



Shanghai Metals Market

CHINA STEEL PMI MONTHLY

NOV, 2016

SMM Information & Technology Co., Ltd.

SMM Steel Research Team

Contacts:

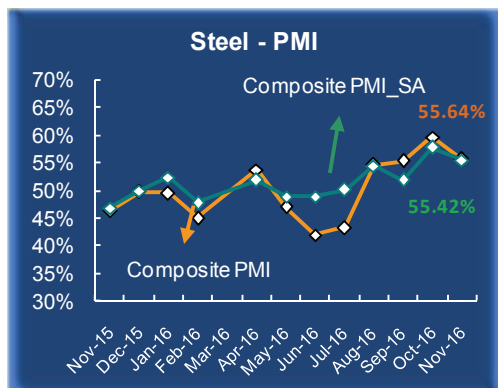
Hotline: +86-21-5155-0322

Fax: +86-21-5155-0345

Mail: service.en@smm.cn

Website: <http://www.metal.com>

Add:8th FL in North Section, Building 9,
Lujiazui Software Park, No. 20, Lane 91,
E'Shan Road, Pudong New Area, Shang-
hai, 200127, China.



Demand Remains Positive, and High Prices Restrict Raw Material Purchases in November

Summary

The Steel-PMI was 55.64 in November, down 4.03 MoM and up 9.35 YoY. On a seasonally adjusted basis, the Steel-PMI came in at 55.42, down 2.25 MoM and up 9.33 YoY.

In November, the Steel-PMI stayed above 50 despite a month-on-month decline both before and after the seasonal adjustment, a reflection that end-user demand, despite signs of weakening, remains positive. Production index was 60.76 in November, down 5.84 MoM and up 17.14 YoY. Production at end-user producers in some regions was negatively affected by cold weather, but overall production remained positive. New order index was 59.26 in November, down 8.78 MoM and up 13.92 YoY. Orders at most end-user sectors kept growing, supporting steel demand.

Highlights of November Steel-PMI

- The construction PMI was 52.13 in November, down 8.22 MoM and up 3.76 YoY. On a seasonally-adjusted basis, the reading was 53.30, down 5.48 MoM and up 3.73 YoY. Production at most construction sites in north China came to a halt due to colder weather and environmental protection inspections.
- The machinery PMI was 58.45 in November, up 0.75 MoM and 22.07 YoY. On a seasonally-adjusted basis, the reading was 56.06, up 1.15 MoM and 21.89 YoY. The support on construction machine from infrastructure projects was continuing, and orders for mining machine also turned better after continuous rises in coking coal and coke.
- The automobile PMI was 69.34 in November, up 0.02 MoM and 14.11 YoY. On a seasonally-adjusted basis, the figure was 59.53, down 0.80 MoM and up 14.29 YoY. Production and new orders at automobile producers improved further with efforts to fulfill full-year targets and preferential policies.
- The shipbuilding PMI was 47.63 in November, up 1.64 MoM and down 4.07 YoY. On a seasonally-adjusted basis, the figure was 45.25, down 1.04 MoM and down 4.00 YoY. The shipbuilding sector remained sluggish. Surging prices of raw materials depressed signing of new orders.
- The home appliance PMI was 63.78 in November, up 5.69 MoM, and up 3.99 YoY. On a seasonally-adjusted basis, the reading was 58.76, up 2.04 MoM, and up 3.48 YoY. Both production and new orders at producers got a boost from year-end promotions and the upcoming Christmas holiday.
- The transportation PMI was 62.70 in November, up 7.05 MoM and 12.96 YoY. On a seasonally-adjusted basis, the figure was 62.14, up 7.07 MoM, and up 12.87 YoY. Construction activity and new orders in transportation sector continued growing in November thanks to acceleration of infrastructure investment and availability of funds earmarked for projects since Q4 2016.

Composite Index by Industry

	Nov	Number of Sample (Effective)
Construction Industry		
Composite Index	52.13	128
Machinery Industry		
Composite Index	58.45	126
Automobile Industry		
Composite Index	69.34	130
Shipbuilding Industry		
Composite Index	47.63	129
Home Appliance Industry		
Composite Index	63.78	126
Transportation Industry		
Composite Index	62.70	130
Steel Downstream Industries		
PMI index	55.64	769
PMI index_SA	55.42	

Illustration for Analysis Method in China Steel PMI Monthly:

SMM conducts surveys, processes data from targeted samples and calculates PMI in steel downstream industries simultaneously with direct collection and PMI formulating methods.

- First, SMM selects qualified samples from all steel downstream enterprises sourced from SMM database, and conducts a direct survey for sample with close-door questions based on relevant indicators;
- Second, SMM classifies the survey data by industry, then calculates various derivative indexes based on PMI formulating methods, then calculates comprehensive index in all industries, and finally calculates PMI in steel downstream industries by weighting the average comprehensive index based on the proportion of steel demand from one industry in total steel demand. According to the definition of PMI, one index greater than 50% indicates this industry increases on a monthly basis, while the index less than 50% means this indicator in this industry fall.
- Index changes in all industries during the process of PMI calculation can reflect the development and forecast of steel downstream industries.

Contacts:

Hotline: +86-21-5155-0322

Fax: +86-21-5155-0345

Mail: service.en@smm.cn

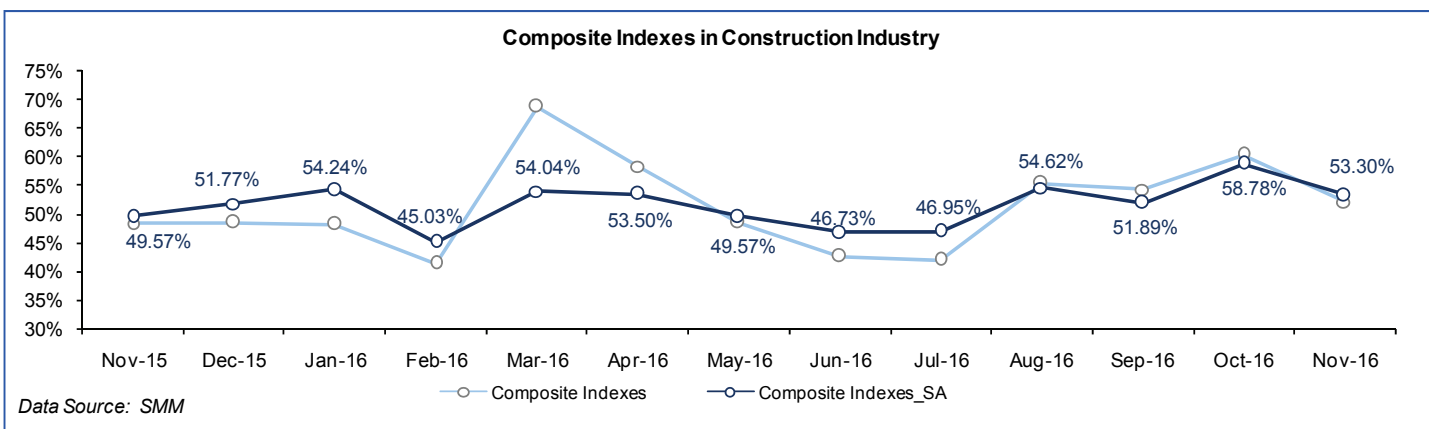
Website: <http://www.metal.com>

Construction Industry

Construction Industry

	Jun	Jul	Aug	Sep	Oct	Nov	MOM	YOY
1 Production Index	38.75%	30.09%	51.72%	56.03%	67.71%	53.78%	-13.93%	7.98%
2 New Order Index	36.33%	42.78%	64.56%	59.74%	69.12%	53.12%	-16.00%	3.89%
3 New Export Order Index	41.76%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%	0.19%
4 Outstanding Business Index	39.33%	61.17%	68.59%	52.48%	50.98%	48.53%	-2.45%	-2.51%
5 Index of Finished Products Inventory	44.18%	48.91%	50.00%	50.00%	53.15%	53.26%	0.11%	3.36%
6 Purchasing Volume Index	47.30%	29.91%	66.34%	66.06%	66.92%	50.51%	-16.41%	4.40%
7 Import Index	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
8 Purchasing Price Index	23.74%	99.56%	99.62%	9.59%	99.01%	95.19%	-3.82%	95.19%
9 Index of Raw Material Inventory	44.54%	45.84%	60.51%	48.34%	50.55%	51.63%	1.08%	1.83%
10 Employment Index	50.00%	46.55%	50.24%	50.00%	50.00%	50.00%	0.00%	1.67%
11 Supplier Deliveries Index	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
Composite Index	42.52%	41.91%	55.37%	54.35%	60.35%	52.13%	-8.22%	3.76%
After Seasonal Adjustment	46.73%	46.95%	54.62%	51.89%	58.78%	53.30%	-5.48%	3.73%

Data Source: SMM



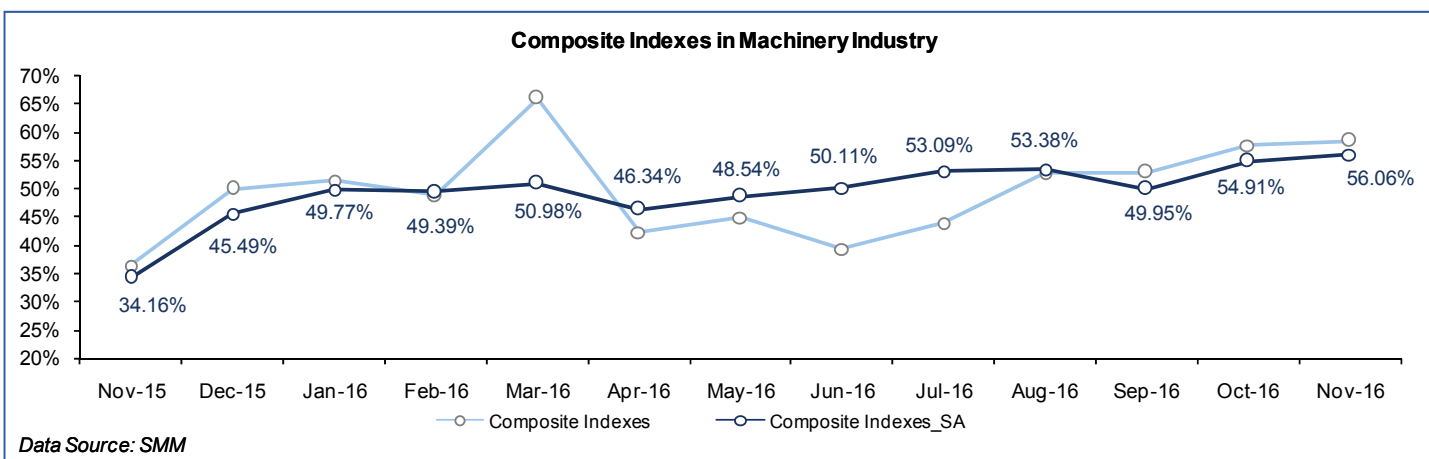
- The construction PMI was 52.13 in November, down 8.22 MoM and up 3.76 YoY. On a seasonally-adjusted basis, the reading was 53.30, down 5.48 MoM and up 3.73 YoY.
- Production index was 53.78, down 13.93 MoM and up 7.98 YoY. New order index was 53.12, down 16.00 MoM and up 3.89 YoY. Production at most construction sites in north China came to a halt due to colder weather and environmental protection inspections, while that in south China grew with commission of new property projects and tighter production schedule before 2017 Chinese New Year holiday in late January. Orders at some steel structure companies reduced as surging raw material prices grew their caution in taking new orders. But, municipal projects were little affected by this, with demand remaining strong.
- Purchasing volume index was 50.51, down 16.41 MoM and up 4.40 YoY. Raw material inventories index was 51.63, up 1.08 MoM, and up 1.83 YoY. The rise in purchasing volumes was due mainly to growing production. Some construction sites replenished raw materials in mid November when steel prices fell back, leading to the increase in raw material inventories. However, stock-replenishment interest was not high in the construction sector.
- *Construction companies kept 15.2 days of raw material inventories on average in November, up 0.3 day MoM. Days of raw material inventories are only for reference since the size of survey sample has changed.*
- Employment index and supplier deliveries index both held steady at 50, unchanged on a monthly basis.
- To sum up, production at most construction sites in north China came to a halt due to colder weather and environmental protection inspections, while that in east and south China grew with commission of new projects and tighter production schedule before 2017 Chinese New Year holiday in late January. Surging prices of raw materials cooled down buying interest in raw materials in the sector in November.

Machinery Industry

Machinery Industry

	Jun	Jul	Aug	Sep	Oct	Nov	MOM	YOY
1 Production Index	44.03%	35.97%	49.61%	55.52%	63.96%	67.00%	3.04%	38.66%
2 New Order Index	21.99%	42.16%	58.79%	54.75%	64.46%	62.86%	-1.60%	33.63%
3 New Export Order Index	48.87%	45.70%	51.62%	50.58%	50.63%	50.00%	-0.63%	0.00%
4 Outstanding Business Index	41.43%	47.40%	54.46%	50.00%	54.15%	36.03%	-18.12%	-13.97%
5 Index of Finished Products Inventory	50.00%	48.76%	50.00%	50.00%	50.00%	56.62%	6.62%	6.62%
6 Purchasing Volume Index	21.86%	33.50%	56.89%	61.48%	60.69%	65.09%	4.40%	36.75%
7 Import Index	50.00%	48.76%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
8 Purchasing Price Index	34.34%	65.79%	71.64%	56.68%	68.07%	71.48%	3.41%	54.44%
9 Index of Raw Material Inventory	34.34%	46.29%	53.95%	50.00%	47.36%	50.13%	2.77%	1.61%
10 Employment Index	50.00%	49.51%	50.00%	50.00%	50.00%	50.00%	0.00%	9.48%
11 Supplier Deliveries Index	50.00%	50.49%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
Composite Index	39.32%	43.87%	52.74%	52.81%	57.70%	58.45%	0.75%	22.07%
After Seasonal Adjustment	50.11%	53.09%	53.38%	49.95%	54.91%	56.06%	1.15%	21.89%

Data Source: SMM



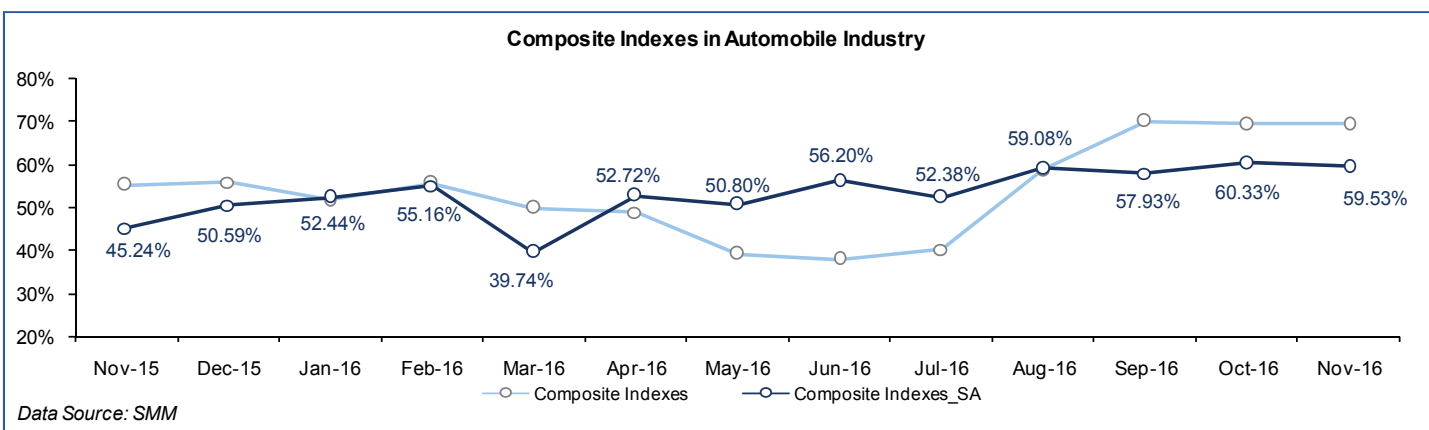
- The machinery PMI was 58.45 in November, up 0.75 MoM and 22.07 YoY. On a seasonally-adjusted basis, the reading was 56.06, up 1.15 MoM and 21.89 YoY.
- Production index was up 3.04 MoM and 38.66 YoY to 67.00. New order index was 62.86, down 1.60 MoM, but up 33.63 YoY. Supported by infrastructure projects from the beginning of 2016, demand for construction machine increased mildly, especially for large construction machine. Orders for mining machine also turned better after surging coking coal and coke prices, and those for power machine remained robust, while conditions for petrochemical machines were poor.
- Finished product inventories index was 56.62, up 6.62 MoM, while raw material inventories index was 50.13, up 2.77 MoM. Purchasing volume index rose 4.40 to 65.09. With year-end approaching, most machinery producers usually increase finished-goods inventories in preparation for sales in the coming year, but surging prices of raw materials resulted in a strong wait-and-see attitude in the sector. Machinery producers, which currently purchase raw materials on as-needed basis will not replenish goods for the foreseeable future.
- *Machinery manufacturers kept 17.03 days of raw material inventories on average in November, down 0.12 day MoM. Days of raw material inventories are only for reference since the size of survey sample has changed.*
- Employment index and supplier deliveries index both held at 50 in November, unchanged on a monthly basis.
- To sum up, demand for construction machine improved further in November thanks to support from infrastructure projects, and that for mining machine continued growing after coking coal and coke prices surged. But, high steel prices kept most machinery producers on the sidelines.

Automobile Industry

Automobile Industry

	Jun	Jul	Aug	Sep	Oct	Nov	MOM	YOY
1 Production Index	28.84%	30.26%	55.25%	85.87%	84.64%	85.91%	1.27%	25.02%
2 New Order Index	27.81%	32.68%	73.72%	85.87%	84.93%	86.14%	1.21%	26.04%
3 New Export Order Index	53.08%	51.72%	50.00%	50.00%	50.00%	52.73%	2.73%	-0.12%
4 Outstanding Business Index	46.45%	49.94%	64.05%	50.00%	57.06%	53.76%	-3.30%	5.51%
5 Index of Finished Products Inventory	48.52%	51.20%	49.29%	52.13%	50.00%	53.07%	3.07%	5.98%
6 Purchasing Volume Index	28.84%	32.84%	64.45%	82.31%	70.49%	67.58%	-2.91%	16.74%
7 Import Index	50.00%	51.03%	50.00%	50.00%	50.00%	50.00%	0.00%	-0.65%
8 Purchasing Price Index	21.29%	62.32%	97.04%	72.72%	98.49%	100.00%	1.51%	90.09%
9 Index of Raw Material Inventory	49.50%	50.99%	55.42%	52.28%	53.65%	56.19%	2.54%	10.56%
10 Employment Index	50.00%	49.48%	50.00%	50.00%	50.00%	50.00%	0.00%	0.78%
11 Supplier Deliveries Index	50.51%	53.38%	50.00%	50.00%	50.00%	43.74%	-6.26%	-6.26%
Composite Index	38.03%	40.38%	58.66%	69.95%	69.32%	69.34%	0.02%	14.11%
After Seasonal Adjustment	56.20%	52.38%	59.08%	57.93%	60.33%	59.53%	-0.80%	14.29%

Data Source: SMM



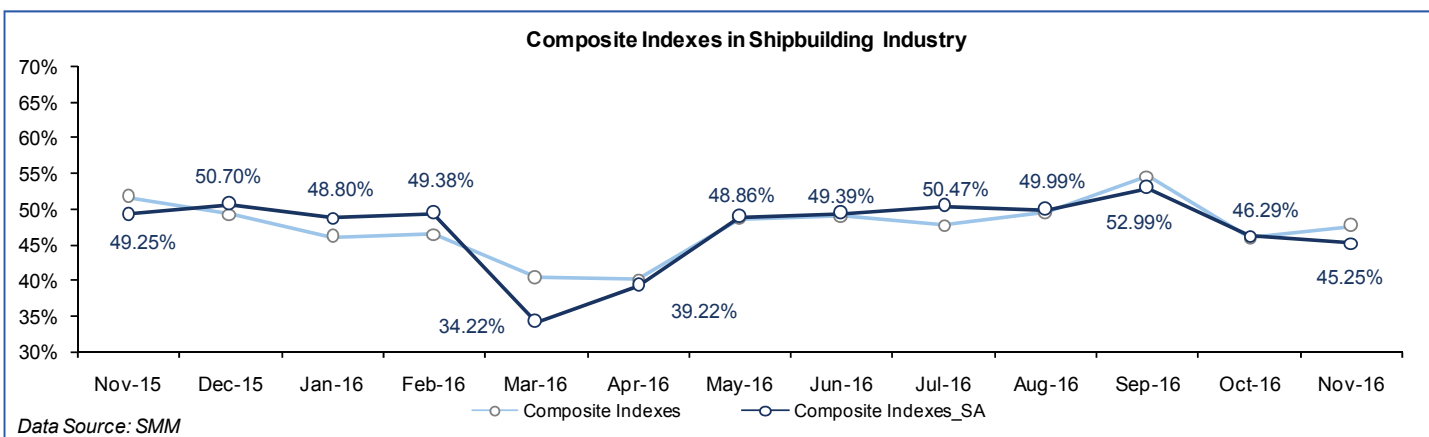
- The automobile PMI was 69.34 in November, up 0.02 MoM and 14.11 YoY. On a seasonally-adjusted basis, the figure was 59.53, down 0.80 MoM and up 14.29 YoY.
- Production index increased 1.27 MoM and 25.02 YoY to 85.91. New order index was 86.14, up 1.21 MoM and 26.04 YoY. Production and new orders at automobile producers improved further with efforts to fulfill full-year targets and preferential policies. Output at some passenger vehicle and auto component producers even refreshed new highs. Some producers also said the Belt & Road initiative is positive for auto exports to Southeast Asia, but market capacity was small.
- Purchasing volume index was down 2.91 MoM to 67.58, while raw material inventories index was up 2.54 to 56.19. Growing orders and production increased raw material purchases, but their purchasing interest was restricted by limited supplies from steel mills, some of which reported orders from automobile producers have been arranged to February 2017. Finished product inventories index was 53.07, up 3.07 MoM and 5.98 YoY.
- Automakers kept 35.46 days of raw material inventories on average in November, up 0.46 day MoM. Days of raw material inventories are only for reference since the size of survey sample has changed.
- Employment index held unchanged at 50, while supplier deliveries index came in at 43.74 as some steel mills postponed deliveries after continuous increases in orders.
- To sum up, production and orders in the automobile sector increased with with efforts to fulfill full-year targets and preferential policies in November. Raw material purchases by automobile producers were restricted by limited supplies from steel mills.

Shipbuilding Industry

Shipbuilding Industry

	Jun	Jul	Aug	Sep	Oct	Nov	MOM	YOY
1 Production Index	50.35%	46.92%	50.29%	50.87%	48.80%	45.83%	-2.97%	-17.32%
2 New Order Index	47.24%	48.32%	47.90%	64.35%	35.33%	49.60%	14.27%	7.32%
3 New Export Order Index	50.00%	50.00%	50.52%	64.02%	35.66%	49.39%	13.73%	29.34%
4 Outstanding Business Index	46.81%	49.43%	34.72%	50.25%	8.86%	48.31%	39.45%	8.35%
5 Index of Finished Products Inventory	50.00%	50.00%	50.00%	50.00%	48.80%	50.00%	1.20%	0.00%
6 Purchasing Volume Index	50.35%	48.36%	49.48%	51.37%	67.99%	13.93%	-54.06%	-41.73%
7 Import Index	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
8 Purchasing Price Index	44.90%	82.41%	67.62%	5.33%	65.12%	58.90%	-6.22%	19.71%
9 Index of Raw Material Inventory	46.91%	42.80%	40.75%	51.93%	65.05%	25.76%	-39.29%	-18.10%
10 Employment Index	50.00%	49.65%	50.00%	50.03%	50.00%	50.00%	0.00%	0.00%
11 Supplier Deliveries Index	50.00%	46.43%	53.57%	50.00%	50.00%	50.00%	0.00%	-6.91%
Composite Index	49.10%	47.76%	49.52%	54.63%	45.99%	47.63%	1.64%	-4.07%
After Seasonal Adjustment	49.39%	50.47%	49.99%	52.99%	46.29%	45.25%	-1.04%	-4.00%

Data Source: SMM



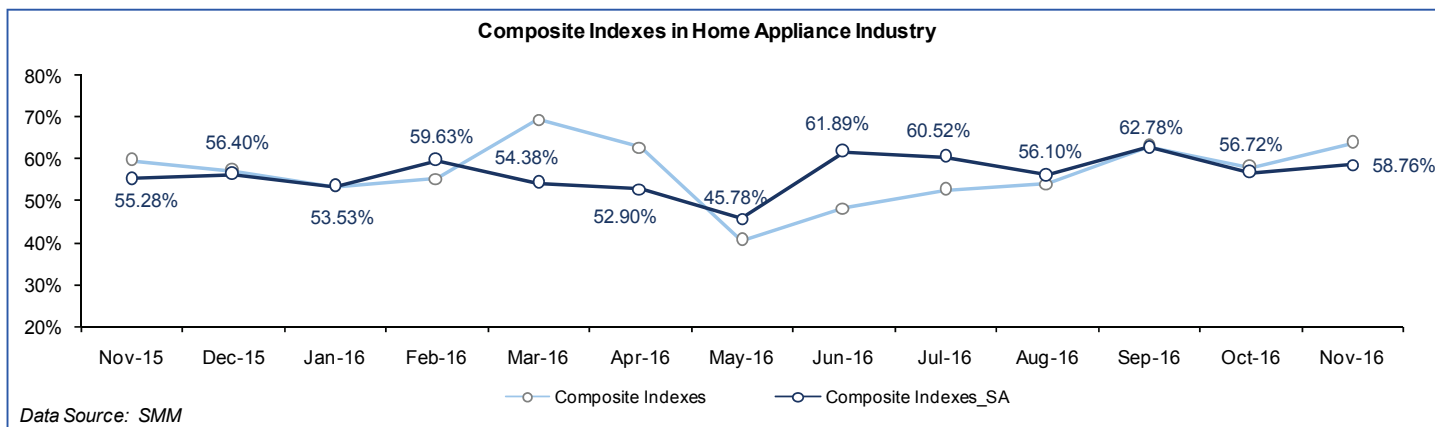
- The shipbuilding PMI was 47.63 in November, up 1.64 MoM and down 4.07 YoY. On a seasonally-adjusted basis, the figure was 45.25, down 1.04 MoM and down 4.00 YoY.
- Production index was down 2.97 to 45.83, and new order index increased 14.27 to 49.60. Export order index was up 13.73 to 49.39. The shipbuilding sector remained sluggish. Some shipbuilders were negotiation over new orders, but surging prices of raw materials turned them wary of signing new ones. Meanwhile, several shipbuilders put off operation time in the face of rapid price gains in raw materials under the prerequisite of delivering goods on time.
- Purchasing volume index tumbled 54.06 to 13.93, and raw material inventories index fell 39.29 to 25.76. The big price spread between raw material and finished goods resulted in a strong wait-and see attitude in the sector, and only very few producers advanced raw material purchases for fear of further price gains.
- *Shipbuilders kept 35 days of raw material inventories on average in November, down 3.13 days MoM. Days of raw material inventories are only for reference since the size of survey sample has changed.*
- Both employment and supplier deliveries index was unchanged at 50 in November.
- To sum up, the shipbuilding sector remained sluggish, and producers in the sector were generally wary of signing new orders after surging steel prices, and took a wait-and-see stance in raw material purchases.

Home Appliance Industry

Home Appliance Industry

	Jun	Jul	Aug	Sep	Oct	Nov	MOM	YOY
1 Production Index	50.00%	51.33%	58.20%	72.17%	54.14%	72.51%	18.37%	4.15%
2 New Order Index	44.72%	55.20%	55.84%	73.46%	72.11%	76.44%	4.33%	8.08%
3 New Export Order Index	47.99%	31.39%	49.65%	47.30%	51.54%	53.92%	2.38%	-0.82%
4 Outstanding Business Index	44.72%	49.35%	48.14%	51.13%	66.94%	49.22%	-17.72%	-7.89%
5 Index of Finished Products Inventory	54.28%	55.18%	54.38%	48.52%	39.22%	51.57%	12.35%	8.44%
6 Purchasing Volume Index	38.68%	51.33%	60.18%	83.89%	69.87%	65.84%	-4.03%	4.13%
7 Import Index	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
8 Purchasing Price Index	7.55%	92.45%	77.65%	9.06%	94.42%	91.76%	-2.66%	91.76%
9 Index of Raw Material Inventory	44.72%	59.56%	55.00%	61.72%	69.32%	52.89%	-16.43%	3.32%
10 Employment Index	50.00%	50.00%	49.65%	50.00%	50.00%	50.00%	0.00%	-0.30%
11 Supplier Deliveries Index	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
Composite Index	48.37%	52.63%	54.20%	63.09%	58.09%	63.78%	5.69%	3.99%
After Seasonal Adjustment	61.89%	60.52%	56.10%	62.78%	56.72%	58.76%	2.04%	3.48%

Data Source: SMM



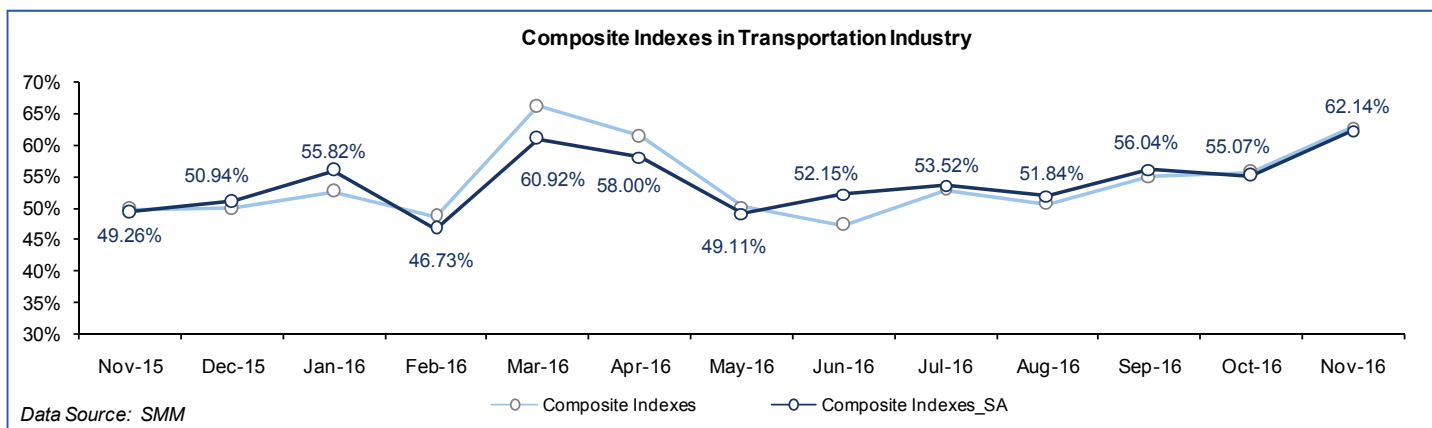
- The home appliance PMI was 63.78 in November, up 5.69 MoM, and up 3.99 YoY. On a seasonally-adjusted basis, the reading was 58.76, up 2.04 MoM, and up 3.48 YoY.
- Production index was up 18.37 MoM and 4.15 YoY to 72.51, and new order index rose 4.33 MoM and 8.08 YoY to 76.44. Home appliance in the survey said that orders continued growing with year-end promotions in domestic markets, especially for white goods, such as fridge, freezer and kitchen appliance. Meanwhile, export orders also got a boost from the upcoming Christmas holiday.
- Finished product inventories index rose 12.35 to 51.57. Raw material inventories index fell 16.43 to 52.89, and purchasing volume index dropped 4.03 to 65.84. Home appliance enterprises increased raw material purchases on a monthly basis due to growing new orders and production. Automobile and home appliance producers rushed to buy raw materials due to limited supply from steel mills and a surge in year-end demand in the automobile sector.
- *Home appliance producers kept 37.55 days of raw material inventories on average in November, down 0.7 days MoM. Days of raw material inventories are only for reference since the size of survey sample has changed.*
- Both employment and supplier deliveries index held unchanged on a monthly basis at 50.
- To sum up, production and new orders in the home appliance sector continued growing in November with many kinds of year-end promotions. But, supply shortages of raw materials intensified completion in raw material purchases between home appliance and automobile producers.

Transportation Industry

Transportation Industry

	Jun	Jul	Aug	Sep	Oct	Nov	MOM	YOY
1 Production Index	44.90%	49.82%	48.13%	51.39%	56.55%	75.47%	18.92%	25.95%
2 New Order Index	44.90%	61.94%	52.75%	65.26%	63.37%	71.12%	7.75%	21.60%
3 New Export Order Index	50.00%	45.17%	50.01%	50.00%	50.00%	50.00%	0.00%	0.00%
4 Outstanding Business Index	50.00%	44.77%	54.62%	63.87%	56.89%	57.22%	0.33%	7.22%
5 Index of Finished Products Inventory	50.00%	44.77%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
6 Purchasing Volume Index	44.84%	49.82%	52.75%	51.39%	56.55%	70.07%	13.52%	20.83%
7 Import Index	50.00%	44.77%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
8 Purchasing Price Index	54.68%	82.01%	82.84%	21.89%	76.25%	83.15%	6.90%	82.20%
9 Index of Raw Material Inventory	50.00%	44.77%	54.62%	50.00%	50.00%	50.05%	0.05%	0.05%
10 Employment Index	50.00%	44.77%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
11 Supplier Deliveries Index	50.00%	55.23%	50.00%	50.00%	50.00%	50.00%	0.00%	0.00%
Composite Index	47.20%	52.75%	50.59%	54.92%	55.65%	62.70%	7.05%	12.96%
After Seasonal Adjustment	52.15%	53.52%	51.84%	56.04%	55.07%	62.14%	7.07%	12.87%

Data Source: SMM



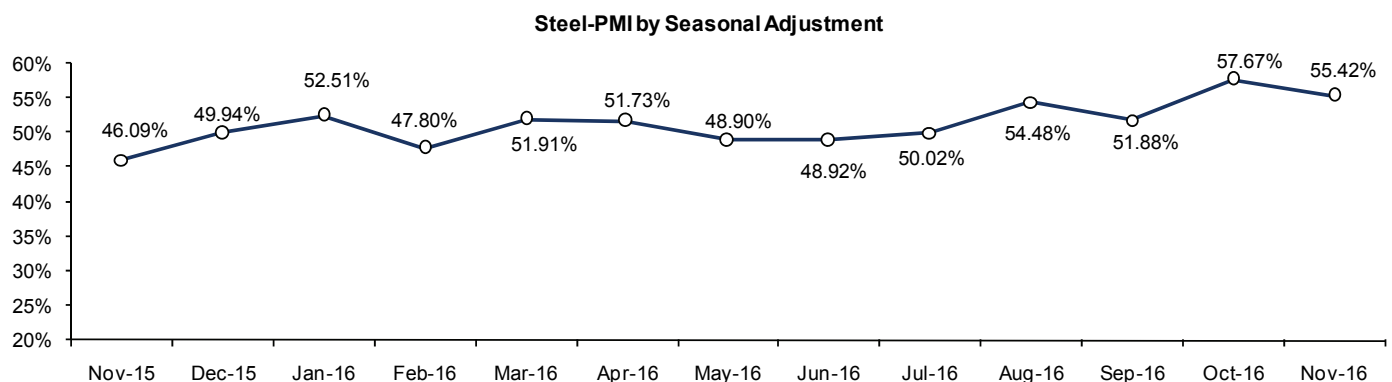
- The transportation PMI was 62.70 in November, up 7.05 MoM and 12.96 YoY. On a seasonally-adjusted basis, the figure was 62.14, up 7.07 MoM, and up 12.87 YoY.
- Production index increased 18.92 to 75.47, and new order index rose 7.75 to 71.12. Construction activity and new orders in transportation sector improved significantly in November thanks to acceleration of infrastructure investment and availability of funds earmarked for projects. Enterprises engaged in railway, highway, bridge and metro as well as related business expressed their optimistic over outlook for December, but some container producers reported losses from a rapid rise in raw material prices, with new orders falling.
- Purchasing volumes index rose 13.52 to 70.07, and raw material inventories index was up 0.05 to 50.05. Surging raw material prices raised strong caution in raw material purchases in the sector, except those which suffer little impact from new transportation policies. Moreover, most state-owned enterprises in the sector said they would not build high inventories, no matter prices were up or down.
- Companies in transportation sector kept 13.4 days of raw material inventories on average in November, down 0.1 day MoM. Days of raw material inventories are only for reference since the size of survey sample has changed.
- Both employment index and supplier deliveries index were both unchanged at 50.00.
- To sum up, construction activity and new orders grew in the transportation sector in November with acceleration of infrastructure investment and availability of funds, but surging steel prices triggered market caution in raw material purchases.

Overview of Composite Index and Sub-indicators in Steel Downstream Industries

- The Steel-PMI was 55.64 in November, down 4.03 MoM and up 9.35 YoY. On a seasonally adjusted basis, the Steel-PMI came in at 55.42, down 2.25 MoM and up 9.33 YoY.
- In November, the Steel-PMI stayed above 50 despite a month-on-month decline both before and after the seasonal adjustment, a reflection that end-user demand, despite signs of weakening, remains positive. Production index was 60.76 in November, down 5.84 MoM and up 17.14 YoY. Production at end-user producers in some regions was negatively affected by cold weather, but overall production remained positive. New order index was 59.26 in November, down 8.78 MoM and up 13.92 YoY. Orders at most end-user sectors kept growing, supporting steel demand. Purchasing volume index fell 9.10 MoM to 55.97, while raw material inventories index grew 0.33 MoM to 50.95. Increasing production boosted raw material purchases, but surging steel prices cooled down downstream buying interest in raw materials.
- In November, production at most construction sites in north China came to a halt due to colder weather and environmental protection inspections, while that in south China grew with commission of new projects and tighter production schedule before 2017 Chinese New Year holiday in late January. Orders at some steel structure companies reduced as soaring raw material prices raised strong caution in signing new orders. The machinery sector improved slightly on a monthly basis. The support on construction machine from infrastructure projects was continuing, and orders for mining machine also turned better after soaring coking coal and coke prices. Machinery producers generally build up inventories of finished goods in year-end, but now are wary of raw material purchases. Production and new orders in the automobile sector improved further with efforts to fulfill full-year targets and preferential policies. Output at some producers even refreshed new highs, but raw material purchases by them were restricted by limited supplies from steel mills. The shipbuilding sector remained sluggish, and surging steel prices depressed their enthusiasm in signing new orders, and only very few producers advanced raw material purchases for fear of further price gains. Home appliance sector kept improving in November. Both production and new orders at home appliance producers got a boost from year-end promotions and the upcoming Christmas holiday, especially for fridge, freezer and kitchen appliance. Home appliance producers rushed to buy raw materials due to limited supply. Construction activity and new orders in transportation sector continued growing in November thanks to acceleration of infrastructure investment and availability of funds earmarked for projects since Q4 2016, but soaring steel prices resulted in as-needed purchases in the sector.
- To sum up, demand from steel downstream sectors was good in November, a traditionally off-demand period, especially from automobile, home appliance and transportation. End-users in some sectors rushed to buy raw materials due to strong demand, but most end-users were wary of purchases after surging steel prices and held low inventories of raw materials.

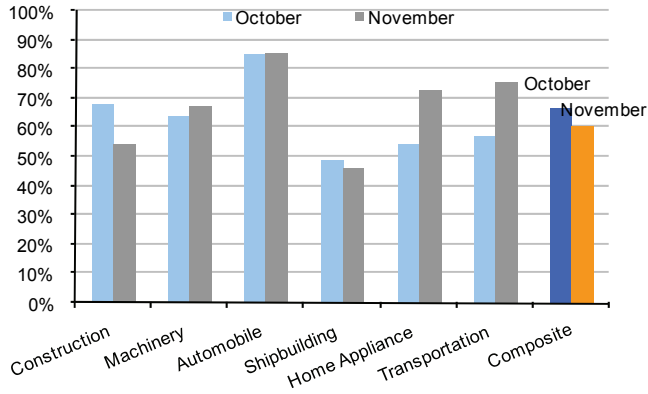
	Jun	Jul	Aug	Sep	Oct	Nov	MoM	YoY
Composite Production Index	40.20%	33.54%	51.32%	57.87%	66.60%	60.76%	-5.84%	17.14%
Composite New Order Index	33.18%	43.49%	62.52%	61.03%	68.05%	59.26%	-8.78%	13.92%
Composite New Export Order Index	45.08%	48.41%	50.40%	50.39%	49.88%	50.25%	0.37%	0.71%
Composite Outstanding Business Index	41.26%	55.54%	62.84%	52.34%	51.95%	46.40%	-5.55%	-4.01%
Composite Index of Finished Products Inventory	46.58%	48.92%	50.04%	50.12%	51.61%	53.76%	2.15%	4.15%
Composite Purchasing Volume Index	39.58%	33.04%	62.58%	65.17%	65.08%	55.97%	-9.10%	13.17%
Composite Import Index	50.00%	49.44%	50.00%	50.00%	50.00%	50.00%	0.00%	-0.04%
Composite Purchasing Price Index	28.23%	87.17%	90.47%	26.07%	89.20%	88.15%	-1.05%	82.42%
Composite Index of Raw Material Inventory	42.79%	46.44%	57.67%	49.45%	50.62%	50.95%	0.33%	1.87%
Composite Employment Index	50.00%	47.49%	50.13%	50.00%	50.00%	50.00%	0.00%	3.33%
Composite Supplier Deliveries Index	50.04%	50.60%	50.08%	50.00%	50.00%	49.57%	-0.43%	-0.58%
Composite Steel PMI	41.98%	43.29%	54.51%	55.26%	59.68%	55.64%	-4.03%	9.35%
Steel PMI by Seasonal Adjustment	48.92%	50.02%	54.48%	51.88%	57.67%	55.42%	-2.25%	9.33%

Data Source: SMM



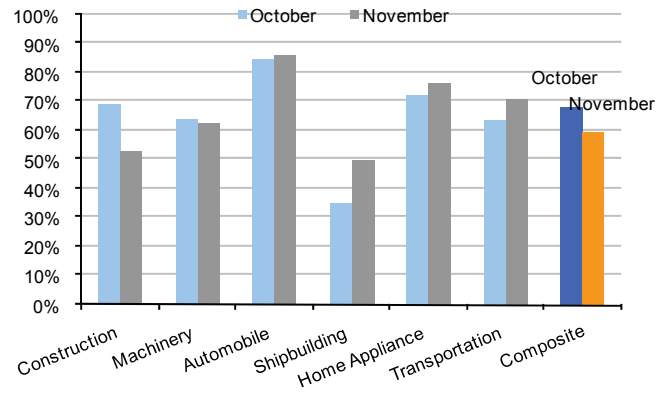
Data Source: SMM

Comparison of Production Index by Industry and of Composite Production Index



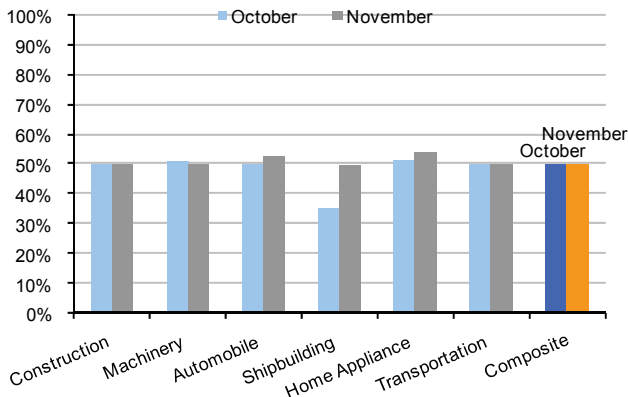
Data Source : SMM

Comparison of New Order Index by Industry and of Composite New Order Index



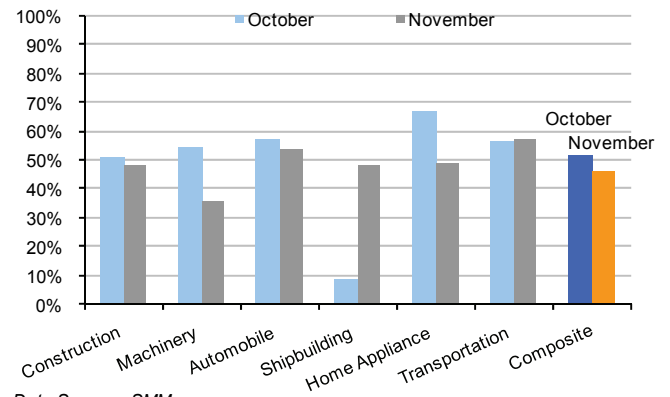
Data Source : SMM

Comparison of New Export Order Index by Industry and of Composite New Export Order Index



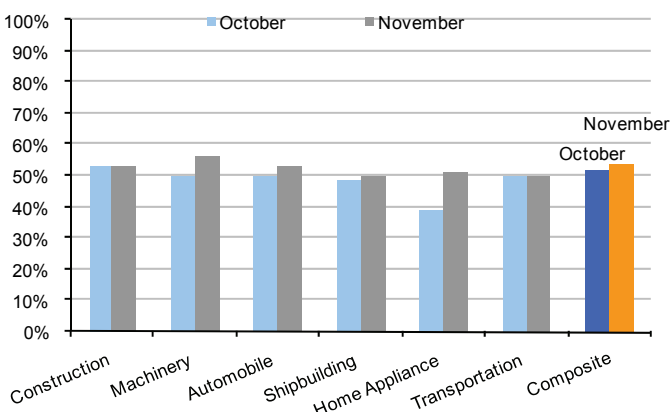
Data Source : SMM

Comparison of Outstanding Business Index by Industry and of Composite Outstanding Business Index



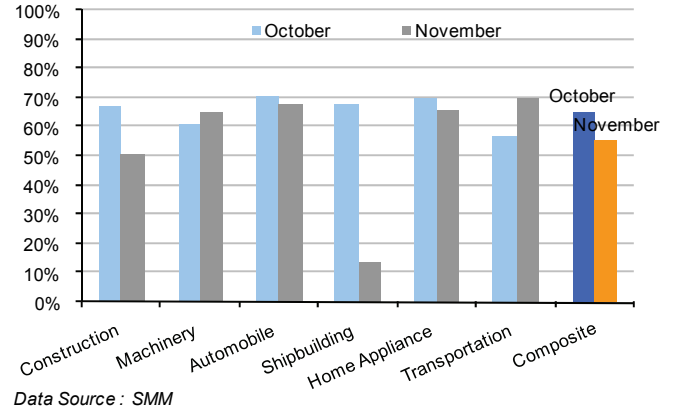
Data Source : SMM

Comparison of Index of Finished Products Inventory by Industry and of Composite Index of Finished Products Inventory



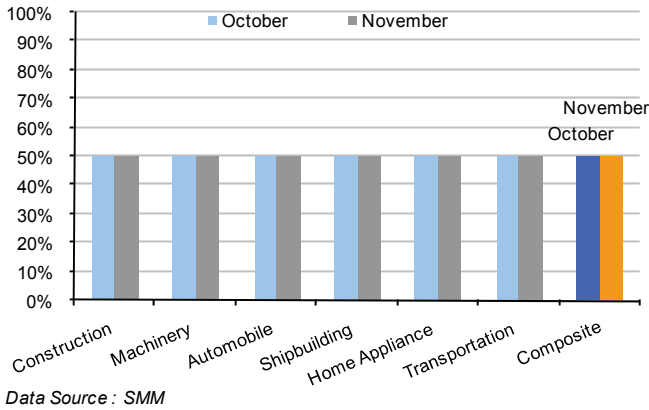
Data Source : SMM

Comparison of Purchasing Volume Index by Industry and of Composite Purchasing Volume Index

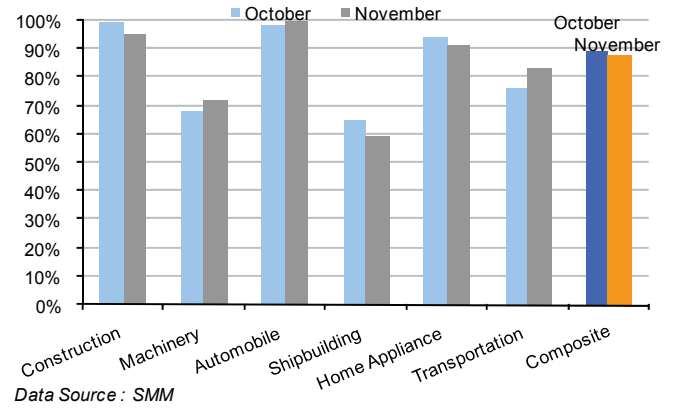


Data Source : SMM

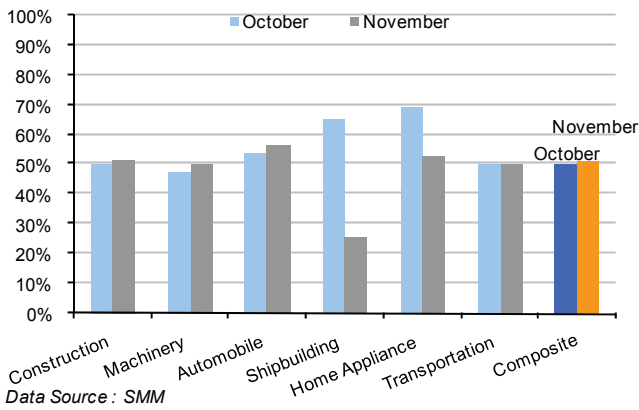
Comparison of Import Index by Industry and of Composite Import Index



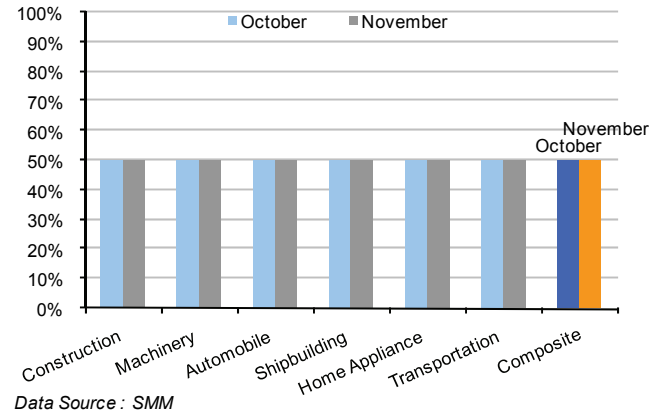
Comparison of Purchasing Price Index by Industry and of Composite Purchasing Price Index



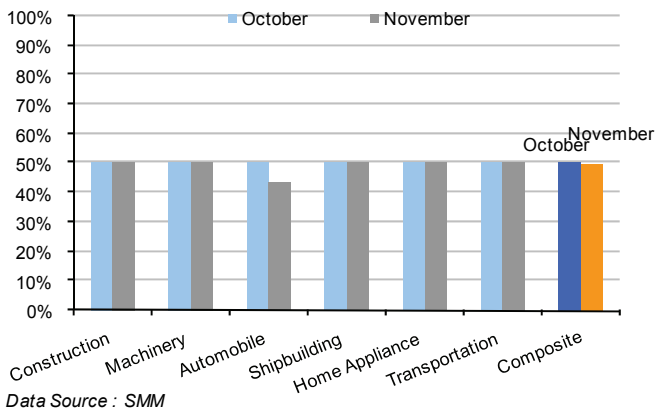
Comparison of Index of Raw Material Inventory by Industry and of Composite Index of Raw Material Inventory



Comparison of Employment Index by Industry and of Composite Employment Index



Comparison of Supplier Deliveries Index by Industry and of Composite Supplier Deliveries Index



Downstream Industry News

Construction Industry

- Shanghai Housing and Urban-Rural Construction & Management Committee, Shanghai Branch of the People's Bank of China and the Shanghai Regulatory Bureau under China Banking Regulatory Commission jointly released the Notice Regarding Improving Stable, Healthy and Orderly Development of Differential Housing Credit Policy November 28. The Notice stipulates that from November 29, 2016, down payment required for the residents of the family applying for commercial personal housing loans to buy the first set of housing (that is, residents have no housing and commercial housing loan records or provident fund housing loan records in Shanghai) is raised to no less than 35%. For a second suite of ordinary housing, down payment ratio for commercial loans increased to 50%. For the purchase of non - ordinary housing, the down payment ratio should be no less than 70%.
- At the same time, the People's Bank of China Tianjin Branch officially released Tianjin to Further Adjust the Differential Housing Credit Policy on its official website, pointing out it will implement differential credit policy. For residential households applying for commercial housing loans to buy the first set of housing, the minimum down payment ratio should be 30%; for those that already have a set of housing with corresponding purchase loans outstanding, the minimum down payment ratio for re-applying commercial individual housing loans for a second house bought in the purpose of improving the living conditions shall be 40%; but for non-Tianjin resident households who purchase the first set of housing in six districts in the city and Wuqing District, the minimum down payment of loans shall be 40%.

Automobile Industry

- The Ministry of Industry & Information Technology (MIIT) released the Catalogue of New Energy Vehicle Types Exempt from Purchase Tax on its website November 25. The ninth catalogue includes 1102 types of new energy vehicles, which is 2-fold higher than those in the eighth catalogue. MIIT's website also discloses Standards for Automotive Battery Industry 2017 (Exposure Draft), regulating producers of motive batteries (used in vehicles, can store electric energy and rechargeable, and devices providing power to drive vehicles, including lithium-ion motive battery, nickel metal hydride motive battery and supercapacitor, and excluding lead-acid battery).
- Operation of vehicles included in National Emission Standards I and II will be restricted within Beijing's 5th Ring Road from February 15, 2017, and elimination of such vehicles will be encouraged. This will push replacement of nearly 400,000 vehicles. Inquiries about car scraping thus increased. The subsidy policy encouraging scraping such vehicles will not take effect until December 1, so has not shown significant result to vehicles sales. Some distributors are awaiting more favorable policies to incentive vehicle replacement.

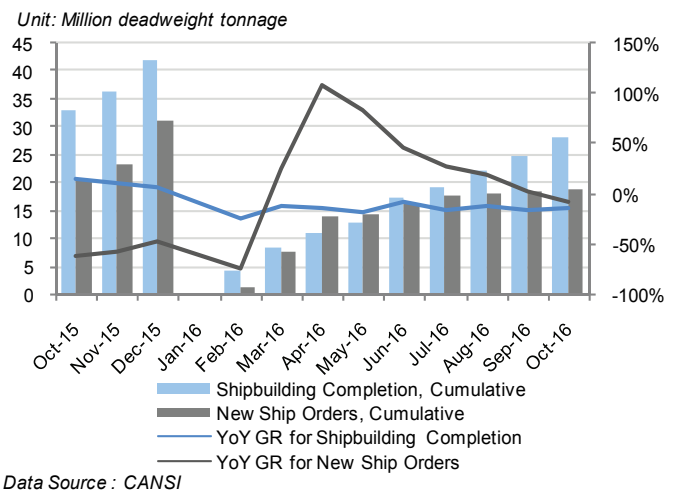
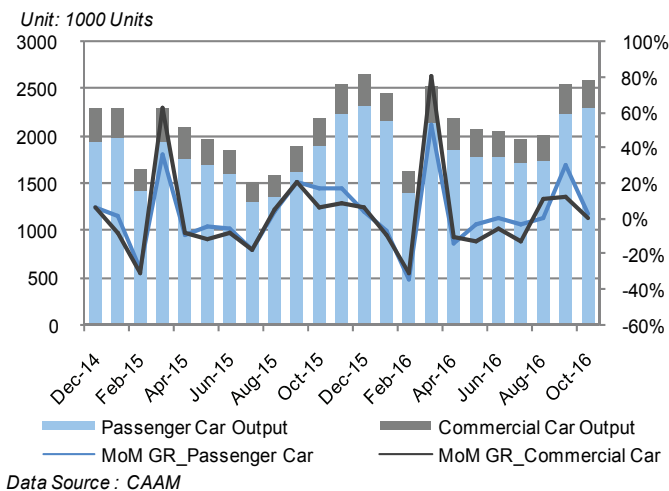
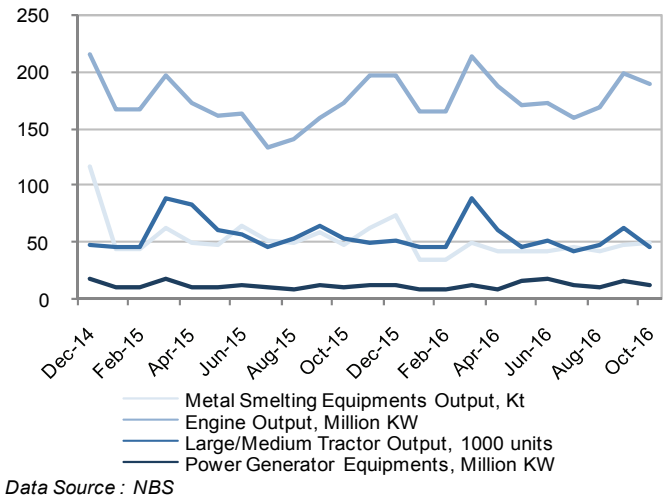
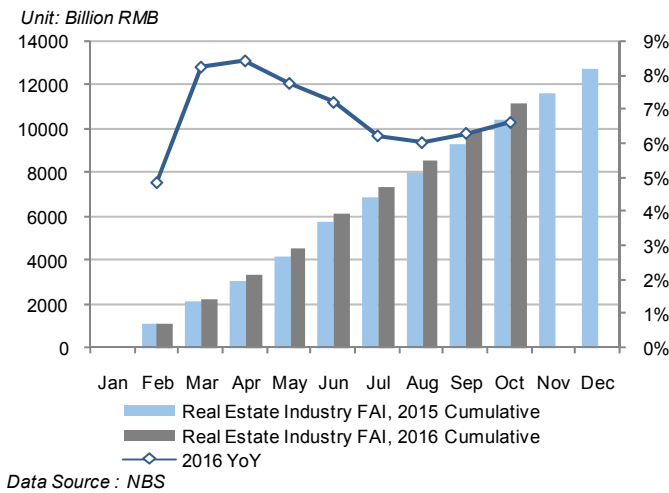
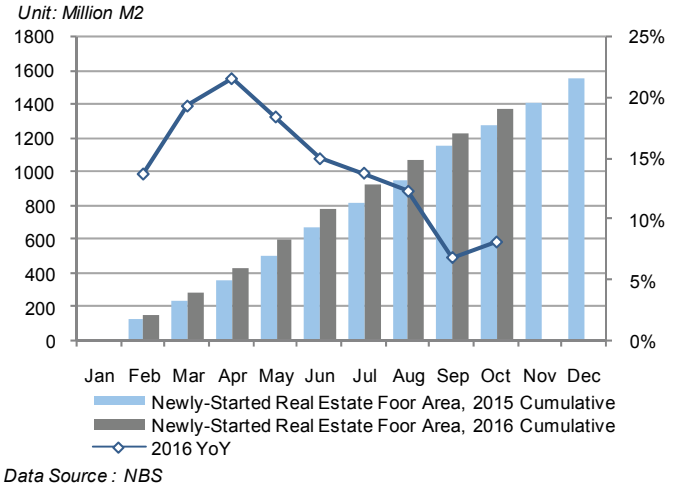
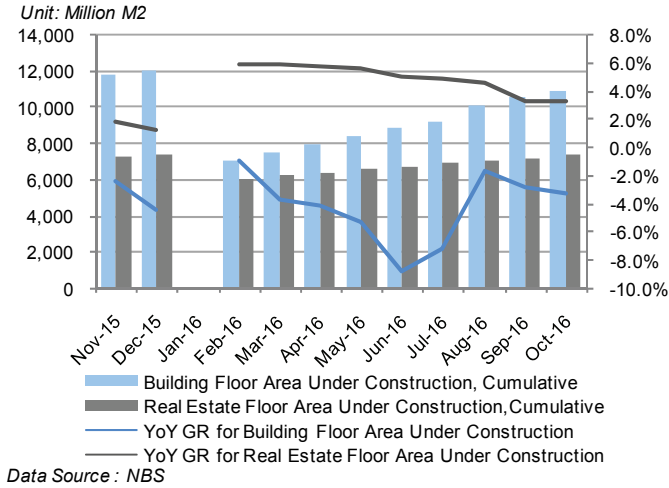
Shipbuilding Industry

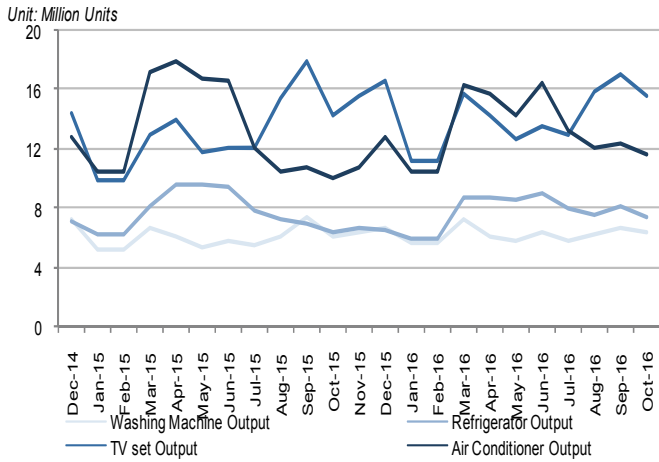
- The 13th Five Year Plan for domestic shipbuilding industry is under final assessment stage, and is expected to be officially released this year. The Plan proposes that China's shipbuilding industry should accelerate upgrading, and innovation, informatization and green development. By the end of the plan period, shipbuilding output shall account for over 40% of global market share, or even 50%. Major products of core technique of hi-tech shipbuilding and maritime equipment shall reach 30% in international market. Localization ratio of key system and equipment of sea oil and gas development equipment shall reach at least 30%. The Plan also decides key targets during this period, including resolving shipbuilding overcapacity, pushing military and civilian integration, encouraging military industrial enterprises to produce civilian infrastructures and "join the army"; supporting the construction of enterprise information to build intelligent shipyards; strengthening the ability of producing supporting equipment; promoting the reform of mixed ownership, and expanding foreign cooperation and development.

Transportation Industry

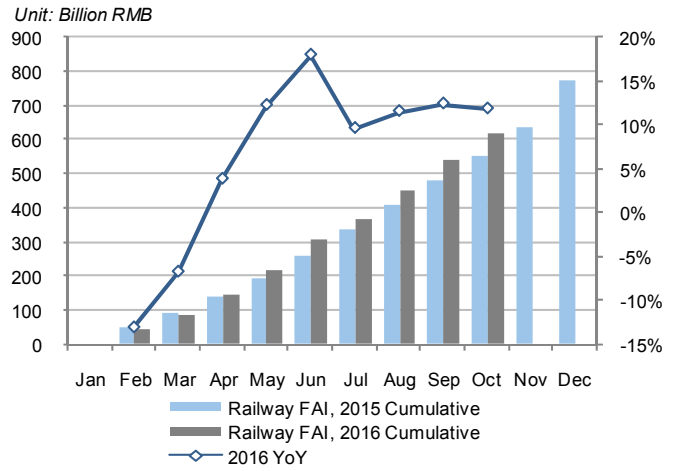
- The National Development & Reform Commission (NDRC) issued the Reply Regarding Intercity Rail Networks Plan in Beijing-Tianjin-Hebei Region November 28. This is the eighth railway construction project approved in November. The NDRC has approved RMB 482.995 billion worth of railway construction projects. China Railway data show domestic fixed-asset investment in the railway industry totaled RMB 623.449 billion in the first ten months of the year, up 9.8% YoY compared to RMB 567.885 billion in the same period of last year. Construction of a number of new railway projects will be commenced in the near term.

Downstream Industry Data

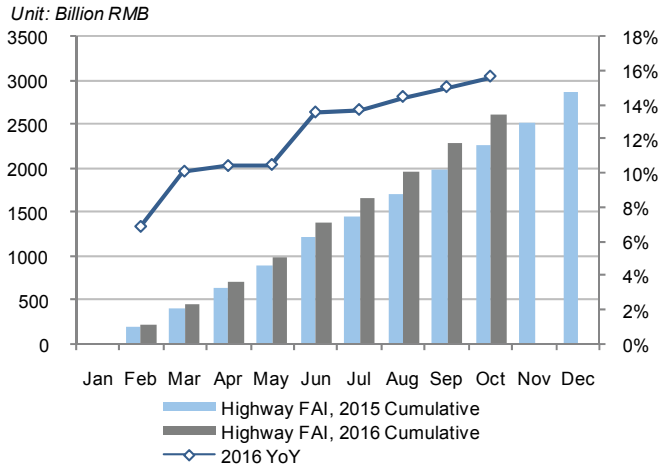




Data Source : NBS



Data Source : NBS



Data Source : NBS

Appendix

Production Index (Weight 25%)

Production index refers to utilization rates in this industry during survey period. Based on the survey of capacity utilization rate at sample enterprises in this industry, production index can be calculated by weighting the number of enterprises whose operating rates increase. Production index greater than 50% indicates the capacity utilization rate of enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates the capacity utilization rate of enterprises weighting over 50% experience declines.

New Orders Index (Weight 30%)

New orders index refers to new orders in this industry during survey period. Based on the survey of new orders received by sample enterprises in this industry, new orders index can be calculated by weighting the number of enterprises whose new orders increase. New orders index greater than 50% indicates new orders at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates new orders at enterprises weighting over 50% experience declines.

New Export Orders Index

New export orders index refers to new export orders in this industry during survey period. Based on the survey of new export orders received by sample enterprises in this industry, new export orders index can be calculated by weighting the number of enterprises whose new export orders increase. New export orders index greater than 50% indicates new export orders at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates new export orders at enterprises weighting over 50% experience declines.

Backlog Orders Index

Backlog orders index refers to current backlog orders in this industry during survey period. Based on the survey of backlog orders at sample enterprises in this industry, backlog orders index can be calculated by weighting the number of enterprises whose backlog orders increase. Backlog orders index greater than 50% indicates backlog orders at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates backlog orders at enterprises weighting over 50% experience declines.

Finished Goods Inventory Index (Weight 5%)

Finished goods inventory index refers to changes in finished goods inventory in this industry during survey period. Based on the survey of changes in finished goods inventory at sample enterprises in this industry, finished goods inventory index can be calculated by weighting the number of enterprises whose finished goods inventory increases. Finished goods inventory index greater than 50% indicates finished goods inventory at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates finished goods inventory at enterprises weighting over 50% experience declines.

Purchasing Volume Index

Purchasing volume index refers to changes in purchasing volume of raw materials in this industry during survey period. Based on the survey of changes in purchasing volume of raw materials at sample enterprises in this industry, purchasing volume index can be calculated by weighting the number of enterprises whose purchasing volume of raw materials increases. Purchasing volume index greater than 50% indicates purchasing volume of raw materials at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates purchasing volume of raw materials at enterprises weighting over 50% experience declines.

Import Index

Import index refers to changes in import volume of raw materials in this industry during survey period. Based on the survey of changes in import volume of raw materials at sample enterprises in this industry, import index can be calculated by weighting the number of enterprises whose import volume of raw materials increases. Import index greater than 50% indicates import volume of raw materials at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates import volume of raw materials at enterprises weighting over 50% experience declines.

Purchasing Price Index

Purchasing price index refers to changes in purchasing prices of raw materials in this industry during survey period. Based on the survey of changes in purchasing prices of raw materials at sample enterprises in this industry, purchasing price index can be calculated by weighting the number of enterprises whose purchasing prices of raw materials increase. Purchasing price index greater than 50% indicates purchasing prices of raw materials at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates purchasing prices of raw materials at enterprises weighting over 50% experience declines.

Raw Materials Inventory Index (Weight 5%)

Raw materials inventory index refers to changes in raw materials inventory in this industry during survey period. Based on the survey of changes in raw materials inventory at sample enterprises in this industry, raw materials inventory index can be calculated by weighting the number of enterprises whose raw materials inventory increases. Raw materials inventory index greater than 50% indicates raw materials inventory at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates raw materials inventory at enterprises weighting over 50% experience declines. Inventory index includes raw materials inventory index and finished goods inventory index.

Employee Index (Weight 20%)

Employee index refers to changes in the number of employees in this industry during survey period. Based on the survey of changes in the number of employees at sample enterprises in this industry, employee index can be calculated by weighting the number of enterprises whose number of employees increases. Employee index greater than 50% indicates the number of employees at enterprises weighting over 50% experience increases during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates the number of employees at enterprises weighting over 50% experience declines.

Supplier Delivery Time Index (Weight 15%)

Supplier delivery time index is the only one reverse indicator and refers to changes in suppliers' delivery time in this industry during survey period. Based on the survey of changes in their suppliers' delivery time at sample enterprises in this industry, supplier delivery time index can be calculated by weighting the number of enterprises whose suppliers' delivery time shortens. Supplier delivery time index greater than 50% indicates suppliers' delivery time at enterprises weighting over 50% shortens during current survey period compared to previous survey period. On the contrary, this index less than 50% indicates suppliers' delivery time at enterprises weighting over 50% lengthens.

Composite Index

Composite index refers to changes in production and demand in this industry during survey period. Composite index can be calculated by weighting production index, new orders index, finished goods inventory index, raw materials inventory index, employee index and supplier delivery time index. Composite index greater than 50% indicates the business climate index in this industry increases on a monthly basis, while composite index less than 50% indicates business climate index drops.

Steel-PMI Index in Steel Downstream Industries

The index refers to the business climate index in all downstream industries related with steel. The Steel-PMI index in steel downstream industries will be calculated by weighting the industrial contribution rate concerning steel demand based on composite index of all steel-related industries. This index greater than 50% indicates the activity and climate index of steel downstream industries increase during current survey period compared to previous survey period, while this index less than 50% indicates the activity and climate index of steel downstream industries experience declines.

Illustration of the Number and Scale of Sample Enterprises in Various Industries

	Number of Sample Enterprise	Annual Purchases of Steel Products (Unit: Thousand mt)
Construction Industry	128	1 - 250
Machinery Industry	126	1 - 100
Automobile Industry	130	1 - 250
Shipbuilding Industry	129	2 - 600
Home Appliance Industry	126	3.6 - 400
Transportation Industry	130	0.08 - 350

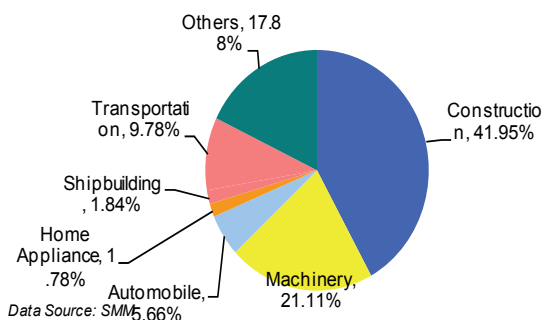
Data Source: SMM

Forecast for Steel Demand in Various Industries and the Total Apparent Demand for Crude Steel (Unit: Million mt)

	Construction	Machinery	Automobile	Home Appliance
2014	348.89	169.64	45.75	13.48
2015	271.99	155.44	41.72	13.47
2016E	259.04	140.44	42.68	13.52
2017E	267.45	141.68	40.88	14.42
2018E	281.58	145.29	41.97	15.19
2019E	316.09	148.33	43.13	16.30
	Shipbuilding	Transportation	Six Major Industries	Total Apparent Demand for Crude Steel
2014	12.09	53.62	643.46	781.76
2015	12.94	66.99	562.55	721.21
2016E	13.39	68.80	537.88	705.49
2017E	12.13	66.62	543.17	716.20
2018E	11.35	67.96	563.33	728.38
2019E	11.03	68.13	603.00	744.44

Data Source: SMM

The Proportion of Steel Demand in Downstream Industries in 2014



Data Source: SMM

SMM also provides

SMM Regular Reports (weekly & monthly)

China Steel Briefing

China Iron Ore Weekly Monitor

China Iron Ore Monthly Monitor

China Steel PMI Monthly

SMM Annual Report & Special Study

China Steel Industry Chain Annual Report, 2015-2019

China Iron Ore Mine Cost Report

Database

China Iron Ore Industry Database

China Steel Industry Database

SMM Research Team

Hotline: +86-21-5155-0322

Fax: +86-21-5155-0345

Email: service.en@smm.cn

Add: 8th FL in North Section, Building 9, Lujiazui Software Park, No. 20, Lane 91, E'Shan Road, Pudong New Area, Shanghai, 200127, China.

Web: <http://www.metal.com>

This report is an original work and/or a compilation by SMM, which holds the copyright thereto and is entitled to copyright protection under the Copyright Law of the People's Republic of China and applicable international treaties. Without the prior written permission of SMM, neither this report nor its contents, in part or in whole, may be reproduced, revised, sold, transferred, displayed, translated, compiled, or otherwise disseminated.

The contents of this report, including, but not limited to, any and all information, articles, data, tables, charts, photographs, audio and/or video recordings, logos, advertisements, trademarks, trade names, domain names, layout designs, are subject to protection under China's Copyright, Trademark, and Unfair Competition laws, as well as applicable international treaties pertaining to the legal protection of copyrights, trademarks, domain names, commercial data, and other forms of intellectual property, and are owned and held by SMM, its rights and assigns. Without the prior written permission of SMM, neither this report nor its contents, in part or in whole, may be reproduced, revised, sold, transferred, displayed, translated, compiled, or otherwise disseminated.

The views expressed in this report are based on a comprehensive assessment of available market information by SMM Research as of the date of publication. This report is provided for reference only. Reliance on the contents hereof is as your own risk.