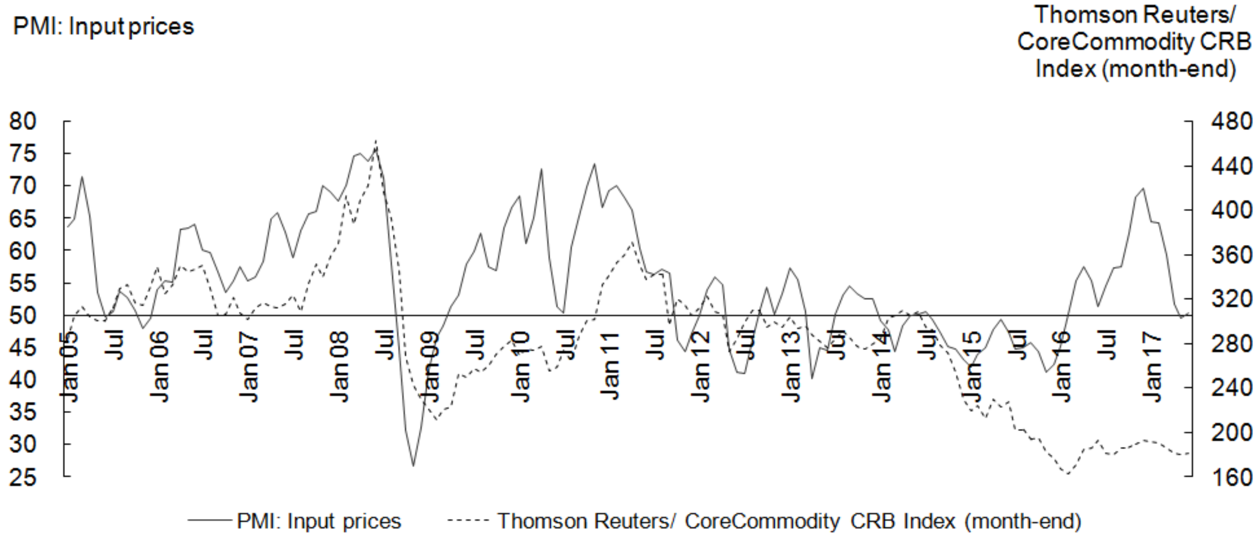

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 21: Input prices index and producer price index, January 2005 to June 2017**




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

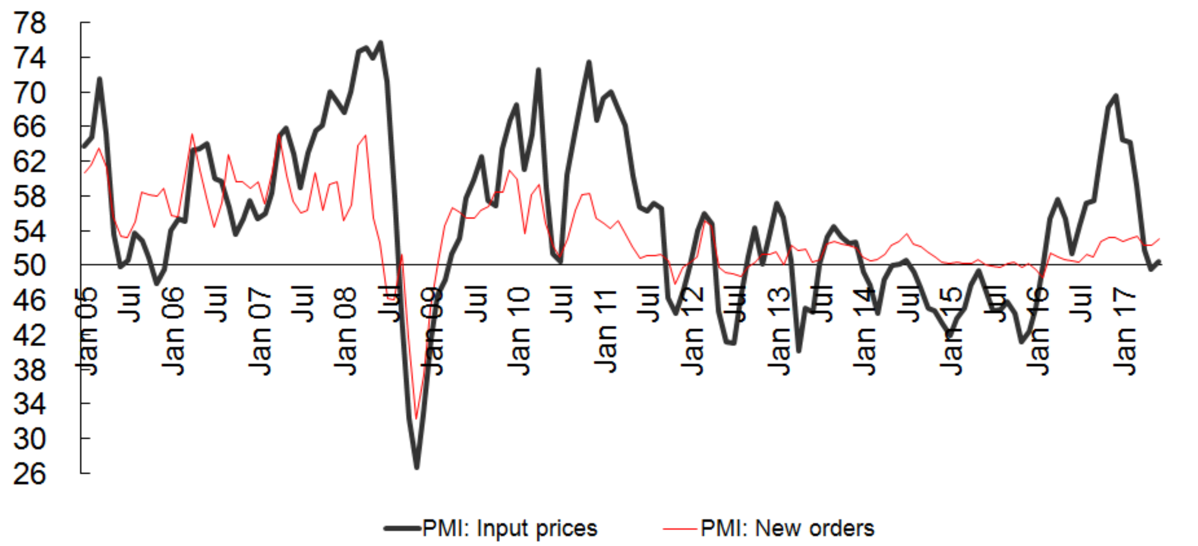
**Exhibit 22: Input prices index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to June 2017**




*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, new orders have risen faster than input prices. This may imply an increase in manufacturers' profit margins in the near future.

**Exhibit 23: Input prices and new orders, January 2005 to June 2017**

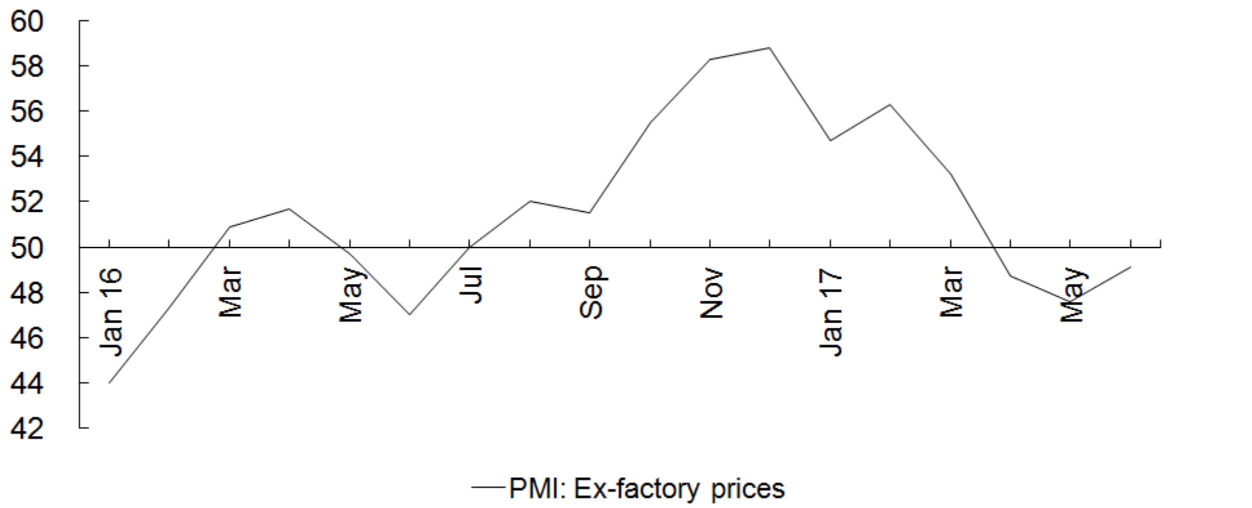



*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 8. Ex-factory prices continue to drop

For the first time in nine months, the ex-factory prices index dropped below the neutral level of 50, registering 48.7 in April. Afterwards, the index recorded 47.6 and 49.1 in May and June respectively, staying below the critical 50-mark for three consecutive months.[5] The ex-factory prices of finished goods have continued to drop in recent months. (Exhibit 24)

**Exhibit 24: Ex-factory prices index, January 2016 to June 2017**




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

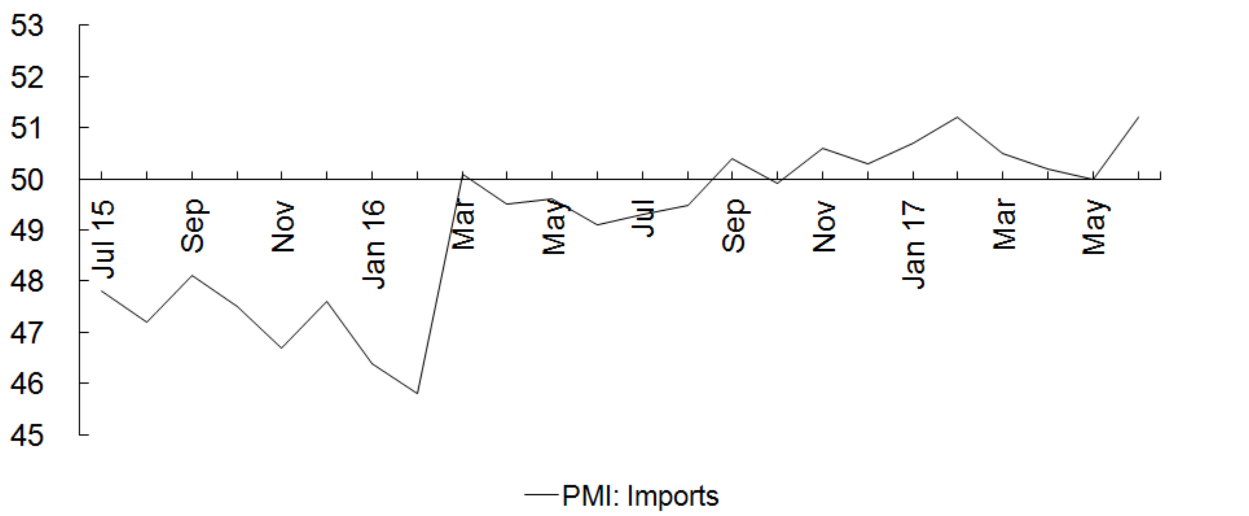
## 9. Imports of raw materials and parts increase

The imports index dropped slightly from 50.2 in April to 50.0 in May. The index then rebounded to 51.2 in June, returning to the expansionary zone. The June reading indicates a recent increase in the imports of raw materials and parts used in manufacturing. (Exhibit 25)

Exhibit 26 shows that the imports index is highly correlated (with some lags) to the year-on-year growth rate in imports. We expect imports to maintain double-digit growth in 3Q17. Exhibit 27 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 28)

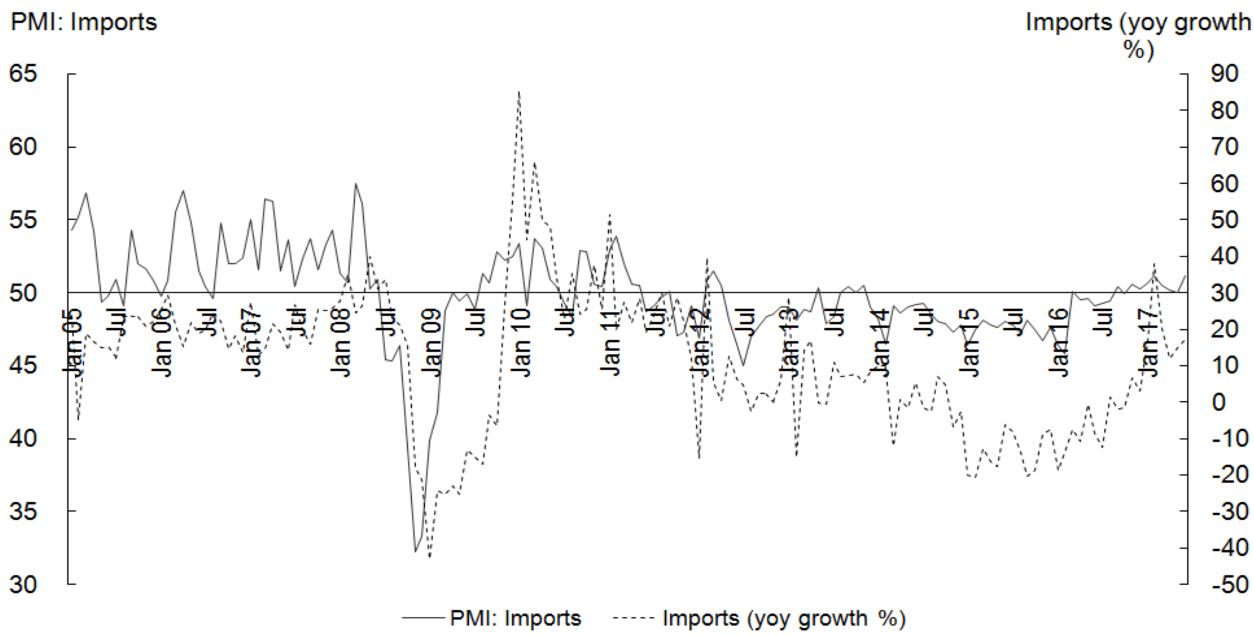
5 The ex-factory prices index has been published since January 2017.

**Exhibit 25: Imports index, July 2015 to June 2017**



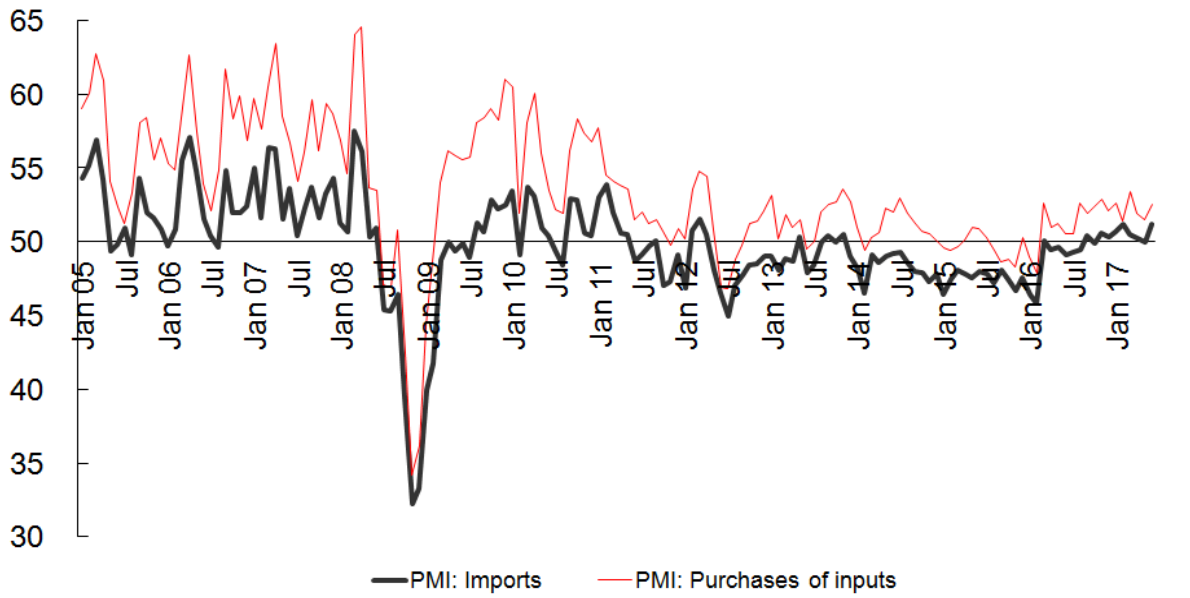

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 26: Imports index and import growth, January 2005 to June 2017**



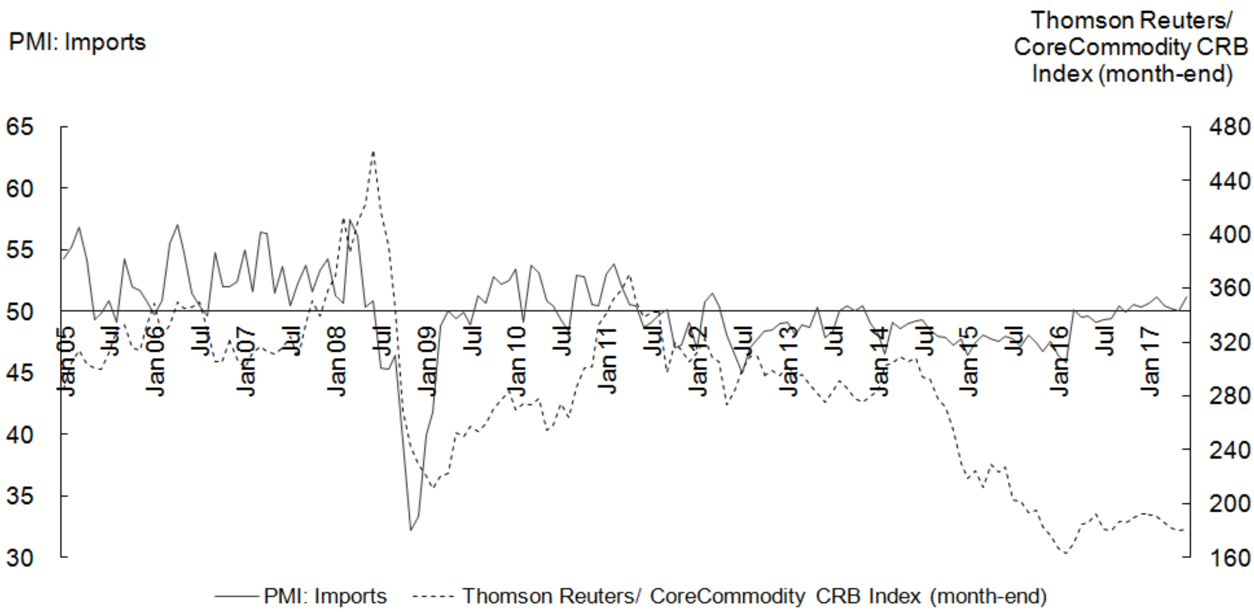

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, China Customs*

**Exhibit 27: Imports and purchases of inputs, January 2005 to June 2017**




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

**Exhibit 28: Imports index and Thomson Reuters/ CoreCommodity CRB Index, January 2005 to June 2017**

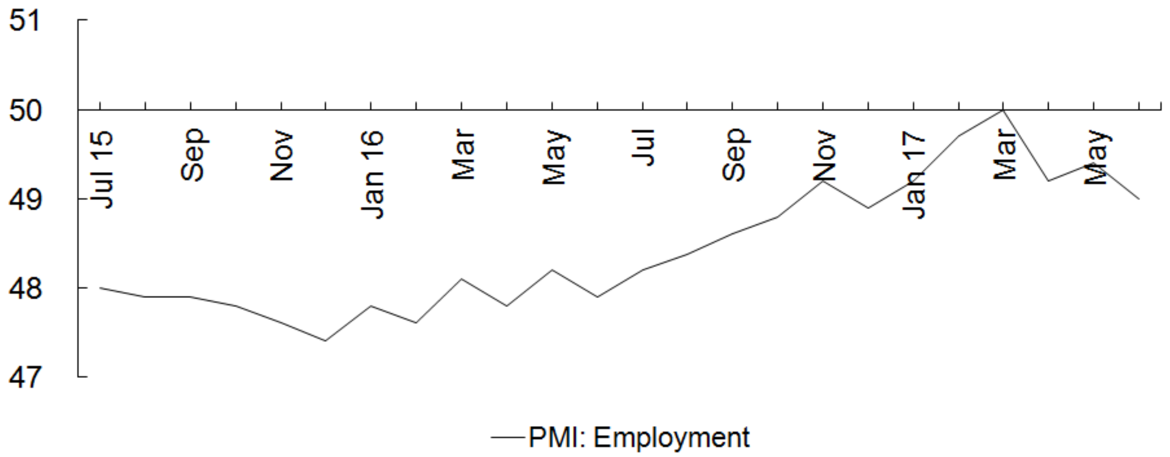



*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics, Thomson Reuters*

## 10. Employment in manufacturing sector decreases at a slow pace

After advancing from 49.2 in April to 49.4 in May, the employment index dropped to 49.0 in June. The index has been slightly below the critical 50-mark since April, indicating that the employment in the manufacturing sector has decreased at a slow pace recently. (Exhibit 29)

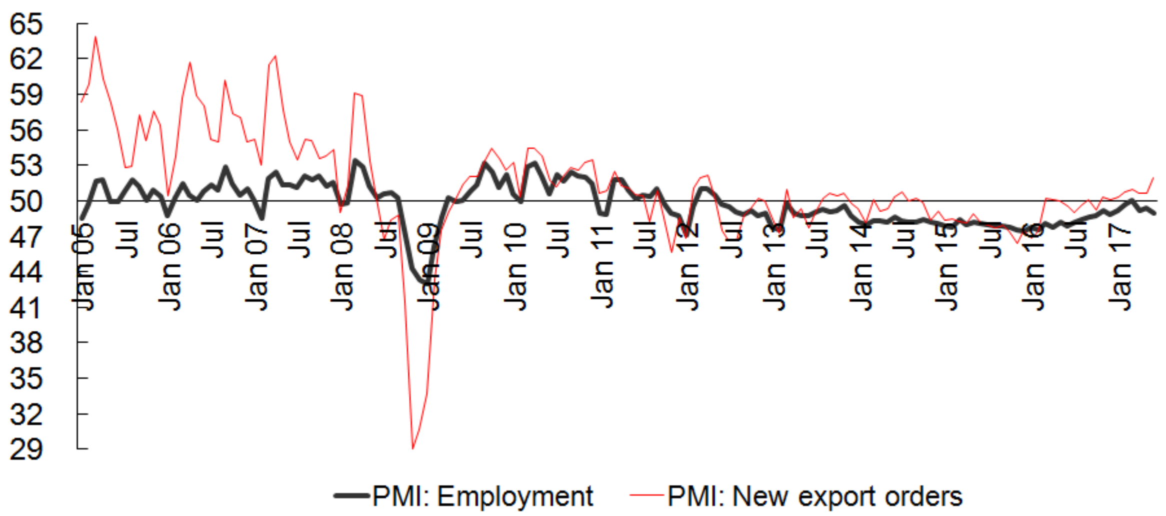
**Exhibit 29: Employment index, July 2015 to June 2017**




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

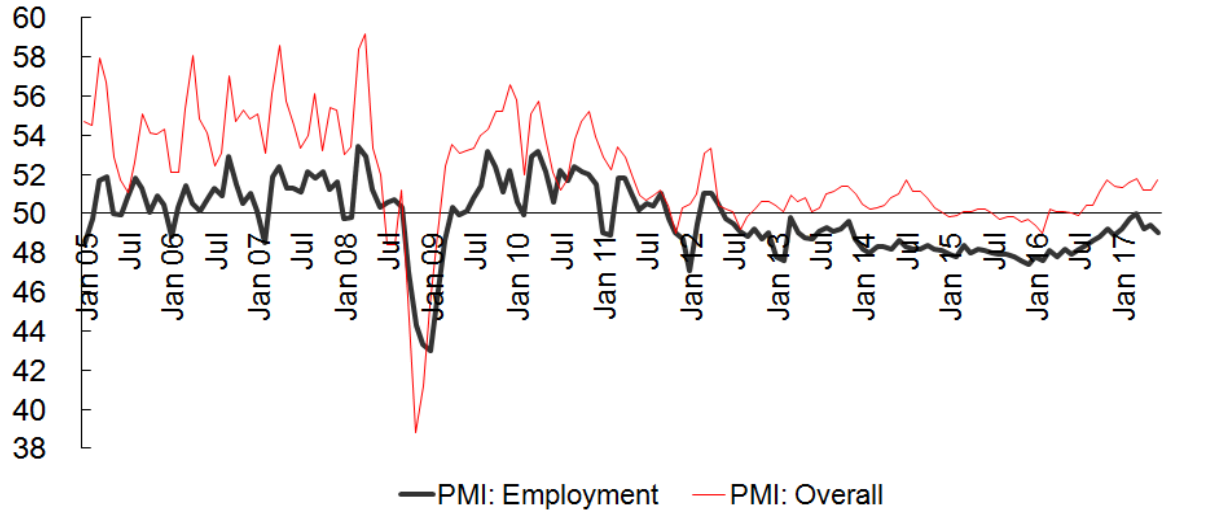
Exhibit 30 proves that the employment in China's manufacturing sector has relied heavily on the export sector. Exhibit 31 and 32 give our readers some ideas about the extent to which the employment situation improves or deteriorates with the manufacturing sector and the overall economy.

**Exhibit 30: Employment and new export orders, January 2005 to June 2017**



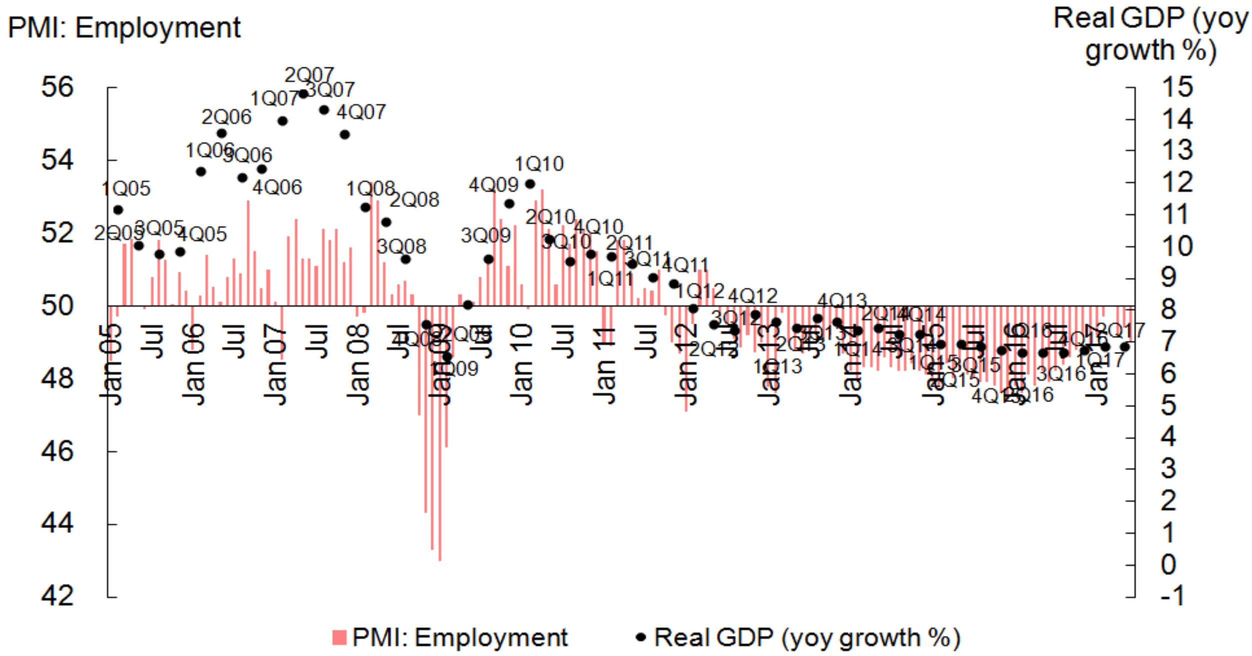

*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

**Exhibit 31: Employment index and headline PMI, January 2005 to June 2017**




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

**Exhibit 32: Employment index and real GDP growth, January 2005 to June 2017**

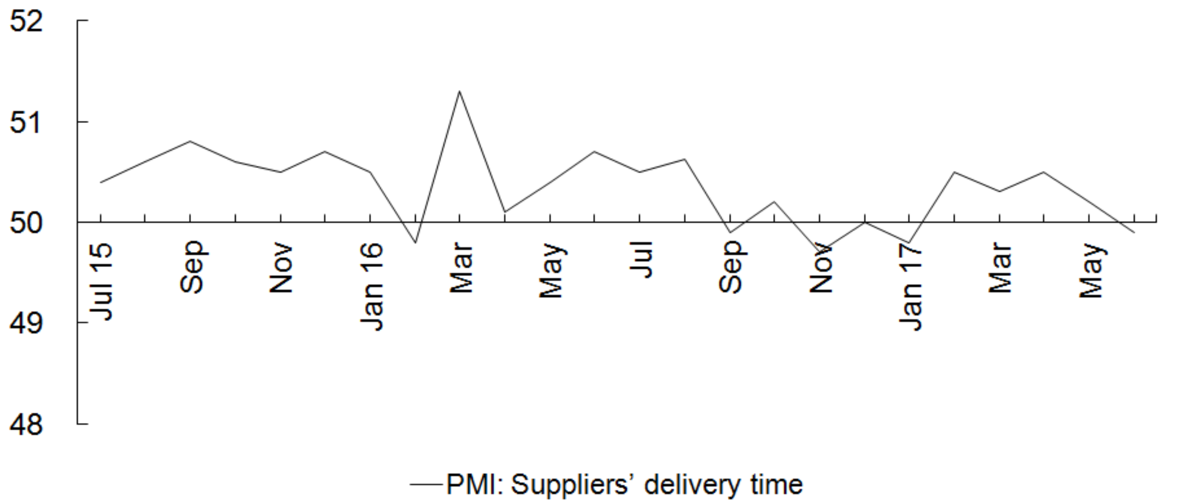



*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 11. Suppliers' delivery slows

The suppliers' delivery time index fell from 50.5 in April to 50.2 in May, and further to 49.9 in June. The index dropped below 50 in June, indicating that suppliers' delivery slowed in the month. (Exhibit 33)

**Exhibit 33: Suppliers' delivery time index, July 2015 to June 2017**

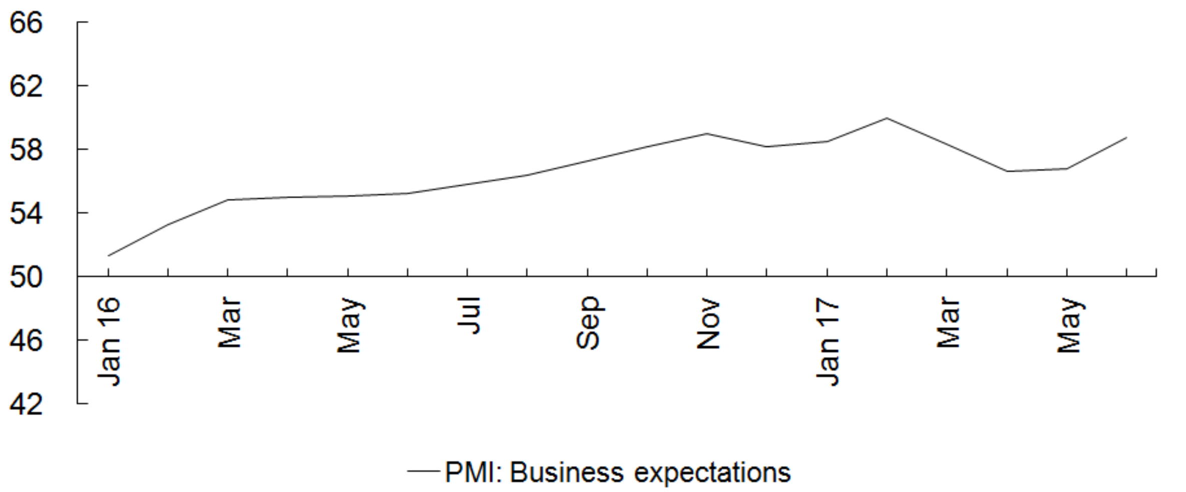



*Source: China Federation of Logistics & Purchasing, China National Bureau of Statistics*

## 12. Confidence among purchasing managers improves

The business expectations index went up slightly from 56.6 in April to 56.8 in May, before rising to a four-month high of 58.7 in June.[6] The recent uptrend indicates an improvement in confidence among purchasing managers in China. (See exhibit 34)

**Exhibit 34: Business expectations index, January 2016 to June 2017**




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

6 Since January 2017, a new method of seasonal adjustment to the business expectations index has been adopted; and accordingly, the historical readings of the index have been revised.

## About China Manufacturing PMI:

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

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

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

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

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

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

# About the Organisations:

## China Federation of Logistics & Purchasing

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

## Fung Business Intelligence

Fung Business Intelligence collects, analyses and interprets 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 45,100 people across 40 economies worldwide, generating total revenue of over US$24.8 billion in 2015. 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.