



**SCRAP MARKET  
REVIEW**

**END USE  
SECTORS**

**TRADE DATA  
ANALYSED**

# WHAT THE SCRAP IS GOING ON?

HEADING INTO SUMMER, CHINESE STEEL MARKETS HAVE REMAINED SURPRISINGLY FIRM DESPITE SEVERAL WARNING SIGNALS STARTING TO CREEP INTO THE MARKET. THIS HAS BEEN IN PART BECAUSE OF A MINIMAL SLOWDOWN IN DEMAND BUT MAINLY BECAUSE OF THE CONTINUING KNOCK-ON EFFECTS OF THE CLOSURE OF INDUCTION FURNACE CAPACITY.



# What the scrap is going on?

Heading into summer, Chinese steel markets have remained surprisingly firm despite several warning signals starting to creep into the market. This has been in part because of a minimal slowdown in demand but mainly because of the continuing knock-on effects of the closure of induction furnace capacity.

One impact of the policy which has caught global markets unawares is the sudden presence of Chinese ferrous scrap exports from April. We take the opportunity in this issue to state our assessment of the Chinese scrap market and its development, which happily coincided with our attendance at the Bureau of International Recycling Annual Convention in Hong Kong. Our view is that China's return to trade, not only exports but also imports, could even have a calming effect on the market in the medium term by capping volatility. But this depends on the healthy development of the scrap sector domestically.

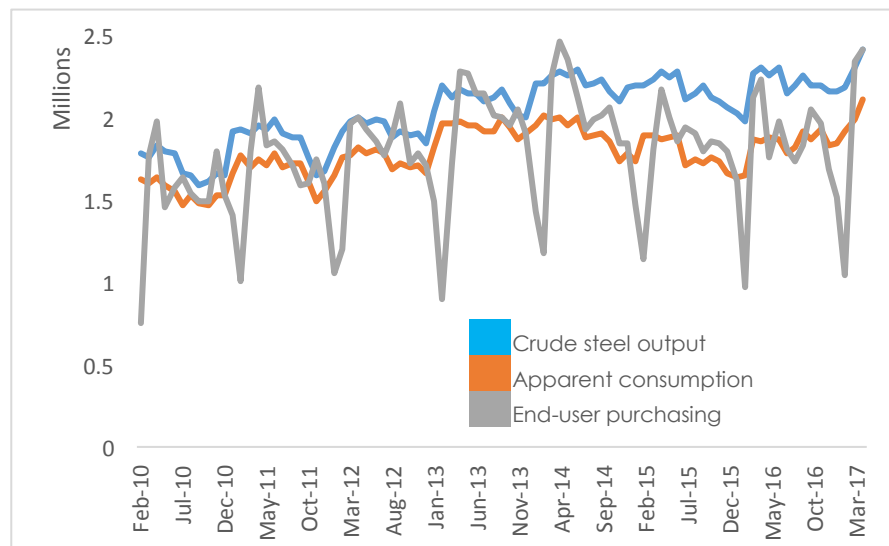
**The question now is, will China's scrap sector develop quickly enough to save the global market?**

**Table 1: Supply and Demand (million tonnes)**

Source: NBS, Kallanish

	2016	2017 ytd	Y-o-y	2017 outlook	2016
<b>Crude Steel Production</b>	808.4	273.9	4.60%	783.5	-260.6
<b>Apparent Steel Demand</b>	672.2	237.5	10.13%	656.8	-197.2
<b>Real Demand Est</b>	668.6	222.8	4.23%	654.9	-223.0

**Fig. 1 Daily steel production and demand 2010-2017 (tonnes)**



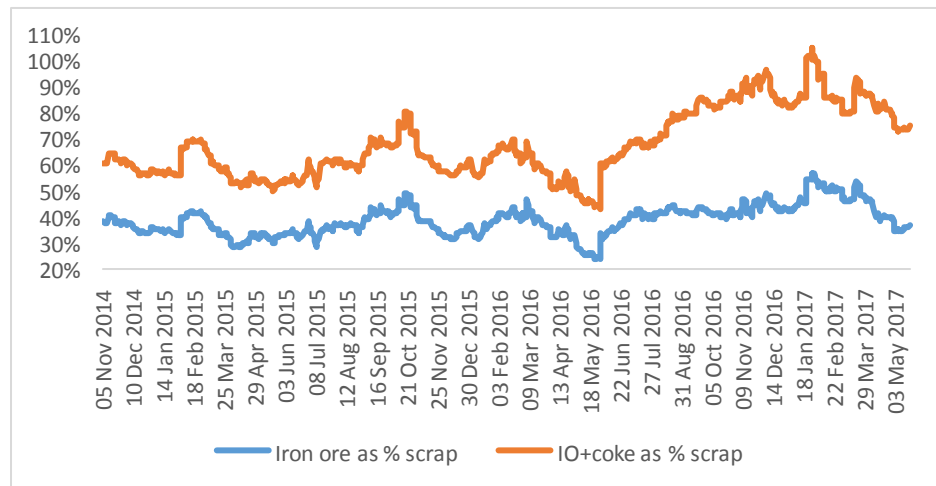
Source: NBS, Kallanish



## China's scrap market huge but not yet scary

China's ferrous scrap market is in the midst of a major transition as a huge number of scrap based steelmakers have been closed down and the government is promoting investment in processing and distribution. This has led to the emergence of scrap exports, terrifying scrap traders with the prospect of massive oversupply on seaborne markets. A closer look at trends in the sector however suggest we are seeing an acceleration of domestic consumption and not a shift to China becoming a constant scrap exporter. This is an even more important issue in the current climate, where the cost effectiveness of scrap has increased substantially. As can be seen in figure 2., the ratio of iron ore price to scrap has actually not deviated far from the recent average, but once coking coal is taken into account, scrap is at its most competitive in years. Little wonder then that traders are worried that the strongest global scrap market in some time could be sunk by a sudden surge in supply.

**Fig. 2 Coking coal has made scrap competitive**



Source: Kallanish (Turkish HMS 1&2 80:20 cfr, 62% Fe Australian fines cfr China, Tangshan ex-works first grade coke)

### How big is China's scrap market?

According to the Bureau of International Recycling (BIR), which sources its Chinese data from the China Association of Metalscrap Utilisation (CAMU), ferrous scrap consumption in steelmaking was up 8.2% year-on-year to 90.1 million tonnes in 2016. As participants at the BIR Annual Conference in Hong Kong noted recently however, these figures fail to include huge volumes of scrap being consumed outside of registered steelmakers. CAMU itself is aware of this problem, and it estimates ferrous scrap generation in 2016 totalled around 160m tonnes and this could reach around 200m t/y in 2020. Even at 90m t China was the biggest scrap consumer globally in 2016, at 160m t it is bigger than the European Union and the USA combined.

With 90.1m t of scrap being used in registered converters and EAFs, most of the rest was being consumed by forges and induction furnaces. China had approximately 130m t/y of induction furnace capacity in 2016, according to investigations by SCI99, although some of this was idle and most of it produced intermittently.

By the end of March these induction furnaces had officially closed, although





# Scrap Markets Cont.

Table 2: Global scrap markets - Steel scrap consumption (million t)

	2016	2015	Y-o-Y change
China (actual)	160 -		
China (reported in steelmaking)	90	83.3	8.20%
EU28	88.272	90.614	-2.60%
USA	56.7	56.5	0.40%
Japan	33.576	33.526	0.15%
South Korea	27.404	29.853	-8.20%
Turkey	25.877	24.058	7.60%
Russia	17.212	17.274	-0.40%

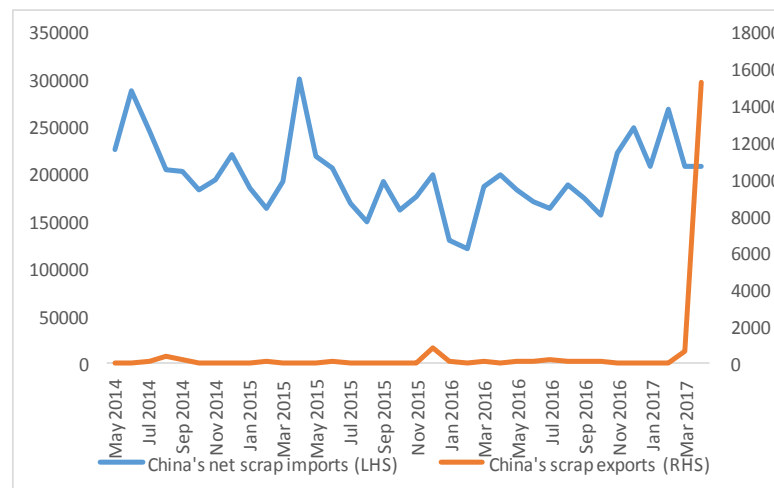
Source: BIR, Kallanish

many have restarted and then been closed again. The closure of the furnaces is being ever more rigidly enforced by both local authorities and larger steelmakers, which have an incentive to ensure competitors do not restart. There are reports that some are even hiring ex-military contractors to spy on induction furnace producers and then claim rewards for informing on them to local authorities. It seems likely that scrap use in induction furnaces will be negligible going forward.

## Is China now a scrap exporter?

In April, Chinese scrap exports increased 27,737% year-on-year but were still only 15,360 tonnes, although it is likely that small volumes were exported under the radar. If volumes continue to increase then China would be a significant new player on the Asian scrap export market. In the same month however, China imported 224,612t of scrap, meaning it is still a far more important importer than it is an exporter.

Fig. 3 China's net scrap imports increase despite export spike (t)



Source: Kallanish

## Scrap Markets Cont.

The closure of induction furnace capacity has likely made available over 60m t/y of scrap to other consumers. Some analysts have suggested that a significant proportion of this could enter the export market. Some steelmakers in South Korea, Japan, India, Indonesia, Taiwan and Vietnam have booked cargos, mainly to test the quality of scrap to see if it is worth securing Chinese cargos more frequently.

There are some problems with this however. One issue is that the scrap used by induction furnaces is often too light to be used in EAFs, as it would increase yield loss. Export data confirm that over 58% of exports in April were under HS code 720441, which is typically lighter scrap than 720449. BIR representatives in Hong Kong said they believed that exports so far are mainly the result of shuttered induction furnaces selling off their scrap inventories.

The presence of several million tonnes/year of light scrap supply in China will likely mean some exports continue however. Of the 60m t/y or so of scrap used in induction furnaces in 2016, some of this is heavy enough to be used in BOFs and EAFs, almost all of the home scrap generated at rolling mills linked to the induction furnaces for example. Some of it will also be fine enough to be consumed by China's iron dust recovery sector, which has also seen investment in recent years. Some however will not fall into either of these categories, and a portion of that will have to find buyers domestically or overseas. Domestically the forging sector will likely take the first tonnes and only a small volume will be left for export. This is likely to be mainly scrap generated in coastal cities without enough forging or other suitable capacity to consume it all.

So China is likely to generate steady but modest volumes of scrap going forward as a result of the closure of induction furnaces. It is important to note however, that what is exported will be of little use to Southeast Asian EAFs. Induction furnaces outside China are likely to be the more important buyers. For medium and heavy scrap grades, exports are a market of last resort. A hefty 40% export tax means that there are limited circumstances in which selling a cargo overseas would be more profitable than selling to a domestic consumer.

### Does China need more EAFs?

Over time China is likely to expand its use of EAFs for several reasons. Firstly, they produce less pollution of various kinds, including greenhouse gases. Secondly, they are more suited to flexibly supplying local construction steel markets once local scrap supply becomes sufficient. However, the calculations do not yet fall entirely in favour of EAFs. They produce a huge amount of dust emissions, which are a major focus of Chinese environmental campaigns. They also consume a lot of electricity in a market which is trying to control its electricity demand and which is still largely dependent on coal fired power plants, wiping out many of the environmental benefits of EAF steelmaking.

Another driver of increased EAF use is the increasing availability of scrap, something which has been accelerated by the closure of induction furnaces. In fact, the impact of the closure of induction furnaces has already been seen. Kallanish knows of at least one longs producer in eastern China which had kept its EAF idle because its induction furnaces enjoyed better margins despite making lower-quality products. That producer has now restarted its EAF to replace lost induction furnace capacity.

Restarting an existing furnace is different from investing in new capacity however, and barriers to investment still exist. Firstly, companies with induction furnace capacity have been expressly forbidden from replacing their furnaces with EAFs. Beijing has no desire to see its official capacity figures

## Scrap Markets Cont.

increase as a result of its closures. Secondly, Chinese electricity costs are higher than most of its neighbours and on a par with the UK. Investors are therefore likely to ask for local government support or favourable rates which local authorities are steadily less willing to provide.

The standardization of the domestic scrap market is another barrier. Even if China is generating enough scrap nationwide, it is not necessarily processing it adequately. And if it is not processing to the same standards nationwide then it is difficult to create a nationwide spot market for scrap, even considering the prohibitively high internal freight costs. China is making headway here, with Gezhouba Group rapidly becoming the dominant investor in scrap shredders, and also heading up a new association to provide support and advice to scrap processors and traders. Local shredder machine supplier Huahong Technology recently told Kallanish that Gezhouba has ordered over 50 pieces of equipment from it as it aims to develop processing centres across the country.

**Table 3: China is still developing shredding capacity relative to market size**

Country	No. of shredders
USA	322
EU28	300
Japan	110
China	73
Canada	26
Mexico	16
Brazil	16
Australia	12
Others	39
<b>Total</b>	<b>914</b>
<i>Source: BIR</i>	

In absolute terms it is not clear that China requires more EAFs to consume the additional scrap that is in the market. In 2016, China officially produced 808.37m t of crude steel and 700.74m t of pig iron. Average official scrap ratios however are extremely low at around 11.15%. This can be significantly increased.

EAFs are largely being used to maximise output at certain periods and can use as little as 35% scrap. The remainder is cold pig iron, some DRI and a large proportion of hot metal. The use of hot metal reduces melting times and electricity costs per tonne of steel. That means less than a third of the 90m t of scrap consumed, in registered steelmaking in 2016, went to EAFs, while maximum EAF scrap consumption with existing EAF has around 114m t/y capacity across 188 furnaces.

BOF steelmakers also have plenty of room to increase their use of scrap as the cost of scrap comes down and more prolonged secondary steelmaking becomes more common. If production stayed at around the 800m t/y level and EAFs produced a steady 97m t/y of steel (85% utilization), around 700m t/y of steel would still need to be produced by BOFs. As BOF steelmaking can use up to a maximum of 30% scrap, a more modest assumption of 20% scrap ratios would mean 140m t/y of scrap would still be consumed in BOF steelmaking. Even at the 200m t/y of scrap generation expected by CAMU in 2020, China has the capacity already in place to consume all the scrap it produces, and even to import if prices are right.

### What does this mean for prices?

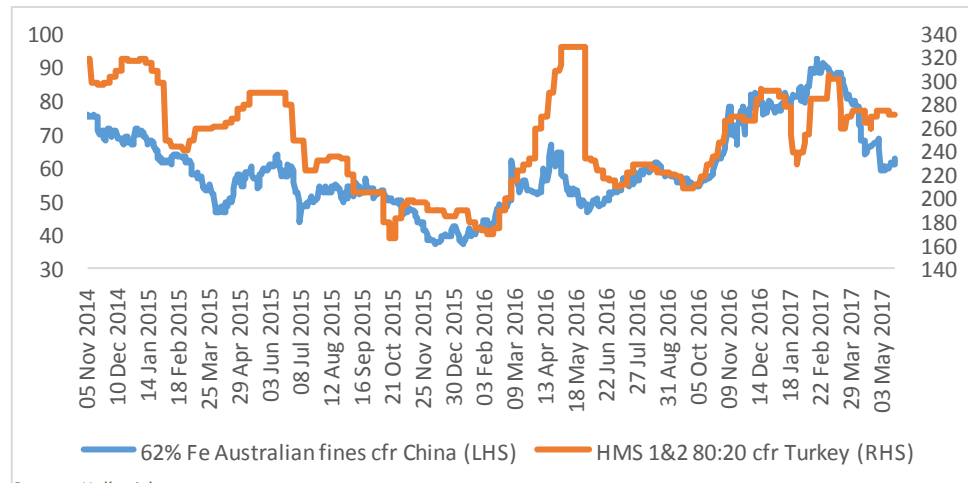
Will China continue to export scrap over the long term? Probably but only limited volumes. Does China still have the capacity to consume all the scrap it produces? Yes, at least for several years. Will China still import scrap? Yes, if the price is right.



## Scrap Markets Cont.

So what does all this mean for the market over the medium term? One scenario is that China's massive demand and supply actually reduces volatility, something quite unexpected after looking at other commodities. For the next several years China may be in a position to adjust its net export position in scrap depending on international prices, acting as both a cap and a support. In that case, scrap is likely to be tied ever-more closely to the price of iron ore.

**Fig. 4 Scrap prices should stay linked to iron ore (\$/t)**



Source: Kallanish

Another scenario however is that China, as for other commodities, becomes the key price setter globally. The Shanghai Futures Exchange is already planning a China-based ferrous scrap futures contract to rival the Turkey-settled contract available from the LME/Hong Kong Exchange. In five years' time then, could international scrap prices be pushed around by speculators in Shanghai the same way rebar prices are? It will likely take some time to displace the dominant Turkish scrap trade, but as Nathan Fruchter of Iduro Trading told the recent BIR conference, it is worth remembering that the global benchmark has changed frequently over the last forty years. The danger remains then that, because of its sheer size, a moderate imbalance in the Chinese market could upturn international prices.

## End Use Markets

### Real Estate

The slowdown in growth in China's real estate indicators continued in April's data, and should continue further through May and June at least. Over January-April real estate sales were up 15.7% year-on-year to 416.55 million square metres, but this was a slowdown from the 19.5% growth seen over Q1, NBS data show. Growth in completions dropped from 15.1% over Q1 to 10.6% over January-April. Broken down by month that implied a 6.1% y-o-y decline in completions in April.

Reporting of completions can be skewed by various regulatory factors and a broader slowdown in data would be needed to prove a more serious slowdown in the sector. The coming weeks are expected to bring seasonal difficulties for construction however. In addition to the summer heat and rains, the wheat harvest is expected to come a little early this year, meaning a shortage of migrant labour for contract work.

Increasing restrictions on the investment side meanwhile should also lead to a continued slowdown in the sector. Restrictions on the percentage of a project

## End Use Markets Cont.

allowed to be sold forward, and even local governments setting prices in some markets all mean investors are nervous and are controlling their cash flows. The sector does not appear on the verge of collapse, but the investment needed to sustain construction steel demand at current levels appears to be lacking.

**Table 4: Real estate growth rates fall in April**

Y-o-y growth in:	Jan-Feb	Jan-Mar	Jan-Apr
Floor space sold	25.10%	19.50%	15.70%
Floor space sold forward	26.20%	20%	16.30%
New Starts	10.40%	11.60%	11.10%
Completions	15.80%	15.10%	10.60%

*Source: NBS*

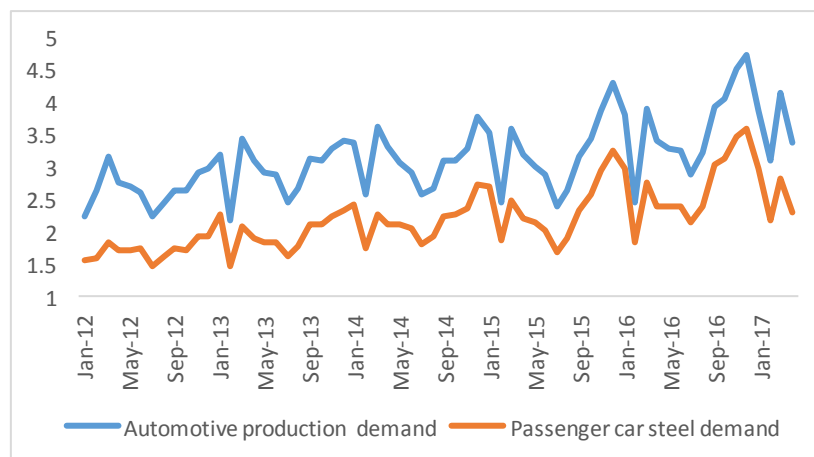
### Automotive

China's automotive sector suffered a sharp slowdown in April, as we noted could happen in the last issue. A slowdown in buying had already begun pushing up inventory at retailers and that translated into lower production levels in April. Estimated steel demand in April saw its first year-on-year decline since August 2015, falling 0.43% to 3.41 million tonnes. Over January -April however implied demand was still up 7.13% at 14.6m t.

Commercial vehicles bucked the trend however, with sales and production continuing to grow steadily. Strong infrastructure spending had created a demand for a wide range of vehicles, while the strong logistics sector is driving truck sales.

Going forward, year-on-year growth figures are likely to remain weak thanks to the sharp increase in vehicle production in the second half of 2016. Sequentially meanwhile there is likely to be a weak period through the hottest months of the summer. If retailer inventories can be brought down by the October holidays however, the sector should still see a sequential increase in demand in the latter part of the year.

**Fig. 5 Automotive production steel demand (monthly, million t)**



*Source: NBS*



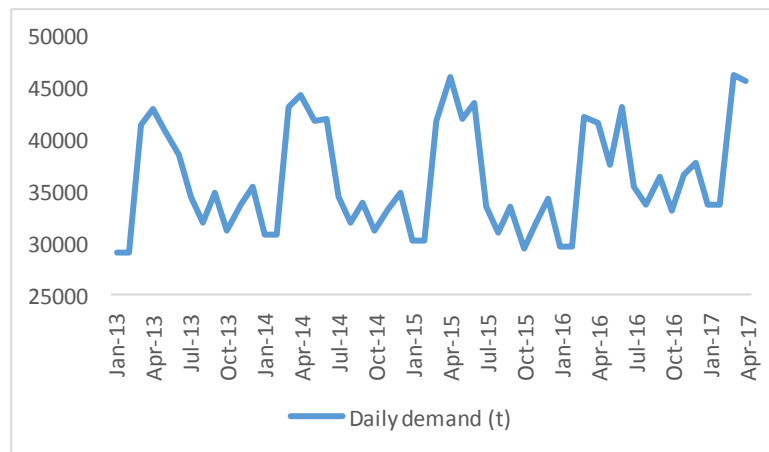
## End Use Markets Cont.

### White Goods

White goods have remained one of the strongest sectors among Chinese steel consumers, with output of key products increasing steadily year-on-year. Over January-April implied steel demand from the sector was up 11.14% to 4.84m t, while in April demand was up 9.93% to 1.38m t.

The sector could face headwinds however as real estate sales slow down. Although most restrictions are focussed on second-time buyers, who are less likely to kit out their apartments with a full range of equipment, white goods sales still typically track home sales. After the strong start to the year, output is likely to finish 2017 up y-o-y but sequentially demand growth could ease back.

**Fig. 6 Implied daily white goods steel demand**



Source: Kallanish

### Shipbuilding

Shipbuilding data has continued to exceed expectation but is set for a slowdown in the coming months. Over January-April China completed 18.56 million deadweight tonnes of ship, up 72% year-on-year, according to the China Association of National Shipbuilding Industry (Cansi).

In part this is because of the improving shipping market and a fairly tight break bulk shipping market. It is also due to large orders booked for delivery in the first half of the year however. The sector is likely to end the year with a year-on-year increase but sequentially it is unlikely that growth in completions can be sustained. The figures so far imply that the sector consumed roughly 6.42m t of steel, with almost half of that in April.

### Energy

China's energy steel sector is gradually recovering thanks to improved investment in oil and gas extraction and an increase in production of power generation equipment. Investment in oil and gas extraction was up 4.2% over January-April, although investment in coal mining remained weak, down 10% y-o-y. Data for investment and equipment production suggest that demand in April surged 22.68% y-o-y in April to 3.15m t, but this was only enough to bring ytd demand back to a 1.59% decline to 7.94m t.

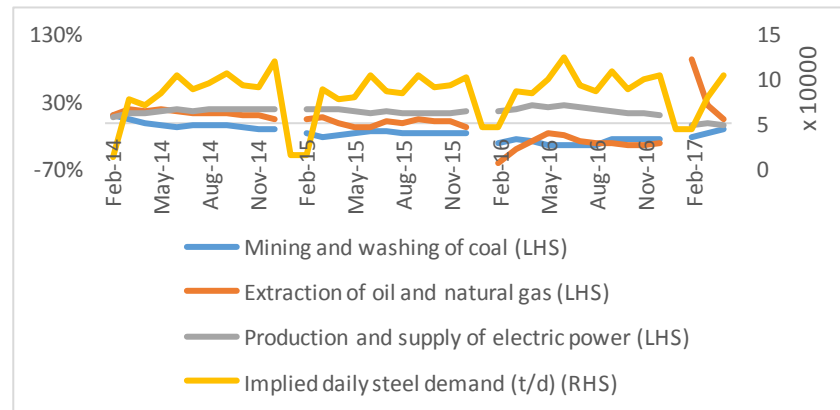
The recovery in oil and gas investment may be limited by international oil prices, which look like they may take a little longer to recover from recent lows. Coal mining and coal power plant restrictions meanwhile will also be negative for demand. Strong investment in upgrading China's power grid will be a key steel demand driver however.





## End Use Markets Cont.

Fig. 7 Yoy change in energy investment



Source: NBS

## Exports

Chinese steel export volumes had another weak month in April, and even some of the more resilient Southeast Asian markets have started to take lower volumes of steel. This trend continues to be driven by high steel prices earlier in the year, especially for rebar. Export volumes are likely to recover only slowly as export prices remain firm.

In late May 2mm SAE1006B was assessed at \$440-450/t fob, up from around \$425-435/t fob at the end of April, with commodity SS400 coil around \$10/t below that. Chinese mills were offering base HRC at \$440-445/t fob by the end of the week after hiking their offers mid-week. Buyers vanished after the hikes however as they still expect offers to fall again. There were plenty of buyers on the side lines waiting for better prices however, traders note, and so prices should not fall too far.

Table 5: Exports (mt)

Sources: China Customs, Kallanish

	2015	2016	yoy	Jan-Apr	Yoy
<b>Total</b>	112.4	108.4	-3.5%	27.2	-25.8%
<b>Net</b>	99.6	95.2	-4.4%	22.7	-30.7%
<b>SE Asia</b>	34.4	39.1	13.1%	9.0	-32.2%
<b>Middle East</b>	14.0	12.8	-8.9%	2.5	-37.8%
<b>South Korea</b>	13.5	14.3	6.3%	4.7	4.2%
<b>Africa</b>	9.7	8.3	-14.6%	1.8	-49.1%
<b>EU</b>	9.4	8.8	-6.3%	1.6	-47.4%
<b>Sh America</b>	8.6	6.5	-24.4%	1.7	-31.8%
<b>Nafta</b>	5.8	4.7	-17.9%	1.8	26.9%
<b>Other Europe</b>	4.5	2.5	-43.5%	0.8	0.0%
<b>Longs</b>	51.6	49.5	-5.5%	9.1	-48.5%
<b>Flats</b>	48.5	48.1	-0.7%	14.8	-5.1%

China's steel exports to Southeast Asia were down 46% y-o-y in April at 2.02 million tonnes, while over January-April they were down 32.2% to 9.01mt. Vietnam was still the second largest single destination but it saw volumes slump 34.4% in April to 660,000t, while over the first four months volumes fell



## Exports Cont.

24.2% to 3.11mt. Even the Philippines, which does not have much local capacity to compete with imports, saw volumes fall 33.83% to 404,000t in April and 14.4% to 1.66mt over January-April.

It is also worth noting that, because price is the key factor, China's flat product exports have fallen only slightly from last year, while longs have plummeted as Chinese rebar prices have soared. China's flat product exports were down just -0.85% y-o-y in April at 3.69mt, and over January-April they were down -5.08% at 14.85mt. Meanwhile its long product exports were down -31.5% in April at 5.52mt and over January-April were down 28.1% at 23.94mt.

Not all markets shrank however, with volumes to the Americas boosted by a 60% y-o-y increase in volumes in March to 454,000t, and a 4.43% increase year-to-date to 1.76mt. Exports to South Korea meanwhile dropped -20.27% m-o-m but were still up 4.12% y-o-y in April at 1.11mt, while over January-April volumes were up 4.24% at 4.69mt.

Fig. 8 Exports

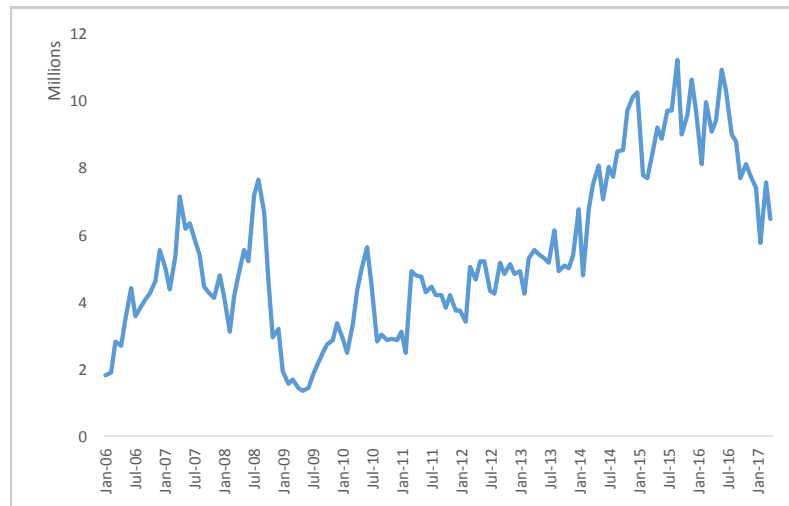
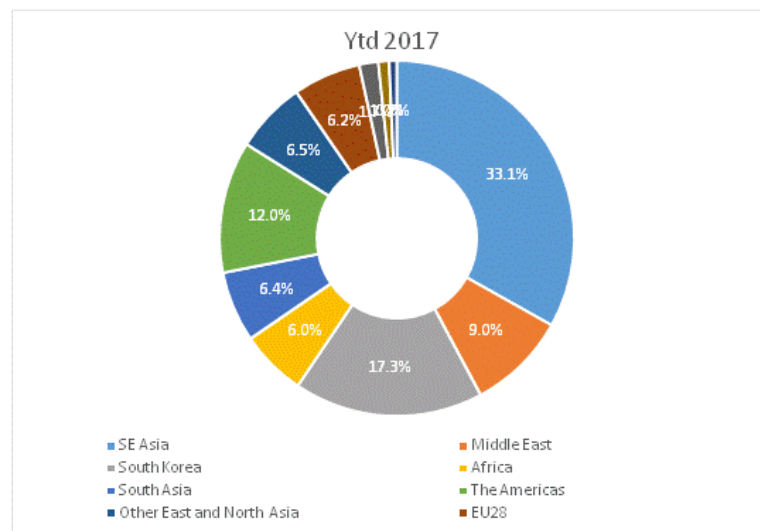


Fig. 9 Exports by region



## Markets

China's spot steel market has been strong despite speculators betting on weaker summer prices over recent weeks, leaving futures prices much more volatile than the physical spot market. The downturn is showing signs of building up momentum however, with export buyers resisting current price levels and raw material costs steadily sliding.

By the end of May in Shanghai, 20mm HRB400 rebar was trading at CNY 3,720-3,750/t (\$543-547/t), up by CNY 120/t from a month earlier. Longs have continued to outperform flats, and Shanghai rebar prices are now threatening to overtake cold rolled coil prices, let alone hot rolled. 1x1,250mm DC01 CRC was sold in Shanghai at CNY 3,740/t on 26 May. The closure of induction furnaces across the country has been key to strong rebar prices, with RHB400 in Sichuan province trading over CNY 4,000/t. This has meant traders have been closing the arbitrage by taking material out of Shanghai, making the market even tighter.

**Table 6: Prices**

*Source: Kallanish*

	2016	y-o-y	Apr	May	M-o-m	Y-o-y
<b>Rebar (CNY/t)</b>	2357	11.8%	3319	3543	6.7%	56.1%
<b>HRC (CNY/t)</b>	2723	23.3%	3118	3119	0.0%	19.3%
<b>62% Fe Aus fines (\$/dmt)</b>	57.05	5.4%	71.13	60.25	-15.3%	13.4%

Hot rolled coil has fared less well but still managed some increase over the month. 5.5x1,500mm Q235B was trading at CNY3,210-3,240/t by the end of May, up CNY 55/t from the end of April. The key difference for HRC is that many traders have inventory and they all hope to cut stocks over the coming weeks as demand continues to dwindle.

Domestically, the expected slowdown in buying over the coming months is expected to hit prices, although some mills are still pushing for higher prices at the start of June. Traders are therefore unwilling to hold too much inventory.

Exporters were also trying to hike prices for the last time before another fall in the summer. SAE1006B was trading in small volumes at \$440-450/t fob at the end of May not much higher than a month earlier, but customers in Southeast Asia were mostly holding out for better prices. Traders are confident that they will only need to lower their prices a little and buyers will flood back to the market however.

Steelmakers however are still mostly profitable, especially for longs, and have been supported by weaker raw materials prices. The Kallanish index for 62% Fe Australian fines ended May at \$57.14/dry metric tonne cfr Qingdao, the lowest level since mid-October 2016 and down 15.64% from the end of April. Chinese port stocks are at record highs over 140 million tonnes but this has still had only a small impact on sentiment. The key factor remains that steelmakers are profitable and so are willing to accept a fair price for higher grade ores. That may change if steel prices fall sharply but it is looking increasingly likely that steel and iron ore will slide more gently into the summer lull.





Table 6: Supply/Demand (m tonnes)

	2014	2015	2016	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>Crude steel production</b>	822.7	803.83	806.68	70.5	69.47	66.81	68.57	68.17	68.51	66.29	67.22	67.2	61.57	72	72.78
<b>Finished steel exports</b>	93.79	112.42	108.98	9.42	10.94	10.3	9.01	8.8	7.7	8.1	7.8	7.4	5.75	7.56	6.49
<b>Finished steel imports</b>	14.43	12.78	13.2	1.09	1.14	1.13	1.11	1.13	1.08	1.11	1.19	1.09	1.09	1.3	1.08
<b>Apparent steel consumption</b>	702.21	664.01	672.17	58.78	56.2	54.3	57.24	57.09	58.46	55.97	57.25	57.51	53.83	62.14	63.73
<b>Calculated real demand</b>	720.36	669.33	668.65	67.21	55	59.54	55.28	54.95	54.64	57.24	52.6	47.42	29.19	72.94	72.91

Table 7: End Users

2017

	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>Manufacturing PMI (NBS)</b>	50.1	50	49.9	50.4	50.4	51.2	51.7	51.4	51.4	51.6	51.8	51.2
<b>Manufacturing PMI (Caixin)</b>	49.2	48.6	50.6	50	50.1	51.2	50.9	51.9	51.9	51.7	51.2	50.3
<b>CPI</b>	2%	1.90%	1.80%	1.30%	1.90%	2.10%	2.30%	2.10%	2.10%	0.80%	1.40%	1.20%
<b>PPI</b>	-2.80%	-2.60%	-1.70%	-0.80%	0.10%	1.20%	3.30%	5.50%	5.50%	7.80%	7.60%	6.40%
<b>FAI (CNY trillion)A</b>	18.8	25.8	31.2	36.63	42.69	48.44	53.85	59.65	59.65	4.14	9.38	14.43
<b>Industrial Value-added</b>	6%	6.20%	6%	6.30%	6.10%	6.10%	6.20%	6%	6%	6.30%	7.60%	6.50%
<b>Real estate investment (CNY billion)</b>	3,456.40	4,663.10	5,536.10	6,438.70	7,459.80	8,397.50	9,338.70	10,258.10	10,258.10	985.40%	1929.20	2773.16
<b>New Construction starts ytd (million square metres)</b>	595.22	775.37	929.44	1,068.34	1,226.55	1,373.75	1,513.03	1,669.28	1,669.28	172.38	315.60	482.40
<b>Completed construction ytd (million square metres)</b>	320.28	395.46	459.04	505.92	571.12	652.11	770.37	1,061.28	1,061.28	161.41	230.31	281.74
<b>Real estate sales ytd (million square metres)</b>	479.54	632.02	757.6	874.51	1,051.85	1,203.38	1513.03	1,573.49	1,573.49	140.54	290.35	416.55
<b>FAI in railways (CNY billion)</b>	217.50	304.00	368.50	452.90	539.30	620.30	666.10	774.80	774.80	44.70	99.49	154.45

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If you found this China Steel Intelligence interesting please let us know, we would love to hear from you. Please send your feedback to the editorial team: [editorial@kallanish.com](mailto:editorial@kallanish.com)

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