

**UBS Global I/O®**

# Global Steel Supply and Demand

## Chinese steel production to shrink

**Equities**

Global  
Steel

**Cautious on global steel as China slows; positive on Europe and the US**

We remain cautious on the global steel industry. 2015 is likely to be another tough year for the sector, with no real easing of the Asian supply overhang. We are becoming more cautious on China's steel production, now forecasting only 0.0% CAGR over the next five years (previously 1.4%). Consequently, we also cut our forecast for global steel output to 1.2% CAGR (from 2%) for the same period. With China still behind in its announced capacity closures, capacity utilisation should remain around 75%. As a result, our mining team has cut its 2015 iron ore price forecast to \$59/t (from \$66/t), with negative implications for our global steel price estimates (Figure 1). Still, Europe is enjoying currency weakness and North America will likely benefit from protectionism and capacity cuts. Both areas are fundamentally better positioned than China or Brazil.

**China steel market at a structural turning point**

Iron ore mining companies still forecast China's steel output to grow at 2.5% CAGR until 2025, but we disagree. Our analysis shows that its steel production has already reached a turning point. We estimate China's steel consumption will decrease at 0.3% CAGR over the next five years and production will be flat at 0.0% CAGR. We believe Chinese steel mills with higher exposure to the construction sector, such as Maanshan I&S, are likely to suffer. While steel stocks could temporarily benefit from potential economic stimulus measures, momentum is likely to fade if excess capacity remains.

**Global protectionism to accelerate**

The global trend of protectionism is intensifying, which should benefit areas that are already addressing excess capacity, such as Europe and the USA, while negatively affecting those that rely on exports, such as China, South Korea and Russia. We have identified more than 17 countries that have already put anti-dumping measures in place, mainly against China. While most AD measures focus on pipe and wire rods, we see them expanding to include flat higher and higher-value-added products.

**UBS recommendations: We prefer Europe and the US; cautious on China**

Our Key Call in the sector is POSCO due to its restructuring story. We like ArcelorMittal (Europe), which should benefit from a recovery in supply-demand conditions in the EU, and Nucor (US) due to our positive view on the recovery in non-residential US construction demand. We have Sell ratings on CSN, Maanshan I&S and ThyssenKrupp.

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**Figure 1: UBS global steel indicator estimates**

Unit: mn tonne	2015E		2016E		2017E	
	New	Old	New	Old	New	Old
World crude steel output	1,683	1,695	1,710	1,724	1,733	1,755
YoY growth	0.6%	3.1%	1.6%	1.7%	1.4%	1.8%
China crude steel output	835	838	837	844	841	853
YoY growth	-0.5%	2.0%	0.2%	0.8%	0.5%	1.0%
World capacity utilization	75%	78%	76%	79%	77%	81%
EU HRC price (US\$/metric tonne)	497	482	530	505	549	538
Iron ore price (US\$/metric tonne)	59	66	58	65	68	72

Source: UBS

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## Investment summary

We no longer forecast that China's steel production will grow over the next five years. On our estimates, China's crude steel production is likely to be flat, at  $\pm 0.0\%$  CAGR over the next five years, versus our previous forecast of 1.4% (for more details, please see our report 'China Steel Sector: Slower for longer – negative growth as demand and exports weigh down on the industry' published on 9 March, 2015). We believe the reasons for the slowdown are falling construction activity and earlier stimulus programs, which brought forward demand for construction. While local stimulus programs may temporarily lift construction demand, the current outflow of cash from emerging markets due to the Fed's hints that it may increase interest rates (see 'Commodity & Mining Q&A: Headwinds from the Fed?' by Julian Garran published 6 March, 2015), as well as existing overcapacity, are likely to offset any stimulus impact, in our view.

We have therefore also cut our global crude steel production forecast and we now estimate that the global steel industry will grow at only 1.2% CAGR over the next five years (down from 2.0% previously). This cut has implications for our iron ore price forecasts. In response to the decline in our global crude steel production forecast, our mining team has lowered its iron ore price forecast to \$59/t from \$66/t, which in turn affects our global steel price outlook (see 'UBS Global I/O: Seaborne Iron Ore S/D – Iron Ore: China steel market ex-growth,' Daniel Morgan, 9 March, 2015). Overall, we maintain a cautious view on the global steel sector. The table below summarises our recent changes.

**Figure 2: Estimate changes for major global companies (2015), price targets and ratings**

Ticker	Region	Company name	EBITDA (Usmillion \$)		EPS (US \$)		Target price (US\$)		Rating	
			New	Old	New	Old	New	Old	New	Old
5401.T	Japan	Nippon Steel&Sumitomo Metal*	6,460	7,030	0.27	0.29	3.60	3.60	Buy	Buy
005490.KS	Korea	POSCO	6,631	6,665	25.53	29.39	336.39	377.30	Key Call Buy	Key Call Buy
5411.T	Japan	JFE Holdings	3,900	4,070	2.30	2.40	23.50	23.50	Neutral	Neutral
600019.SS	China	Baosteel	3,129	3,291	0.07	0.07	1.13	1.17	Buy	Buy
004020.KS	Korea	Hyundai Steel	2,584	2,661	7.30	7.49	73.19	68.64	Buy	Buy
NUE.N	US	Nucor Corp.	2,179	2,229	2.38	2.47	54.00	57.00	Buy	Buy
AKS.N	US	AK Steel	419	640	0.05	1.08	4.00	6.50	Neutral	Neutral
RS.N	US	Reliance Steel & Aluminum	826	867	4.45	4.75	62.00	63.00	Neutral	Neutral
STLD.O	US	Steel Dynamics	968	1,090	1.34	1.66	22.00	24.50	Buy	Buy
X.N	US	United States Steel	1,050	1,359	0.92	2.28	24.00	25.00	Neutral	Neutral
BSL.AU	Australia	BlueScope	495	516	0.17	0.23	4.68	5.27	Buy	Buy
0347.hk	China	Angang	1,017	1,118	0.03	0.04	0.82	0.54	Neutral	Sell
0323.hk	China	Maanshan	833	875	0.01	0.01	0.30	0.25	Neutral	Neutral

Source: UBS estimates. Note: local currency price targets as follows: Nippon Steel&Sumitomo Metal 430 JPY, POSCO 370,000 KRW, JFE Holdings 2800 JPY, Baosteel 7.15 CNY, Hyundai Steel 80,500 KRW, Nucor Corp. 54 USD, AK Steel, AK Steel 4 USD, Reliance Steel & Aluminum 62 USD, Steel Dynamics 22 USD, United States Steel 24 USD, BlueScope 6 AUD, Angang 6.35 HKD, Maanshan 2.30 HKD

# 2015: Likely to be another tough year

## Bearish overall, with Europe and USA as sweet spots

The global steel industry has little to cheer about in 2015, in our view. Steel prices have continued to fall since the end of 2014, while iron ore and coking coal stabilised. Excessive steel exports from China, lower Russian steel prices due to rouble depreciation and the drop in US scrap prices are putting pressure on global steel prices. We believe China is at a tipping point. Steel consumption and production are likely to decrease going forward, mainly due to the slowdown in construction activity. Companies with high exposure to long steel operations, such as Maanshan I&S, are most at risk. We have reduced our EBIT forecast for our global steel coverage by 6.3% YoY in 2015, while we still estimate a 15% YoY increase in October for the same period.

Europe and North America, however, are sweet spots in our gloomy base scenario for the global steel industry. Both markets are structurally better positioned. In Europe, the process of shutting down excess capacity has started, and euro depreciation should drive imports down by around 30% in 2015, boosting production and lifting the utilisation rate to 77% from 74% in 2014 in tandem. In North America, the removal of excess and outdated capacity coupled with robust demand from the auto and capital goods sectors should also drive up utilisation rates in the sector. We believe North American steel prices will remain at a premium to other markets due to high-cost raw materials integration and potential further anti-dumping measures after imports surged 38% YoY in 2014.

We believe steel prices in 2015 will be below last year's levels, mostly due to iron ore and scrap prices. The area with the biggest drop in hot rolled coil prices is the Asian spot market (including the Russian export price), while we estimate the steel price decline in Europe and Japan will be comparatively shallow due to currency weakness. Since the end of last year, the fall in the global steel price has picked up due to increasing exports from China as well as the seasonal slowdown in steel consumption.

Global protectionism in steel will likely intensify in 2015, in our view. China's steel exports surged 50% in 2014 to nearly 94 million tons, equivalent to 80% of US steel consumption. Asia is especially hard hit by these excessive volumes, but the European and North American steel markets are also negatively impacted. While China has historically exported mainly flat steel products, the slowdown in its construction sector led to a significant increase in long steel exports (+67% YoY). Consequently, global steel margins remain at historically low levels. We have identified 17 countries that have filed anti-dumping measures against China to protect domestic players from Chinese steel volumes, and we see an increasing number of investigations into other countries, particularly Russia.

Valuations of Chinese steelmaker stocks are demanding, in our view, and risk/return is skewed to the downside. They are trading at a 39% premium to the global average 2015E EV/EBITDA. New market expectations of quantitative easing (QE) have recently propelled Chinese steel stock prices upward, even though we argue that the stocks are not only expensive but fundamentally vulnerable. Should protectionism intensify, the market environment for China's steelmakers is likely to deteriorate further, in our view.

**Globally, the steel industry remains under pressure, especially in China...**

**...but Europe's and North America's steel sectors are better positioned structurally**

**Global steel prices to fall YoY in 2015**

**Protectionism likely to intensify this year**

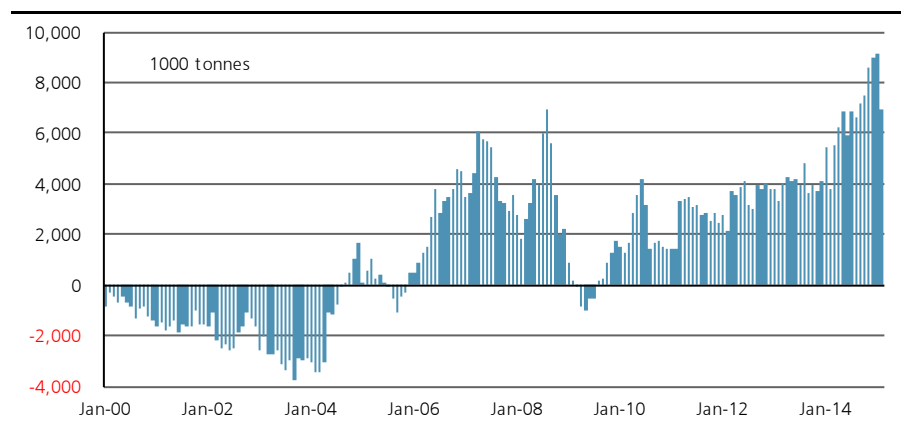
**China steel stocks most at risk**

**Figure 3: Mining companies' long term outlook**

Mining company	China's steel production by 2025 (t)	Remarks
BHP (Feb 24, 2015)	1-1.1bn	plateaus through 2030
Rio Tinto (Oct 9, 2014)	0.9bn	China to produce 1bn t by 2030
Fortescue	no forecast made	
<b>CAGR 2014 - 2025</b>		<b>2.50%</b>

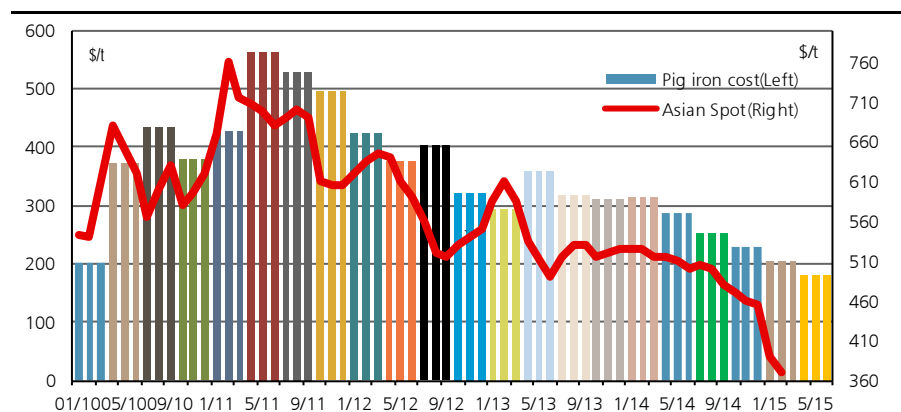
Source: Company data

**Figure 4: China net steel export**



Source: Chinese Custom Statistics

**Figure 5: Main raw material price and Asian commercial grade HRC price trends**



Source: The Japan Iron and Steel Federation, Platts, UBS estimates

## Global capacity cuts necessary for market recovery

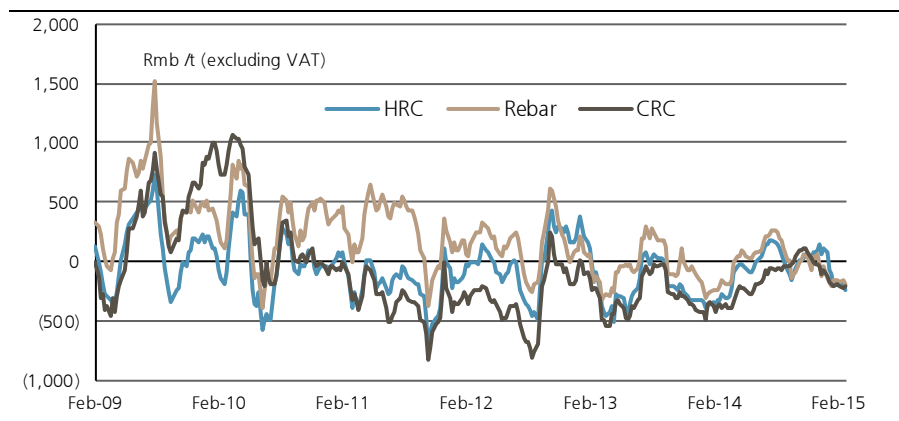
China's government is trying hard to limit new steel capacity and production, but it struggles with the inventiveness of its steel companies. Not only has it strengthened environmental regulations, but it has also removed export tax incentives for rebar, wire rods and plates with added boron. While these measures should have decreased steel exports, China's steel mills are trying to use other additives, such as chromium, to circumvent the higher tax bill. Recent adjustments in the country's capacity also make us believe the government is not aware of all the installed capacity in the country. This makes it harder to combat overcapacity and increases the amount of time required to do so.

The performance trend is important. Many companies have started to record losses as steel prices are low and temporary shutdowns have started. Production cuts are spreading to other regions, such as Asia, Europe and the US. The period following the Chinese Spring Festival is traditionally one of strong seasonal demand. Global steel prices are likely to rebound, starting in China. Inventory is also likely to be built up not only for steel, but also for iron ore. However, as long as excess capacity remains, supply pressure will likely return, and any price recovery could be short-lived. A fully fledged market recovery would likely require a capacity reduction. Also, demand in China seems weak.

China's government caught between good intentions and companies' inventiveness

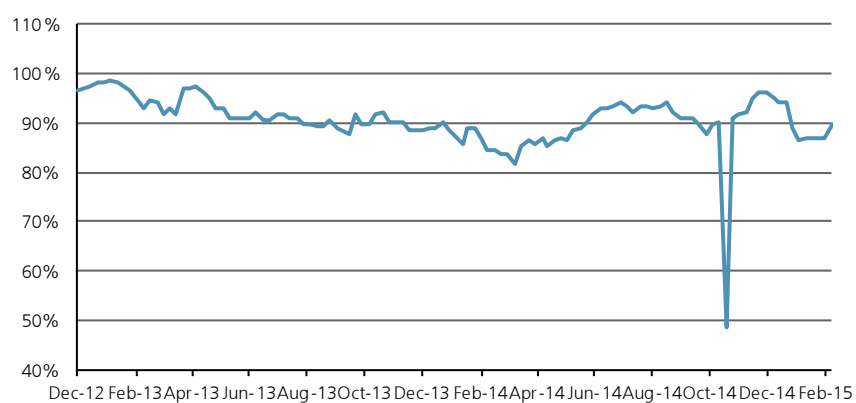
Steel price recovery will be temporary as long as there is overcapacity

**Figure 6: Chinese steel mills' cash margins (excluding VAT, including carry over)**



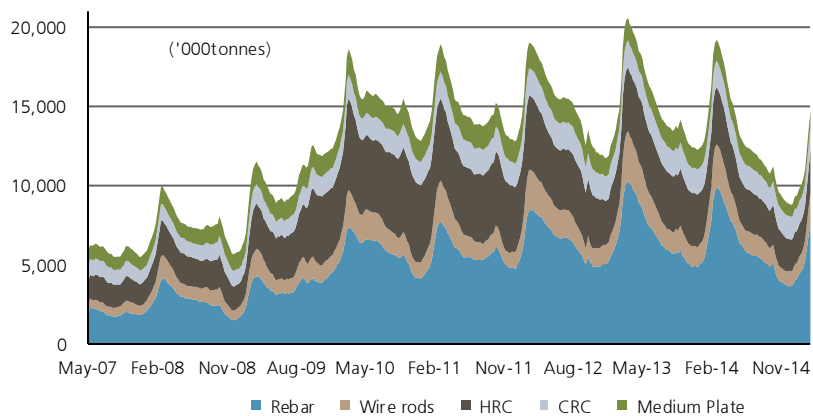
Source: Mysteel, UBS

**Figure 7: Tangshan's blast furnace operation rate**



Source: Mysteel

**Figure 8: Steel inventories at traders in China show inventory build-up in early spring**



Source: Mysteel

## Protectionism increasing

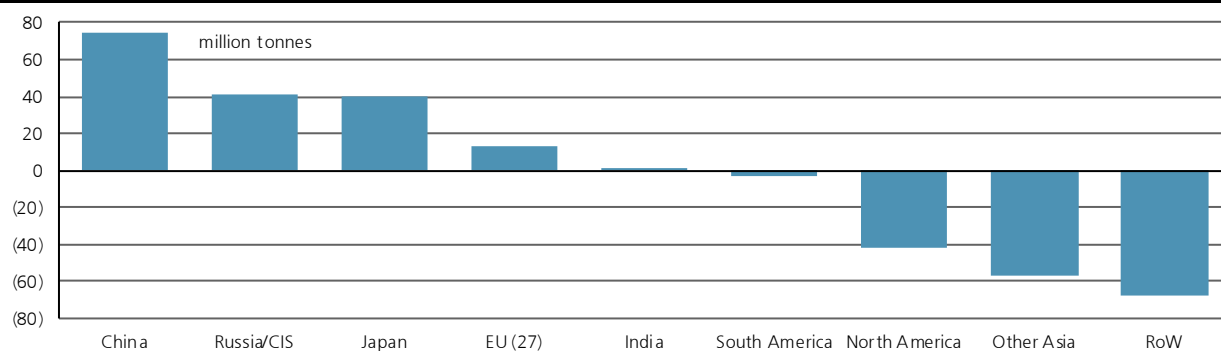
Many regions have already introduced protectionist measures against China's low-priced steel exports, and a significant number of anti-dumping cases have been filed. Trade protectionism is a political issue and takes time to put in place. However, if Chinese steel is excluded from these regions in the future, it could pressure Chinese steel mills to finally reduce capacity.

In the long run, protectionism may benefit Europe and the US, where imports weigh heavily on prices, but it will likely put pressure on production in major steel exporters such as China and Russia. Japan and South Korea, which are also steel-exporting countries, are less likely to be impacted by protectionism, as the majority of their exports are semi-finished products supplied to specific customers or their own companies.

Many regions are trying to block Chinese steel imports, but the process will take a long time

Europe and the US should benefit from protectionism, while China and Russia would likely be hurt

Figure 9: Net exports by region (2015)



Source: UBS estimates

Figure 10: Cases in which final anti-dumping duties were imposed (2014-15)

Country	Product type	Final anti-dumping duties	Targeted country
EU	certain welded tubes and pipes of iron or non-alloy steel, and certain seamless steel pipes of iron or steel	-	Russia
US	steel wire garment hangers	15.83%→187.25%	China
US	grain oriented flat-rolled electrical steel (GOES)	-	China
Taiwan	select cold-rolled stainless steel products	20.18%→38.11%	China and South Korea
Canada	hot-rolled carbon steel plate and high-strength low-alloy steel plate	59.70%	Brazil, Denmark, Indonesia, Italy, Japan, and South Korea
US	circular welded carbon-quality steel line pipe	73.87%→101.10	China
Indonesia	CRC/S	5.9%~55.6%	Japan, China, Korea, Vietnam, Taiwan
Brazil	Seamless pipe	-	China
US	Nickel Coated Steel Sheets	~77.70%	Japan
Taiwan	cold-rolled stainless steel sheet	-	China
China	alloy-steel seamless pipes	13%~14.1%	EU and US
US	welded stainless steel pressure pipes	17.72%~53.91%→16.25%	Viet Nam, Malaysia and Thailand
US	wire rod	31.4%~35.31%	China
Canada	carbon steel welded pipe (CSWP)	-	Taiwan
US	steel wire	31.40%~35.31%	China
US	steel wire	9.99%	Mexico
US	oil pipe	2.52%	Taiwan
US	oil pipe	9.89%~15.75%	Korea
US	oil pipe	-	Philippines, India, Saudi Arabia, Thailand, Vietnam, Turkey and Ukraine
US	Steel Pipe	-	Saudi
Mexico	welded steel link chain	USD0.50/kg	China
US	steel threaded rod	206%	China
US	malleable iron pipe fittings	111.36%	China
US	Steel Pipe	~118%	South Korea, India, Taiwan, Turkey, Ukraine, Saudi Arabia and Vietnam
EU	wire rod	24%	China
US	carbon and certain alloy steel wire rod	106.19%~110.25%	China
Vietnam	cold-rolled stainless steel	3.07%~37.29%	Taiwan, mainland China, Indonesia and Malaysia
US	reinforcing steel bars (rebar)	20.58%~66.7%	Mexico
US	grain oriented flat-rolled electrical steel (GOES)	159.21%(China)	China, South Korea, Russia
US	non-oriented electrical steel (NOES)	407.52%	China
US	non-oriented electrical steel (NOES)	204.79%	Japan
US	non-oriented electrical steel (NOES)	98.84%	Germany
US	non-oriented electrical steel (NOES)	126.72%	Sweden
US	non-oriented electrical steel (NOES)	52.23%	Taiwan
US	non-oriented electrical steel (NOES)	6.88%	South Korea
Egypt	steel rebar	7.30%	China, Ukraine and Turkey
US	hot-rolled, flat-rolled, carbon quality steel	73.59~184.56%	Russia
Brazil	seamless tube	59.9% or \$908.59/t	China
Malaysia	prestressed concrete wire strand	5.93%~8.71%	China
Australia	quenched & tempered plate	10.80%	Finland
Australia	quenched & tempered plate	9.60%	Sweden
Australia	quenched & tempered plate	24.6~33.8%	Japan
Australia	section steel	12.23%	Japan
Brazil	seamless tube	\$708/mt~\$155.80/mt	Ukraine
Ukraine	seamless stainless steel pipe	41.07%	China
EU	pipe fittings	-	Korea, Malaysia
Canada	concrete reinforcing bar (rebar)	3.8~41%	China, South Korea, Turkey
US	wire rod	-	China
Brazil	boron-added steel plate	\$211.56/mt	China
Brazil	boron-added steel plate	\$261.79/mt	Ukraine
Indonesia	CR stainless steel	-	China, Thailand, Malaysia, South Korea, Singapore and Taiwan
Colombia	steel cable	-	China
EU	welded tube	90.6%	China
EU	welded tube	38.1%	Belarus
EU	welded tube	10.1%~20.5%	Russia
Brazil	galvanized wire	\$245.41/mt~\$746.41/mt	Sweden
Canada	carbon and HSLA plate	15%~21.3%	Ukraine
US	cut-to-length carbon steel plate	-	China
Thailand	pre-painted galvanized and zinc-aluminum alloy coated steel	23.24%	China
Thailand	pre-painted galvanized and zinc-aluminum alloy coated steel	10.70%	Korea
Thailand	unpainted Zn-Al alloy coated steel	2.65%~29.5%	China
Thailand	unpainted Zn-Al alloy coated steel	5.85%~24.14%	Taiwan

Source: UBS



**Figure 11: Cases in which preliminary anti-dumping duties were imposed (2014-15)**

Country	Product type	Preliminary anti-dumping duties	Targeted country
US	welded stainless steel pressure pipes	54%	Vietnam
US	welded stainless steel pressure pipes	167%	Malaysia
US	welded stainless steel pressure pipes	7~10%	Thailand
US	steel rebar	66.70%	Mexico
US	steel rebar	2.64%	Turkey
US	grain oriented electrical steel	~241.91%	Japan, China, Czech Republic, Germany, Korea, Poland, Russia
US	EAF steel	5.34%~241.91%	Japan, China, South Korea, Germany, Poland, the Czech Republic, Russia
US	non-oriented electrical steel (NOES)	6.91%~407.52%	Taiwan, Japan, South Korea, China, Germany and Sweden
US	steel wire	31.40%~35.31%	China
US	steel wire	9.99%	Mexico
US	steel wire rod	106.19% → 110.25%	China
India	stainless steel	0.1	China
Canada	OCTG pipe	-	Taiwan, India, Indonesia, the Philippines, South Korea, Thailand, Turkey
S.Korea	ceramic tile	9.07~29.41%	China
Korea	H beam	17.7%~32.7%	China

Note: Cases shaded in grey are those with a follow-up

Source: UBS

**Figure 12: Potential anti-dumping cases (2014-2015)**

Country	Product type	Targeted country
India	flat stainless steel products	China
Colombia	steel pipes	Turkey
Indonesia	hot-rolled bars and rods	-
Indonesia	I and H Sections of Other Alloy Steel	-
EU	cold rolled stainless sheet	China and Taiwan
EU	electrical steel sheet	Russia
US	carbon and certain alloy steel wire rod	China
US	steel pipes and tubes	South Korea
India	Hot-Rolled Flat Products of Stainless Steel 304 series	China, Korea and Malaysia
Canada	Hot-Rolled Carbon Steel Plate	Brazil, Denmark, Indonesia, Italy, Japan, and South Korea
Egypt	steel	Turkey
US	Steel nails	India, South Korea, Malaysia, Taiwan, Turkey, Vietnam and Oman
S. Korea	H section	China
Philippine	steel roofing sheets	China
Morocco	cold-rolled sheets and plated or coated sheets	-
EU	cold rolled stainless steel product	China and Taiwan
US	HRC	Russia
Egypt	rebar and wire rod	China, Turkey and Ukraine
EU	wire rod	China
US	OCTG	Vietnam
US	Steel nails	Oman, South Korea, Malaysia, Taiwan, and Vietnam
EU	grain oriented electrical steel (GOES)	China, Japan, Korea, Russia and USA
Malaysia	Plate	-
Malaysia	steel concrete rebar	China and South Korea
Malaysia	Plate	South Korea, China and Vietnam
Mexico	HRC	China, France, Germany
India	cold-rolled flat stainless steel products	-
Mexico	HRC	Germany, China and France
Taiwan	billet	China
US	boltless steel shelving	China
EU	seamless pipes	China
Malaysia	steel products	China
US	welded line pipe	South Korea, Turkey
Australia	steel reinforcing bar (rebar)	South Korea, Thailand and Turkey
India	cold rolled flat products of stainless steel	-
Taiwan	plate	South Korea, India, China and Japan
Morocco	CRC and coated sheet	-
South Africa	coated and painted flat-steel coil	China, India
Brazil	Heavy plate	Ukraine, China
Arab	steel	China
Turkey	cold rolled stainless steel welded tube	Viet Nam, Malaysia
EU	cast iron tubing	India
S. Korea	H-shaped steel	China
EU	stainless steel cold flat products	China, Taiwan
Mexico	tube	US, Spain, India
Thailand	wire rod	China
Turkey	HRC	China, Japan, France, Russia, Ukraine, Romania and Slovakia
UK	steel	-
Belarus	stainless pipe	Ukraine
Kazakhstan	stainless pipe	Ukraine
Russia	stainless pipe	Ukraine
EU	plate	China

Note: Cases shaded in grey are those with a follow-up

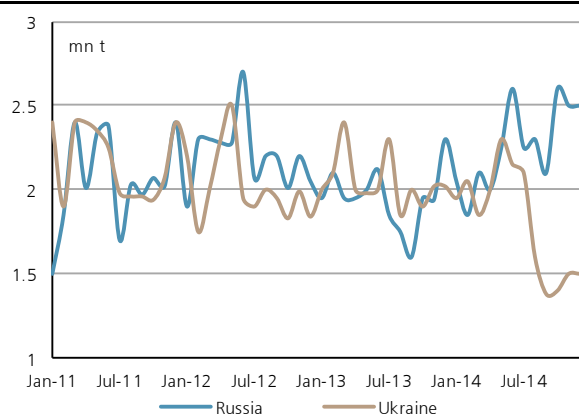
Source: UBS

# Russia's cheap steel: A psychological rather than a real effect

Concerns are spreading that Russia and Ukraine may flood the market with cheap steel as the two countries' costs of steel production have come down significantly due to rouble/hryvnia depreciation. With 70-80% of all steel-related costs denominated in the local currency, we agree this could pose a real threat to the market. However, we do not agree with the widespread view that Russia and Ukraine will flood the global steel market in 2015. We expect the situation in Ukraine will keep Russian companies in check as they seek to avoid further sanctions by Western countries.

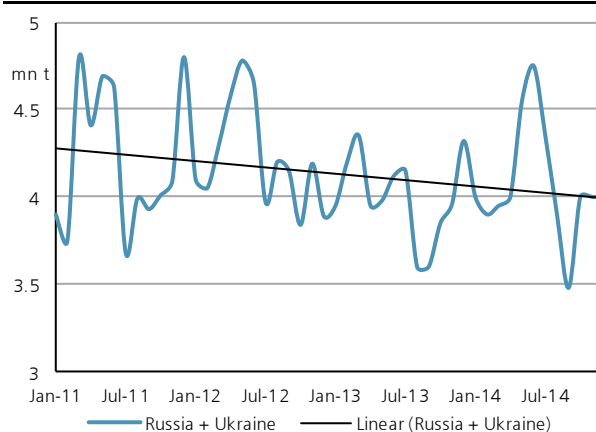
We have not yet seen a major increase in combined exports from Russia and Ukraine, but we believe the steel market has reacted to announcements of low prices from those areas. Elsewhere, China's HRC export price has dropped below \$380/t, much faster than the decline in raw material prices.

**Figure 13: Rising Russian but falling Ukrainian steel exports**



Source: ISSB, UBS

**Figure 14: Russia + Ukraine steel exports trending down**



Source: ISSB, UBS

# Steel supply and demand outlook

## 2015 outlook

We expect 2015 crude steel production to increase by 0.6% YoY to 1.683bn tonnes compared with our previous estimate of 3.1% YoY growth to 1.695bn tonnes. The main factors behind our new forecast are worldwide inventory adjustments due to high exports from China, and a demand slowdown, mainly in China and other emerging regions. We expect crude steel consumption in China, the world's biggest market, to be flat vs. our previous estimate of +2.6% YoY.

**Utilization rate is expected to remain weak, falling by 3ppt to 75%, reflecting a demand slowdown in China etc.; at this level, a full margin recovery is unlikely**

By region, we see European steel production rising by 3.8%, with exports increasing and imports decreasing; in North America, where the sector suffers from high imports but is supported by a strong macro economy, we forecast an increase of 1.9%; production in India will likely increase by 3.5% along with continued economy growth; in China, we estimate production will decrease by 0.5% given the expected demand slowdown and decrease in exports; finally, we see Japan sliding by 0.6% as demand slows and inventory adjustments continue. We have revised down estimated production in Asia, where the economy is worsening.

Although we expect a slight decrease in steel exports from China, they are still high and will likely continue to adversely impact global supply and demand.

Although we have raised our forecast for China's production capacity to 2.256bt from our previous estimate of 2.174bt, this mainly reflects revisions to Chinese production capacity statistics before 2014, so there has not in fact been a major change from our previous estimates. We increased our outlook for crude steel production in China to 1.115bt from 1.023bt, but actual capacity seems to be below this level if personnel, raw materials and fuel contracts are considered. In any case, it is clear that China has significant excess capacity.

We expect world crude steel capacity utilization to move flat to 75%, down 3pt from the previous survey level of 78%. At this level, a full margin recovery is unlikely.

## 2016/2017 outlook

We expect crude steel production in 2016 to grow by only 1.6% YoY to 1.71bn tonnes (vs. our previous forecast of 1.724bn tonnes). Although we anticipate demand growth in many regions, such as Europe, the former Soviet Union, South America and India, we expect apparent crude steel consumption to decrease by 0.4%. We do not see any growth drivers that could replace China.

**Although we expect production to recover in 2016, the utilization rate will likely only rise to ~76% given slowing demand in China**

We expect capacity to rise by 0.9% YoY to 2.264bn tonnes. Chinese government policies coupled with falling profitability are likely to lead to a 0.1% decrease in China. Although cutting-edge integrated steelworks are ramping up in South China, the disposal of obsolete facilities is also likely. We expect capacity to expand in India, where the economy continues to grow.

As a result, we forecast the utilization rate will rise by 1ppt to 76%, but at this level steelmakers are still unlikely to regain pricing power.

We estimate crude steel production will grow 1.4% YoY in 2017. As China's capacity reduction policy introduced in early 2014 takes effect, the global utilization rate should rise to 77%. We expect apparent crude steel consumption to recover in South America after a period of stagnation and to grow in Europe, North America and India, while it will likely stay flat in China.

**Utilization rate likely to recover to 77% in 2017, still not enough for steelmakers to regain pricing power**

We expect the steel market to recover gradually. However, as long as the utilization rate stays below 80% and demand continues to fluctuate, steelmakers will not regain pricing power relative to their customers.

In our upside scenario, we expect the Chinese government to push successfully for capacity reduction. Moreover, protectionism is increasing in many regions, and a ban on imports from China would likely lift global steel prices.

**Upside catalysts: Further capacity reduction in China and protectionism**

In our downside scenario, we assume capacity reduction in China undershoots expectations, and we see unexpected capacity expansion even in a modest market recovery. For example, E United still plans to build an integrated steel mill in Vietnam. Moreover, Formosa's steel mill in Vietnam is under construction, and its completion will likely result in a tough market with excess supply.

**Downside catalyst: delay in capacity reduction in China**

**Figure 15: Global steel supply-demand outlook summary**

million tonnes	2011	2012	2013E	2014E	2015E	2016E	2017E	2018E
Crude steel production	1,537	1,559	1,649	1,673	1,683	1,710	1,733	1,754
yoy	7.3%	1.4%	5.8%	1.5%	0.6%	1.6%	1.4%	1.2%
Crude apparent consumption	1,524	1,542	1,635	1,672	1,683	1,710	1,733	1,754
yoy	7.1%	1.2%	6.0%	2.2%	0.7%	1.6%	1.4%	1.2%
Crude steel production capacity	1,937	2,044	2,214	2,236	2,256	2,264	2,259	2,275
yoy	4.6%	5.5%	8.3%	1.0%	0.9%	0.4%	-0.2%	0.7%
Capacity utilization	79%	76%	75%	75%	75%	76%	77%	77%

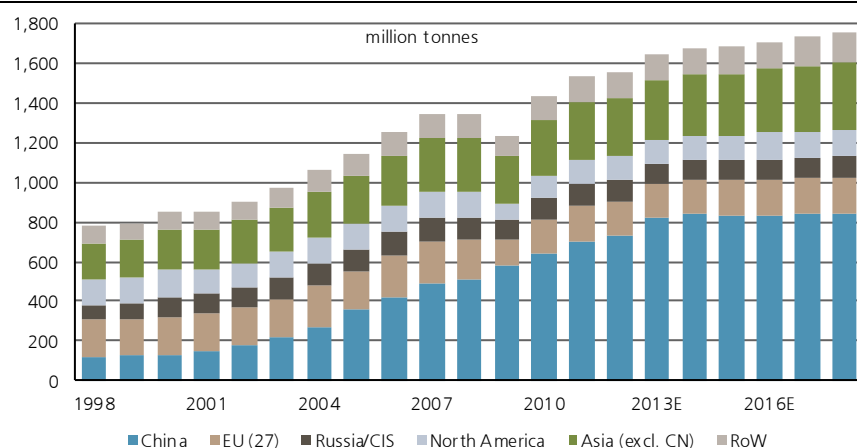
Source: CRU, WSA, UBS estimates

**Figure 16: Changes in global steel supply-demand estimates**

	2014E		2015E		2016E		2017E	2018E
million tonnes	New	Old	New	Old	New	Old	New	New
Crude steel production	1,673	1,644	1,683	1,695	1,710	1,724	1,733	1,754
YoY	1.5%	1.8%	0.6%	3.1%	1.6%	1.7%	1.4%	1.2%
Crude apparent consumption	1,672	1,644	1,683	1,695	1,710	1,724	1,733	1,754
YoY	2.2%	1.8%	0.7%	3.1%	1.6%	1.7%	1.4%	1.2%
Crude steel production capacity	2,236	2,159	2,256	2,174	2,264	2,176	2,259	2,275
YoY	1.0%	1.2%	0.9%	0.7%	0.4%	0.1%	-0.2%	0.7%
Capacity utilization	75%	76%	75%	78%	76%	79%	77%	77%

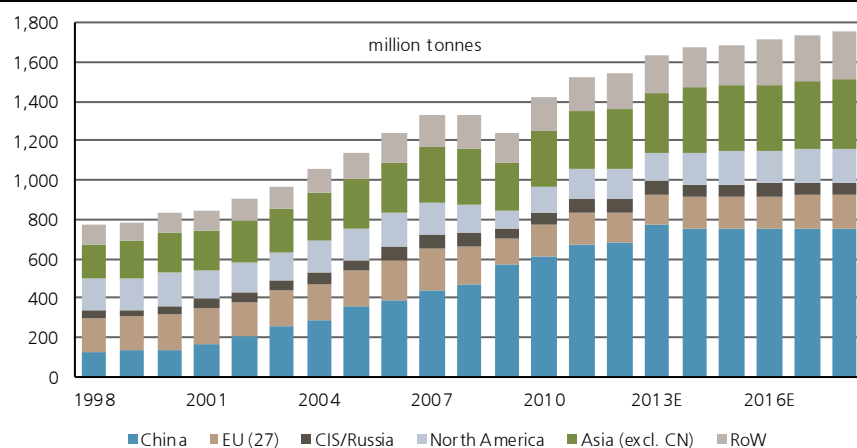
Source: UBS estimates

**Figure 17: Global steel production**



Source: CRU, WSA, UBS estimates

**Figure 18: Apparent crude steel consumption**



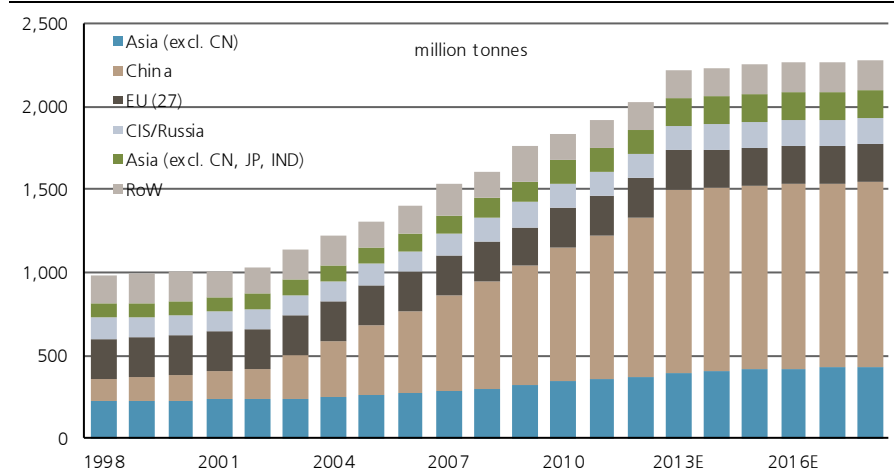
Source: CRU, WSA, UBS estimates

**Figure 19: Global capacity utilization**



Source: CRU, WSA, UBS estimates

**Figure 20: Global crude steel production capacity**



Source: CRU, WSA, UBS estimates

## Comparing growth in individual regions

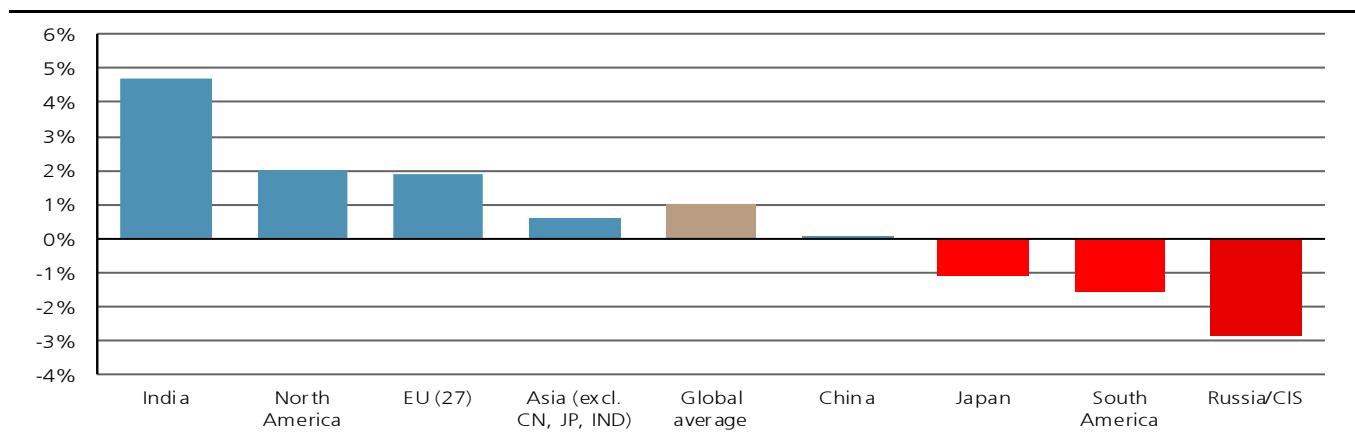
In 2015, among steel markets larger than 50mt, we estimate India will see the highest growth in apparent crude steel consumption, as its economy is likely to pick up fueled by the new government's stimulus measures. We also expect North America, where the macro economy is strong, to grow 2%. China, the world's biggest market, will have 0% growth, in our view. Given geopolitical risk and weak crude oil prices, expected negative growth in the former Soviet Union is a concern. The South American market, where the macro economy is set to continue deteriorating in 2015, is likely to record negative growth for the second year in a row. We also expect Japan to post negative growth given the demand slowdown in the auto sector and inventory adjustments due to import effects.

Crude steel production in Europe is likely to grow rapidly, as euro depreciation is expected to increase exports and decrease imports. Production in South America is also likely to increase due to currency weakness. India, where demand continues to rise, is likely to grow as well. We see high growth of crude steel capacity in South America. Dongkuk Steel, a South Korean steelmaker, is launching a slab steel plant in Brazil. India is also expanding capacity.

**We forecast high growth in India in 2015**

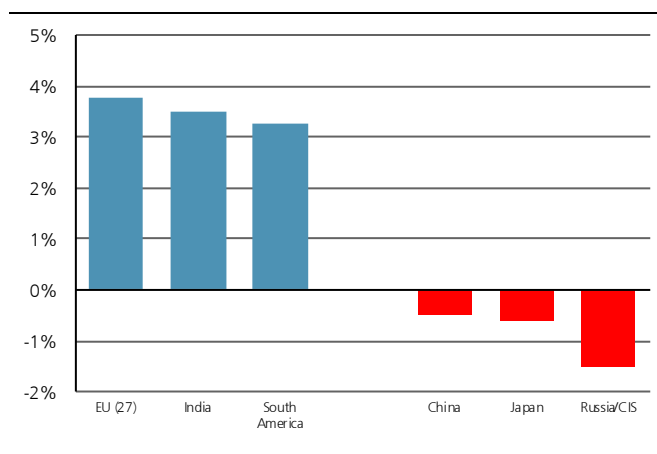
**Production in Europe is likely to grow in 2015**

**Figure 21: Apparent consumption growth rate (2015)**



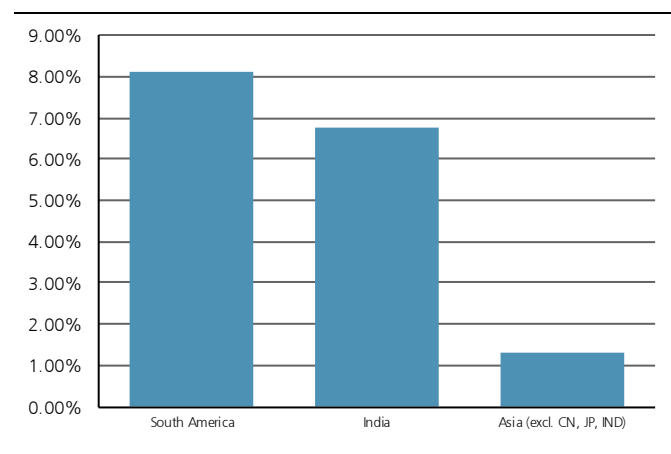
Source: CRU, WSA, UBS estimates; \* Excluding China, India and Japan

**Figure 22: Crude production growth rate (2015)**



Source: CRU, WSA, UBS estimates; \* Excluding China, India and Japan

**Figure 23: Production capacity growth rate (2015)**



Source: CRU, WSA, UBS estimates; \* Excluding China, India and Japan

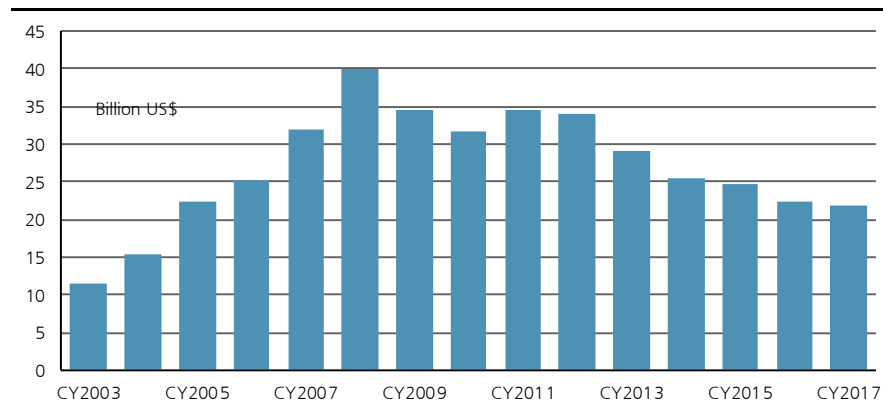
## Capex is decreasing

Figure 24 shows capex for the companies in our coverage. In the 2000s prior to the global financial crisis, investment grew by 30% YoY on average, partly reflecting improvements to production facilities, acquisitions, and mine investments. However, this was followed by a fall of 7% after the global financial crisis, when returns from the steel industry declined substantially. We envisage a decrease of 5% pa from 2015. Steel sectors in developed countries have reined in capex since the global financial crisis. Going forward, investment is likely to be focused on maintenance and repair; with the exception of Baosteel, there are no plans for major capacity expansion. India, which is not in our coverage but continues to enjoy demand growth, is carrying out sustained capacity expansion. Supply-demand is deteriorating, but projects planned when the economy was stronger in Vietnam, Brazil, and elsewhere are moving forward rapidly and capacity is expanding. Nevertheless, operating in the current supply-demand environment could present notable economic challenges.

**We expect capex to decline 5% pa from 2015**



**Figure 24: Global major steel companies' capital expenditures**



Source: Company data, company estimates

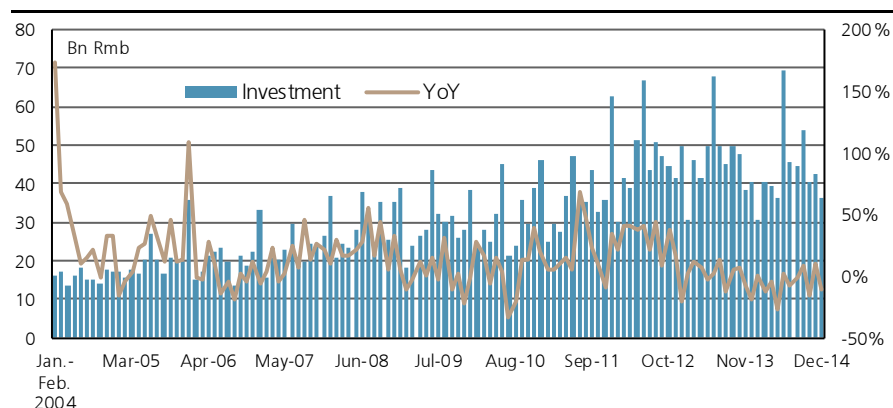
## Capex trend in China

Following the global financial crisis, government economic stimulus improved business sentiment in the steel sector and capacity increased briskly. Capex remained high until 2014, and new production facilities are ramping up one after the other. Though capex is falling due to deteriorating profitability and funding, it remains high. Steel capex has a long lead time, and in many cases projects that have started construction cannot easily be halted due to deterioration in the supply-demand balance.

We expect no more expansion of production facilities, partly reflecting government plans to reduce them. Meanwhile, in the south, Baosteel is carrying out projects to build new integrated steel mills, so we do not expect the reduction in excess production facilities to proceed smoothly.

**Capex is falling due to worsening profitability and funding, but it remains high**

**Figure 25: China steel industry FAI**



Source: Wind EDB

## Steel product price outlook

We have lowered our steel price forecasts in major regions in response to the falling iron ore price outlook. Iron ore prices have plunged as low-cost miners, mainly in Australia, have increased output with the aim of kicking high-cost miners out of the market. The spread between steel product prices and raw material costs is widening, as steel demand has not fallen significantly. However, we expect steel prices to trend down because the supply-demand balance is also weakening. However, the movement of margins depends on regional supply and demand factors, product types and FX. The steel spread in China, which is the center of the oversupply in Asia, has narrowed rapidly. However, prices for tier-1 mills that produce high-grade steel are likely to fall only slightly, and margins are widening.

**We lower our steel price forecasts in major regions**

**Figure 26: Changes in UBS steel price estimates**

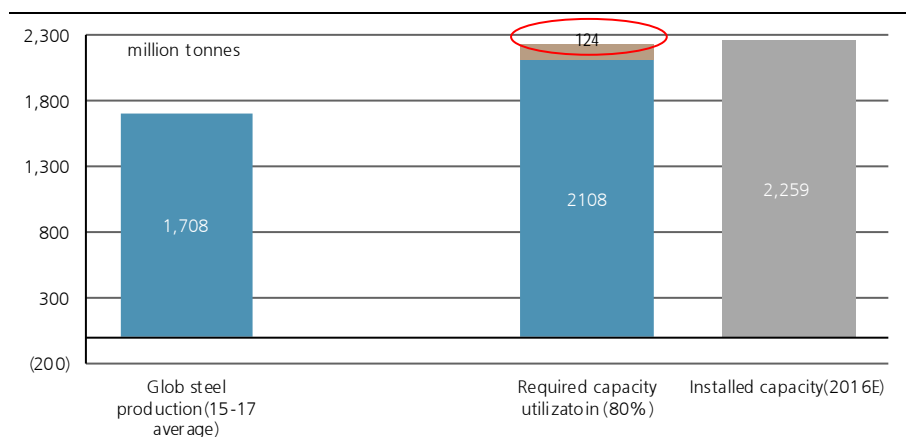
US\$/metric tonne	2015E		2016E		2017E		LT	
Steel price	New	Old	New	Old	New	Old	New	Old
Europe	497	482	530	505	549	538	635	635
N.America	555	636	562	639	635	658	700	700
China	445	453	472	473	496	488	515	518
Iron ore price	59	66	58	65	68	72	75	75

Source: UBS estimates

## Global capacity needs to be reduced by about 124m tonnes

We estimate that the average supply-demand gap could reach 551m tonnes in 2015-17. In order for steelmakers to regain product pricing control, capacity utilization will likely need to reach 80%, which we estimate would require a 124mt reduction in global capacity.

**Figure 27: Around 124mt of capacity must be cut to achieve 80% utilization**



Source: UBS estimates

## Scenario analysis

Given the complexity of global steel markets, and especially their sensitivity to changes in macro conditions, we provide a risk-reward analysis of our global steel stock coverage universe under different scenarios. We change EBITDA per tonne by \$30/t in the up- and downside cases to demonstrate the effect on our earnings and price targets of different macro scenarios and utilisation rates.

**Figure 28: Upside and downside based on changes in the metal spread ( $\pm 30\$/t$ )**

Ticker	Region	Company name	EBITDA(US\$mn) FY2015			Target price(US\$)		
			Upside	Base case	Down side	Upside	Base case	Down side
5401.T	Japan	Nippon Steel&Sumitomo Metal*	7,800	6,460	5,100	4.6	3.6	2.6
ISPA.AS	Europe	ArcelorMittal	11,397	7,689	3,659	37.7	24.9	3.5
005490.KS	Korea	POSCO	7,952	6,759	5,565	585.4	382.6	172.4
5411.T	Japan	JFE Holdings	4,680	3,900	3,100	28.0	23.5	19.0
TKAG.DE	Europe	ThyssenKrupp	4,395	3,351	2,329	34.3	21.4	8.0
GGBR4.SA	Brazil	Gerdau	2,427	1,885	1,343	8.2	5.7	3.1
004020.KS	Korea	Hyundai Steel	3,157	2,698	2,240	113.4	69.6	30.4
NUE.N	US	Nucor Corp.	2,875	2,179	1,483	71.0	54.0	36.0
2002.TW	Taiwan	China Steel	2,429	2,128	1,828	1.2	0.9	0.6
5406.T	Japan	Kobe Steel	2,050	1,870	1,690	2.1	1.9	1.7
VOES.VL	Europe	Voestalpine	1,962	2,000	1,301	66.5	45.0	21.0
TX.N	Argentina	Ternium	1,787	1,500	1,213	44.7	27.0	9.3
CSNA3.SA	Brazil	CSN	952	811	670	2.4	1.9	1.4
SZGG.DE	Europe	Salzgitter	1,066	681	324	108.3	56.2	15.0
SSABa.ST	Europe	SSAB	822	672	456	7.0	4.9	0.6
BSL.AU	Australia	BlueScope	587	495	421	6.9	4.7	3.7

Source: UBS estimates

# Supply/demand trend by region

## Europe (Riek) – EU steel sector showing signs of improvement

We keep our positive stance on the European steel sector over the past two years. The Street turned negative on the EU steel sector at the end of 2014 as European market sentiment deteriorated and iron prices weakened. However, the market is overlooking three major factors, in our view:

1) EU steel demand remains robust, driven by a still growing auto market and a recovery in the construction sector.

2) Against the market perception that there has been no progress in closing excess capacity in Europe, we identified almost 6 million tonnes of capacity that has been shuttered for good, representing 29% of our previously estimated overcapacity volume of 19.5 million tonnes. As a result, the EU's steel utilisation rate will increase to 77% in 2015 from 74% in 2014, which should improve profitability.

3) Euro depreciation is more of an opportunity than a risk for European companies, in our view, as it should drive down imports to 12.5m tonnes from 18.5m tonnes in 2014. This should improve the utilisation rate by around 3ppt.

We continue to see a high likelihood that 14-20m tonnes of overcapacity could be eliminated over the next 2-4 years, which could double the sector's profitability over the same period. Sentiment is poor after years of disappointment, but we see this as an opportunity rather than a bad omen.

We still do not forecast significant margin expansion for the EU steel industry in 1H 2015. Steel prices in Europe are stable in euro but still under pressure in US dollar terms. In USD, HRC prices dropped by US\$65/t over the same period, while iron ore prices decreased only US\$17/t. We expect pressure on EU steel earnings this year, especially in 1H 2015. For the full year, we expect flat steel prices to stay the same as in 2014.

Imports are now less of threat to the European market, in our view. While EU steel imports in 2014 reached approximately 18.5 million tonnes, we expect euro depreciation to reduce them to around 12.5 million tonnes in 2015. Additionally, we see opportunities for higher steel exports from the euro area.

We see upside potential for our covered European steel stocks in the current market environment, especially after the recent share price correction. In our view, we have reached the bottom of the cycle. We think earnings multiples for the entire European steel space now look attractive. Our favoured stock picks are ArcelorMittal (Buy, PT\$14/€12), Voestalpine (Buy, PT €37), and Salzgitter (Buy, PT €36), while our least preferred stocks are ThyssenKrupp (Sell, PT €15) and SSAB (Sell, PT SKr35).

**The Street is bearish on Europe's steel sector, but we remain bullish because: (1) demand remains robust...**

**...(2) utilization rates should rise as production facilities are closed; and (3) terms of trade should improve on euro depreciation**

**Buy rating on ArcelorMittal, Voestalpine, and Salzgitter; Sell on ThyssenKrupp and SSAB**

## US (Murphy)

The demand growth picture for 2015 appears to remain intact, with construction, manufacturing and automotive seeming to be the healthiest markets.

We forecast 4% demand growth in non-residential construction in 2015, slightly below the 6% growth we saw in 2014. Private spending continues to lead, while public spending remains generally flat. The Architect's Billings Index (ABI) is a leading indicator that has been signalling expansion since May 2014. In the automotive market we forecast a 3% pickup in US light vehicle SAAR to 16.9m vehicles. We believe substitution of steel for aluminium (particularly in the Ford F-150) could result in fairly flat YoY steel volumes to the auto industry, though demand would still be healthy. One soft spot for steel will be energy-related steel demand, which has pulled back significantly. Our oil and gas team estimates a ~30% decline in E&P capex budgets. The US rig count has declined by ~30% since the oil selloff commenced in earnest. OCTG demand is very weak; this pullback is being exacerbated in the near term by destocking.

On the supply side, US steel mill capacity utilization ended the year at 70% but rose to 75-76% in the past few weeks as domestic supply pulled back in response to market conditions. Overshadowing the strong demand story are high foreign steel imports, which flooded the market and supply chain. Service centre inventories jumped 8% in December and seasonally adjusted inventories reached 60.4 days of shipping, one standard deviation above normal. Imports remain high and the pressure is being amplified by a strong USD. US steel producers noted that both spot and contract business is now under pressure and their business is being hurt, so there remains a possibility that trade cases will be filed this spring.

US producers responded to the rapid growth of imports by filing some trade cases in 2014, notably against OCTG and Russian HRC. However, no cases were filed on cold rolled and coated products, and the positive rulings have thus far had little effect on total import levels. We expect additional filings in 2015. Until then, only further deterioration in US steel prices, a rise in global steel prices, or a strong concerted surge in global demand could reduce the impact of imports.

US scrap pricing fell and took out cost support in February, and further price weakness is possible as a strong USD discourages scrap exports. We would expect a falling scrap price to benefit mini-mill margins but also potentially further reduce cost support.

Overall, the steel mills generally seemed upbeat on end demand and seemed to believe this weak market will be relatively short-lived. We continue to recommend lower-beta names that are leveraged to non-residential construction growth and have traditionally been able to generate profits in soft markets. We have Buy ratings on NUE and STLD.

## Brazil (Bokkenheuser)

2015 is set to be another challenging year for the LatAm steel sector. Headwinds include: 1) falling import and export prices; 2) domestic demand pressure; and 3) political uncertainty characterized by rising taxes and lack of investment.

We expect steel production growth of 0-2%, marginally better than apparent steel consumption in Brazil, while Mexico is likely to remain the only bright spot in the region.

**Demand is firm, particularly in construction and autos**

**Construction demand firm; auto-use demand flat alongside move to aluminium; demand to fall for energy-use steel products**

**Strong dollar and favourable supply-demand attracting exports; market prices soft**

**Protectionist moves to mitigate negative impact from imports, but no boost emerging yet**

**EAfs to benefit from ferrous scrap prices**

**Buy ratings on Nucor and Steel Dynamics**

**2015 likely to be tough year for South American steel sector due to lower market prices, weak domestic demand and lack of political transparency**

Import tariffs and taxes are likely to rise in Brazil as mills struggle with profitability, which is likely to put further pressure on already weak domestic consumption.

Moreover, ongoing iron ore price pressure will materially reduce sector earnings among the net exporters, though this will be partly offset by a weaker currency and lower rail and port tariffs.

Lastly, ongoing in-fighting among Brazilian steel mills over asset control could likely end up in prolonged court battles and weigh on sector valuations while increasing volatility.

In this environment, we prefer long steel over flat steel in Brazil, as we expect government and private investment in infrastructure to recover sooner than auto and household consumption. More specifically, we believe the government will eventually have to reignite economic growth through fixed asset investment, while consumers will hesitate to increase auto purchases until the economy shows sustainable signs of improvement.

**We favour long over flat product makers**

## China (Sun)

China's apparent steel consumption has fallen slightly YoY. This reflects substantial decreases in distributor inventories, but there are no signs of underlying demand fading.

**Real steel consumption likely to decline in 2015; steel demand to be flat yoy as restocking offsets a decline in apparent steel consumption; a fall of 0.6% likely in 2016**

We expect apparent steel demand to be flat YoY in 2015 because we expect modest restocking in 2015 after deep destocking in 2014. We forecast a small YoY decline in real domestic steel demand in 2015 due to weak property construction. Though we expect positive demand growth from infrastructure and manufacturing in 2015, this will not be enough to offset subdued property demand, in our view. We expect apparent steel demand to decline modestly by 0.4% YoY in 2016 and recover by 0.1% YoY in 2017.

In our supply-demand model, we revised up China's 2014 crude production by 2%, from the NBS's reported 822.7mt to 839.2mt, mainly considering that China's NBS tends to underreport production and revise it up later, eg, it revised up 2013 crude production by 4.7% from 779.04mt to 815.4mt when it reported 2014 crude production recently. We expect China's crude steel production to decline modestly by 0.5% to 835mt in 2015 as a result of weak domestic demand and a YoY decline in steel exports. We expect crude steel production to grow by 0.2%/0.5% to 836.6mt/840.8mt in 2016/17, mainly driven by slight growth in steel exports in 2016/17.

**Steel product exports reached record levels in 2014, but we envisage a slight decline in 2015**

China's steel exports increased by 50.4% YoY to 93.8mt in 2014, a historical high. We do not expect the strong momentum to continue, however, and we forecast China's steel exports will decline by 5% to 89mt in 2015 and recover by 4%/1% YoY to 92.5mt/93.4mt in 2016/17. We forecast a small steel export decline in 2015 due to: 1) front-loaded steel exports in December 2014; 2) the removal of the export tax rebate will have a big impact on China's steel exports in the short term, though we expect them to recover in later months as steel mills use other alloys to qualify for tax rebates; 3) increasing pressure from trade friction. The currency environment will be slightly positive for China's steel exports in 2015, but the impact will be limited, in our view.

**China's production facilities to peak in 2015 and decline from 2016**

We expect China's crude steel capacity to increase modestly in 2014/15 to 1109mt/1115mt from 1106mt at the end of 2013. We believe China's crude capacity will peak in 2015 and start to fall from 2016 given capacity closures and lower new fixed asset investment in the steel industry.

#### Delays in closing down capacity

We expect 16mt/14mt/8mt of new capacity additions in 2015-17, most of which has already been built, but its operation has been delayed due to the weak steel market.

We expect 10mt/15mt/20mt of capacity closure in 2015-17. We cut our total capacity closure assumption for 2013-17 to 65mt from the previous 73mt, 81% of the government's 80mt closure target. We are lowering our assumption mainly because the closure of outdated capacity has been slower than we previously expected, as both local governments and banks are trying to prevent these steel mills from going bankrupt in order to avoid unemployment and bad debts.

We prefer flat steel over long steel products due to better demand growth and limited new supply for flat products before Baosteel's Zhanjiang project goes into operation in Q415.

Baosteel is our most preferred name in the Chinese steel sector because of its leading position in the high-end auto sheet market, as well as long-term production and profit growth from the Zhanjiang project, though the depreciation charge may be high in the early years of its operation.

#### Most preferred: Baosteel

Maanshan is our least preferred name, as a higher share of its sales come from long products, which will be hit by weak property construction. We also think the current valuation of 0.56x P/B is rich given average forecast ROE of 3.0%.

#### Least preferred: Maanshan

**Figure 29: China steel supply-demand model**

Unit: mn tonne	2007	2008	2009	2010	2011	2012	2013	2014	2015E	2016E	2017E	2018E
<b>Crude steel</b>												
Crude steel capacity	610.3	644.3	718.0	800.3	863.3	959.9	1,106.2	1,108.8	1,114.8	1,113.8	1,101.8	1,109.8
% YoY	29.2%	5.6%	11.4%	11.5%	7.9%	11.2%	15.2%	0.2%	0.5%	-0.1%	-1.1%	0.7%
<b>Crude steel output</b>	<b>489.7</b>	<b>512.3</b>	<b>577.1</b>	<b>638.7</b>	<b>702.0</b>	<b>731.0</b>	<b>815.4</b>	<b>839.2</b>	<b>835.0</b>	<b>836.6</b>	<b>840.8</b>	<b>843.3</b>
% YoY	16.3%	4.6%	12.6%	10.7%	9.9%	4.1%	11.5%	2.9%	-0.5%	0.2%	0.5%	0.3%
Capacity utilization ratio	90.5%	81.7%	84.7%	84.1%	84.4%	80.2%	78.9%	75.8%	75.1%	75.1%	75.9%	76.3%
Imports - finished & semi steel	17.1	15.7	22.2	17.1	16.2	14.0	14.6	14.4	14.0	13.0	10.8	10.0
Exports - finished & semi steel	69.1	60.6	24.6	42.7	48.9	55.8	62.3	93.8	89.0	92.5	93.4	94.4
Net exports - finished & semi steel	52.0	44.8	2.5	25.6	32.7	41.8	47.7	79.4	75.0	79.5	82.6	84.4
<b>Apparent crude steel demand</b>	<b>435.5</b>	<b>465.6</b>	<b>574.5</b>	<b>612.1</b>	<b>667.9</b>	<b>687.5</b>	<b>765.6</b>	<b>756.5</b>	<b>756.8</b>	<b>753.8</b>	<b>754.7</b>	<b>755.5</b>
% YoY	12.7%	6.9%	23.4%	6.5%	9.1%	2.9%	11.4%	-1.2%	0.0%	-0.4%	0.1%	0.1%

Source: UBS estimates

**Figure 30: Changes in China steel supply-demand estimates**

Unit: mn tonnes	Current estimation				Previous estimation				Difference			
	2014E	2015E	2016E	2017E	2014E	2015E	2016E	2017E	2014E	2015E	2016E	2017E
<b>Crude steel</b>												
Crude steel capacity	1,108.8	1,114.8	1,113.8	1,101.8	1,025.1	1,023.1	1,016.1	1,004.1	83.7	91.7	97.7	97.7
% YoY	0.2%	0.5%	-0.1%	-1.1%	0.2%	-0.2%	-0.7%	-1.2%	0.0%	0.7%	0.6%	0.1%
Crude steel output	839.2	835.0	836.6	840.8	821.2	837.6	844.3	852.8	18.0	(2.7)	(7.7)	(11.9)
% YoY	2.9%	-0.5%	0.2%	0.5%	2.4%	2.0%	0.8%	1.0%	0.5%	-2.5%	-0.6%	-0.5%
Capacity utilization ratio	75.8%	75.1%	75.1%	75.9%	80.2%	81.8%	82.8%	84.4%	-4.4%	-6.7%	-7.7%	-8.5%
Imports - finished steel	14.4	14.0	13.0	10.8	14.8	15.2	15.7	14.1	(0.4)	(1.2)	(2.7)	(3.3)
Exports - finished steel	93.8	89.0	92.5	93.4	88.0	85.4	81.1	83.5	5.8	3.6	11.4	9.9
Net exports - finished steel	79.4	75.0	79.5	82.6	73.2	70.1	65.4	69.4	6.2	4.9	14.1	13.2
Apparent crude steel demand	756.5	756.8	753.8	754.7	744.9	764.6	776.2	780.5	11.5	(7.7)	(22.4)	(25.7)
% YoY	-1.2%	0.0%	-0.4%	0.1%	-1.0%	2.6%	1.5%	0.6%	-0.2%	-2.6%	-1.9%	-0.4%

Source: UBS estimates

## Japan (Yamaguchi) – Yen weakness and production discipline to support Japan steel prices

The earnings of Japanese BFs and EAFs are strong. Apart from margin expansion due to falling iron ore prices, BFs have benefited from other cost reductions. If one-offs such as negative inventory factors are excluded, actual recurring profit in 2014 is likely to increase by around 50%. EAFs have been hit by a rise in electricity rates; however, as the iron scrap price jumped significantly following the price of iron ore, the metal spread has expanded and profit is increasing. However, the growth of specialty steel EAFs' profits has remained modest due to weak sales of Japanese automobiles.

Steel supply and demand in Japan is not strong. Demand from the auto and residential construction markets has declined sharply since the consumption tax hike. Given healthy demand from shipbuilding and machinery sectors, overall demand is flat, though this is worse than the market expected. In addition, in export markets, given the impact of steel exports from China and South Korea, sales at Asian locations of Japanese automakers have been sluggish. Steel exports from Japan mainly consist of high-grade steel for overseas locations of Japanese manufacturing companies, which does not compete directly with Chinese steel products. However, if Chinese mills lower their sales prices, steel prices will be impacted. The HRC capacity expansion of POSCO, a steelmaker in South Korea that produces high-grade steel, is affecting the export market.

However, steel prices in Japan continue to decouple from global prices and remain high, though we expect them to decline modestly. Moreover, due to falling crude oil prices, we expect cost reductions, such as for electricity. Therefore, we expect better results from BFs and EAFs in 2015. In particular, BFs' results are likely to improve significantly due to a lower negative inventory impact from the bottoming out of the iron ore price.

Steel prices in Japan remain high for the following reasons: 1) Although supply-demand has stagnated, demand remains high enough that Japanese mills do not need to lower their sales prices to maintain utilization rates; 2) the inflow of cheap imports is limited due to yen weakness; 3) Chinese steel products do not meet the quality requirements of Japanese customers; and 4) steelmakers exercise good

**Profit trending up at Japan's steelmakers alongside lower raw material costs**

**Domestic demand weak, global prices worsening, Asian auto sales sluggish, so exports soft**

**Japan steel prices are decoupling from global prices and remain high, boosted by yen weakness and steelmakers' learning from the past**



production discipline. Both BF and EAFs are operating with an emphasis on price to maximize margins.

Given the emphasis on price, UBS has revised down its outlook for crude steel production and export volumes in 2015. Although we have cut our export price outlook in line with falling raw material costs, we still expect domestic steel prices to remain high. We note that the cost competitiveness of Japanese BF has recovered to a level above that of tier-1 BF in Asia, and there is little concern over share loss.

As supply-demand is currently easing, steel stocks do not look attractive, but we expect them to become more so in April-June, when inventory adjustment is likely to take place.

**Inventory adjustment to happen in April-June; investing in BF likely to become more attractive**

## South Korea (Son)

Crude steel production rose 6.1% YoY to an annualized 71mt during September-November 2014 vs. 8.4% YoY YTD as the base effect started to fade. BF was the key driver of the increased production, up 18.3% YoY to 11.9mt for the period. EAF production fell 12.2% YoY to 5.8mt due to increased import competition. We expect 2014 crude steel production to be 71.2mt, up 7.8% YoY.

**Crude steel output and exports firm; imports of Chinese products rising, so output cuts by competing EAFs**

Korea's steel exports rose 7.9% YoY to 8.4mt in 4Q14, slower than the growth rate for full-year 2014 of 10.5% YoY to 32.3mt. This is due to the low base effect from 3Q13. Exports to the US, India and Europe showed the strongest growth in 2014, while exports to the Middle East continued to languish due to competition from both domestic and foreign producers.

Imports to Korea shot up 16.1% YoY to 5.7mt in 4Q14, in line with full-year growth of 16.4% to 22.7mt for 2014. Imports from China remained strong, up 35% YoY in 2014, while imports from Japan fell 5% YoY given better demand there on the back of Abenomics.

Apparent steel demand was up a surprising 10% YoY in 11M14, partially due to rising inventory. Even after adjusting for producers' inventory, steel demand was up 8.4% YoY. We believe this was largely driven by construction and auto.

The retail HRC price fell 3% QoQ to Won630k/t in 4Q14, while the rebar price plunged 8% QoQ to Won560k/t given import competition. H-beam prices were more resilient, down only 3% QoQ.

We cut our crude steel forecast by 3-5% to factor in the shutdown of Dongbu Steel's EAF mill in December 2014. We now assume crude steel production of 71.3mt (0.1% YoY) in 2015. We lower our net export forecast by 20% in 2015 and 14% in 2016, as we anticipate steel imports will remain high despite the removal of the boron steel rebate. This implies apparent steel demand will rise a mere 0.6% YoY in 2015, as we expect inventory destocking to meet some of the end demand. We believe apparent steel consumption will fall 0.2% in 2016.

**Reducing crude steel production forecast to factor in EAF stoppage at Dongbu**

We prefer POSCO and reiterate it as a Key Call. We believe the disappointing 4Q14 results offer a further buying opportunity given the historically low valuation. We also reiterate our Buy rating on Hyundai Steel given rising profits, deleveraging and attractive valuations.

**POSCO our Key Call**

**Figure 31: Supply and demand balance in Korea**

	2006	2007	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E	2017E	2018E
Crude steel production	48	48	52	54	49	58	68	69	66	71	71	71	72
Crude steel apparent consumption	52	56	60	54	49	52	59	59	56	62	61	60	72
Capacity	56	57	60	64	76	79	80	88	88	86	86	86	86
Utilization rate	85%	85%	86%	84%	64%	74%	86%	78%	75%	82%	82%	83%	83%

Source: CRU, WSA, UBS estimates

## Taiwan (Son)

Crude steel production rose a sharp 12.5% YoY to an annualized 24.2mt during September-November 2014 vs. 3.0% YoY YTD given the low base due to the CSC blast furnace revamping in September 2013-February 2014. BF crude steel production rose 27.0% YoY during the same period (14.7mt annualized), while EAF production fell 4.3% YoY to an annualized 9.6mt. We expect 2014 crude steel production to be 23.2mt, up 3.8% YoY.

Taiwan's steel exports fell 0.7% YoY to 3.3mt in 4Q14, slower than the full-year growth of 3.1% YoY to 13.7mt in 2014. This is due to the low base effect from 1H13. Imports to Taiwan shot up 32.9% YoY to 2.6mt in 4Q14, well above the full-year growth of 13.8% to 9.1mt for 2014. We believe a surge in imports from China was the reason for the sharp rise in imports in 4Q14.

Apparent steel demand was healthy, up 5.2% YoY to 52.9mt in 11M14 despite falling inventory, suggesting solid end demand. We believe healthy finished product exports and strong auto production are the key drivers of steel demand in Taiwan, as construction demand has been stable.

China Steel (CSC) cut its steel price for three consecutive periods given falling input costs and import pressure, with the HRC price at US\$542/t in March, down 13.4% YoY and 3.5% QoQ. However, CSC has said falling costs mean their steel spread will not decrease.

We raise our crude steel forecast by 3-4% to factor in increased production by CSC in 2015. We now assume crude steel production of 23.7mt (+2.5%YoY) in 2015. We lower our net export forecast by 13% in 2015 and 18% in 2016, as we cut our export assumption while anticipating steel imports from China will remain high despite the removal of the boron steel rebate. This implies apparent steel demand will fall by 1.0% YoY in 2015 but recover 2.2% in 2016.

Despite higher than expected earnings, we affirm our Neutral rating on China Steel given its unattractive valuation.

**Imports from China rose, but production increased on the back of firm domestic demand**

**Production to rise**

**Neutral rating due to unattractive valuation**

## Australia (Lazar) – volume-led recovery

The Australian steel market produces c4.6mtpa of raw steel. It is dominated by two companies: BlueScope, which specialises in flat steel and produces c2.6mtpa, and Arrium, which specialises in long steel products and produces c2.0mtpa.

Flat steel demand in Australia accounts for c1.9mtpa of BlueScope's 2.6mtpa production capacity. Of this, around 30%, or 0.6mt, is value-added products such as the coated market, where BlueScope prices at a premium. Surplus product is exported to Asia at export parity prices linked to regional HRC. Domestic demand drivers include construction, which accounts for c65% of local volumes, with the

**No major margin growth likely, but sector profit to improve on gradual domestic volume recovery driven largely by improvement in residential construction activity**

remainder made up of the agriculture, mining, engineering and auto end markets. BlueScope is vertically integrated and also controls a significant share of Australian distribution, particularly in the downstream roll-formed segments.

The long product market is largely driven by non-residential construction demand, targeting multi-dwelling projects, ie, apartments and condominium construction, as well as infrastructure projects.

We still do not forecast significant margin expansion but expect a gradual volume recovery to drive an improvement in sector returns over the next several periods, driven by residential and non-residential construction activity. Recent macroeconomic residential indicators have been positive, led by building approvals and an increase in detached housing, but they are partially offset by a weaker rebound in domestic volumes for flat steel products. The trend in the recovery of residential approvals has been broad-based, boding well for BlueScope's higher exposure outside urban areas. On the other hand, weak growth in alterations and additions and continued declines in non-residential approval and spend will impact BlueScope's dispatches in these segments, partially offsetting growth in the residential segments. This weakness is particularly apparent in the domestic long product markets, which are more leveraged to construction and capex-related spends. However, we see that the strong pipeline of announced infrastructure spend (New South Wales, Victoria) will still drive demand for long products, albeit later in the decade.

Recent falls in global steel prices have compressed spreads for the regional steelmakers and have largely offset potential earnings uplift provided by the modest volume and mix improvements and lower A\$/US\$. We see BlueScope as best positioned to leverage any increase in global steel prices given its restructuring initiatives undertaken over the last several years.

The lower A\$ should also act as a tailwind, indirectly improving local manufacturing competitiveness against regional imports. This is already evident, with imports playing a major role due to the strength of the A\$ over the past two years. However, imports appear to be slowing following c20% depreciation of the A\$/US\$ from 105c to now 78c. Nevertheless, we expect both imports and exports to slow as currency erodes the competitiveness of imported products and domestic demand recovers.

Additionally, the Australian government has enacted protectionist or anti-dumping measures, whereby duties are imposed on steel imports, largely from East Asia (China, Korea, Japan, Vietnam) to make domestic steel production competitive. This appears to have had a moderate impact to date.

Overall, we prefer BlueScope as our key pick in Australia given its leverage to a cyclical volume recovery, albeit at a lower rate than previously estimated, which should translate into a better margin as more product is placed domestically. BlueScope will also benefit from the integration of recent acquisitions in the downstream businesses as well as from the recovery in North America, where it has exposure to non-residential construction. The company's balance sheet remains in a comfortable position, with very low gearing through FY15, and it has recently resumed dividend payments.

**Residential improvement partially offset by weak non-residential; flat steel volume to grow only modestly, long steel to remain challenged**

**Fall in global steel spreads impacting earnings and offsetting mix and volume benefits**

**Tailwind from cheaper Australian dollar; positive vs. imports**

**Moves to lift import duties and protect domestic steelmakers**

**BlueScope our key pick**

## Russia/CIS (Riek) – Steel demand increasingly under pressure

Russian flat steel demand is cooling down, in our view. While the new gas pipeline to China is helping plate producers, particularly Severstal and MMK, to utilise their assets fully, the construction industry is suffering. We believe the main reason is rouble depreciation, but it is also due to the political and economic pressure on Russia. In Ukraine, the ongoing conflict is lowering steel demand and production at the same time. HRC prices in Russia have fallen by \$95/t to \$356/t since November and the Black Sea HRC quotation fell by \$60/t over the same period. Rebar prices in Russia are trading at \$355/t and are down \$93/t, or 26%, since November. The main reason behind the drop in steel prices is the depreciation of the rouble, in our view, which dropped by c60% over the same period.

Russian steel mills are trying to mitigate the effect of decreasing domestic steel consumption by increasing exports. However, we do not expect flooding of the international markets given relatively high logistical costs. Additionally, on our analysis, higher Russian steel exports are almost entirely offset by the drop in Ukrainian steel exports, as the damage to Ukrainian steel assets from the Russia-Ukraine conflict more than offset the steel consumption decline.

Our stock picks: In our Russian steel coverage, we prefer MMK (Buy, PT \$4/GDR) over Severstal (Neutral, PT \$9.7). MMK trades on 2015 estimates at 2.2x P/FCF and 2.7x EV/EBITDA vs. Russian peers at 4-5x. MMK has very little exposure to iron ore compared to its competitors Severstal and NLMK. Consequently, the fall in iron ore prices should benefit MMK most amongst its peers.

**Demand fading on rouble depreciation, political issues, and geopolitical risk**

**Russian steel mills seeking to compensate for lower domestic steel consumption through exports, but no flooding of international markets is likely given relatively high logistical costs**

**We favour MMK**

## Near-term demand outlook

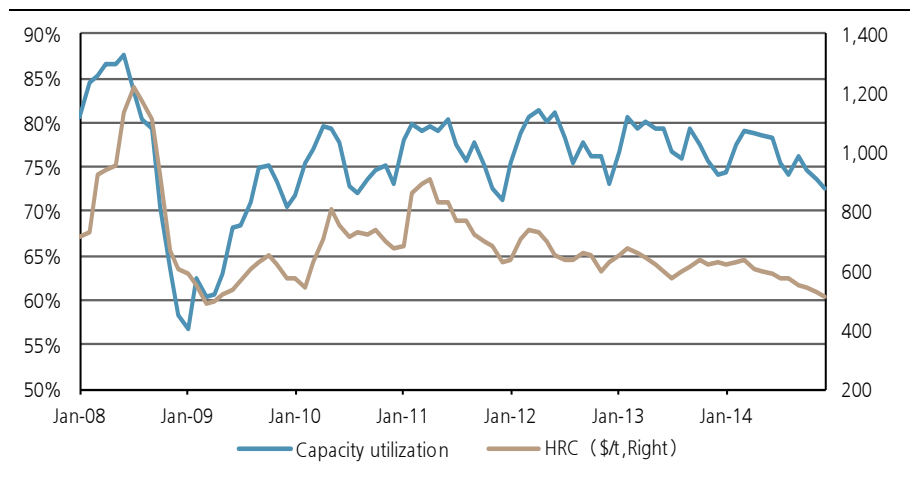
In 2015, at least in H1, we expect a phase of adjustment in inventories for the global steel market due to excessive exports by China. Partly reflecting the impact of Russian products, the downtrend in global steel prices is accelerating and metal spreads are worsening.

Steel product prices could temporarily rebound in early spring. Moves to lower production in response to worsening profitability can be seen in China, the US, and Japan. However, as long as excess capacity remains, any price recovery is likely to be muted.

The trend in the Russian rouble is also important, as the country's sales at cheap prices stem from currency weakness.

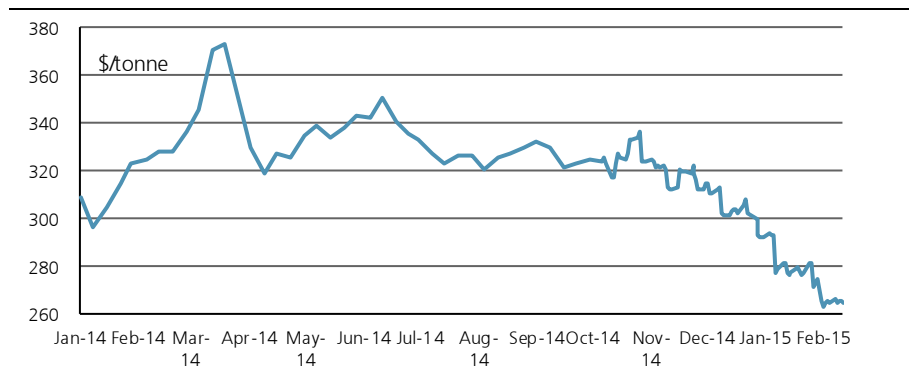
**Inventory adjustment likely in H1 2015**

**Figure 32: Global crude steel capacity utilisation ratio and HRC price**



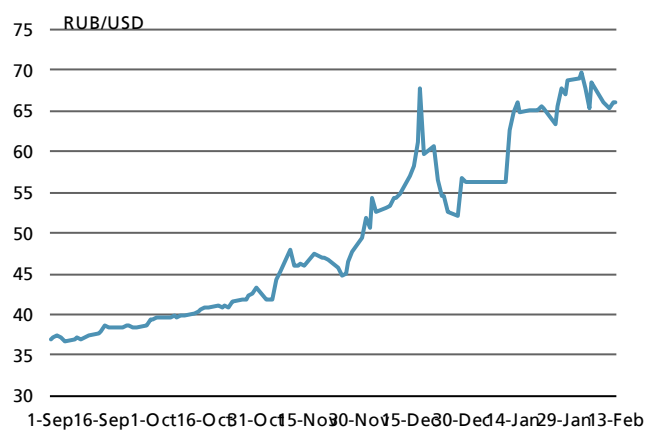
Source: WSA, CRU, UBS

**Figure 33: HRC metal spread**



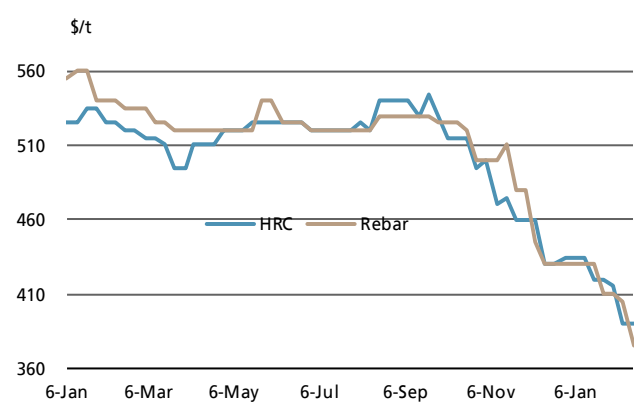
Source: CRU, Platts, UBS

**Figure 34: FX rate: Russian RUB vs. US\$**



Source: Datastream

**Figure 35: Export price of former Soviet Union**



Source: Metal Bulletin

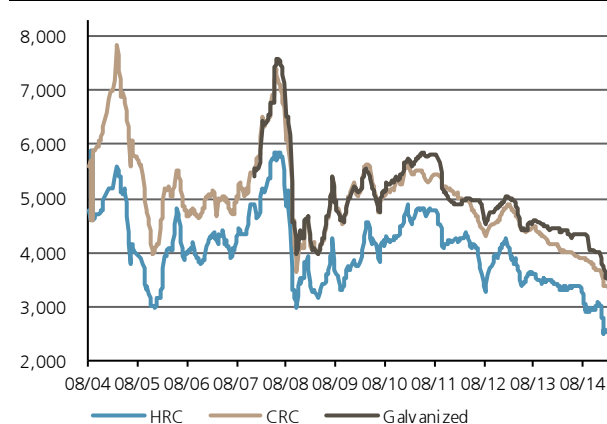
## Steel product price and inventory trends

Steel product prices show some correlation at an international level, but the near-term trend for individual regions differs depending on supply-demand and forex. In Russia, domestic prices are trending up, reflecting substantial currency weakness, but export prices have declined notably. In China, domestic prices and export prices are falling. In Brazil, both export prices and domestic prices are soft. Alongside currency weakness, demand is relatively strong in Europe and Japan, and steel product prices are showing resilience to the downside. Meanwhile, in the US, dollar appreciation and relatively favourable demand have seen import pressure rise and prices weaken.

Steel distributor inventories are low in China but high in South Korea, Brazil, Japan, and the US.

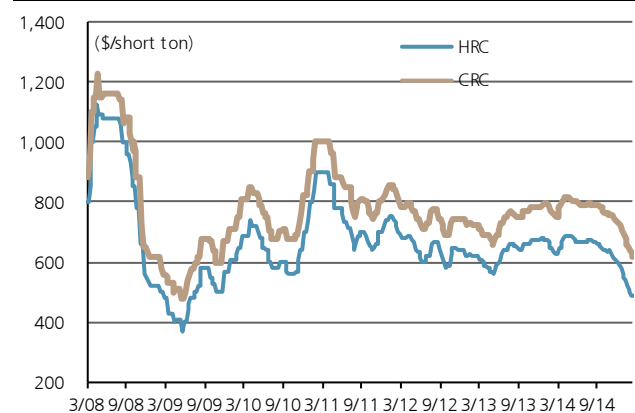
**Stark differences depending on forex and demand levels**

**Figure 36: China: Steel sheet prices**



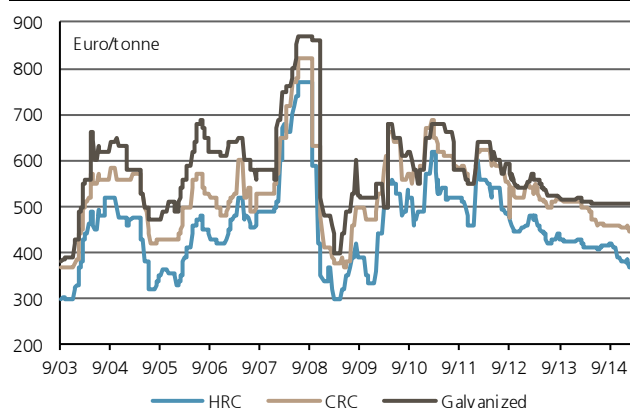
Source: Metal Bulletin

**Figure 37: USA: Steel sheet prices**



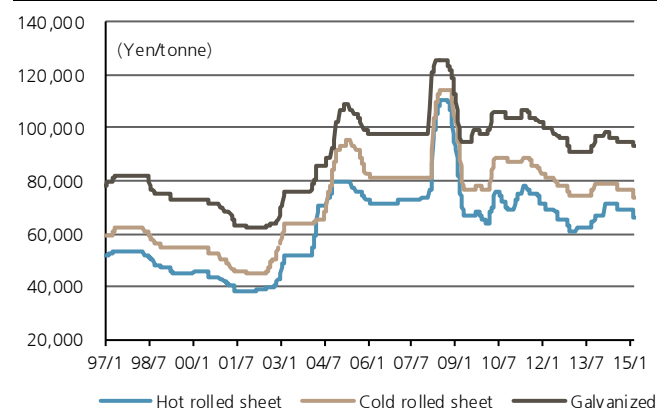
Source: Metal Bulletin

**Figure 38: EU: Steel sheet prices**



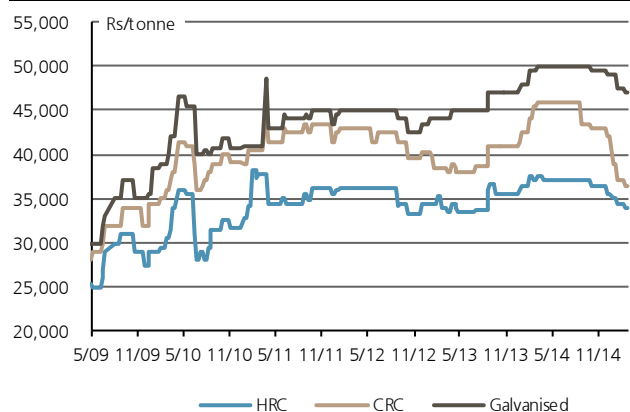
Source: Metal Bulletin

**Figure 39: Japan: Steel sheet prices**



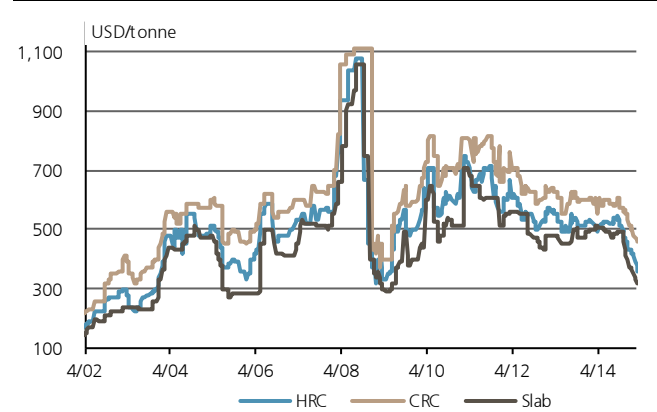
Source: Nikkei

**Figure 40: India: Steel sheet prices**



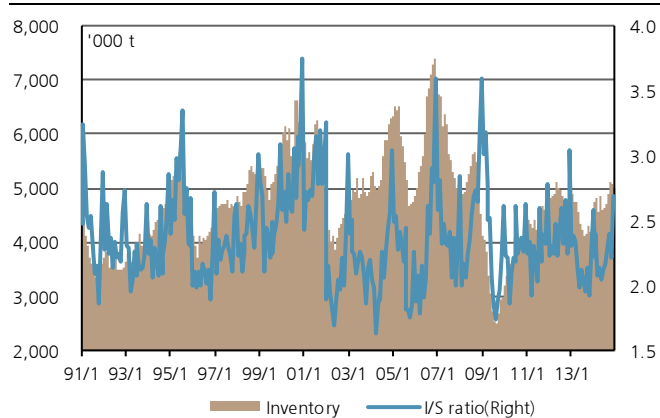
Source: Metal Bulletin

**Figure 41: CIS: Steel sheet prices**



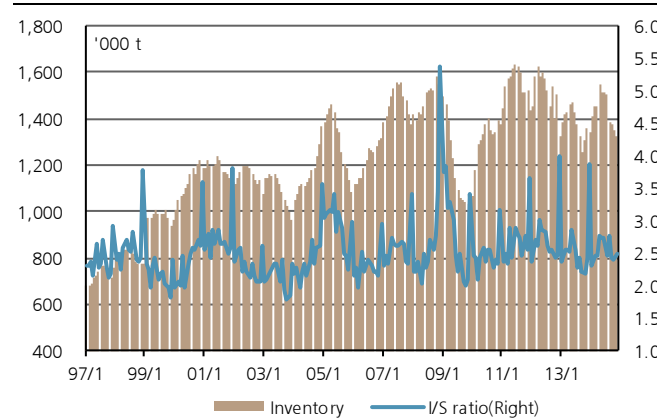
Source: Metal Bulletin

**Figure 42: USA: Steel sheet inventory and I/S ratio**



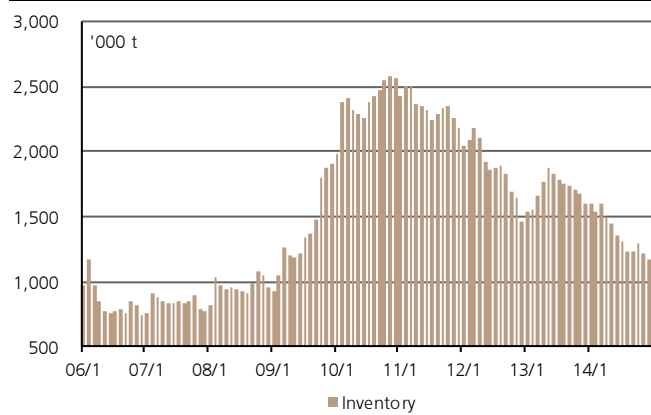
Source: CRU

**Figure 43: Germany: Steel sheet inventory and I/S ratio**



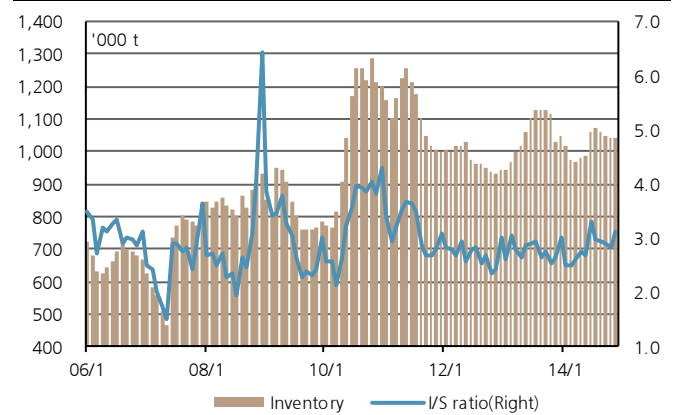
Source: CRU

**Figure 44: China: Steel sheet inventory**



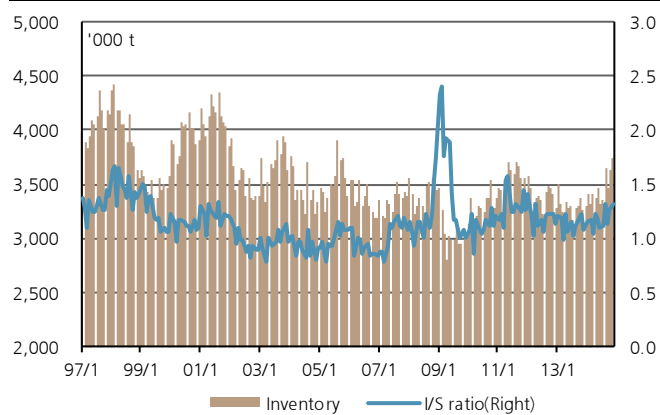
Source: CRU

**Figure 45: Brazil: Steel sheet inventory and I/S ratio**



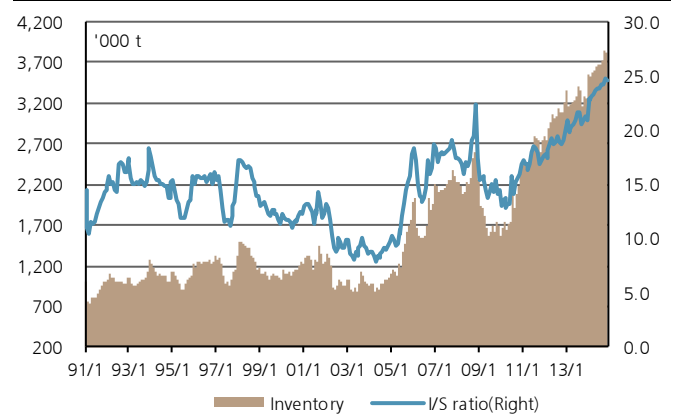
Source: CRU

**Figure 46: Japan: Steel sheet inventory and I/S ratio**



Source: CRU

**Figure 47: South Korea: Steel sheet inventory and I/S ratio**



Source: CRU



## Global crude steel production outlook

Figure 48: Global crude steel production

Mt	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
EU (27)	207	210	198	139	173	177	169	166	168	175	176	177	181
y/y (%)	5.8%	1.3%	-5.6%	-29.9%	24.5%	2.6%	-4.5%	-2.0%	1.5%	3.8%	0.7%	0.5%	2.3%
Other Europe	28	31	32	29	33	38	38	40	33	35	37	38	39
y/y (%)	12.9%	8.5%	3.8%	-9.6%	15.2%	14.6%	-0.1%	4.8%	-8.3%	5.0%	5.0%	3.0%	3.0%
Russia/CIS	120	124	114	98	108	114	111	108	105	103	104	106	106
y/y (%)	5.9%	3.6%	-7.9%	-14.7%	11.2%	4.7%	-2.0%	-2.7%	-2.9%	-1.5%	0.4%	1.9%	0.0%
North America	132	133	124	83	112	119	122	119	121	123	132	133	134
y/y (%)	3.3%	0.6%	-6.1%	-33.0%	34.0%	6.4%	2.5%	-2.5%	1.8%	1.9%	7.4%	0.6%	0.7%
South America	45	48	47	38	44	49	47	46	45	47	50	52	54
y/y (%)	0.0%	6.5%	-1.8%	-20.2%	15.9%	12.6%	-4.8%	-2.3%	-0.9%	3.3%	6.5%	4.8%	3.6%
China	421	490	512	577	639	702	731	822	839	835	837	841	843
y/y (%)	18.3%	16.3%	4.6%	12.6%	10.7%	9.9%	4.1%	12.4%	2.1%	-0.5%	0.2%	0.5%	0.3%
India	49	53	58	63	68	72	78	81	83	86	91	98	106
y/y (%)	8.0%	7.3%	8.9%	8.7%	8.7%	5.7%	7.4%	4.4%	2.9%	3.5%	5.0%	8.0%	8.0%
Japan	116	120	119	88	110	108	107	111	111	110	112	112	112
y/y (%)	3.3%	3.4%	-1.2%	-26.3%	25.2%	-1.8%	-0.3%	3.1%	0.1%	-0.6%	1.5%	0.3%	0.3%
Asia (excl. CN, JP, IND)	89	95	95	84	101	113	110	109	117	117	119	122	124
y/y (%)	4.0%	7.8%	-0.2%	-11.8%	20.4%	11.6%	-2.4%	-0.9%	6.8%	0.4%	1.6%	3.0%	1.3%
RoW	43	44	43	41	45	45	46	48	51	51	53	54	54
y/y (%)	2.0%	3.9%	-2.6%	-6.0%	10.8%	1.1%	1.7%	1.3%	0.0%	1.5%	2.9%	1.8%	1.4%
World total	1,250	1,348	1,343	1,238	1,433	1,537	1,559	1,649	1,673	1,683	1,710	1,733	1,754
y/y (%)	8.9%	7.8%	-0.4%	-7.8%	15.7%	7.3%	1.4%	5.8%	1.5%	0.6%	1.6%	1.4%	1.2%
World ex China	829	858	831	661	794	835	828	827	834	848	873	892	911
y/y (%)	4.7%	3.5%	-3.2%	-20.4%	20.1%	5.2%	-0.8%	-0.1%	0.8%	1.6%	2.9%	2.2%	2.1%

Source: CRU, WSA, UBS estimates, \* Excluding China, India and Japan

## Global apparent crude steel consumption outlook

In estimating apparent consumption volume, we take into consideration production yields for processing crude steel into finished products at 10% in the steel product export/import data.

**Figure 49: Global apparent crude steel consumption outlook**

Mt	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
EU (27)	208	220	199	127	163	170	152	153	159	162	166	169	173
y/y (%)	14.5%	5.8%	-9.7%	-35.9%	28.1%	4.2%	-10.5%	0.9%	3.5%	1.9%	2.6%	1.8%	2.4%
Other Europe	34	41	29	24	29	33	33	39	33	35	36	37	39
y/y (%)	34.8%	18.8%	-28.5%	-18.7%	22.8%	12.6%	0.6%	18.6%	-16.2%	5.1%	5.1%	3.0%	3.0%
CIS/Russia	63	72	64	50	62	71	71	71	62	60	63	64	63
y/y (%)	9.6%	14.6%	-11.2%	-22.6%	24.2%	14.0%	0.1%	1.1%	-12.8%	-2.8%	4.2%	0.9%	-1.6%
North America	178	158	143	95	129	144	151	146	164	167	161	166	167
y/y (%)	14.1%	-11.3%	-9.3%	-33.3%	35.7%	11.5%	4.5%	-3.2%	12.1%	2.0%	-3.5%	3.1%	0.6%
South America	38	43	47	35	48	50	50	51	51	50	51	53	55
y/y (%)	12.3%	15.7%	7.5%	-25.9%	39.0%	3.5%	1.5%	0.8%	-0.4%	-1.6%	2.1%	4.7%	3.5%
China	386	436	466	575	612	668	687	772	756	757	754	755	755
y/y (%)	8.8%	12.7%	6.9%	23.4%	6.5%	9.1%	2.9%	12.3%	-2.0%	0.0%	-0.4%	0.1%	0.1%
India	48	54	57	66	72	72	79	78	82	86	91	98	106
y/y (%)	7.0%	12.5%	5.6%	14.7%	8.9%	1.4%	8.6%	-0.7%	5.1%	4.7%	6.1%	7.9%	7.9%
Japan	85	88	85	56	70	71	70	72	70	69	70	71	71
y/y (%)	0.4%	3.7%	-3.5%	-34.1%	24.5%	1.9%	-1.4%	2.8%	-3.4%	-1.1%	2.3%	0.4%	0.4%
Asia (excl. CN, JP, IND)	122	136	140	117	143	150	148	152	176	177	177	178	178
y/y (%)	-1.5%	11.5%	3.1%	-16.9%	22.9%	4.4%	-1.1%	2.8%	15.3%	0.6%	0.2%	0.7%	0.1%
RoW	78	86	96	94	95	95	101	100	120	122	140	142	147
y/y (%)	3.6%	11.0%	11.1%	-1.7%	0.7%	0.6%	6.0%	-1.2%	20.4%	1.1%	15.4%	1.1%	3.5%
World total	1,240	1,334	1,326	1,238	1,423	1,524	1,542	1,635	1,672	1,683	1,710	1,733	1,754
y/y (%)	9.0%	7.6%	-0.6%	-6.6%	15.0%	7.1%	1.2%	6.0%	2.2%	0.7%	1.6%	1.4%	1.2%
World ex China	854	899	860	663	811	856	855	863	916	926	956	979	999
y/y (%)	9.1%	5.3%	-4.3%	-22.9%	22.3%	5.5%	-0.1%	1.0%	6.1%	1.2%	3.2%	2.4%	2.1%

Source: CRU, WSA, UBS estimates, \* Excluding China, India and Japan

## Global crude steel production capacity and crude steel capacity utilization outlook

For Europe, North America, India, Japan, South Korea, Taiwan, and other East Asian nations, we have taken into account projects that appear highly feasible, in addition to those that have already been announced. We have not taken into consideration potential capacity reductions.

**Figure 50: Global crude steel capacity**

Mt	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
EU (27)	243	243	241	238	241	237	234	236	229	228	229	229	229
y/y (%)	-0.7%	0.1%	-0.6%	-1.3%	1.3%	-1.6%	-1.1%	0.8%	-3.3%	-0.1%	0.4%	0.0%	0.0%
Other Europe	36	40	43	46	51	54	55	56	56	56	56	56	56
y/y (%)	9.8%	12.2%	5.9%	7.7%	10.2%	5.4%	3.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
CIS/Russia	127	133	149	147	149	152	152	154	156	157	157	157	157
y/y (%)	2.3%	5.1%	11.7%	-1.1%	0.9%	2.2%	0.2%	1.2%	1.3%	0.6%	0.0%	0.0%	0.0%
North America	151	159	160	160	162	166	165	161	164	164	164	164	164
y/y (%)	4.5%	5.1%	0.4%	0.0%	1.2%	2.7%	-0.7%	-2.2%	1.8%	0.0%	0.0%	0.0%	0.0%
South America	52	57	59	59	61	64	65	66	73	79	80	80	80
y/y (%)	1.4%	9.0%	4.1%	-0.6%	4.2%	4.1%	1.9%	0.8%	10.7%	8.1%	1.3%	0.0%	0.0%
China	489	580	644	718	800	863	960	1,106	1,109	1,115	1,114	1,102	1,110
y/y (%)	15.3%	18.6%	11.1%	11.4%	11.5%	7.9%	11.2%	15.2%	0.2%	0.5%	-0.1%	-1.1%	0.7%
India	53	56	66	75	80	89	95	101	111	119	124	131	139
y/y (%)	19.1%	5.8%	18.3%	13.1%	7.1%	11.1%	6.1%	6.2%	10.7%	6.7%	4.2%	5.9%	6.1%
Japan	116	120	122	124	127	128	130	130	129	126	125	125	125
y/y (%)	0.0%	3.1%	1.7%	1.4%	2.4%	1.0%	1.3%	0.0%	-0.2%	-2.3%	-0.9%	0.0%	0.0%
Asia (excl. CN, JP, IND)	102	107	113	120	139	143	146	161	165	167	170	170	170
y/y (%)	4.6%	4.8%	5.7%	6.2%	15.8%	2.5%	2.2%	10.1%	2.4%	1.3%	2.1%	0.0%	0.0%
RoW	86	87	56	112	41	41	42	43	44	45	45	45	45
y/y (%)	16.6%	1.0%	-35.9%	100.3%	-63.7%	1.2%	1.2%	4.2%	2.4%	1.2%	0.0%	0.0%	0.0%
World total	1,456	1,583	1,654	1,799	1,851	1,937	2,044	2,214	2,236	2,256	2,264	2,259	2,275
y/y (%)	7.5%	8.7%	4.5%	8.8%	2.9%	4.6%	5.5%	8.3%	1.0%	0.9%	0.4%	-0.2%	0.7%
World ex China	967	1,003	1,010	1,081	1,051	1,074	1,084	1,107	1,127	1,141	1,150	1,157	1,165
y/y (%)	4.0%	3.7%	0.7%	7.1%	-2.8%	2.2%	0.9%	2.2%	1.8%	1.2%	0.8%	0.6%	0.7%

Source: CRU, WSA, UBS estimates, Excluding \*China, India and Japan

**Figure 51: Global steel capacity utilization**

Utilization Rates (%)	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
EU (27)	85%	86%	82%	58%	72%	75%	72%	70%	74%	77%	77%	77%	79%
Other Europe	78%	76%	74%	62%	65%	71%	69%	71%	60%	63%	66%	68%	70%
CIS/Russia	95%	93%	77%	66%	73%	75%	73%	70%	67%	66%	66%	68%	68%
North America	87%	83%	78%	52%	69%	72%	74%	74%	74%	75%	81%	81%	82%
South America	87%	85%	80%	64%	71%	77%	72%	70%	62%	60%	63%	66%	68%
China	86%	84%	80%	80%	80%	81%	76%	74%	76%	75%	75%	76%	76%
India	93%	95%	87%	84%	85%	81%	82%	80%	75%	73%	73%	74%	76%
Japan	100%	100%	97%	71%	86%	84%	83%	85%	85%	87%	89%	89%	90%
Asia (excl. CN, JP, IND)	87%	89%	84%	70%	73%	79%	75%	68%	71%	70%	70%	72%	73%
World total	86%	85%	81%	69%	77%	79%	76%	75%	75%	75%	76%	77%	77%
World ex China	86%	86%	82%	61%	76%	78%	76%	75%	74%	74%	76%	77%	78%

Source: CRU, WSA, UBS estimates, \* Excluding China, India and Japan

# Global steel price outlook

Figure 52: UBS global steel price table

US\$/ metric tonne	2009	2010	2011	2012	2013	Q1 '14	Q2 '14	Q3'14	Q4'14	2014	2015	2016	2017	2018	LT
<b>Europe</b>															
Flat Products															
HRC	569	688	771	666	628	630	596	566	527	580	497	530	549	569	635
CRC	630	799	905	782	749	758	733	694	646	708	596	636	659	683	755
HDG	688	834	929	806	778	791	773	729	674	742	639	678	700	725	805
Long Products															
Rebar	504	616	764	685	657	683	653	633	586	639	547	585	598	627	630
Wire Rod	502	624	780	680	644	661	637	621	577	624	540	576	590	618	625
Beams	732	807	923	799	802	820	786	769	709	771	663	708	725	760	725
<b>North America</b>															
Flat Products															
HRC	519	671	816	728	699	728	747	743	699	729	555	562	635	662	700
CRC	620	791	937	838	817	858	888	869	839	866	666	675	762	795	800
HDG	670	846	1,003	904	881	925	939	944	920	933	750	759	857	894	880
Long Products															
Rebar	591	658	838	794	721	726	719	717	730	723	624	568	670	707	650
Beams	778	811	948	893	838	860	876	860	898	882	745	619	718	757	780
<b>China</b>															
Flat Products															
HRC	466	548	636	549	511	476	471	454	418	455	431	445	472	496	515
<b>Japan</b>															
Flat Products															
HRC	552	655	752	672	600	590	580	560	560	570	490	490	510	520	530
CRC	723	815	895	827	750	750	740	720	710	730	690	690	710	720	730
HDG	864	899	1,021	980	890	880	870	850	840	860	790	790	810	820	830
Long Products															
Rebar	553	625	766	721	616	640	620	620	550	610	500	500	510	520	530
Beams	766	795	987	894	730	760	750	750	680	740	640	640	650	660	670
<b>Russia/CIS</b>															
Flat Products															
HRC	451	580	694	567	562	504	524	507	496	508	523	519	515	520	527
CRC	550	677	859	688	653	572	592	576	566	577	590	588	583	590	594
HDG	818	881	1,026	967	866	856	873	852	839	855	879	873	862	870	882
Long Products															
Rebar	410	576	694	637	618	503	523	501	496	508	523	519	515	520	527
Wire Rod	402	568	706	644	580	505	525	576	566	577	590	588	583	590	594
Beams	661	744	842	839	932	761	787	852	839	855	879	873	862	870	882
<b>India</b>															
Flat Products															
HRC	590	703	770	668	594	NA	NA	NA	NA	565	550	550	550		550
CRC	674	837	907	792	674	NA	NA	NA	NA	655	640	640	640		640
HDG	706	919	937	839	770	NA	NA	NA	NA	730	715	715	715		715
<b>Brazil (domestic)</b>															
Flat Products															
HRC	856	944	913	884	827	877	875	854	780	846	770	794	836	874	912
CRC	943	1,127	1,144	1,059	1,002	970	981	944	862	939	870	894	936	974	1,012
HDG	1,228	1,347	1,280	1134	1077	1,062	1,074	1,034	944	1,029	995	1,019	1,061	1,099	1,137

Source: CRU, UBS estimates

# Valuations

In the past two and a half years, global steel stocks have remained within a range band of +/-10%. Five weeks ago, they sank to the lower end of the range for the first time in six years, due to the financial market instability and commodity price declines. The share prices remained low last week. With supply remaining in excess, steel stock expectations are low, but share prices are fluctuating in line with movements in steel prices alongside the economic outlook and situation in China.

The steel stocks we cover are trading on a FY15E PER 17.8 X EV/EBITDA of 6.3X, P/Book of 1.0X and ROE 6.1%. PBR and EV/EBITDA are at the historical average.

Global oversupply and low-priced exports from China are affecting the global market negatively. If protectionist moves emerge and put a brake on China's exports, it should be good news for all markets except China, but if protectionism spreads to other regions, it could bring some issues.

By region, we are bullish on Europe, where there are moves to erase excess supply and where currency weakness is improving terms of trade. We are also bullish on the US. Import pressure is intense, but demand is firm and protectionist moves are supporting prices. Turning to Asia, our Key Call is POSCO, where spreads are widening and restructuring could make progress. Conversely, we have a bearish investment stance on South American and Chinese steel stocks. Chinese steel stocks in particular have risen on earlier bullish expectations and are now overvalued.

Share prices sank to the lower end of the range

Protectionist moves could be positive for importing countries

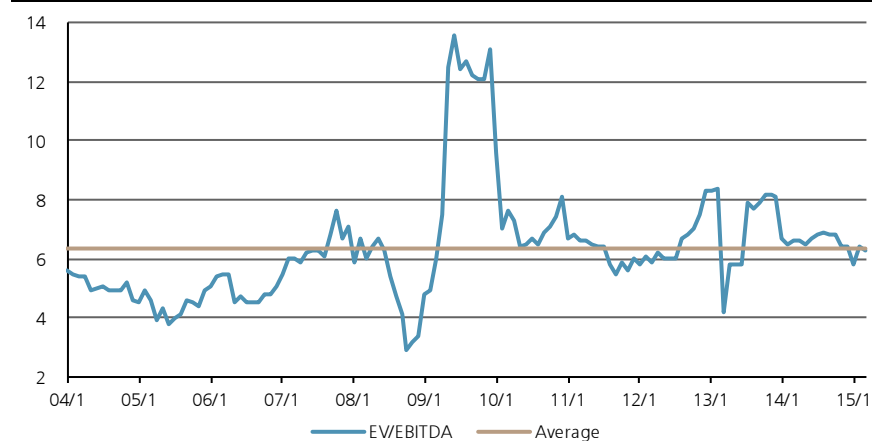
Bullish on Europe, the US; bearish on South America, China

**Figure 53: Price to Book (TKA,NUE, X, POSCO, Bao, NSSM, CSC)**



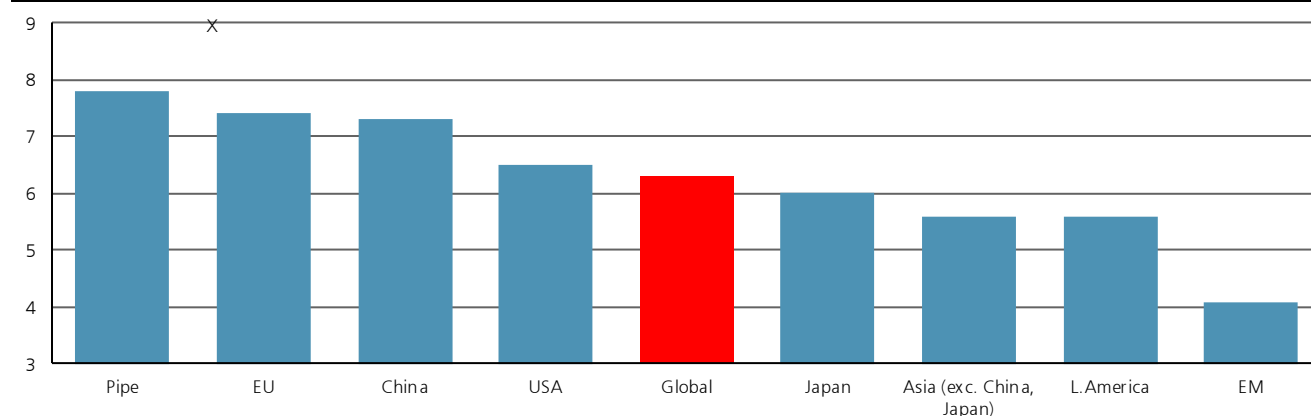
Source: UBS estimates, Datastream

**Figure 54: EV/EBITDA (UBS coverage companies average)**



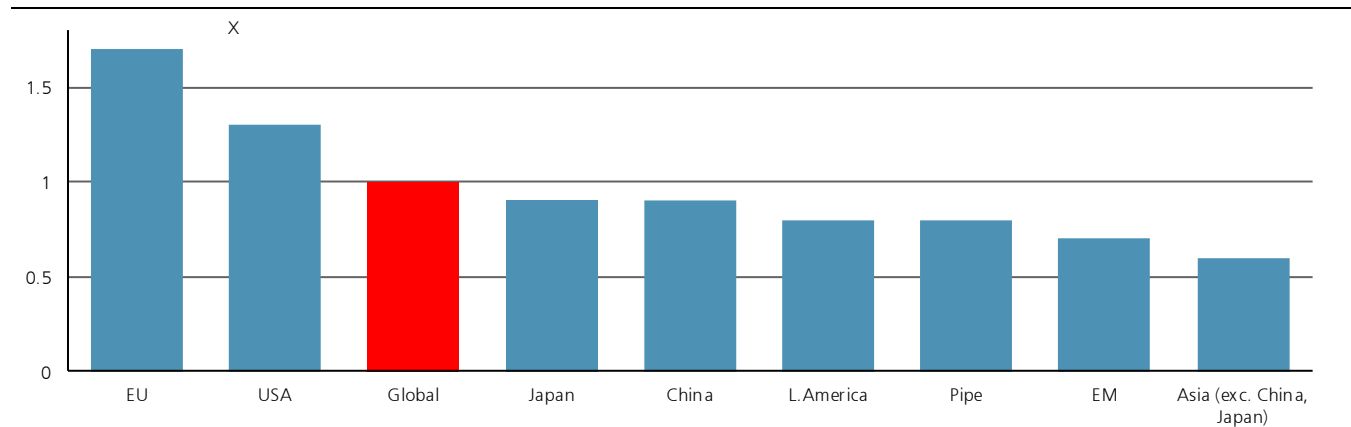
Source: UBS estimate, Datastream

**Figure 55: EV/EBITDA (Mar-9, 2015)**



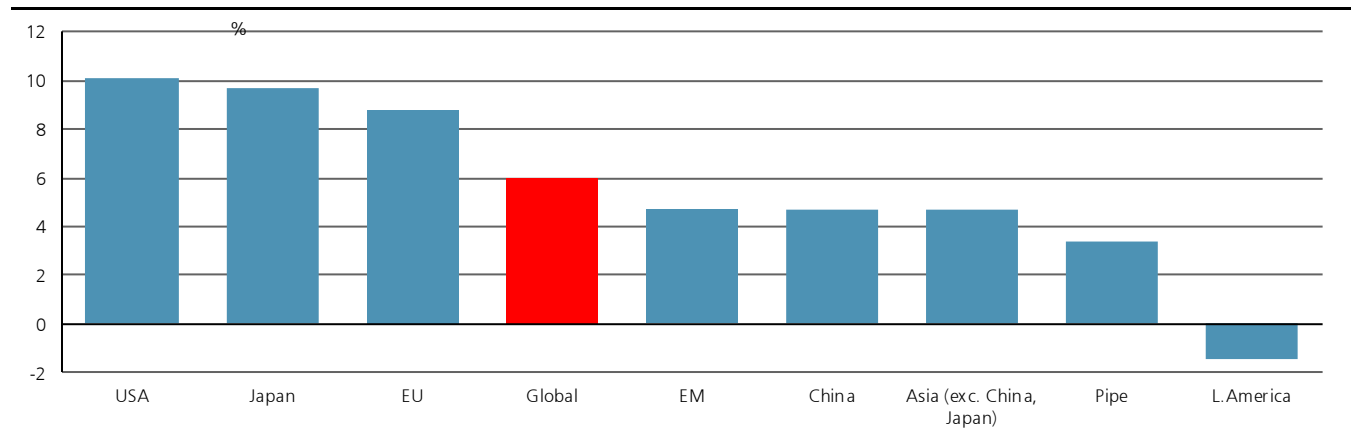
Source: UBS estimates

**Figure 56: P/Book (Mar-9, 2015)**



Source: UBS estimates

**Figure 57: ROE (Mar-9, 2015)**



Source: UBS estimates

Figure 58: Global Valuation(1)

																				EBITDA /		
																				Net	EBITDA	tonne
		PE (x)			EV/EBITDA (x)			P/Book (x)			ROE (%)			ROIC (%)			Dividend yield			Debt/Eq	Mgn (%)	(US\$/t)
Ticker	Company name	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2014E	2014E	2014E
Asia ex Japan, China																						
005490.KS	POSCO	18.7	18.8	8.4	5.8	4.6	4.1	0.5	0.5	0.5	3.6	2.9	6.3	4.0	4.3	5.0	2.9	2.9	2.9	57	10.0	153
004020.KS	Hyundai Steel	11.3	11.7	8.6	6.7	4.4	3.9	0.6	0.6	0.6	6.0	5.2	6.7	2.7	4.1	5.2	0.7	0.7	0.7	85	16.0	127
2002.TW	China Steel	24.3	18.7	17.4	12.0	10.6	9.9	1.3	1.3	1.3	5.6	7.1	7.4	3.4	4.0	4.6	2.7	3.5	3.7	94	17.4	220
BSL.AX	BlueScope Steel	27.5	20.8	12.7	7.5	7.1	5.9	0.6	0.6	0.6	1.7	2.6	3.1	0.7	5.1	6.2	0.0	1.2	1.6	6	7.2	82
ARI.AX	Arrium Limited	6.0	76.5	6.1	5.1	4.0	4.4	0.1	0.2	0.2	4.1	7.9	0.2	4.7	10.0	0.5	40.1	0.0	0.0	46	12.3	84
	Average	17.5	29.3	10.7	7.4	6.1	5.6	0.6	0.7	0.6	4.2	5.1	4.7	3.1	5.5	4.3	9.3	1.7	1.8	57.6	12.6	133
China																						
600019.SS	Baosteel	12.9	16.0	13.6	6.9	7.8	7.3	0.9	0.9	0.9	5.3	5.7	6.5	2.8	4.2	4.6	1.6	3.1	3.7	40	10.3	142
	Average	43.4	16.0	13.6	8.3	7.8	7.3	0.8	0.9	0.9	2.5	5.7	6.5	1.7	4.2	4.6	0.7	3.1	3.7	40.3	10.3	#N/A
Japan																						
5401.T	Nippon Steel&Sumitomo Metal	13.3	9.8	8.7	5.8	5.8	4.6	1.1	1.0	0.9	8.7	8.4	10.5	-2.8	3.8	5.8	1.5	2.2	2.8	57	11.5	138
5411.T	JFE Holdings	11.8	9.7	8.7	6.7	6.8	5.9	1.0	0.9	0.8	7.1	8.4	9.6	-0.5	3.8	4.8	1.4	2.1	2.8	86	9.1	137
5406.T	Kobe Steel	11.2	12.5	11.8	5.3	6.1	5.6	1.2	1.1	1.0	11.6	10.8	8.9	-0.3	6.6	7.4	1.7	1.7	2.2	77	10.8	308
5471.T	Daido Steel	21.2	14.7	13.0	8.5	8.1	6.8	1.0	1.0	0.9	5.5	4.9	6.7	3.1	3.2	4.5	1.2	1.2	1.3	39	8.5	312
5423.T	Tokyo Steel	10.6	8.7	8.1	8.4	6.5	5.9	1.5	1.3	1.2	3.8	14.9	16.1	-23.4	17.9	21.0	0.2	0.7	1.2	-16	6.7	76
5413.T	Nisshin Steel	10.4	11.3	9.8	8.1	8.0	7.5	0.8	0.8	0.7	8.5	7.6	6.6	-4.7	3.9	3.9	1.0	2.6	2.6	117	6.5	112
	Average	13.1	11.1	10.0	7.1	6.9	6.0	1.1	1.0	0.9	7.5	9.2	9.7	-4.8	6.5	7.9	1.2	1.7	2.1	60	8.9	181
Emerging Markets																						
NLMKq.L	Novolipetsk	52.9	12.6	13.9	8.7	5.6	5.4	0.8	0.8	0.7	1.8	6.1	5.4	3.9	6.5	6.3	0.7	2.4	2.2	18	19.6	126
SVSTq.L	Severstal	15.1	16.0	8.9	5.4	5.7	5.6	1.4	1.3	1.4	6.9	8.5	15.1	11.2	11.5	14.2	1.1	1.5	15.8	43	17.8	149
MAGNq.L	MMK	-4.2	52.6	11.9	5.0	3.8	3.1	0.4	0.4	0.4	-8.3	0.8	3.6	1.9	4.9	6.5	0.0	0.4	1.7	38	16.3	110
ACLJ.J	Mittal S.Africa	-59.9	-24.8	11.2	5.7	6.1	2.3	0.4	0.5	0.4	-1.0	-1.8	4.0	-1.0	-0.9	5.2	0.0	0.0	0.0	9	2.8	17
	Average	1.0	14.1	11.5	6.2	5.3	4.1	0.8	0.7	0.7	-0.2	3.4	7.0	4.0	5.5	8.0	0.4	1.1	4.9	27.1	14.2	100.5

Source: UBS estimates



Figure 59: Global Valuation(2)

																				EBITDA /		
																				Net	EBITDA	tonne
		PE (x)			EV/EBITDA (x)			P/Book (x)			ROE (%)			ROIC (%)			Dividend yield			Debt/Eq	Mgn (%)	(US\$/t)
Ticker	Company name	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2013	2014E	2015E	2014E	2014E	2014E
Europe																						
ISPA.AS	ArcelorMittal	-14.8	-35.8	126.6	6.5	6.6	6.2	0.4	0.5	0.5	-3.3	-1.6	0.4	3.2	5.0	4.7	2.0	2.0	3.0	35	9.2	77
TKAG.DE	ThyssenKrupp	-10.9	38.3	23.8	11.7	8.8	9.5	5.7	4.7	4.4	-26.9	11.3	19.1	7.0	13.0	12.7	0.0	0.0	0.4	181	6.0	199
KCOGn.DE	Klockner	-16.9	47.5	14.7	12.9	8.1	6.6	0.7	0.7	0.6	-3.9	1.4	4.4	0.5	4.3	7.0	0.0	0.0	2.0	29	3.0	38
VOES.VI	Voestalpine AG	11.7	12.0	9.8	5.7	6.9	7.2	1.4	1.3	1.2	11.4	11.2	11.3	9.5	8.3	7.3	3.8	4.1	3.2	91	12.4	242
	Average	-7.7	15.5	43.7	9.2	7.6	7.4	2.0	1.8	1.7	-5.6	5.6	8.8	5.0	7.6	7.9	1.4	1.5	2.2	84	7.7	139
North America																						
NUE.N	Nucor Corp.	32.3	22.4	19.0	11.7	9.6	8.2	2.0	1.9	1.8	6.1	9.5	9.9	6.7	8.8	10.1	3.1	3.1	3.1	43	9.9	122
STLD.O	Steel Dynamics Inc.	18.8	15.4	11.0	8.5	7.7	6.2	1.6	1.5	1.4	7.6	10.9	13.1	6.8	7.8	10.0	2.4	2.5	2.5	94	9.6	182
X.N	United States Steel Corp	-23.6	7.0	9.8	7.6	4.5	3.9	1.1	0.9	0.8	-4.0	18.4	8.7	2.6	14.6	9.6	0.9	0.9	0.9	56	8.9	65
AKS.N	AK Steel Holding Corp	-7.9	-230.6	3.7	6.9	8.7	4.6	-2.5	-1.5	-2.4	19.1	1.3	-49.6	-6.5	1.4	-8.9	0.0	0.0	0.0	-3,094	5.9	137
USRS	Reliance Steel & Aluminum	15.6	14.0	12.0	9.1	9.1	7.8	1.2	1.1	1.0	8.9	9.5	8.8	6.9	7.4	7.5	2.2	2.4	2.8	54	8.1	150
	Average	10.8	14.7	13.0	9.2	7.7	6.5	1.5	1.4	1.3	4.7	12.1	10.1	5.8	9.6	9.3	2.2	2.2	2.3	61.7	9.1	129.8
South America																						
CSNA3.SA	CSN ADR(ON)	26.1	-17.2	-8.6	3.8	2.9	4.8	0.9	1.2	1.6	6.4	-5.8	-16.1	8.9	10.4	7.3	22.6	6.6	2.9	372	26.4	274
GGBR4.SA	Gerdau ADR (PN)	17.4	14.4	21.5	9.2	7.0	6.8	0.6	0.6	0.6	5.5	4.1	2.7	5.2	4.6	4.9	2.3	2.2	2.3	43	10.9	98
USIM5.SA	Usiminas	-74.3	22.1	-14.8	9.4	5.4	8.1	0.3	0.3	0.3	-0.9	1.2	-1.8	3.7	2.4	-0.1	2.4	1.8	0.0	21	13.8	104
TX.N	Ternium	10.3	7.0	6.8	3.4	2.6	2.5	0.7	0.7	0.6	8.5	9.4	9.6	11.5	11.9	13.3	3.7	4.2	2.8	30	17.6	162
	Average	-5.1	6.6	1.2	6.4	4.5	5.6	0.6	0.7	0.8	4.9	2.2	-1.4	7.3	7.3	6.4	7.7	3.7	2.0	116	17.2	159
Pipe Tube																						
VLLP.PA	Vallourec	18.8	25.5	69.8	7.7	7.2	8.4	0.5	0.6	0.6	5.0	3.4	0.9	5.5	4.4	2.0	3.6	3.6	0.5	41	15.0	251
ITARTS	Tenaris	15.0	14.2	18.8	8.9	8.6	8.8	1.4	1.3	1.3	14.4	14.0	6.9	14.6	15.5	8.4	6.8	10.9	6.9	-9	26.3	70
RUTMK	TMK	13.1	-8.6	28.0	7.0	6.3	6.2	0.4	0.6	0.6	10.6	-13.3	2.3	9.5	10.5	7.7	6.7	0.8	0.9	233	13.0	137
	Average	15.6	10.4	38.9	7.9	7.4	7.8	0.8	0.8	0.8	10.0	1.4	3.4	9.9	10.1	6.0	5.7	5.1	2.7	88	18.1	153
	Global Average	11.1	14.7	17.8	7.7	6.7	6.3	1.0	1.0	1.0	3.5	5.6	6.1	4.0	7.1	6.8	3.6	2.5	2.7	66.9	12.2	#N/A

Source: UBS estimates

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## Statement of Risk

Steel supply-demand is heavily influenced by trends in global economic conditions and forex. We would expect supply-demand conditions for steel products to soften if the global economy grows more slowly than we forecast. In addition, sharp appreciation of the yen could worsen earnings at customer companies.

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<b>Buy</b>	FSR is > 6% above the MRA.	47%	37%
<b>Neutral</b>	FSR is between -6% and 6% of the MRA.	42%	32%
<b>Sell</b>	FSR is > 6% below the MRA.	11%	21%
Short-Term Rating	Definition	Coverage <sup>3</sup>	IB Services <sup>4</sup>
<b>Buy</b>	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%
<b>Sell</b>	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%

Source: UBS. Rating allocations are as of 31 December 2014.

1:Percentage of companies under coverage globally within the 12-month rating category. 2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

3:Percentage of companies under coverage globally within the Short-Term rating category. 4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

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Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
<b>AK Steel Holding Corp</b> <sup>16, 20</sup>	AKS.N	Neutral (CBE)	N/A	US\$4.11	06 Mar 2015
<b>Angang Steel</b>	0347.HK	Sell	N/A	HK\$5.82	09 Mar 2015
<b>ArcelorMittal</b> <sup>13, 16</sup>	ISPA.AS	Buy	N/A	€9.86	06 Mar 2015
<b>Baosteel Iron &amp; Steel</b> <sup>4, 5</sup>	600019.SS	Buy	N/A	Rmb6.38	09 Mar 2015
<b>BlueScope Steel</b>	BSL.AX	Buy	N/A	A\$4.52	09 Mar 2015
<b>China Steel</b>	2002.TW	Neutral	N/A	NT\$25.70	09 Mar 2015
<b>Companhia Siderurgica Nacional</b> <sup>5, 16</sup>	CSNA3.SA	Sell	N/A	R\$4.95	06 Mar 2015
<b>Gerdau</b> <sup>16</sup>	GGBR4.SA	Buy	N/A	R\$10.59	06 Mar 2015
<b>Hyundai Steel</b>	004020.KS	Buy	N/A	Won69,300	09 Mar 2015
<b>JFE Holdings</b> <sup>22</sup>	5411.T	Neutral	N/A	¥2,790.5	09 Mar 2015
<b>Kobe Steel</b>	5406.T	Neutral	N/A	¥229	09 Mar 2015
<b>Maanshan Iron &amp; Steel</b>	0323.HK	Neutral	N/A	HK\$2.13	09 Mar 2015
<b>Maanshan Iron &amp; Steel - A</b>	600808.SS	Sell	N/A	Rmb3.69	09 Mar 2015
<b>Magnitogorsk Iron and Steel</b> <sup>4, 5</sup>	MAGNq.L	Buy	N/A	US\$3.46	06 Mar 2015
<b>Nippon Steel&amp;Sumitomo Metal</b>	5401.T	Buy	N/A	¥321.4	09 Mar 2015
<b>Novolipetsk Steel</b>	NLMKq.L	Neutral	N/A	US\$13.58	06 Mar 2015
<b>Nucor Corp.</b> <sup>16, 18</sup>	NUE.N	Buy	N/A	US\$47.03	06 Mar 2015
<b>POSCO</b> <sup>4, 16</sup>	005490.KS	Buy	N/A	Won267,500	09 Mar 2015
<b>Reliance Steel &amp; Aluminum</b> <sup>16</sup>	RS.N	Neutral	N/A	US\$57.73	06 Mar 2015
<b>Salzgitter AG</b>	SZGG.DE	Buy	N/A	€26.92	06 Mar 2015
<b>Severstal</b> <sup>4</sup>	SVSTq.L	Neutral	N/A	US\$12.07	06 Mar 2015
<b>Steel Dynamics Inc.</b> <sup>16</sup>	STLD.O	Buy	N/A	US\$18.23	06 Mar 2015
<b>Swedish Steel AB</b> <sup>4</sup>	SSABa.ST	Sell	N/A	SKr46.82	06 Mar 2015
<b>Ternium SA</b> <sup>16</sup>	TX.N	Buy	N/A	US\$17.76	06 Mar 2015
<b>ThyssenKrupp</b>	TKAG.DE	Sell	N/A	€24.65	06 Mar 2015
<b>United States Steel Corp</b> <sup>6, 7, 13, 16</sup>	X.N	Neutral	N/A	US\$23.03	06 Mar 2015
<b>Voestalpine AG</b>	VOES.VI	Buy	N/A	€34.52	06 Mar 2015

Source: UBS. All prices as of local market close.

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