15 September 2016

HSBC Global Research

Global Commodities

A supply correction is underway

ECONOMICS/EQUITIES

Global

- After falling to low levels in early 2016, the prices of most commodities have climbed through the year to date
- Retrenchment of supply and a pullback in investment are gradually rebalancing some key commodity markets
- Further supply consolidation and solid demand growth are expected to drive modest price rises in coming quarters

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Past the trough

For the resources sector, consolidation remains the focus. After the heady days of the super-cycle upswing, when rising prices supported profitability almost irrespective of costs, the past couple of years have seen a clear focus on cost reduction. Investment plans have been significantly curtailed and inefficient operations are starting to be closed. This supply pullback, combined with modest growth in demand, is a key driver of the 25% lift in global commodity prices since early 2016.

Of course, the story varies across the types of commodities. For oil, OPEC's strategy to gain market share has squeezed out non-OPEC supply and investment. OPEC production has hit new record highs, while non-OPEC production has fallen. This has supported a modest rally in prices. Of course, the shale sector has become more nimble, with producers able to bring on new supply more quickly than conventional producers. Nonetheless, over time, we expect to see the oil price climb, as there has been a sharp cut-back in investment plans which should bite into medium-term supply.

For metals, supply has pulled back for zinc, aluminium, nickel, thermal and coking coal. Zinc and nickel supply has been cut by mine closures and falls in production, while China has put in place strict controls to cut coal production and has reduced aluminium production. There has also been a decline in high-cost Chinese supply of iron ore, although more low-cost supply is due to come to the market. The supply side pullback and solid growth in demand, particularly supported by Chinese infrastructure investment, should mean that most prices are past the trough.

For food, rising demand from Asia for higher-quality products, such as meat and sugar, has been the key theme. For sugar, prices have risen and underinvestment in capacity is also expected to lead to weak supply, lifting prices further in the medium term. By contrast, bumper crops have driven a significant fall in grain prices, particularly for wheat and corn. As a result, the prices of the 'finer foods' have outperformed grain prices, a medium-term trend which we expect to continue as rising Asian middle class incomes support demand.

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Are we past the price trough?

- Commodity prices fell to such low levels in early 2016 that they have motivated a pullback in supply and investment
- Combined with steady growth in demand, the supply pullback has lifted commodity prices, albeit only modestly
- Our central case suggests the supply pullback, combined with expected continued modest demand growth, should be sufficient to mean that commodity prices are likely to have passed the trough

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Lifting from the lows

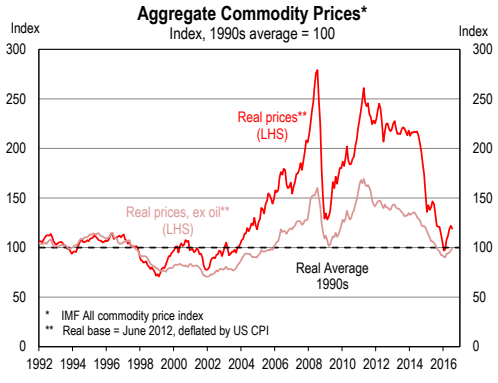
Commodity prices have fallen a long way since the heady days of the super-cycle upswing. The most recent peak for global commodity prices was in 2011, at levels that were 150% higher than their 1990s average level in inflation-adjusted terms (Chart 1.1).

By early 2016, the price of the global basket of traded commodities had fallen back to the low levels of the 1990s, after adjusting for inflation. The most rapid price falls were for energy products, led by oil prices, which declined by 70% over 18 months to early 2016. In contrast, metals prices declined more gradually, falling by 60% in the five years to early 2016 (Chart 1.2).

Supply developments help to explain much of the fall in prices from 2011 peak levels

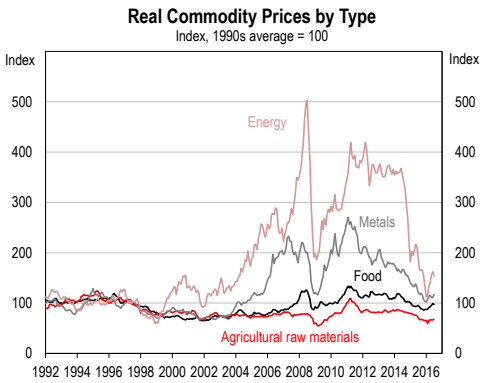
We think that supply developments explain much of the price fall and particularly the differing trends across types of commodities. Much of the ramp-up in the super-cycle upswing reflected the slow response of supply in the face of strong growth in demand, largely from China. Long lags between exploration, development, investment and eventual production from resources projects meant that supply took many years to catch up with demand. The typical lag in the supply response is 7 to 10 years for major mining projects.

1.1. Commodity prices have edged higher



Source: IMF, HSBC

1.2. Most commodity prices have risen



Source: IMF, HSBC

When supply finally started coming on-line, commodity prices peaked. The more gradual fall in metals prices than energy prices reflects metals supply progressively ramping up, while oil supply ramped up rapidly from mid-2014, largely due a shift from a price to an output target by the major OPEC producers, led by Saudi Arabia. By comparison, food and non-food agricultural product prices did not increase by much during the super-cycle upswing, partly because the supply side was able to respond more quickly to rising demand.

A pullback in supply is a key driver of the lift in commodity prices this year

We also see the supply side as a key driver of the lift in commodity prices that has occurred since the beginning of the year. Aggregate commodity prices have increased by 25% since their trough in January. In the context of recent history, the increase looks small, although the magnitude of the recent rise would have constituted a large part of the cyclical upswings in the more stable 1980s and 1990s.

The lift in commodity prices has been enough to offset falls in the latter half of 2015, meaning that aggregate commodity prices are now flat y-o-y (that is, the base effect has worked through).

Price rise has been quite broad-based

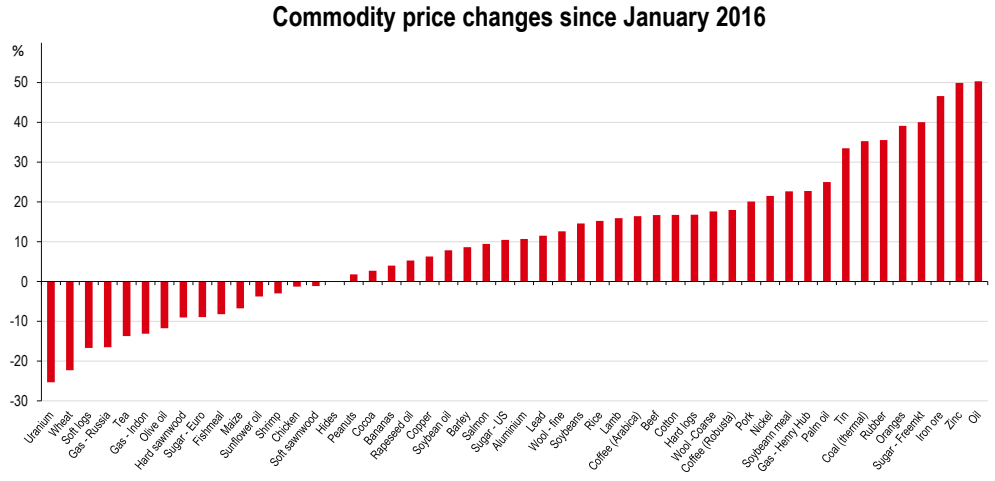
The rise in commodity prices since the beginning of 2016 has been quite broad-based. Of the 50 commodities that are covered in the IMF global commodity price index, two-thirds of them have shown price rises since the trough in early-2016 (Chart 1.3).

Around two-thirds of the commodities in the IMF index have had price rises this year

The largest price gain has been for oil, which carries the highest weight in the index (around 54%). Rising oil prices are also typically supportive of a lift in other commodity prices as oil is a key input into the cost of production of other materials. Across the commodity basket, all metals prices that are tracked in the index have risen, led by gains in zinc and iron ore prices. The performance of food products has been mixed, with strong demand for the higher quality 'finer foods' driving generally greater price increases than for the grains. A number of grain prices have also fallen due to a strong boost to supply from a bumper Northern hemisphere harvest.

Supply-side developments help to explain many of the differing trends across commodities. For example, zinc prices have increased sharply due to closure of a key mine in Australia. Onshore US gas prices have risen, due to a lift in demand, while a sharp boost to global supply and segmentation of global gas markets has weighed on Asian prices.

1.3. Most commodity prices have risen since the early-2016 trough



Source: IMF

Supply consolidation is underway

Given differing trends across the range of commodities, finding universal themes that explain the trends across commodities markets is difficult. However, across a range of commodities, there are signs that the fall in commodity prices which has occurred in recent years has seen a pullback in investment and production, which is helping to rebalance oversupplied markets.

In particular, the fall in prices has motivated resource producers to focus on cost reduction in order to maintain or restore profitability. In some cases, this has meant shutting down inefficient and unprofitable operations.

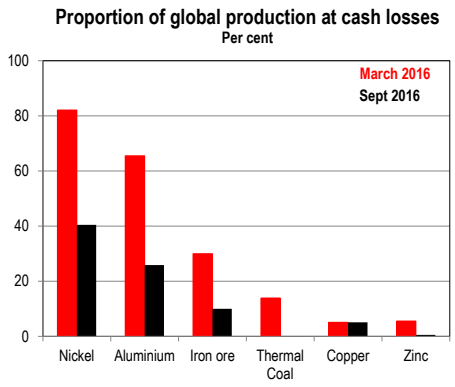
At the price low point, in early 2016, many operations were running at cash losses

At the low point for commodity prices, in early 2016, estimates suggested that a large proportion of mining operations across a range of commodities were operating at cash losses. The majority of nickel mines and aluminium producers were operating at cash losses while around one-third of iron ore production and around 15% of thermal coal mines were also unprofitable (Chart 1.4). A lift in metals prices and cost-cutting by producers has seen a reduction in resource projects that are operating at a loss.

A driver of the lift in prices for aluminium, zinc, nickel, thermal and coking coal has been a cut back in production. For zinc, this has involved the long-planned shutdown of a large mine in Australia in early 2016. Across all of these products, the pullback in supply has been partly occurring in China, where the production costs of these commodities are typically quite high, partly due to the low-grade of the materials (Chart 1.5). For coal, the Chinese authorities have put in place production controls, limiting the number of days coal miners work with the aim of reducing over-capacity and restoring profitability in the sector.

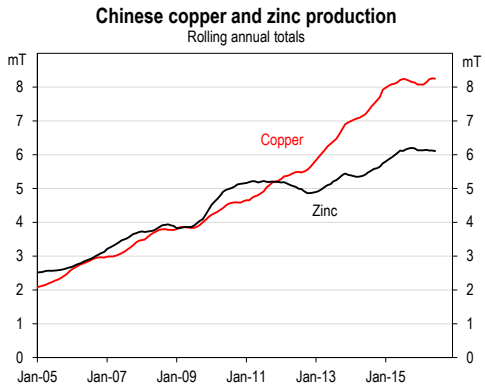
In the case of iron ore, Chinese domestic production has fallen by 13% since its peak in mid-2014 (Chart 1.6). China produces magnetite, which is a low-grade iron ore that requires significant and expensive processing before it can be used to produce steel, but also imports higher grade and lower cost haematite, mainly from Australia and Brazil. The cutback in iron ore supply has supported the globally traded price of higher grade iron ore. The retrenchment of iron ore supply is also a sign that reform is progressing in some areas in China. However, reform of the overall steel industry is still quite slow.

1.4. Higher prices reduce loss makers



Source: HSBC; RBA

1.5. China's production is levelling out



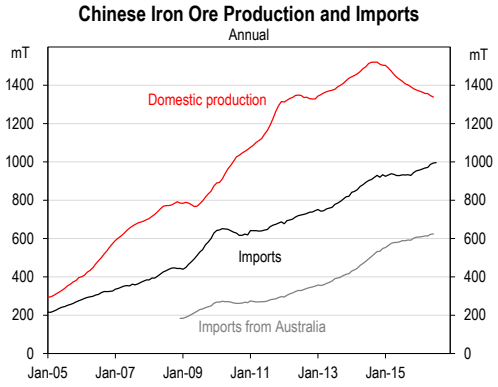
Source: CEIC

As more high-quality and low-cost iron ore comes to market over coming quarters, particularly from Australia, our metals team still expect that iron ore prices are likely to step back a bit from current levels, which we discuss further in Chapter 3, below.

A pullback in non-OPEC investment is rebalancing the oil market

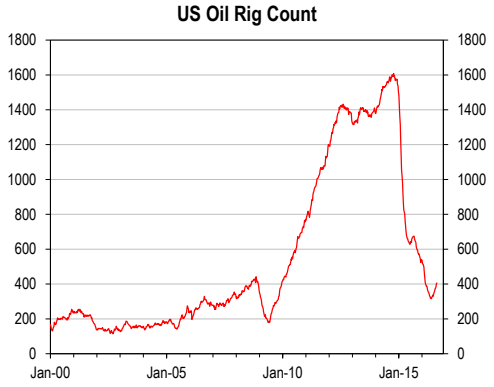
For oil, there has also been a significant cutback in higher cost supply, particularly in the US (Chart 1.7). This has reflected a significant boost to supply by OPEC countries, led by Saudi Arabia, as the OPEC producers have sought to gain market share. OPEC production has reached new record highs while non-OPEC production has been falling. This pullback in supply and investment that is helping to rebalance the global oil market and has lifted the oil price from a low point of below US30 a barrel in early 2016, to now be around US45 a barrel. Our oil and gas team see this as likely to mean that oil prices are past the trough, as they discuss further in Chapter 2, below.

1.6. China's iron ore production has fallen



Source: CEIC

1.7. US shale pullback has been significant



Source: Bloomberg

Global investment downswing is well entrenched

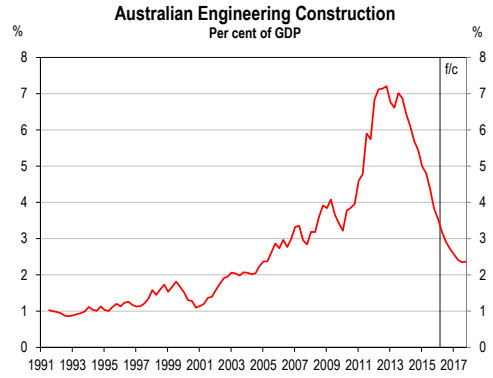
As we have argued above, a pullback in production appears to have been a driver of the recent lift in a range of key commodity prices. At the same time, the sharp fall in commodity prices over recent years has also driven a significant pullback in investment in resources projects. The fall in the US oil rig count and cancellation of other large oil projects is set to see non-OPEC oil supply fall this year and our oil and gas team are forecasting that non-OPEC oil supply will be flat out to 2020. It is this investment pullback that is set to correct the oil market over time.

Resources sector investment is set to stay weak for some time yet

There has also been a pullback in investment intentions in resource development projects, given the oversupply in the market and the cash losses that many higher cost mines are receiving. Mining investment in key commodity exporting countries, such as Australia, has been falling for a number of years and is set to decline a bit further yet, with no signs of a pick-up in the horizon (Chart 1.8).

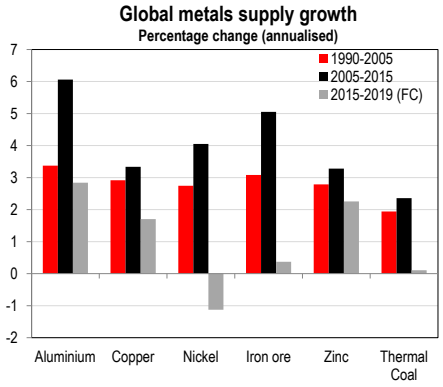
Summing up these investment and production trends, we expect there to be a significant slowdown in growth in supply of a range of key commodities over coming years (Chart 1.9). We expect these supply trends to continue, which should provide some support for commodity prices.

1.8. Investment is falling in key producers



Source: ABS; HSBC estimates

1.9. Supply growth set to remain weak



Source: World Bank; HSBC estimates

Demand continues to grow, albeit modestly

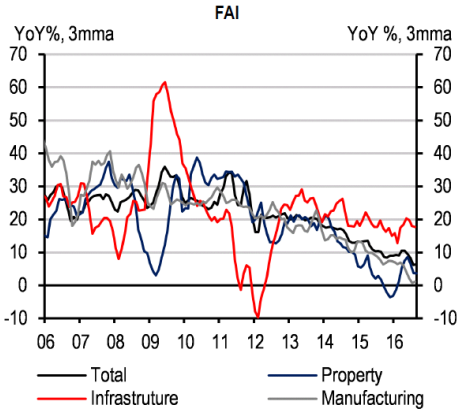
Oil demand has held up well, with the supply side driving the large price moves

Energy markets have continued to be supported by solid demand growth. For oil, US demand in the first half was strong, despite a slow start to the year, with numbers running at well above the already high levels from last year. Lower prices at the beginning of the year, in particular, contributed to the demand growth. Demand from India has also been strong. However, working in the other direction has been weaker oil demand from China and we expect a further moderation in growth in Chinese oil demand in the second half of the year. Overall then, our oil team have a forecast for oil demand that is weaker than the consensus (this is discussed further in Chapter 2, below). However, at the same time, we are forecasting the oil price to gradually climb as the supply-side pullback is expected to continue.

Metals demand has been supported by China and is set to be more driven by the ASEAN economies

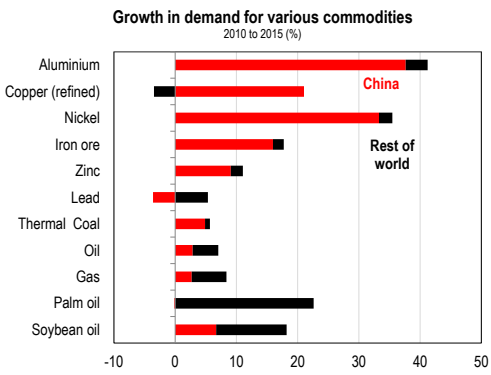
For metals, the modest fiscal boosts in China in February and in June supported growth in infrastructure investment, which has, in turn, driven growth in Chinese demand for metals (Chart 1.10). China remains a key source of demand for metals, having accounted for the bulk of growth in demand for most metals in recent years (Chart 1.11). Importantly, however, as other countries infrastructure needs increase, greater demand for metals is likely to come from other countries, including the ASEAN nations, where large infrastructure pipelines are forming (see J. Incalcaterra *ASEAN Perspectives: Filling the Infrastructure pothole*, 29 July 2016).

1.10. China's investment has picked up



Source: CEIC; HSBC

1.11. China has driven most demand



Source: World Bank

Some commodities are still over-supplied

There is significant oversupply of gas and grains, such as wheat and corn

Of course, the story is not the same for all commodities. For some commodities, the supply side correction has not yet begun, in part because of the long lag between project planning and completion. A clear example of this is the global gas market. Our oil and gas team provides more details on the gas market in Chapter 2.

A number of agricultural products also have oversupplied markets due to positive weather-related factors. In particular, grain prices have generally fallen this year due to good growing conditions in the Northern hemisphere and bumper crops.

Another factor worth keeping in mind for the commodity price outlook is that the supply-side for many commodities has become more flexible, given both technological developments and the large amount of investment in new capacity over the past decade. A keen focus on cost reduction amongst commodity producers has also made the supply side more flexible. A key example is the US shale oil producers which may be readily able to boost supply in a shorter time frame than large oil producers, thereby meeting a short-term boost to demand more quickly.

Past the trough

As high-cost production continues to be squeezed out, we expect commodity prices to gradually climb. For most commodities, our forecasts are for long-term prices to be higher than current spot prices (Table 1.12). At the same time, we see prices only gradually climbing towards those long-term levels.

1.12. Long-term prices are still higher than the current spot prices*

Commodity	Unit	Spot price	2016f	2017f	2018f	Long term
Aluminium	USD/t	1547	1575	1575	1620	2100
Copper	USD/t	4633	4771	4960	5060	5850
Nickel	USD/t	9809	9000	10750	12600	18000
Zinc	USD/t	2221	1913	2166	2608	2150
Iron ore	USD/t	56	49	42	41	52
Thermal coal	USD/t	71	52	53	54	57
Coking coal	USD/t	161	87	88	92	95
Brent	USD/b	47	47	60	75	75
WTI	USD/b	45	46	59	74	74
Nymex gas	USD/mBtu	2.9	2.5	3	3.5	na
Beef **	US cents/lb	186	181	179	na	na
Pork**	US cents/lb	63	64	66	na	na
Chicken**	US cents/lb	111	112	111	na	na
Palm oil**	USD/t	690	635	630	na	na
Sugar (US)**	US cents/lb	28	28	27	na	na
Dairy	USD/t	2793	na	na	na	na
Wheat**	USD/t	115	149	152	na	na

Source: Bloomberg; HSBC estimates; Thomson Reuters Datastream; IMF.*Note that these forecasts are those of HSBC's equity team. HSBC's economics team uses the technical assumption of futures curve forecasts to underpin the macroeconomic forecasts, for example, for the GDP and CPI forecasts.; **IMF forecasts

HSBC

Oil market balance is near, but gas is oversupplied

- Our supply/demand forecasts point to a fully balanced market in 2017e
- Cuts to investment plans pose risks to future security of supply
- Gas market might remain under pressure for a sustained period

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Our oil demand growth forecasts are below consensus

Oil market summary: Although current inventory data and recent price volatility highlight that the oil market is still not out of the woods, it is closer to balance than at any other time in the past two years. Our supply/demand model points to a market that should be in balance by 2017 – despite our below-consensus demand growth assumption – as non-OPEC output declines for a second successive year. Thereafter, through 2018-20, we see a steadily tightening market under a combination of demand growth scenarios. We expect OPEC's output to continue to rise but with virtually flat non-OPEC volumes, with a recovery in US production to new highs by 2018-19e offset by continued declines elsewhere.

We assume Brent prices to recover to average USD60/b in 2017e and USD75/b in 2018e.

For more details of the trends driving crude prices and our views on the oil market, see *Oil insights: The dog days of summer*, 10 August 2016 and *Global oil supply: Will mature field declines drive the next supply crunch?*, 7 September 2016.

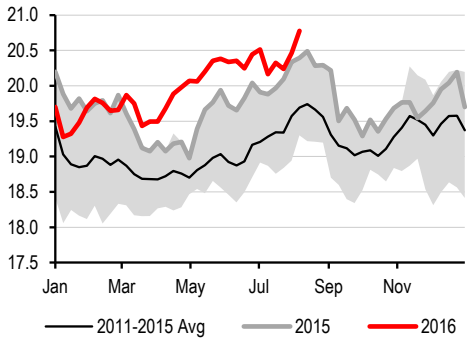
Demand: slowing growth, but robust near-term outlook

We forecast global demand growth of 1.1 million barrels a day (1.2%) this year. This would be a marked deceleration from last year's rate of 1.6 million barrels a day – a five-year high – but still above the ten-year average of 0.9 million barrels a day. We then expect demand to return broadly to trend (0.9 million barrels a day) in 2017-18e before slowing further to 0.8 million barrels a day a year in 2019-20e.

Our forecasts for demand growth are below those of the three major forecasting agencies for 2016 and materially so for 2017. The average estimate from the US EIA, IEA and OPEC points to demand growth of 1.4 and 1.3 million barrels a day in 2016 and 2017, respectively.

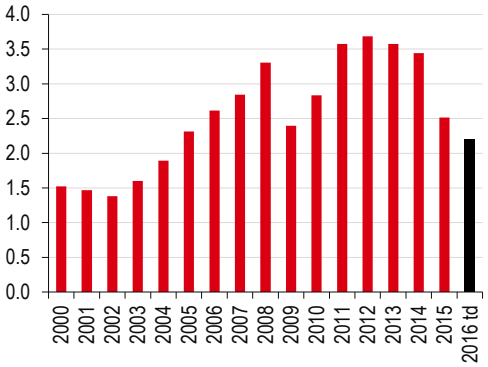
Demand trends in the first half were undoubtedly robust. In particular, weekly consumption data from the US EIA has indicated very healthy demand growth in the US this year. Despite a sluggish start to the year due to bad weather, US total product demand was running well above last year's already strong levels throughout Q2 and in Q3-to-date. The main source of strength has been gasoline, and the EIA expects gasoline demand to post its strongest year on record in 2016 (the previous record is from 2007). Consumption has undoubtedly been boosted by price elasticity effects. The price of crude oil makes up around 45% of the cost of a typical gallon of gasoline in the US, and the lower oil price has driven year-to-date average US gasoline prices to their lowest since 2004.

2.1. US total product demand, rolling 4-week average, mbd



Source: US EIA

2.2. Average US retail gasoline price (all grades, all formulations), USD/gallon



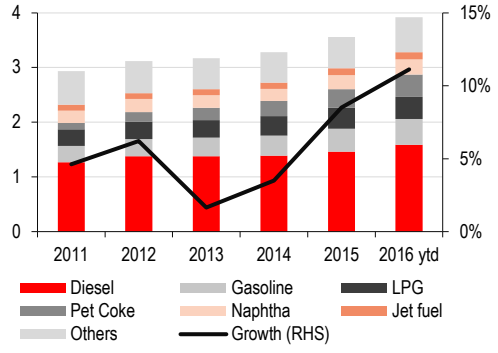
Source: US EIA

India should achieve higher oil demand growth than China this year

The clear stand-out in terms of demand growth this year, however, has been India. According to data from the Indian petroleum ministry's Petroleum Planning & Analysis Cell (PPAC), total oil product consumption grew 11% year-on-year in H1 2016. Growth slowed to 6% y-o-y in June, and we believe the pace will moderate further during monsoon season (typically July-September) when agricultural diesel demand tends to fall significantly (see *India Petroleum & Chemicals Insight – July 2016*, 28 July 2016). Nevertheless, India is on track to post higher demand growth in millions of barrel per day terms than China both this year and next off a base roughly one-third the size.

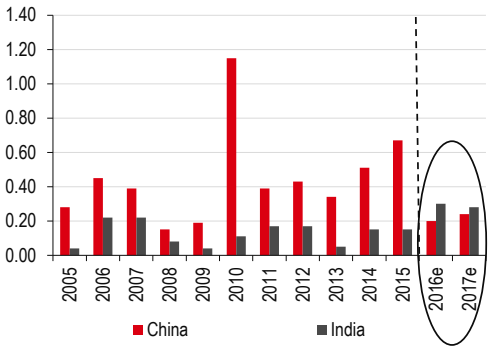
India is also in the process of bringing its first strategic petroleum reserve (SPR) online, which could add marginally to demand in coming years. The first phase of India's SPR build-out contains three sites with a combined capacity of 39.1 million barrels. This would cover around 13 days of imports based on the EIA's 2015 India supply and demand statistics. The first facility started filling last year, according to the EIA, and the two remaining sites should be completed late this year. The Indian government also has plans to add a second phase with 91 million barrels additional capacity by 2020.

2.3. India petroleum consumption, mbd



Source: PPAC

2.4. Annual oil demand growth, mbd

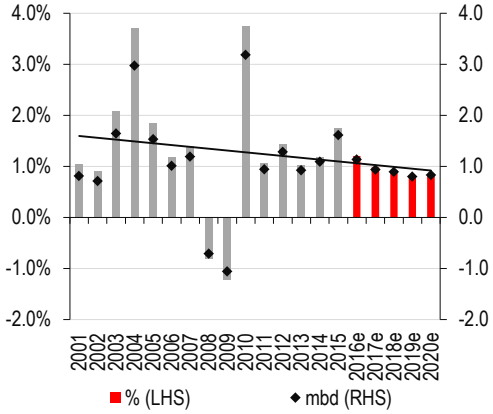


Source: IEA

Notwithstanding the observed strong demand in H1, we are comfortable with our below-consensus near-term demand projections for several reasons: **(1)** our expectation of further moderation in Chinese oil demand in the second half of the year (see *China Oil Demand: Crude demand likely to moderate further in 2H*, 1 August 2016), which could be exacerbated by this summer's devastating floods in Southern China, **(2)** the recent significant weakening of refining margins, which should lead to reduced crude runs, and **(3)** waning incremental price elasticity effects.

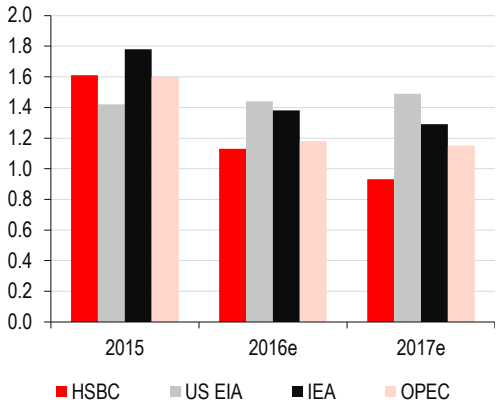
We also retain our more cautious view of global demand in the medium term (0.8 million barrels per day per annum on average in 2019-20e). This primarily reflects **(1)** our assumption of rising prices, **(2)** increased energy efficiency, **(3)** subsidy reform in large EM oil consuming countries, and **(4)** a continued gradual rebalancing of the Chinese economy from manufacturing to services. That said, we view our demand growth assumptions as conservative and believe the risks are mainly to the upside in the absence of any major macroeconomic shocks.

2.5. Global oil demand growth, % and mbd



Source: BP, IEA, US EIA, Wood Mackenzie, HSBC estimates

2.6. Global oil demand growth forecast comparison, mbd



Source: HSBC estimates, US EIA, IEA, OPEC

Demand seasonality adds further to volatility

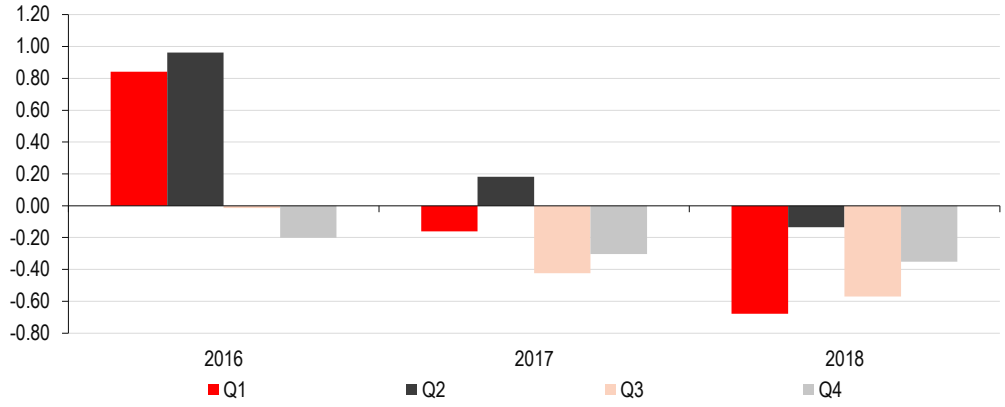
The oil market should be close to balance by year-end

The full-term rebalancing of supply and demand would still take some time, but the process is well underway. On our numbers, the implied oversupply looks set to fall from 1.7 million barrels a day in 2015 to 0.5 million barrels a day this year, and 2017e should be fully balanced. The market could already be close to balance in H2 this year due to higher seasonal demand and falling production, for example, in the US, China and Venezuela. However, we believe it could take until the second half of 2017 before the market moves into a sustained supply deficit.

Global oil demand has historically been higher in H2 compared to H1. In the OECD, this is because of seasonally higher consumption during the cold winter months in Q4, as well as the peak of the US driving season in July-August. Q3 has historically been the strongest quarter for non-OECD oil demand, with increased cooling requirements during the summer likely to be an important factor.

Overlaying historical ten-year average seasonality factors to the various components of our supply/demand equation yields some interesting results. This analysis indicates a small draw on inventories in Q4 2016, a balanced market in H1 2017 and accelerating supply deficits thereafter. However, it is worth remembering that patterns can vary widely in any given year, for example as a result of unusual weather.

2.7. Implied quarterly oil inventory build/(draw) based on ten-year average seasonality factors



Source: BP, IEA, US EIA, Wood Mackenzie, HSBC estimates

Assessing the longer-term demand outlook

Although there might be some very near-term concerns about demand, the medium-term outlook to 2020e looks robust. However, following the COP21 agreement and in the context of rapid advances in alternative energy technologies, uncertainties over the long-term outlook for oil demand seem to have increased significantly. With this in mind, we recently conducted a detailed review of a number of leading long-term energy demand scenarios and their implications for long-term oil demand.

Much of the debate around long-term prospects for oil demand is dominated by the issue of penetration of the light duty vehicle (LDV) fleet by electric vehicles (EVs). Of course, this is one of the key uncertainties, but there are a few other important points to highlight:

- It's not all about cars: LDVs are only responsible for around a quarter of world oil demand.
- Other forms of transport (trucks, aviation, marine and rail) consume in total more than LDVs, and although substitution is happening, widespread disruption on the potential scale facing LDVs looks far less achievable, in our view. Demand growth prospects for both aviation and commercial trucks look extremely strong across all the reference scenarios we assessed, driven mainly by non-OECD markets.
- Petrochemicals demand currently accounts for around 13% of global oil demand and has been a key source of growth; aggregate chemicals demand growth of ~50% (6mbd) by 2040e looks quite feasible from the studies we examined.

The base case scenarios we studied point to gasoline demand probably peaking somewhere around or soon after 2030 as fuel efficiency and EVs offset growth in the LDV fleet, but none of them sees total oil demand peaking by 2040 due to the strength of commercial transport and petrochemicals demand growth. However, none of these is consistent with the 2 degree Celsius global warming target. We reviewed two scenarios which are, and both of these imply a peak in oil demand before 2025. The rate of technological and policy change could point to downside risks to many of the central scenarios and a possible peak in oil demand somewhere in the 2030-40 period, but this is still highly uncertain.

It is worth highlighting that even in a world of slowing oil demand growth the oil industry's major long-term challenge is to offset depletion. For illustration, if conventional and deepwater crude production declines at 4% per annum from its current ~70 million barrels a day, the world would need to replace around 45 million barrels a day of output by 2040 just to keep supply flat. This is equivalent to roughly four times the current output of Saudi Arabia. Hence, on a long-term perspective, it seems clear to us that should be a supply problem before there is a demand problem.

For more details, please see *Global oil demand: Near-term strength, longer-term uncertainty*, 25 July 2016.

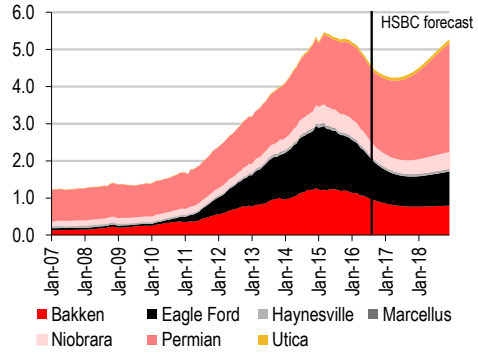
Non-OPEC supply: declines materialising

Non-OPEC oil supply forecast to fall 800kbd in 2016e

Our overall forecast for non-OPEC supply to contract by 0.8 million barrels a day in 2016 is largely in line with the major agencies' estimates. To put this number into context, it is roughly equivalent to Turkey's oil consumption in 2015. If our estimates prove correct, it would be the largest annual decline in non-OPEC supply since the collapse of the Soviet Union.

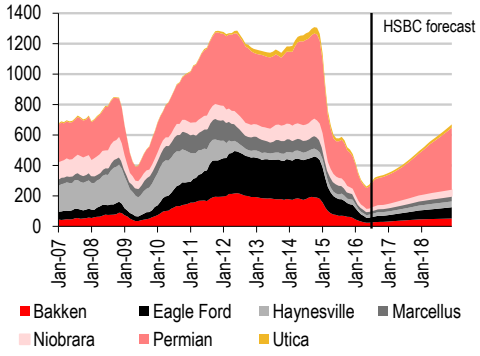
US tight oil production remains the dominant driver of the supply response outside OPEC. We believe US onshore output will fall by 0.6 million barrels a day in 2016e and a further 0.4 barrels a day in 2017e, before rebounding strongly with growth of 0.6 barrels a day in 2018e as crude prices recover. Our analysis is based on the drilling productivity data from the US EIA and necessarily involves a number of assumptions regarding average rig productivity, rig counts and base decline rates. We assume that the rig count in the main seven US unconventional basins more than doubles to approximately 700 rigs by end-2018e (+ ~400 rigs or 135%) based on our expectation for a recovery in industry cash flows. However, this needs to be viewed in the context of a rig count which peaked at more than 1,300 rigs in Q4 2014. We believe that the Permian region will see the largest increase in activity in the next couple of years.

2.8. US tight liquids output, mbd



Source: US EIA (August 2016), HSBC estimates

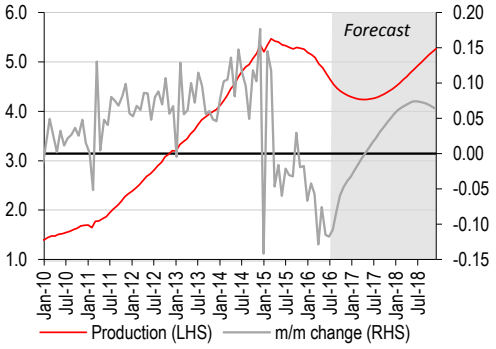
2.9. Rig count in main 7 unconventional basins



Source: US EIA (August 2016), HSBC estimates

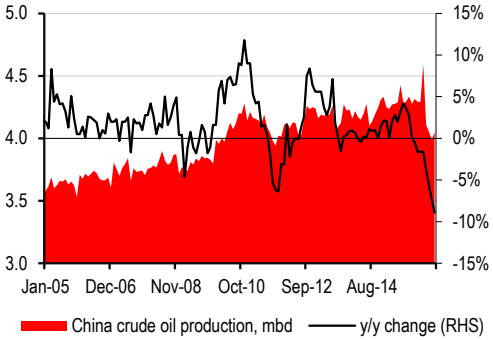
As drillers start to put more rigs back into service, we would expect to see the multi-year trend of improving rig productivity (defined as new-well production per average rig) to reverse eventually as the reactivated rigs are less efficient at the margin. Although it is impossible to pinpoint when this could happen, we currently assume average rig productivity peaks around mid-next year in most US onshore regions. Our decline rate assumptions are largely based on extrapolations of recent trends, and our production forecasts are much less sensitive to this assumption relative to rig counts and productivity.

2.10. US tight oil production from main 7 basins, mbd



Source: US EIA (July 2016), Thomson Reuters Datastream, HSBC estimates

2.11. China domestic crude oil production, mbd



Source: National Bureau of Statistics, Bloomberg

Chinese domestic crude oil production is falling fast

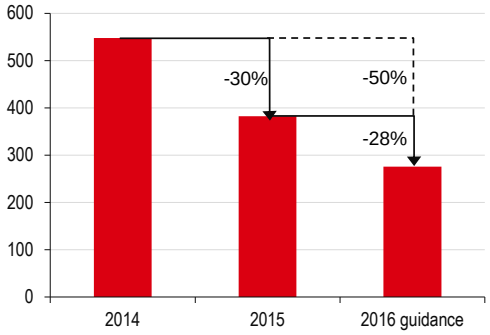
China will be the other large contributor to the decline in non-OPEC supply this year. We forecast a y-o-y decline of more than 200,000 barrels a day (-5%) in 2016, which is in the upper end of the 2-5% production decline guidance given by the major Chinese oil companies in Q1 2016. Many of China's fields are extremely mature, and we believe the country faces huge challenges to moderate decline rates in its upstream production in the current environment.

Elsewhere, supply has admittedly remained more resilient than expected despite an almost unprecedented fall in upstream investment. The industry has also adopted rapidly and has made impressive improvements to efficiency and productivity. The global Oil Majors are all singing from the same hymn sheet in terms of how their mind-sets are changing: standardisation, simplification and optimisation have reduced development costs and boosted project economics, improved facility uptime, enhanced project execution and reduced drilling times significantly. In addition, supply chain costs have come down materially. As a result, oil producers can now do "more for less". Even though we are forecasting large declines in US production, the efficiency improvements have been the most pronounced amongst the US unconventional oil producers, where the best companies have been able to drill and complete more wells despite lower spend, reduce the number of drilling days and grow horizontal laterals, enhance well productivity and cut costs more than expected.

That said, we are finally starting to see tangible evidence that supply declines are starting to materialise, and non-OPEC production growth turned negative year-on-year in March 2016. In 2017e, we expect a further 0.5 million barrel a day drop in non-OPEC volumes, led by a 0.4 million barrel a day drop in US tight oil production and declines in mature regions including Mexico, Colombia, China and the North Sea. This should be partly offset by growth in Brazil, Canada and Kazakhstan. Our 2017e non-OPEC supply growth forecast is materially below consensus from the big three forecasting agencies (IEA, US EIA and OPEC).

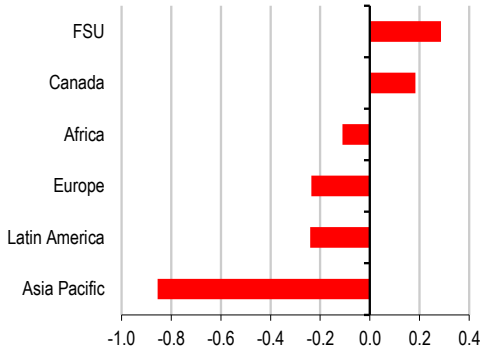
Our model suggests that non-OPEC supply will temporarily return to growth in 2018e on the back of a strong recovery in US onshore production, as well as large project ramp-ups in Brazil and on Kazakhstan's giant Kashagan field. We then see non-OPEC volumes broadly flat-lining to the end of the decade.

2.12. Upstream exploration & development capex, USDbn



Source: Wood Mackenzie. Based on sample of 134 oil companies, including US E&P companies

2.13. Non-OPEC volume growth ex-US, 2015-18e, mbd

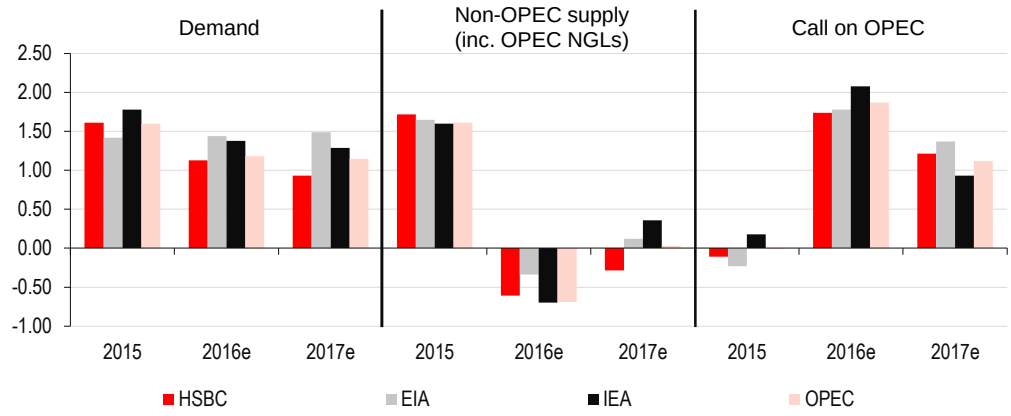


Source: BP, IEA, US EIA, Wood Mackenzie, HSBC estimates

Lack of investment poses risks to future oil supply

Even though oil companies have been getting more out of their existing assets in the current downturn, they have sanctioned very few new major projects during the past couple of years. 2015 and H1 2016 were characterised by an almost complete dearth of large project sanctions. A handful of high-profile developments have been given the go-ahead in the past couple of months, but they have predominantly been natural gas projects, and the number of Final Investment Decisions being taken in the current environment remains extremely low. Given the long lead-times involved in greenfield oil projects, the hiatus in sanctioning of new volumes would impact supply for many years to come. We expect that the current cuts to investment will result in no net growth in non-OPEC production in 2016-20e as a recovery in US tight oil output and new volumes from places like Brazil, Canada and Kazakhstan should be insufficient to offset natural declines elsewhere.

2.14. Annual changes in oil supply and demand – forecast comparison, mbd



Source: HSBC estimates, US EIA, IEA, OPEC

OPEC supply: further growth ahead

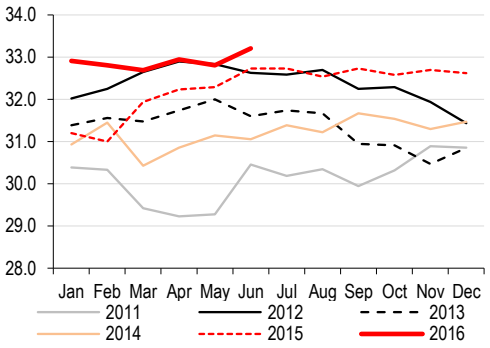
OPEC crude oil output has been running at the highest levels since 2008 in recent months, despite continued outages in Nigeria and still-depressed production in Libya. The increase has mainly been driven by further ramp-ups in Iran and seasonally higher Saudi production to meet domestic power demand during the hot summer months. OPEC production has averaged close to 33 million barrels a day year-to-date, according to the IEA, slightly above our full-year forecast of 32.7 million barrels a day.

We expect OPEC crude supply to gradually trend lower towards the end of the year based on Saudi domestic demand seasonality and further declines in Venezuela. We also see limited scope for further production increases in Iran and Iraq in the near term. However, there are upside risks to our forecast if **(1)** Libya successfully increases and sustains production following the recent re-unification of the National Oil Corporation and possible re-opening of key export ports and **(2)** the Nigerian authorities bring an end to sabotage attacks on oil facilities and output can recover quickly.

We expect continued growth in OPEC oil production

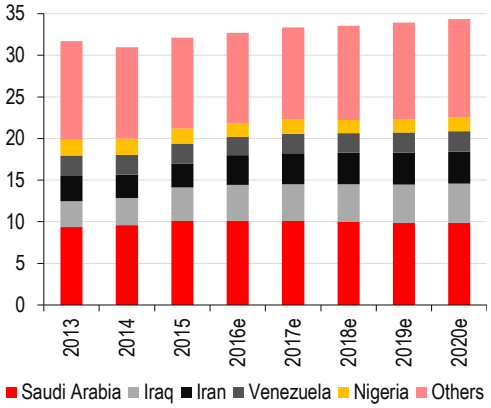
In the medium term, we expect OPEC crude production to continue to grow fairly steadily out to 2020e. We forecast output growth of 0.6 million barrels a day in both 2016 and 2017, primarily driven by Iran and Iraq. We also assume a gradual come-back in Libyan production for the sake of prudence, but this is entirely dependent on a stabilisation of the political security situation in the country. We then see OPEC volume growth moderating to around 0.3 million barrels a day a year on average in the 2018-20e period. This would take 2020e OPEC crude production a full 2.2 million barrels a day above 2015 levels, with Iraq, Iran, the UAE and Libya accounting for most of the additional supply.

2.15. OPEC crude oil production, mbd



Source: IEA. Note: Historical production adjusted to include Indonesia and Gabon, which recently re-joined OPEC

2.16. OPEC crude oil production forecast, mbd



Source: IEA, US EIA, BP, Wood Mackenzie, HSBC estimates

OPEC production of non-crude liquids should continue to see robust growth in coming years and add 0.7 million barrels to global supply in 2020e relative to 2015 levels on our numbers. The growth is heavily concentrated in Iran due to expected strong growth in associated liquids production from further development phases of the supergiant South Pars gas field. We project OPEC NGL output growth of 0.2 million barrels a day in both 2016e and 2017e, partly offsetting the large declines in non-OPEC volumes.

After the country reactivated its OPEC membership in July 2016, we have reclassified Gabon from non-OPEC to OPEC in our supply model. Historical data have been restated to reflect this.

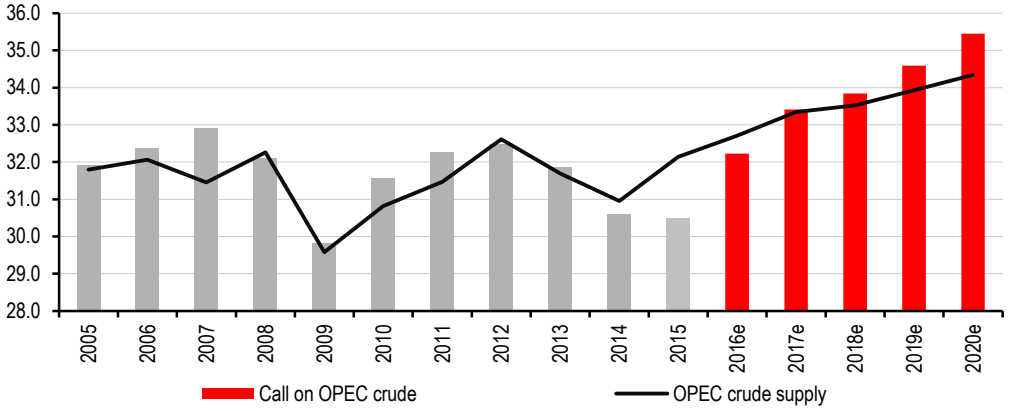
Oil market balance: supply deficit from 2018e

Factoring in the large production outages in Q2 (primarily Canada and Nigeria), the implied 2016 supply surplus in our model is around 0.5 million barrels a day.

2017 should see a balanced oil market

Our supply and demand numbers indicate a market which is fully balanced in 2017 despite large OPEC production increases and conservative demand growth assumptions. We see no net growth in non-OPEC supply between 2016e and 2020e but believe demand will grow 3.4 million barrels a day cumulatively over the same period. Our forecasts suggest increased OPEC output will fill less than half of this gap. As a result, we expect to see a growing supply deficit through to 2020e, paving the way for materially higher prices.

2.17. Call on OPEC and OPEC crude supply, mbd



Source: BP, IEA, US EIA, Wood Mackenzie, HSBC estimates

Furthermore, we think that the market tightening will be accompanied by a reduction in available spare capacity. Based on the US EIA's projection of future OPEC crude capacity, effective spare capacity would be as low as 1 million barrels a day, or just above 1% of global demand, in 2017e. Although plentiful inventories should provide a buffer, this leaves the global market balance highly exposed to future supply disturbances. If there is one thing we learnt from this year's large-scale outages, it's that crude prices can move quickly and sharply in response to large supply disruptions.

Although we expect to see significantly higher crude prices in coming years, the path there will inevitably be volatile given the large number of factors affecting prices in opposite directions, on top of the usual geopolitical, macroeconomic and seasonal volatility. Some key downside risks include very high global inventory levels, continued resilience of US tight oil producers and a stronger USD. Meanwhile, challenging security situations in large OPEC producers (for example, in Iraq and Nigeria) and the economic crisis in Venezuela could pose upside risks to prices, particularly in light of how little excess capacity there is in the global supply system to fill the gap if large volumes fall out of the market.

2.18. Global oil supply/demand balance, mbd

	2013	2014	2015	2016e	2017e	2018e	2019e	2020e
Demand								
OECD	46.0	45.8	46.2	46.4	46.3	46.1	45.9	45.7
Non-OECD	45.4	46.7	47.8	48.8	49.8	50.9	51.9	53.0
Global demand	**91.3**	**92.4**	**94.0**	**95.2**	**96.1**	**97.0**	**97.8**	**98.6**
Demand growth	1.0%	1.2%	1.7%	1.2%	1.0%	0.9%	0.8%	0.8%
Supply								
Non-OPEC*	53.0	55.5	57.1	56.3	55.8	56.2	56.0	56.0
OPEC NGLs	6.4	6.4	6.5	6.7	6.9	7.0	7.1	7.2
Non-OPEC & OPEC non-crude	**59.5**	**61.8**	**63.6**	**62.9**	**62.7**	**63.2**	**63.2**	**63.2**
OPEC crude production	**31.7**	**31.0**	**32.1**	**32.7**	**33.3**	**33.5**	**33.9**	**34.3**
Global supply	**91.2**	**92.8**	**95.7**	**95.6**	**96.0**	**96.7**	**97.1**	**97.5**
Implied inventory build/(draw)	**-0.2**	**0.4**	**1.7**	**0.5**	**-0.1**	**-0.3**	**-0.7**	**-1.1**
Call on OPEC crude	31.9	30.6	30.5	32.2	33.4	33.8	34.6	35.4
OPEC crude capacity, mbd	33.2	33.1	33.4	34.1	34.4			
Spare capacity at call, mbd	1.4	2.5	2.9	1.8	0.9			
Spare capacity at call, %	4.1%	7.5%	8.6%	5.4%	2.8%			
Effective spare capacity, mbd	1.5	2.1	1.2	1.4	1.0			
Effective spare capacity, %	4.6%	6.4%	3.6%	4.0%	3.0%			
Spare capacity at call, % of demand	1.5%	2.7%	3.1%	1.9%	1.0%			
Effective spare capacity, % of demand	1.7%	2.3%	1.3%	1.4%	1.1%			
Annual changes, mbd								
Global demand	0.9	1.1	1.6	1.1	0.9	0.9	0.8	0.8
Non-OPEC supply	1.5	2.4	1.6	-0.8	-0.5	0.4	-0.1	-0.1
Non-OPEC (inc. OPEC NGL) supply	1.5	2.4	1.7	-0.6	-0.3	0.5	0.0	0.0
Call on OPEC	-0.6	-1.3	-0.1	1.7	1.2	0.4	0.8	0.8
OPEC crude production	-0.9	-0.7	1.2	0.6	0.6	0.2	0.4	0.4

*Includes global biofuels, processing gains etc.
Source: BP, IEA, US EIA, Wood Mackenzie, HSBC estimates

2.19. Oil and gas prices and HSBC assumptions

Annual average		2011	2012	2013	2014	2015	2016e	2017e	2018e
Brent	USD/b	110.9	111.7	108.7	99.5	53.6	46.8	60.0	75.0
WTI	USD/b	95.1	94.1	97.9	93.1	48.7	45.5	59.0	74.0
W Canada Select	USD/b	78.4	71.8	73.5	74.4	35.7	29.0	42.0	52.5
Dubai	USD/b	106.1	108.9	105.4	96.6	51.2	43.2	57.0	72.0
Nymex gas	USD/mBtu	4.03	2.83	3.73	4.27	2.63	2.50	3.00	3.50
UK spot gas	GBp/th	56.4	59.7	68.2	50.2	42.7	31.5	40.0	50.0
Quarterly average		**Q1 15**	**Q2 15**	**Q3 15**	**Q4 15**	**Q1 16**	**Q2 16**	**Q3 16e**	**Q4 16e**
Brent	USD/b	55.2	63.4	51.3	44.6	35.3	47.0	50.0	55.0
WTI	USD/b	48.6	57.7	46.6	41.9	33.4	45.6	49.0	54.0
Nymex gas	USD/mBtu	2.82	2.74	2.73	2.23	1.99	2.25	2.75	3.00
UK spot gas	GBp/th	48.0	44.8	41.5	36.6	30.4	31.4	29.0	35.0

Source: Bloomberg, HSBC assumptions

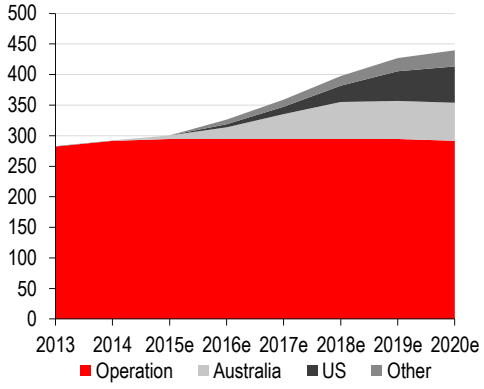
What about the gas market?

We are positive on the outlook for crude prices as we see the oil market returning to balance in 2017e and becoming increasingly tighter thereafter. However, the outlook for natural gas is far less clear in our view. In particular, the scale of expansion of global liquefaction capacity points to an LNG market in substantial surplus until into the next decade.

47% increase in global gas liquefaction capacity 2015-20e

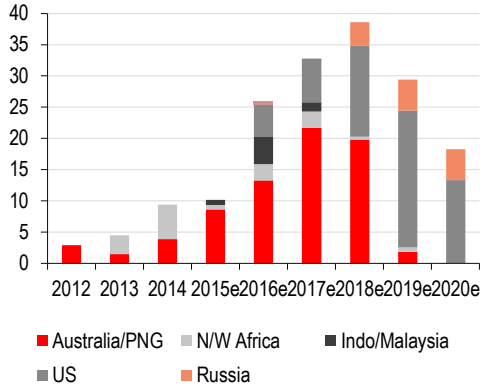
The growth in US exports of LNG, along with major new project start-ups in Australia, are driving a dramatic expansion of capacity worldwide, which should see global LNG output rise by around 47% over the period 2015-20e. We estimate there are around 140 metric tonnes per annum of LNG capacity under construction right now (vs a base of c.300 metric tonnes per annum), of which c56 metric tonnes per annum are in Australia (plus another 6 metric tonnes per annum which started up recently) and c62 metric tonnes per annum in the US. As the graph below (RHS) shows, the first big wave is coming from Australia, followed by the US.

2.20. Global LNG liquefaction capacity (mtpa), 2013-20e



Source: BP Statistical Review of World Energy, HSBC estimates

2.21. Global LNG capacity additions (mtpa)



Source: BP Statistical Review of World Energy, HSBC estimates

There isn't a problem with LNG demand. Demand growth is still healthy in East Asia, as well as in several new LNG-importing markets in Asia (Pakistan, Thailand), the Middle East (Egypt, Jordan, Kuwait) and Eastern Europe (Lithuania and Poland). Nonetheless, this growth doesn't look sufficient to absorb the scale of new capacity, and we see a period of significant oversupply in the global LNG market that could persist into the beginning of the next decade.

Not all new LNG supply has found a home

For much of the past 12 months, companies with substantial exposure to global LNG and/or European gas markets have highlighted that the vast majority of new supplies are already contracted to buyers. Despite this, we see many reasons why there is likely to be an excess of uncontracted LNG supply over the 2016e-20e period:

- We estimate that around 10-15% of Australian LNG and a similar amount if US capacity remains uncontracted.
- LNG buyers have the option to lower contracted purchases below annually contracted levels, typically by up to 10% without penalty. As spot prices in Asia continue to languish below contracted prices, contracted long-term sales are likely to fall, leaving more cargoes available for sale into regasification capacity in Europe and/or Asian short-term markets.
- Some Asian end-users (for example, GAIL, Osaka) have already re-sold or are looking to re-sell their excess supplies of LNG (notably from the US) to the big IOC players.

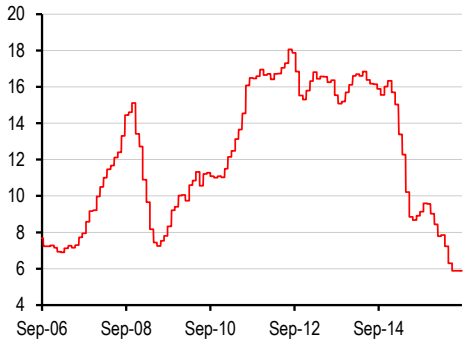
- We estimate that 25-50% of US volumes have been contracted by LNG portfolio players (that is, large oil & gas companies) rather than classic end-users, that is, Asian and European utilities.
- Commissioning cargoes are often not pre-sold to customers, and add to the pool of available spot LNG.

The pressure on LNG markets has already been seen in a slump in spot prices, with Asian LNG pricing falling all the way down to USD4/mBtu in April vs the mid-teens for much of the period 2012-15 (it has since recovered marginally to around USD5.5/mBtu). Oil-linked contracted prices have held up better, but have dropped in line with crude prices with a 3-6 month time lag. The Japan average LNG import price has fallen below USD6/mBtu, down from USD15-17/mBtu for most of the 2011-14 post-Fukushima period.

2.22. UK NBP spot gas price, USD/mBtu

Source: Bloomberg

2.23. Japan LNG import price, USD/mBtu



Source: Bloomberg

Our expectation of higher Brent prices going forward implies a material recovery in oil-linked contract prices, but the likely scale of uncontracted volumes points to spot markets remaining under pressure. There is a risk in this case that a widening gap between contracted and spot prices could in turn lead to pressure for contract renegotiations over time.

Impact on European gas prices

Europe is the LNG market of last resort

In a globalised LNG market, we expect a large part of uncontracted LNG to end up in Europe. Europe is the world's largest and most liquid gas import market with substantial regasification capacity, hence effectively the market of "last resort". Therefore, we expect continued pressure on European prices as global LNG supply grows until 2020-21. Uncontracted LNG volumes will increasingly compete with pipeline supplies from Russia, Norway, North Africa and elsewhere in Europe, as the marginal cargo landing in Europe will need to be competitively priced to attract the marginal buyer.

LNG imports represented only 10-11% of total European gas demand in 2015, but have a disproportionate impact on marginal pricing of key NW European gas hubs. LNG is not part of Europe's "baseload" gas supply, but acts as a marginal source of supply in times of high seasonal (weather-driven) demand or tight supply (e.g. following disruptions), as it is more flexible in the very short term than other sources such as Russian gas. European spot prices have already fallen to around USD4/mBtu, due to a combination of collapsing oil prices, weak demand growth and rising LNG availability.

A crude price recovery would pull up hub gas prices, but less than it would have in the past. The main reason is that the proportion of spot or hub-linked gas has risen significantly, to 54% of the total on our estimates vs 20% ten years ago. The lower proportion of oil-linked sales means that rising oil prices have less potential to influence the whole gas complex in the event of an oversupply of gas.

US LNG imports to Europe could land at <USD5.5/mcf

Meanwhile, we think US LNG supply could act as a soft ceiling on European spot prices during the upcoming period of oversupply, particularly as US volumes ramp up from 2H17 through 2019. Although we estimate all-in US supply costs to Europe at USD7-9/mcf for Henry Hub gas prices of USD2.2-3.5/mcf, US LNG could potentially land in Europe at *cash costs* of USD4-5.5/mcf if sellers are willing at the margin to write off the fixed tolling fee of USD3-3.5/mcf as a "sunk cost". We think there could be sufficiently material volumes of flexible US LNG – possibly 10-15mtpa, vs 2014 European LNG imports of 32mtpa – looking for a home and ready to be sold at cash cost. History has shown that although LNG represents only 10-11% of European consumption, it was enough to move spot prices in the past and we don't think it would take much more than 10mtpa of surplus LNG to put a lid on European gas prices.

Therefore, we can see the gas market – particularly in Europe – remaining under sustained pressure for a more prolonged period.

HSBC

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Some signs of a gradual pullback in metals supply

- Lower metals prices have driven a pullback in investment and some higher cost supply is starting to shut down, particularly in China
- Solid demand growth combined with a gradual pullback of less efficient and higher cost supply is providing support for metals prices and benefitting low-cost producers
- A risk is that the recent lift in metals prices slows the process of supply-side consolidation

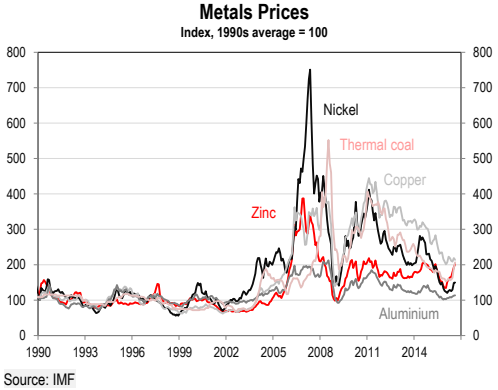
Working through the oversupply

Metals prices fell by 60% from the peak in 2011 to the recent low point in early 2016 (Chart 3.1). Since then, overall metals prices have risen by 17%, with all major metals showing price rallies (Chart 3.2).

The lift in metals prices has reflected a combination of ongoing modest growth in demand and a pullback in supply, particularly of some higher-cost productive capacity. Of course, the story differs across the different types of metals. To varying degrees, though, some oversupply does appear to have been reduced.

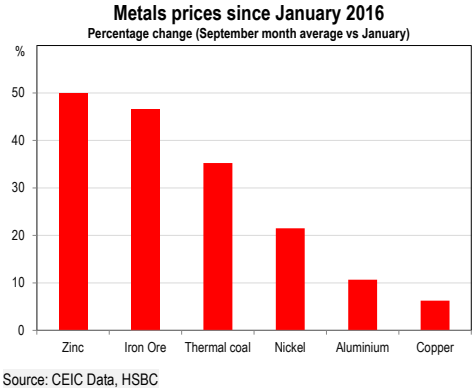
This partly reflects developments in China, as Chinese commodity supply is typically at the upper end of the global cost curve. For instance, there is evidence of cuts to Chinese production of zinc, aluminium, thermal and coking coal and low-grade iron ore. There have also been cutbacks in supply in a range of products from other commodity-producing nations.

3.1. Metals prices have lifted modestly



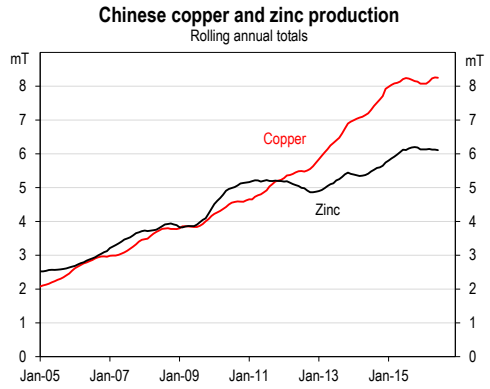
Source: IMF

3.2. The increase has been broad-based



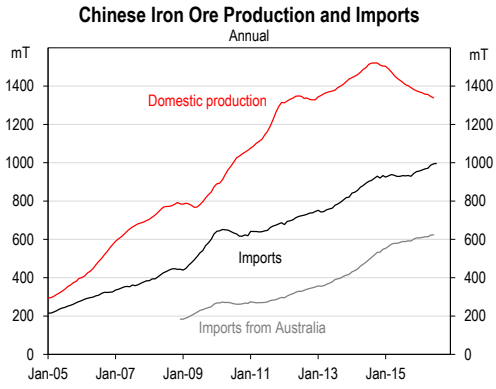
Source: CEIC Data, HSBC

3.3. Chinese copper and zinc levelled out



Source: CEIC

3.4. Low-cost iron ore imports still rising



Source: CEIC

Supply pullback across a range of metals

For zinc, the supply cutback mainly reflects the closure of a large mine in Australia but there have also been a number of voluntary cutbacks in output in an effort to support prices (Chart 3.3).

Nickel supply has also been cut back recently. Following the Indonesian export ban in 2014, supply from the Philippines filled much of the gap. But this supply has itself now started to fall as the new government strengthens the environmental requirements placed on the sector.

The Chinese authorities have recently put in place production controls for thermal and coking coal. These have involved reducing the working week from over 330 days to a maximum of 276 days.

Elsewhere, the supply pullback does not appear to have been as significant in the iron ore and copper markets. Although domestic Chinese iron ore production has been falling gradually, much of the growth in supply in recent years has been from large facilities with low cost of production in Australia and Brazil (Chart 3.4). Some of this production capacity is still yet to come online, and with overall supply likely to continue growing, the iron ore market looks set to remain oversupplied for some time.

Demand supported by infrastructure, in China and elsewhere

Modest growth in demand continues

As well as some pockets of supply pullbacks, metals prices have found support in recent months from growing public sector infrastructure plans. This has been most evident in China, where infrastructure is being used as a stimulus measure to offset slower residential construction and general private-sector business investment.

China remains a key source of demand for metals, having accounted for the bulk of growth in demand for most metals in recent years. Importantly, however, as other countries infrastructure needs increase, greater demand for metals is likely to come from other countries. Several southeast Asian countries have also stepped up their infrastructure agendas. For instance, Vietnam has commenced an USD10bn railway modernisation programme. The new Philippine government is trying to accelerate public infrastructure projects. For more on this see J. Incalcaterra, *ASEAN Perspectives: Filling the Infrastructure pothole*, 29 July 2016.

The supply/demand balance

For most of the metals, we expect growth in production to be slower than growth in consumption over the next few years, which should help to rebalance the metals markets (Table 3.5). The key exception is iron ore, where there is still significant low-cost supply due to come to the market. For most metals, we expect prices to climb from here and for all of the metals, we see prices being past the trough (Table 3.6).

3.5. Demand growth is expected to outpace supply growth for most metals

	2015	2016e	2017e	2018e	2019e	2015-19e (%)
Aluminium (kt)						
Production	56698	58636	60663	62318	63418	11.9
Consumption	55896	57776	59783	61797	63916	14.3
Balance	802	860	880	521	-498	
Copper (kt)						
Production	21939	22283	22831	23144	23471	7.0
Consumption	21831	22147	22563	23036	23572	8.0
Balance	108	136	268	108	-101	
Iron ore (mt)						
Production	2272	2250	2271	2316	2306	1.5
Consumption	2138	2115	2077	2084	2093	-2.1
Balance	134	135	194	232	213	
Nickel (kt)						
Production	1939	1760	1793	1854	1853	-4.4
Consumption	1852	1918	1964	1983	2001	8.0
Balance	87	-158	-171	-129	-148	
Zinc (kt)						
Production	13682	13743	14170	14539	14958	9.3
Consumption	13915	14081	14330	14604	14898	7.7
Balance	-233	-338	-160	-65	-31	

Source: HSBC estimates.

3.6. For most metals the forecast is for higher prices over time

Commodity (USD/t)	Trough price	Current spot price	2016f	2017f	2018f	Long term
Aluminium	1435	1547	1575	1575	1620	2100
Copper	4331	4633	4771	4960	5060	5850
Nickel	7562	9809	9000	10750	12600	18000
Zinc	1455	2221	1913	2166	2608	2150
Iron ore	38	56	49	42	41	52
Thermal coal	47	71	52	53	54	57
Coking coal	72	161	87	88	92	95

Source: Bloomberg, HSBC estimates

Aluminium: Some rationalisation is underway, but more is needed

By Jigar Mistry

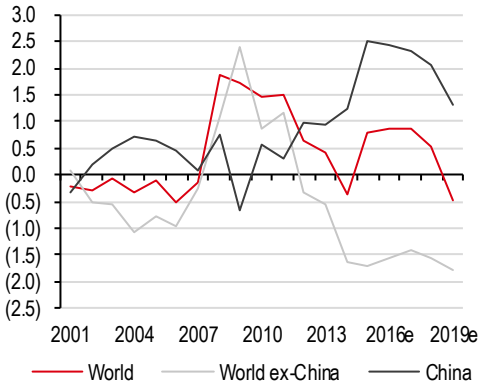
The lift in aluminium prices has reflected capacity closures in China

Although the aluminium price recovered 17% by mid-August, from its low in January, the price has subsequently retraced by 7%. We attribute the lift in aluminium prices to capacity closures in China and better-than-expected discipline on maintaining the closures (Chart 3.7).

However, we expect prices to moderate in the second half as we expect growth in supply in China. We still see a global surplus at 0.9 million tonnes over 2016e-17e and expect the surplus to progressively turn into a deficit only in 2019e, supported by healthy demand growth, a slowdown of new investments and more closures in China.

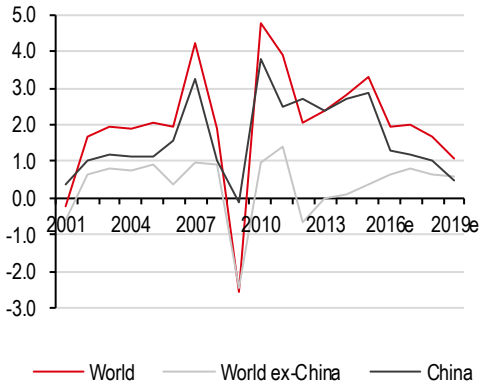
Globally ex-China, rationalisation commenced in 2012, leading to a deficit of 1.7 million tonnes by 2015. However, the benefit of this rationalisation had been over-shadowed by supply increases in China. Since 2001, Chinese supply has increased at a 17% CAGR, leading to a 2.5 million tonnes of surplus in China in 2015 (Chart 3.8).

3.7. Aluminium surplus/ deficit (mt)



Source: Wood Mackenzie, HSBC estimates

3.8. Aluminium production growth (mt)



Source: Wood Mackenzie, HSBC estimates

The aluminium industry announced the first wave of significant closures (of 4 million tonnes of capacity) in China towards the end of 2015 after the aluminium price hit a low in November 2015. The Chinese industry has maintained a better discipline than our previous expectation and we expect only 1.0-1.3 million tonnes of production to be restarted (out of 4 million tonnes of closures) in 2016e. However, Chinese industry players have continued to add new low-cost capacity even in 2016, which we estimate at 3.3-3.8 million tonnes.

More closures of high-cost supply expected to be needed to support prices

With growth in demand slowing in China, we see a need for closure of high-cost capacity to offset the addition of new capacity. Our supply estimates assume only 4.0 million tonnes of net increase in production over 2016-19e, assuming the closure of high-cost capacity. For a sustainable improvement in the market balance, we believe China needs to permanently curtail high-cost capacity rather than keep them off-line for a period as was done recently.

We are of the view that the aluminium price needs to remain low at USD1,575 per tonne over 2016-17e in order to continue to motivate a structural cutback in surplus capacity in China. The recent rise in prices has the potential to defer a supply pullback as the aluminium cost curve has flattened considerably with costs in the 90th percentile dropping below USD1,800 per tonne in China and USD1,700 per tonne in the rest of the world.

Copper: Oversupply is weighing on prices

By Jonathan Brandt and Botir Sharipov

Copper prices have risen only by a little as supply remains high

Copper prices have underperformed most of the other metals this year so far, having only risen by 6% since the January-trough. High inventories, including exchange and non-exchange traded stocks, are creating a supply overhang which appears to have weighed on copper prices (Chart 3.9). Slower growth in Chinese copper imports over the past three months and the increase in Chinese exports of copper products in July are providing ample supply to the market (Chart 3.10).

On the demand side, we expect China, which consumes around 45% of the total traded copper, to grow at around 2% a year. We see greater downside risks to Chinese demand in weaker end markets despite the Chinese government's efforts to reignite the private residential sector.

At the same time, copper production is growing at a solid pace as new projects come online. Stability in copper prices has yielded support to producers at the high end of the cost curve, limiting supply closures. The expectation of a potential market deficit in the long term might have also provided producers with an incentive to continue producing despite the current lower pricing environment.

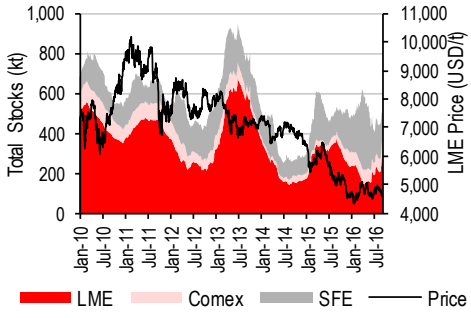
Since the current prices are at the around 94% of C1 cash costs, we expect limited weakness in prices in the short term, though we note that capacity additions are mostly in the lower end of the cost curve.

Oversupply is expected to leave the copper market in surplus until 2018

In the medium to long term, as a result of continued supply growth and slower growth in demand, the copper market is expected to remain in surplus until 2018e and turn into deficit only in 2019e (vs. 2018 previously). We have a cautious outlook on copper prices as inventory levels are well above normalized level to compensate for any potential deficit.

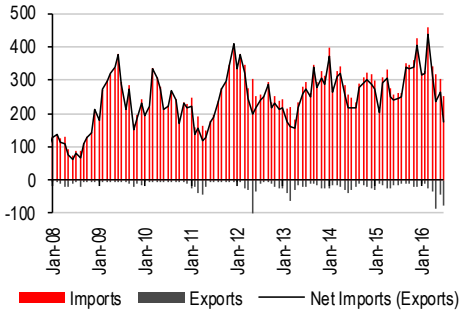
We expect copper prices to average USD4,771 a tonne in 2016 and inch up to USD4,960 a tonne in 2017e.

3.9. Exchange inventories are increasing



Source: CEIC, HSBC

3.10. China refined copper imports



Source: CEIC, HSBC

Iron ore: Elevated spot prices may limit supply cuts

By Derryn Maade and Anshul Gadia

Chinese fiscal support has lifted the iron ore price

China's "mini-stimulus" fiscal packages in February and June have buoyed steel producers' margins and supported iron ore prices, in our view. These events have kept spot prices elevated during the majority of 2016 to-date, and we believe that most of the iron ore miners, including some of the Chinese producers, are cash positive at USD60 a tonne levels. Indeed, only around 10% of our supply universe is currently facing profitability risk (Chart 3.11).

The global iron ore cost curve has fallen and flattened significantly over the past two years driven by lower oil prices, reduced freight rates, operating efficiency gains (most notably in Australia) and weaker producer currencies. These factors have enabled the iron ore majors to successfully lower their FOB cost by around 40% from FY14 levels (Chart 3.12). However, we see waning cost support going forward as oil prices have recovered, cost-cutting and capex rationalisation initiatives have matured and producer currencies appear to have stabilised vs the USD.

Low-cost supply is forecast to continue rising for some time

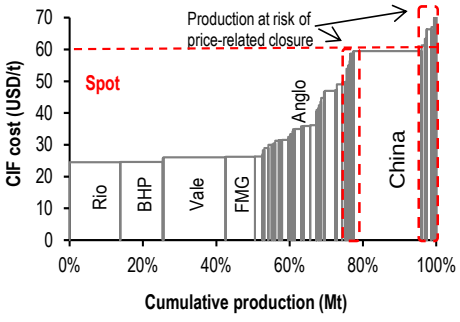
Our medium-term supply growth forecast remains driven by 'de-bottlenecking' at BHP, production ramp-up at Roy Hill, Vale's S11D project, Anglo's Minas Rio project and increased volumes from India following the lifting of the mining ban this year. Also, supply from the junior producers is likely to remain in the market until prices correct, in our view. This growth is expected to be offset by lower volumes from moderate cuts to Chinese production, combined with ever-increasing depletion from mines. We estimate global iron ore supply to grow by 1.0% in 2017e and 2.0% in 2018e, as major producers deliver low-cost project ramp-ups.

We estimate sluggish iron ore demand in the medium term given our weak outlook on the global steel sector where we continue to expect a relatively flat growth profile for crude steel output over the period in 2016-19e. We have reduced our EU steel output estimates following Brexit, but these have been offset by a moderate improvement in our estimates for China (short-term strength) and the CIS (GDP up).

An iron ore market surplus is expected to weigh on prices

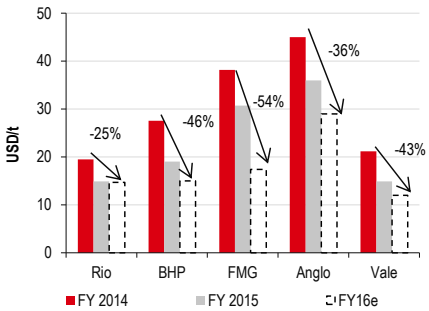
We see a market surplus of 84mt in 2016e, which we forecast to increase to 143mt in 2017e as supply growth from the majors materialises in an environment of subdued demand. Accordingly, we forecast iron ore prices at USD41-42/t during 2017-19e.

3.11. Global iron ore cost curve (2016e)



Source: Wood Mackenzie, HSBC

3.12. FOB cost of iron ore majors*



* Costs shown on FY basis - Rio/Anglo are Dec end, BHP/FMG are June end; Rio's FY16e is from Wood Mackenzie estimates.
Source: Company reports, Wood Mackenzie, HSBC

Nickel: Supply has fallen, but little further restraint is expected

By Emma Townshend and Anshul Gadia

Nickel supply has fallen, as many mines have been making cash losses

We estimate that around 50% of global nickel supply is making cash losses at spot pricing (Chart 3.13). However, the bulk of loss making production faces only limited risk of closure as most of this capacity is owned by diversified miners, who are therefore not vulnerable to nickel price alone.

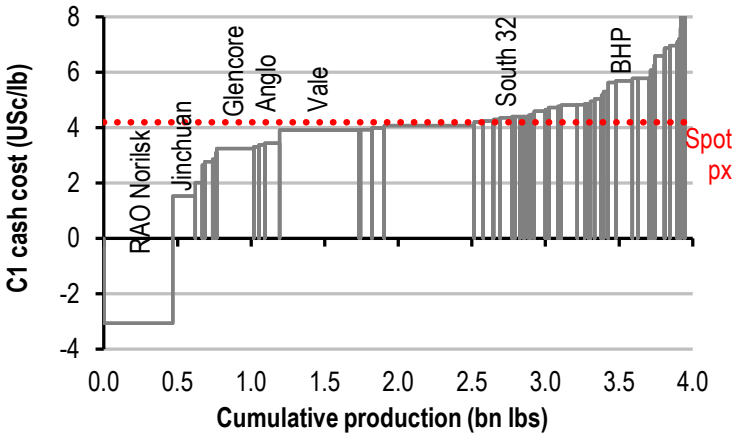
Furthermore, a share of this loss-making capacity is either supported by government or is in ramp-up phase. As such, we estimate that only around 15% of the supply remains at an actual risk of closure if current weak pricing persists. While supply discipline gained momentum in 1H16, the better-than-expected outlook for Chinese stainless steel production, and the year-to date recovery in nickel pricing, may slow this trend in 2H16, in our view.

The Philippines (20%) and Indonesia (14%) are the two largest global suppliers of nickel ore. Philippine ore exports to China were down 28% y-o-y in the first seven months of the year and we believe current environmental factors facing the domestic industry present a further downside risk. While Indonesian smelter projects may come on-stream earlier than expected, weak spot pricing does present headwinds to this potential source of increased supply.

We expect prices to lift further in 2017 and 2018 as the market tightens

HSBC's metals team expects the nickel price to lift in 2017 and 2018, to USD10,750/t and USD12,600/t, respectively, as the market tightens on inventory draw-downs.

3.13. Swathes of nickel supply remain loss making at spot pricing



Source: Wood Mackenzie, HSBC

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Thermal coal: Prices have jumped on China production control

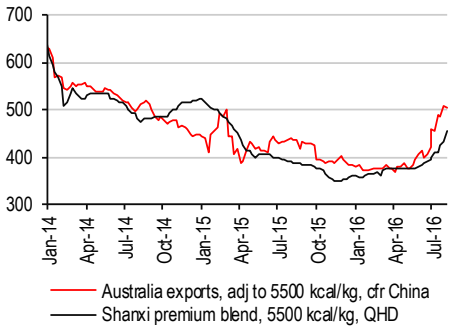
By Jeff Yuan

Chinese supply controls have lifted the thermal coal price

The benchmark Qinhuangdao 5500kcal coal price has increased 40% y-t-d to RMB500/t (Chart 3.14). The price increase has primarily been driven by Chinese government-enforced production cuts through limiting utilization at existing mines (276 days of operation vs typical 330 days) (Chart 3.15). However, the current production control rule is a short-term measure and focuses on lowering utilisation, rather than permanent capacity eliminations; in fact, higher prices have made the supply reform harder and year-to-date capacity elimination is behind the target; please see our report China Steel: Slower-than-expected capacity elimination, 12 August 2016.

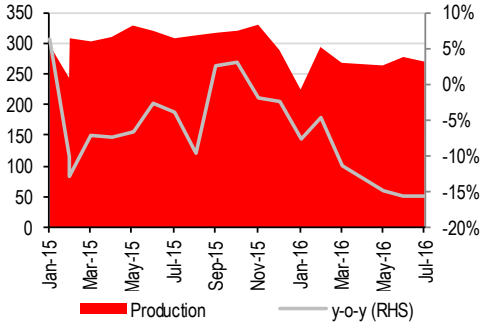
Moreover, new capacity (about 1.7bn tons) is either waiting to come online or still under construction (see China coal sector: Substantial downside risks despite higher prices, 27 July 2016). As we have expected, the government has recently started to loosen the production control measures by exempting certain large-sized mines from the production restriction if prices trend higher.

3.14. Thermal coal prices have risen



Source: Bloomberg, SXCoal, HSBC

3.15. Thermal coal production has slowed

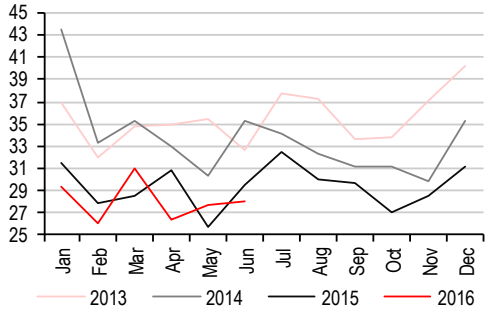


Source: CCTD, SXcoal, HSBC calculations

The demand outlook for thermal coal remains weak

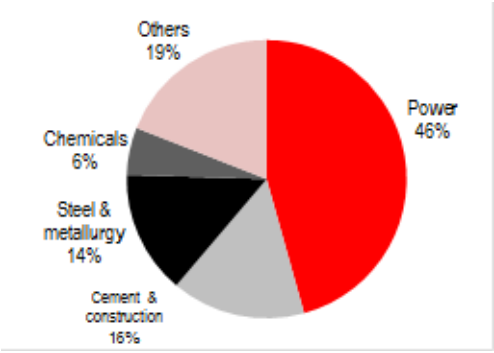
We estimate seaborne thermal coal demand is going to see another decline of 2% in 2016e (after a sharp 7% y-o-y drop in 2015) (Chart 3.16). Seaborne thermal coal demand in China has been impacted by both weak power demand and government efforts to reduce dependence on thermal generation (Chart 3.17). Accelerated domestic coal production by the Indian government coupled with high carbon price floor and coal to gas switch in the UK further weakens the seaborne coal demand. The impact of the decline in market size should be mainly borne by Indonesia (low rank coals) and the US (bankruptcy of major coal companies).

3.16. China, Japan and S Korea thermal coal imports (Mt)



Source: McCloskey, HSBC

3.17. China coal consumption breakdown, 2016e



Source: HSBC estimates

Coking coal: Supply side rationalization is needed

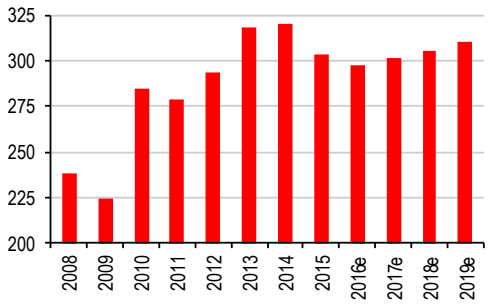
By Jeff Yuan

The hard coking coal contract price for Q3 2016 increased to USD92.5 a tonne (up USD85 a tonne q-o-q), a second consecutive rise in contract prices, for the first time since 2011, on a pick-up in steel production in China coupled with consolidation of the hard coking coal (HCC) sector.

Government production cuts have driven a coal price rise

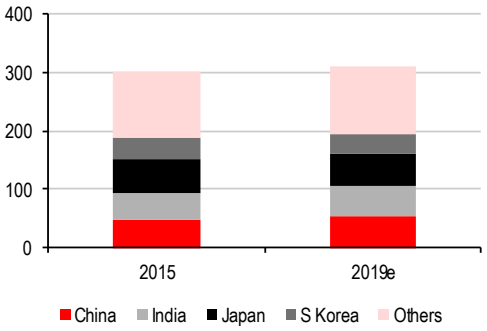
The government-enforced production control in China has driven the price rise. However, the current production control rule is a short-term measure and focuses on lowering utilisation, rather than permanent capacity eliminations. With the increase in prices, we see a risk of return of production from operating capacity and higher imports into China; see China Coal Sector: Substantial downside risks despite higher prices, 27 July 2016) (Chart 3.18). Chinese coastal trade rationalisation is critical for price recovery. Besides China, we see a need for more supply-side rationalisation in the global seaborne market as we believe HCC supply overhang is still of the order of 25 million tonnes (Chart 3.19).

3.18. Global metallurgical coal imports (Mt)



Source: McCloskey, Wood Mackenzie, HSBC estimates

3.19. Global metallurgical coal imports by region (Mt)



Source: McCloskey, Wood Mackenzie, HSBC estimates

Zinc: Supply pullback lifts prices as fundamentals drive the market

By Jigar Mistry

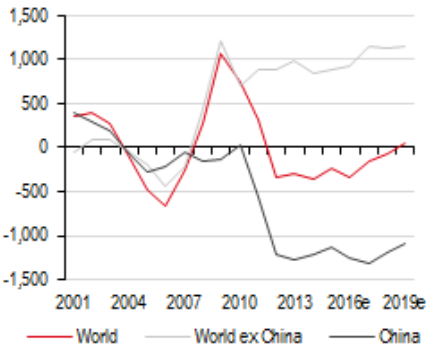
Zinc prices have been lifted by a cut back in supply

Zinc has been the top-performing exchange-traded metal, with zinc prices rising by 45% year-to-date. Importantly, this illustrates that commodities with strong fundamentals (solid demand and weak supply) can move independently from the rest of the LME complex. The zinc concentrate market continues to remain tight – as evidenced from the decline in spot treatment charges in China from cUSD200 a tonne to USD105 a tonne.

We expect a continued deficit each year between 2016e and 2018e, thereby reducing the refined stocks to critical levels (from c29 days of consumption in 2015 to just 8 days in 2018e) (Chart 3.20). Glencore's decision (as presented in the 1H results) to 'restart when supply and demand provides justification' could further exacerbate the position in refined balance, resulting in higher zinc prices.

The potential supply is not very high either – with only four projects (out of 77) making it to Wood Mackenzie's base-case scenario (Chart 3.21). The new mines should have higher cash costs, lower head grades and are being developed at higher capital spending. The incentive prices should continue to move up. Our 2019e forecast of USD2,860, albeit more than 20% higher from spot prices, looks achievable given the expected supply deficit.

3.20. Zinc surplus/deficit (kt)



Source: Wood Mackenzie, HSBC estimates

3.21. Zinc production growth (kt)

Source: Wood Mackenzie, HSBC estimates

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The ‘finer foods’ are seeing price gains

- Sugar and beef have had strong price gains, mostly supported by rising demand
- At the same time, a strong boost to supply has weighed on key grain prices, including for wheat and corn
- We expect the finer foods to continue to outperform other food commodities as Asia’s consumer demand rises and preferences shift

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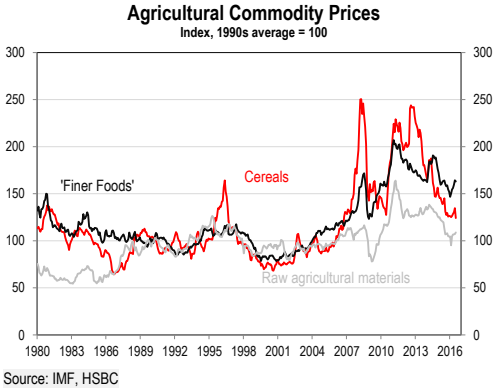
The finer foods have been outperforming

Agricultural prices fell to low levels in early 2016 but have recovered more recently. This has not played out in a uniform fashion, though (Chart 4.1). The price declines were larger, and the rebound was smaller, for grains and raw agricultural commodities (which include timber, rubber, cotton and wool). In contrast, the prices of the ‘finer foods’ – items such as meat, sugar, vegetable oils and coffee – have been much better supported (Chart 4.2).

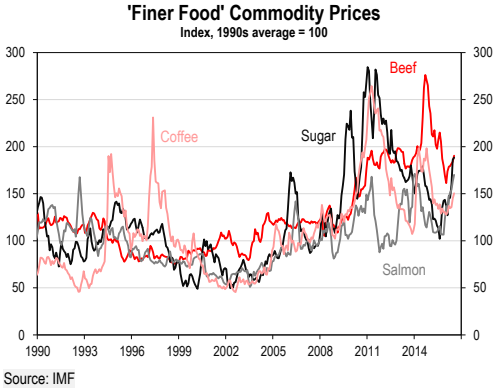
This partly reflects short-term, often weather-related, fluctuations in demand and supply. But we believe it is also tied to emerging demand for the finer foods in developing Asia, in particular, China. As we have written before, historical comparisons of demand for food products suggest that as countries develop and incomes rise, demand for higher-quality foods picks up. Demand for finer foods tends to keep growing until per capita GDP reaches USD20,000 to USD30,000, depending on the type of food. Using data spanning the past 50 years and a large range of countries shows that as countries develop, demand for animal products rises (Chart 4.3).

Chart 4.1. Grain and materials prices down



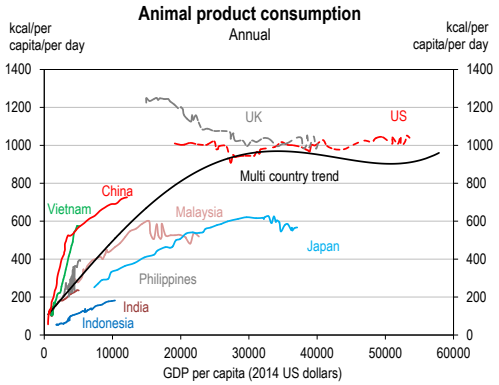
Source: IMF, HSBC

Chart 4.2. Finer food prices have risen



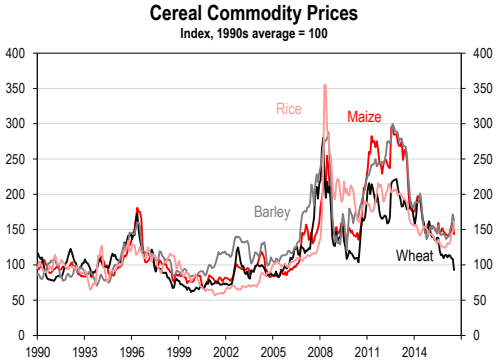
Source: IMF

4.3. Animal product demand is rising



Source: FAO; Conference Board; HSBC

4.4. Cereal prices are generally down



Source: IMF

Supply side varies across different foods

Although the general trend in commodity markets over recent months has been supply growth pulling back in response to low prices, this has not been the case in some agricultural commodity markets. In particular, weather conditions have been supportive of grain production. Late last year, it was feared that the strong El Niño pattern would dent agricultural production in many parts of the world, but the overall impact was fairly minimal.

This has been especially true in grain markets, where the northern hemisphere summer has been positive for crops, particularly in the US and Russia. The USDA is currently forecasting an increase in global grain production and ending stocks of around 4% in 2016/17 compared to 2015/16.

In other markets, though, supply and demand remain more finely balanced. For instance, sugar prices have climbed to the highest level since 2012 due to weather-related supply disruptions in India, Thailand and parts of Southeast Asia. We see a longer-term structural bull market in sugar following a period of limited investment in new capacity. We also expect sugar to be one of the main beneficiaries of rising incomes and changing diets in developing Asia.

Sugar: Supply constraints support the price

By Alex Falcao and Ravi Jain

Supply constraints and solid Asian demand underpin a bullish view on sugar prices

We are bullish on the long-term outlook for sugar prices mainly due to supply constraints given limited investment across all major producers. Although the short-term dynamics are impacted by weather, the medium/long-term trends are expected to result in a structural bull upswing as demand surpasses installed global capacity. We expect prices to be determined in BRL terms and we see supply/demand dynamics setting prices at BRLc63/lb in the short term and BRLc76/lb in the long term, as demand reaches installed capacity incentivizing capacity expansion (Chart 4.5).

Our forecast for sugar prices to be BRLc63/lb in the 2016/17 harvest season is derived from the price that we estimate would incentivize farmers in Brazil to switch to producing sugar from ethanol and help bridge the global deficit. In turn, we estimate that prices could cool off in the next two years as production catches up. We forecast a price of BRLc55/lb for 2017/18e, and reaching BRLc47/lb (breakeven cost in Brazil) in 2018/19e. See our recent report LatAm Spotlight: Sugar rush, dated 31 May 2016.

If these trends continue, we believe there could be large surpluses that could temporarily cause prices to remain closer to BRLc47/lb (above the breakeven cost of the efficient mills in Brazil at BRLc40/lb). Once global consumption catches up closer to the global capacity, prices will have to increase in order for the marginal producers to expand production. In the case of sugar, Brazil is the low cost as well as the marginal cost producer given availability of arable land.

However, the cost of a greenfield project is high and unviable at current prices, a problem exacerbated by an uncertain fuel pricing policy. In the longer term, we are convinced that sugar prices will have to rebound to the marginal cost of production in Brazil, that is, the breakeven cost plus expansion cost which we estimate at BRLc76/lb.

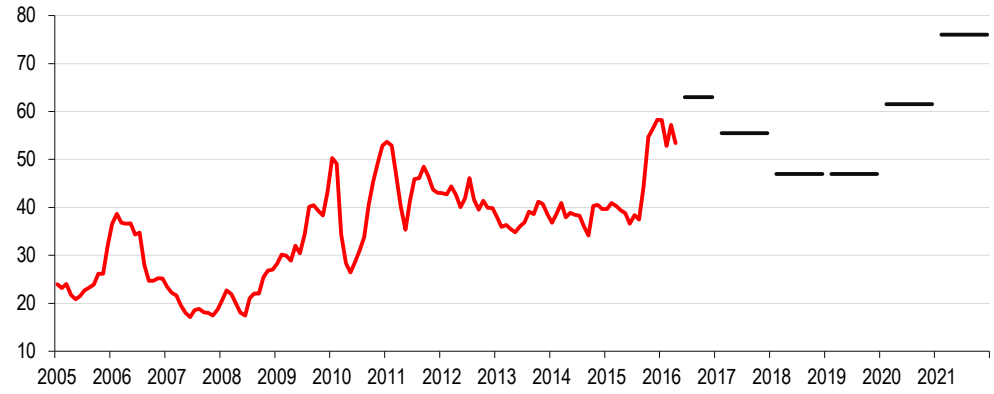
Current price moves reflect short-term developments

Current price moves are not yet being driven by structural forces

Sugar prices have increased by around 70% in the last 12 months in BRL terms. With the lack of investment in new capacity across several major producers like Brazil, India and Australia, there is an expectation by investors of a structural bull phase or a super-cycle for sugar that will be needed to re-ignite investment and support supply growth.

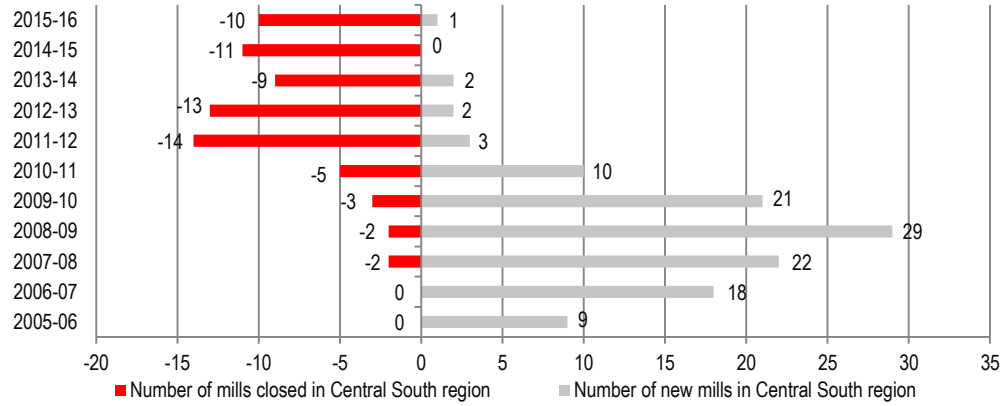
However, we believe that this sugar price move is more cyclical than structural. El Niño has had an important impact on production in India, Thailand and parts of Southeast Asia. In addition, Brazilian production was also lower y-o-y in 2015/16 driven by higher swing to production of ethanol. We believe that the global capacity sizeably exceeds current consumption levels, thus making the recent sharp increase in sugar prices a cyclical price swing rather than a bull run. We estimate global capacity of sugar production at 198 million tons (which includes a 50% ATR diversion to sugar in Brazil, normalized yields and sugar conversion rates in India and Thailand and the total quota as well as non-quota production in Europe).

4.5. Sugar price, historical and forecast (BRLc/lb)



Source: Reuters, HSBC estimates

4.6. Brazil: Rising mill closures since 2010



Source: UNICA

Reforms across the major producing and exporting countries could accelerate the super-cycle, in our view. In Brazil, the industry needs a stable fuel pricing policy. With greater visibility into gasoline prices and therefore ethanol prices in Brazil, mills and sugarcane farmers would be able to plan their investments. In India, with higher domestic prices in the next 12-24 months, we believe there may be a compelling opportunity for the government to formally link sugarcane pricing to revenues from sugar and its by-products. In addition, we believe that a sustainable and flexible ethanol policy could address the longer-term oversupply.

We believe the government could potentially make the ethanol blending target a flexible one, e.g. 5/15%, so as to change the actual blending depending on the sugarcane crop forecasts in order to minimize price volatility and ensure sustained profitability to mills and therefore sustained remuneration to sugarcane farmers.

Challenges for each major exporter

All of the major sugar producing and exporting countries have their individual challenges.

Brazil has been a leader of biofuel and renewable energy use by including ethanol in its aggressive 25% blend rate in gasoline, as well as the strong level of sales of flex fuel cars. But in the absence of a transparent fuel pricing policy, ethanol prices have remained stagnant for a long time, pressuring Brazilian mills into bankruptcy. Brazil has seen net mill closures for the last five consecutive years.

India's cyclicality has traditionally been driven by unaffordable cane prices set by the state governments that led to payment arrears and thus crop switching. While the arrears issue has only gotten worse, government soft loans and diverging profitability of competing crops like wheat and rice could make a material crop switch by farmers less likely in the future. In addition, while India's ethanol-blend policy of 5% has been in place, actual blend implemented has ranged from merely 1-3%.

Thailand has had its share of challenges as the government attempts to incentivize farmers to switch from rice to sugarcane (as a result of overstocking of rice). Australian mills have struggled to compete given higher costs and lack of subsidies. And lastly, Europe has had a quota system in place since 1968 and is finally set to end it by the end of the 2016/17 harvest year.

Also, ethanol is important in Brazil as renewable energy sources represent around 42% of the energy supplied (vs global and OECD average of 10-15%), with sugarcane representing around 16% of the total energy supply in Brazil. Furthermore, Brazil has a mandatory blending of anhydrous ethanol into gasoline at 27%, well above the rate of most other countries. Farmers can divert more sugarcane to ethanol or sugar production depending on market prices, which can have implications for global trade as Brazil is the largest individual sugar exporter. Finally, ethanol sales are an important tax revenue driver for Brazil as Petrobras sets prices at the pump for gasoline.

No demand cyclicality and the rising emerging market influence

We see continued solid demand for sugar

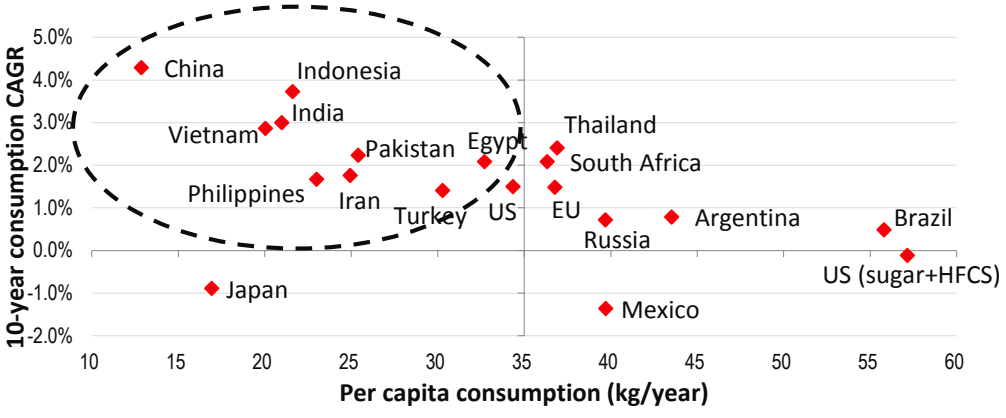
Sugar has also seen its share of volatility, like other commodities, but driven more by supply disruptions and excess rather than demand cyclicality. Despite not being a staple crop, global sugar consumption growth has been steady at 1.7-2% per year. The per capita consumption in developed economies is gradually declining, but this is being mostly offset by population growth, with the exception of Japan and Canada.

However, sugar consumption is booming in emerging economies – not only is the population growth higher, but per capita consumption is also rising at a rapid pace. For example, India, China, Africa and the Middle East, which account for 56% of the global population and 42% of sugar consumption today, have been increasing sugar consumption at 3.2% CAGR over the last 10 years (1.5% population growth and 1.8% per capita consumption growth).

Not only is the per capita calorie consumption in emerging markets sizeably lower than in developed markets, but also the share of sugar and sweeteners in the food intake is substantially lower. Calorie consumption per capita in North America and Europe is 3.4-3.6 thousand kcal per day, 31% higher than that in Asia and Africa.

In addition, the share of sugar and sweeteners in the food intake is very low at 6% in Asia/Africa compared to more than 15% in North America and 10.4% in Europe. Sugar taxes and negative publicity related to the ill effects of sugar are likely to have an impact on consumption in the long run, but overall growth appears poised to be steady in the nearer term.

4.7. Countries by per capita sugar consumption and 10-year CAGR



Source: USDA, World Bank, HSBC

Dairy: Oversupply challenge remains

By Christopher Leung

The China onshore dairy price is low, while the imported price has risen

China's raw milk price has fallen by 4% to RMB3.39/kg over the year-to-date, which is 5% lower than the historical average price of RMB3.58/kg, and we expect it to continue to remain at a low level in 2H16 before a modest recovery in 2017e (Chart 4.8).

Although Fonterra's whole milk powder auction price rebounded sharply in August, up 30% m-o-m, we believe the implication on China's raw milk price should be limited given that the domestic raw milk supply is still growing and the international milk powder price is still much cheaper than domestic raw milk price (Chart 4.9).

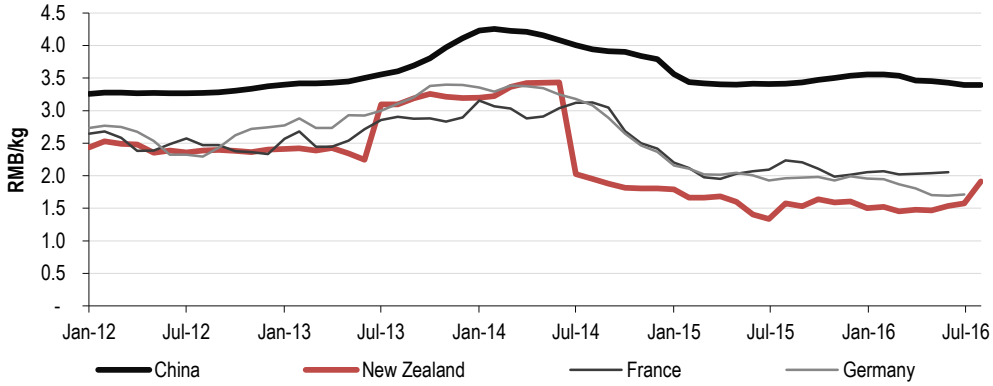
On the supply side, while we have seen more backyard farmers exiting the dairy farming business, we understand that many of them actually sold their cows to the medium-sized dairy farms rather than slaughtered the cows. Meanwhile, the large-scale dairy farms are still expanding their herd size from organic growth. For instance, of the four largest listed dairy farming companies in Hong Kong, including China Modern Dairy, Huishan Dairy, Shengmu and YST Dairy, their herd size increased by 15% y-o-y in 1H16 while their external raw milk sales volume was only up 3% y-o-y.

At the same time, although the demand for domestic raw milk is still fairly lacklustre, demand for imported milk powder has remained fairly strong year-to-date, up 16% y-o-y during 7M16, as it is still much cheaper than domestic raw milk (Chart 4.10). For example, the current whole milk powder price in New Zealand is USD2,695/ton, up 17% year-to-date, but it is still 17% lower than the historical average price of USD3,240.

Chinese demand for imported dairy has been supported

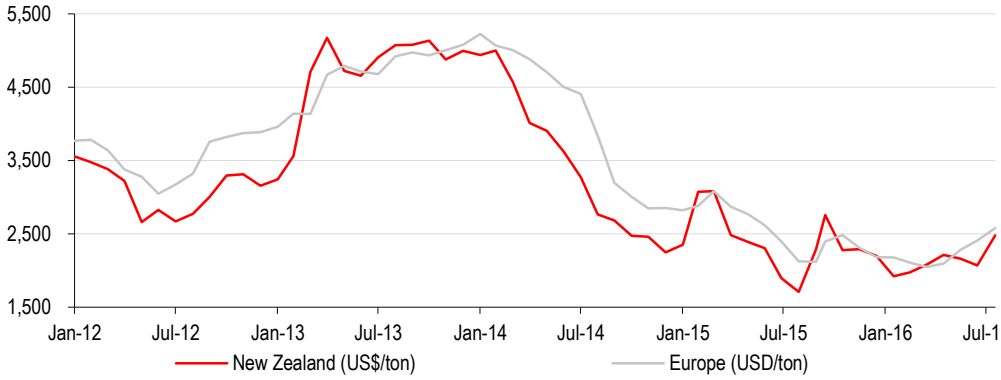
Taking into account the import tariff and transportation costs, we estimate that this is equivalent to RMB2,710/t of raw milk, which is 20% cheaper than China's current domestic raw milk price of RMB3,390/t.

4.8. Global raw milk prices, Jan-2012 to Aug-2016



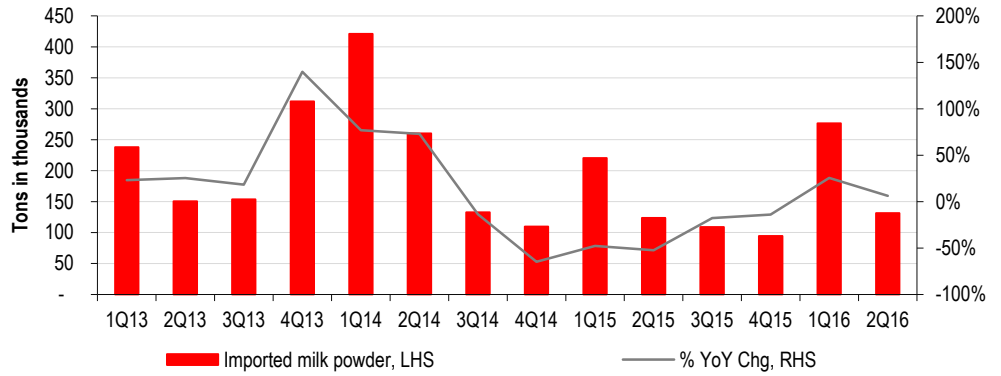
Source: Hesitan, Global Dairy Trade and CLAL

4.9. New Zealand and Europe milk powder prices, Jan-2012 to Aug-2016



Source: Global Dairy Trade and CLAL

4.10. Imported milk powder in China, Jan-13 to Nov-15



Source: Hesitan and HSBC

Meat: Demand from emerging economies remains strong

By Andrew Muench and Paul Bloxham

EM demand for beef has picked up strongly, driven by China

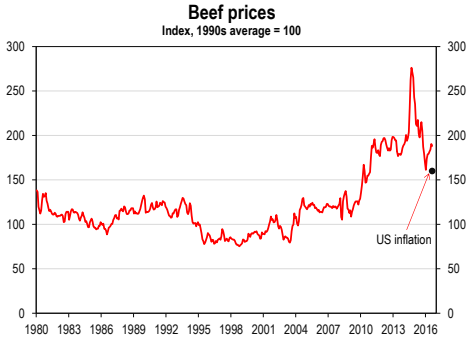
Beef: Beef imports into China have almost doubled over the past year or so, albeit from low levels, supported by rising middle class incomes, shifting preferences and limited local beef supply. Much of the demand has been met by exports from Brazil, which has recently overtaken Australia to be China's largest source of beef imports. The strong pick-up in Brazilian beef exports to China began after a trade embargo, related to bovine spongiform encephalopathy, which was in place from December 2012, was lifted in August 2015. South Korea has also seen strong growth in demand for imported beef, as domestic production remains weak.

Brazil has overtaken Australia in terms of Chinese beef imports

On the supply side, after almost a decade of a declining herd in the US, a rebuilding began in the first half of 2016 and is expected to continue through the next several years. At the same time, dry conditions in Australia are expected to continue to see declining inventories, despite reduced slaughter rates. Brazil's herd continues to grow, and the country was approved (1 Aug 2016) for beef export to the US that should eventually lead to the opening of other important markets, for example South Korea (given the US is perceived to be the benchmark in terms of food safety). A more open network of export opportunities for producing countries should help smooth demand and subsequently price.

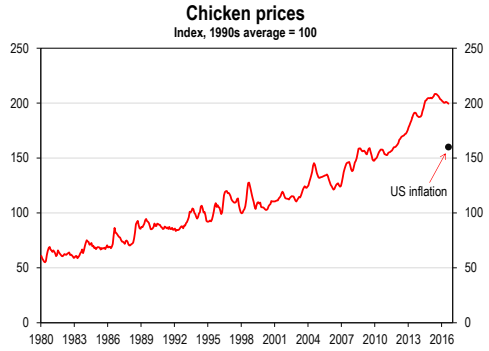
While global beef demand is rising today, the higher cost of this product could limit the commodity's access into lower-income emerging markets. It would be unsustainable to produce beef to feed the global population like we do in Australia, Brazil and the US (the top 3 highest per-capita consumers of beef). Therefore, we are more optimistic for the long-term demand for poultry and pork that are comparatively less expensive and still provide an adequate supply of calories and protein to emerging market consumers. Nonetheless, strong emerging economy demand, led by China, is expected.

4.11. Beef prices have been well supported



Source: IMF

4.12. Chicken prices trending higher



Source: IMF

Demand for chicken is set to remain strong

Poultry: We remain most bullish on the long-term demand outlook for global poultry. Based on the four points below, we believe chicken prices can remain insulated from the higher volatility that has affected beef prices, as an example, over the last year.

First, chicken remains the fastest growing global protein, doubling the rate of growth versus beef and pork at about 5% per annum looking back over the last 20+ years. This trend continues, and it is not only confined to the lower-income emerging markets; Sanderson Farms, the fourth largest US poultry producer mentioned in its latest management presentation that the US sees rising demand for protein despite declining per capita consumption for beef (and flat per capital consumption for pork).

Second, chicken is cheaper to produce versus other animal meats and is also considered to be a healthier choice for this reason: 1.5-2 pounds of input feed are required to create a pound of poultry, versus 2-3 pounds for one pound of pork and 5-7 pounds for one pound of beef.

Third, chicken production is more localized versus beef and pork production (albeit grain accessibility does remain an important consideration for competitive poultry supply). Given the (smaller relative) size of a chicken, and its input requirements, production can be more globally distributed/ dispersed around the world, which can help match local demand and optimize export opportunities. It is these three points that lead us to believe that chicken prices, from a global perspective, can be insulated from significant price gyrations.

However, it is worth noting that these points above argue for an insulated chicken price long-term, but short-term dynamics remain quite diverse globally. In the US, continued low grain prices are driving high returns for producers like Tyson and Pilgrims Pride. On the other hand, record-high grain prices in Brazil (up 75-100% y-o-y) are causing margins to tighten considerably for chicken-dependent food processors like BRF and in JBS's processed food business.

Finally, as we wrote about in our Brazilian proteins report "In the Spotlight: LatAm Foods – Food branding: More grass", 18 February 2016, we think emerging market demand will continue to drive chicken demand for the coming decades given the protein's lower cost relative to its alternatives. We would prefer protein companies that are focused on poultry with an efficient platform (scaled), that is diversified (globally) and brand-oriented (packaged food commands an operating margin 2x that of a commodity company, according to our analysis).

Chinese demand for imported pork is set to rise

Pork: China's sow herd continues to contract, and this represents an opportunity for exporters to get into the world's largest consumer of pork meat, at nearly 50% of current demand. China has historically produced the majority of its own pork for consumption, but environmental regulation in the industry, coupled with a slowing economy, are changing this dynamic. US companies like JBS and Tyson, top US pork producers, should benefit most as EU pork producers still face a waning herd in light of low prices. In fact, JBS management remarked on its latest 2Q16 conference call that export growth to China is close to 300% compared to last year.

HSBC

A quick look at each commodity

- Since early 2016, the prices of around two-thirds of the commodities in the IMF commodity price index have risen
- The IMF index is 25% above its 1990s average level in real terms
- Relative to the 1990s, around half of the commodities now have higher prices in inflation-adjusted terms

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Broad-based lift since the early-2016 trough

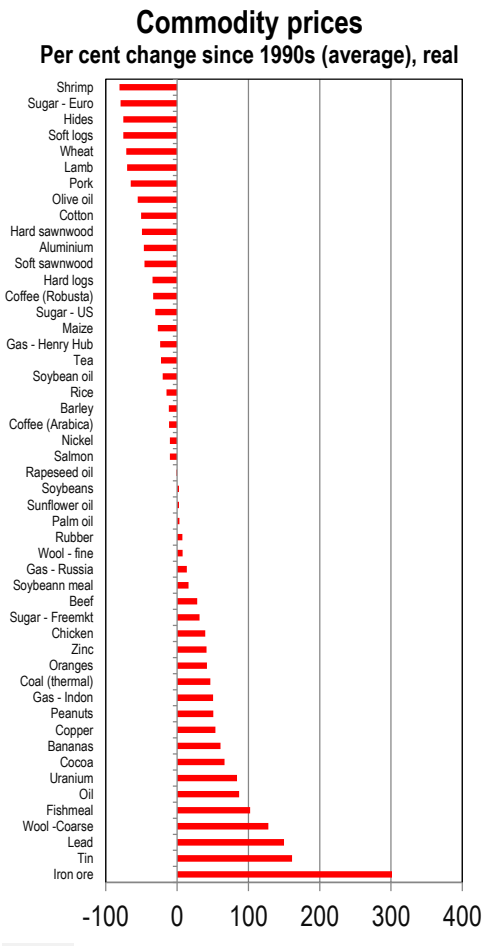
At the low point, in early 2016, global commodity prices had fallen back to around their 1990s average levels in inflation-adjusted terms. Since then, they have risen to be around 25% above their 1990s average levels.

Around two-thirds of the commodities in the index have seen price rises since the beginning of the year and around half the commodities in the index have prices that are higher than the 1990s average levels in inflation-adjusted terms (Chart 5.1).

Metals prices generally remain higher than they were in the 1990s, with the exception of aluminium and nickel prices. Iron ore prices, which have lifted since the beginning of the year, are around 300% higher than they were in the 1990s on average.

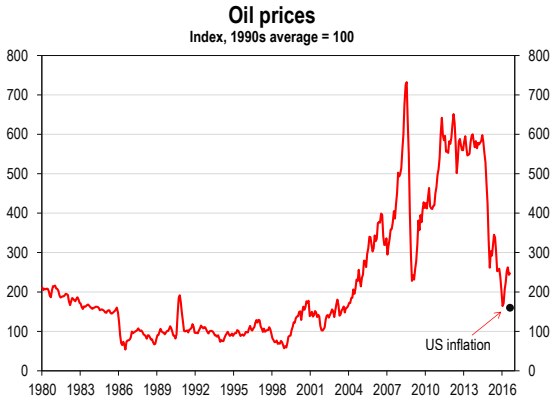
Oil prices are 87% higher than they were in the 1990s, on average, in inflation-adjusted terms. The prices with the largest fall since the 1990s have largely been for agricultural commodities.

5.1. Prices are below the 1990s real averages for most commodities



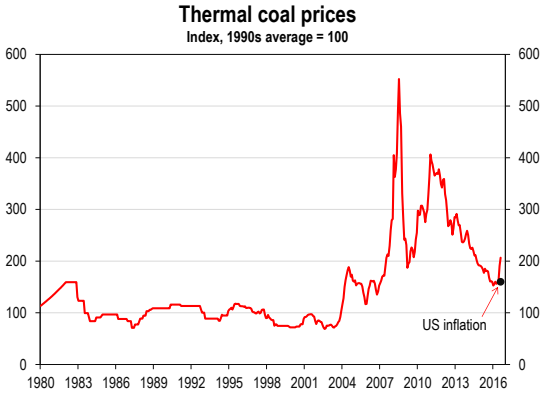
Source: IMF

5.2. Oil prices have lifted from very low levels recently



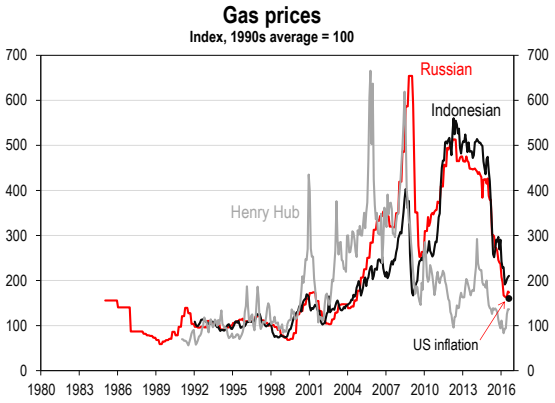
Source: IMF; HSBC

5.3. Thermal coal prices have risen sharply recently



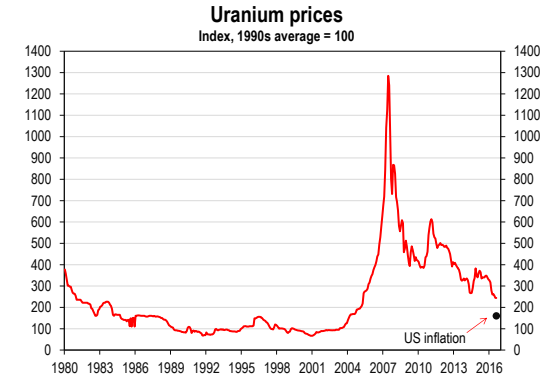
Source: IMF; HSBC

5.4. Gas prices have lifted in the US in particular



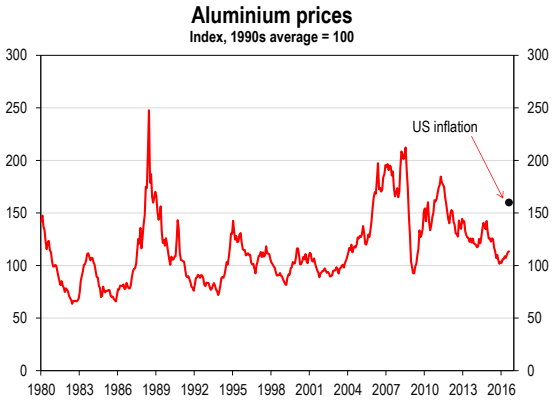
Source: IMF; HSBC

5.5. Uranium prices have fallen further recently



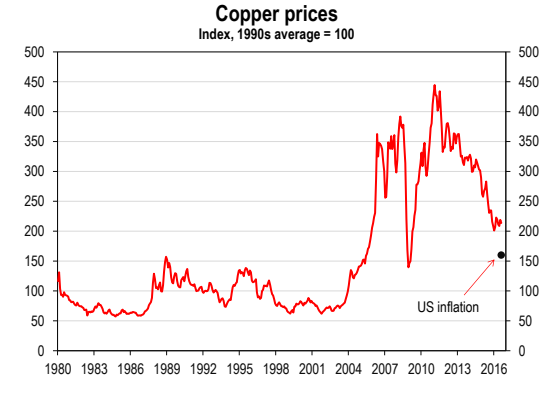
Source: IMF; HSBC

5.6. Aluminium prices have lifted in recent months



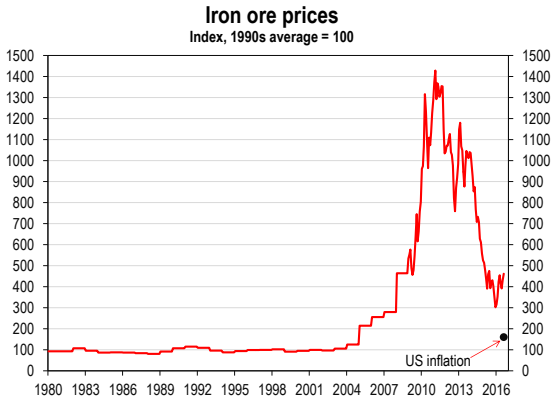
Source: IMF; HSBC

5.7. Copper prices are still well above 1990s levels



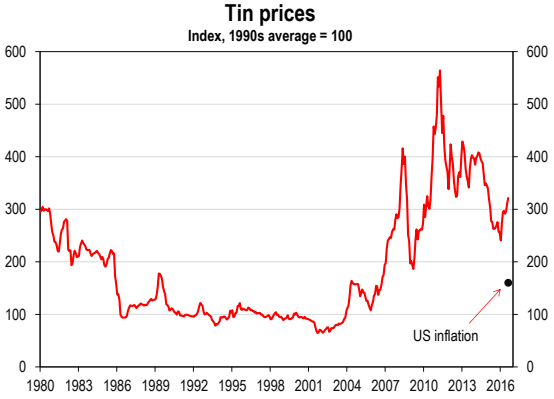
Source: IMF; HSBC

5.8. Iron ore prices have rallied solidly since early 2016



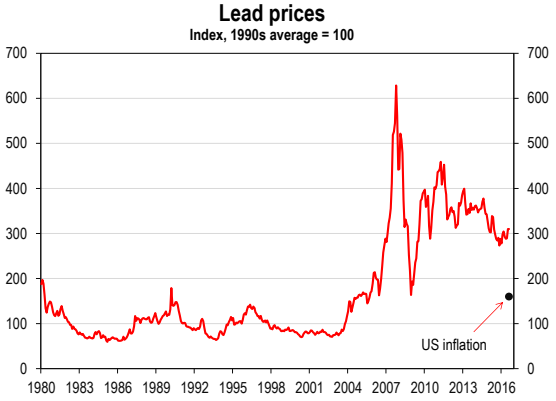
Source: IMF; HSBC

5.9. Tin prices have increased since early 2016



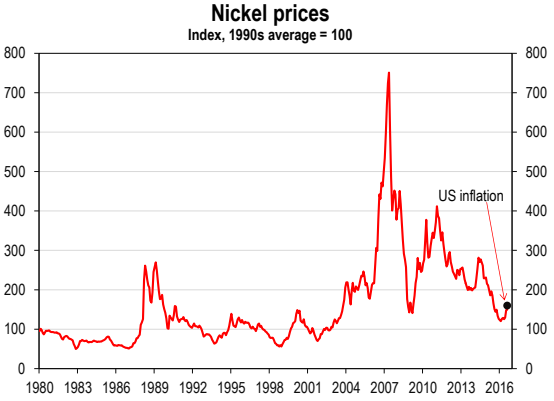
Source: IMF; HSBC

5.10. Lead prices are still well above 1990s averages



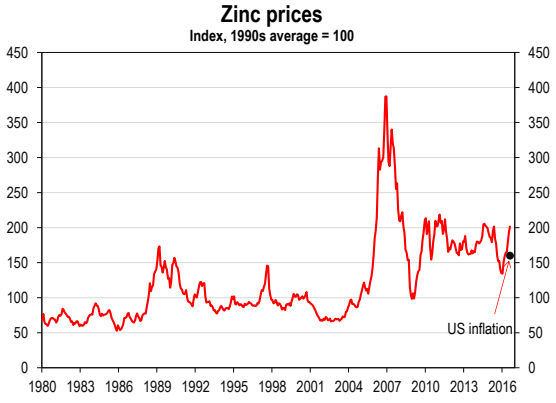
Source: IMF; HSBC

5.11. Nickel prices have rallied solidly since early 2016



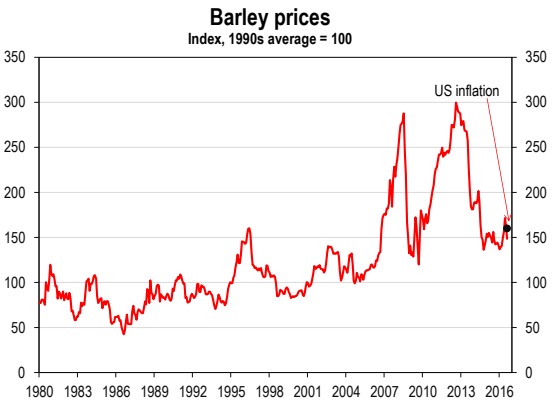
Source: IMF; HSBC

5.12. Zinc prices have increased strongly since early 2016



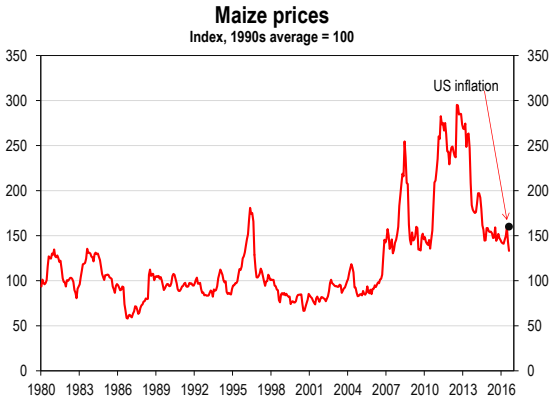
Source: IMF; HSBC

5.13. Barley prices have increased solidly this year so far



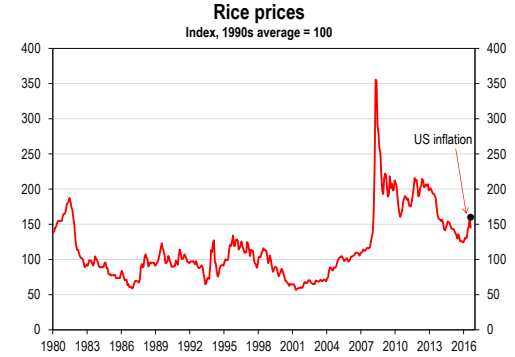
Source: IMF; HSBC

5.14. Maize (corn) prices have fallen in recent months



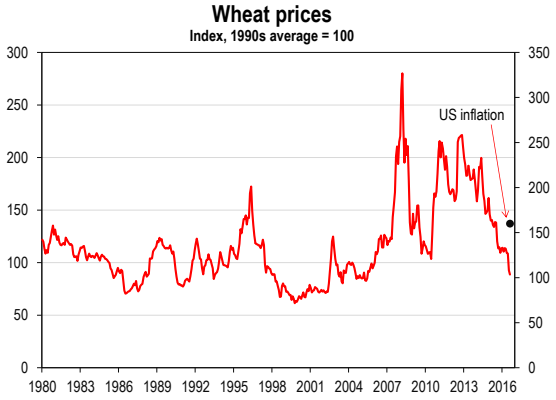
Source: IMF; HSBC

5.15. Rice prices have increased solidly this year so far



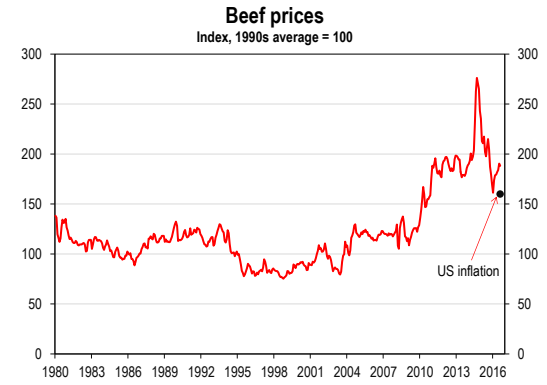
Source: IMF; HSBC

5.16. Wheat prices have fallen sharply this year so far



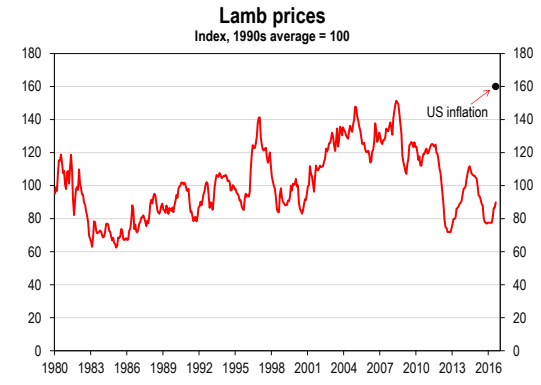
Source: IMF; HSBC

5.17. Beef prices have risen sharply this year so far



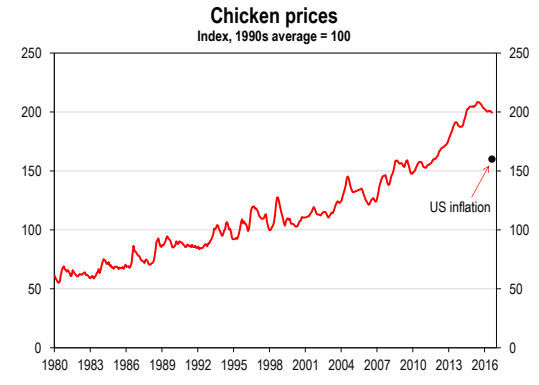
Source: IMF; HSBC

5.18. Lamb prices have edged higher but remain low



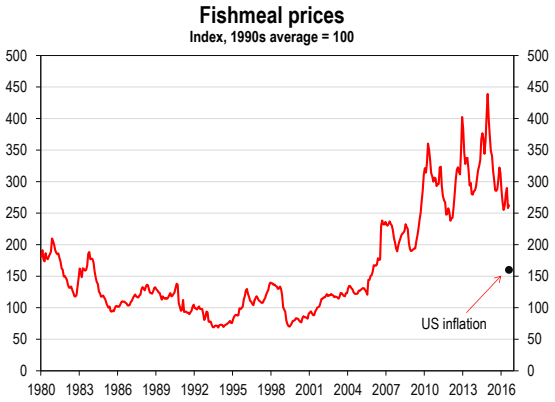
Source: IMF; HSBC

5.19. Chicken prices trending higher



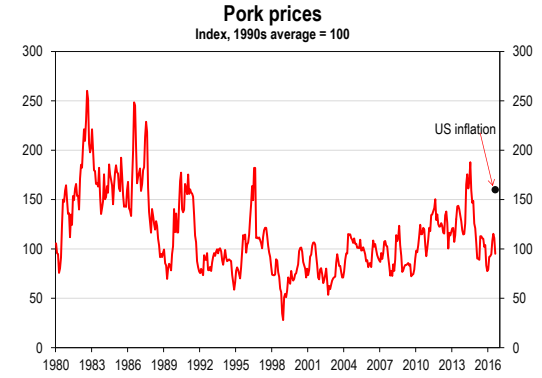
Source: IMF; HSBC

5.20. Fishmeal prices are high, but have fallen recently



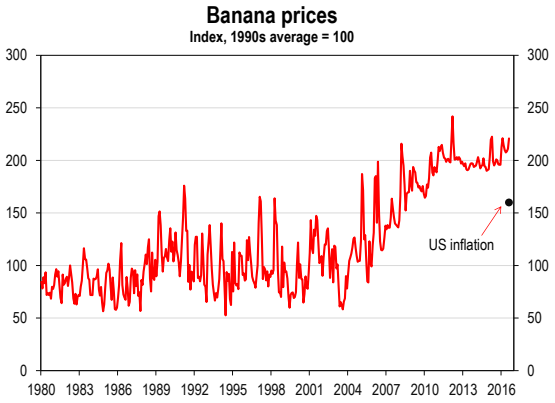
Source: IMF; HSBC

5.21. Pork prices have increased solidly this year so far



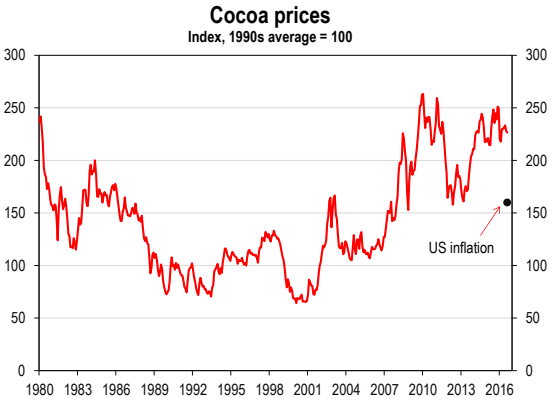
Source: IMF; HSBC

5.22. Banana prices have outpaced US inflation



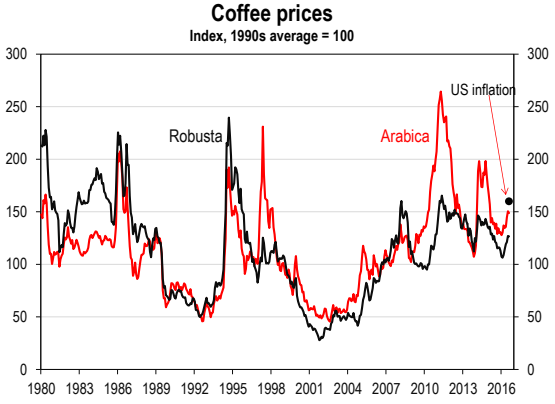
Source: IMF; HSBC

5.23. Cocoa prices are above real 1990s average levels



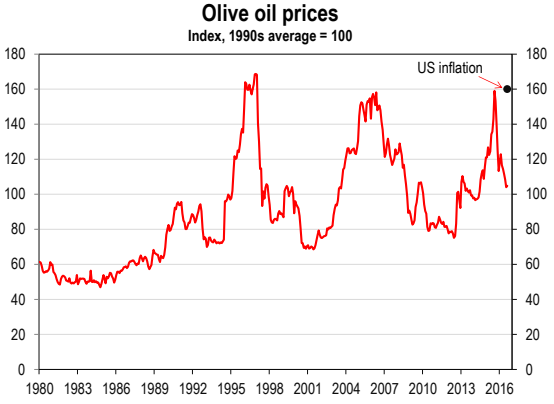
Source: IMF; HSBC

5.24. Coffee prices have risen recently



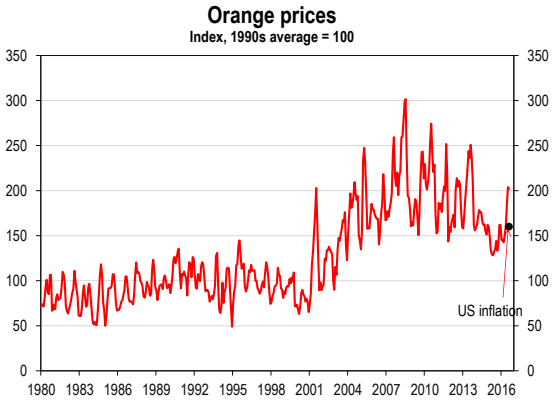
Source: IMF; HSBC

5.25. Olive oil prices have fallen to below 1990s real averages



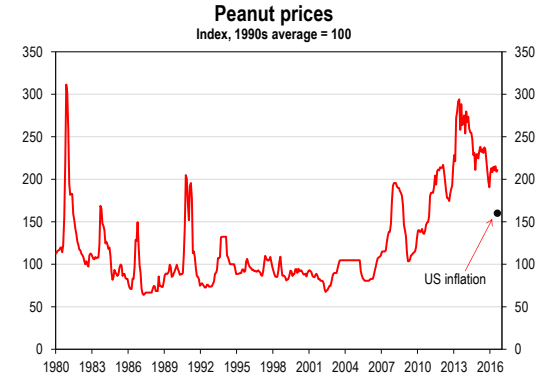
Source: IMF; HSBC

5.26. Orange prices have risen sharply this year



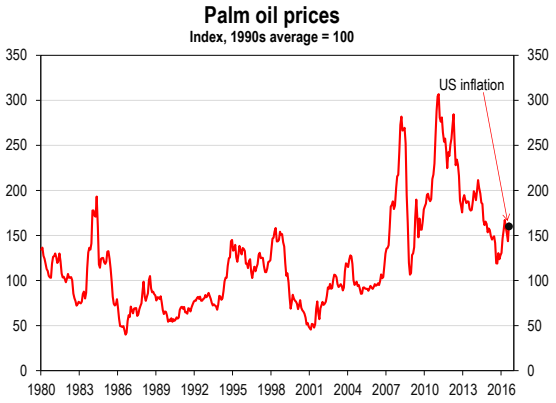
Source: IMF; HSBC

5.27. Peanut prices are above 1990s average levels in real terms



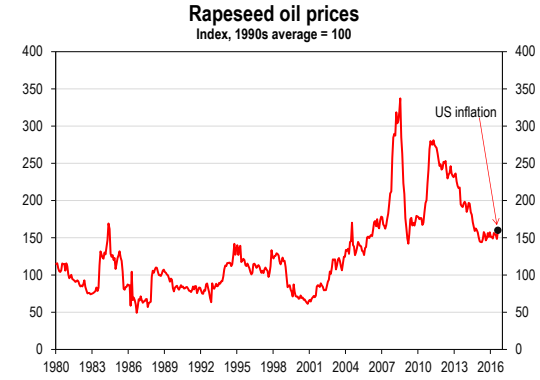
Source: IMF; HSBC

5.28. Palm oil prices have picked up this year



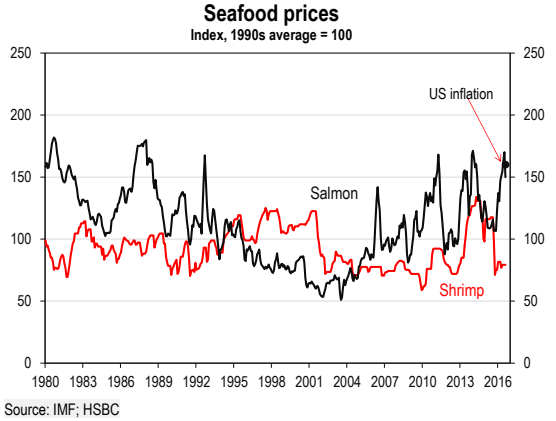
Source: IMF; HSBC

5.29. Rapeseed oil prices have kept up with US inflation



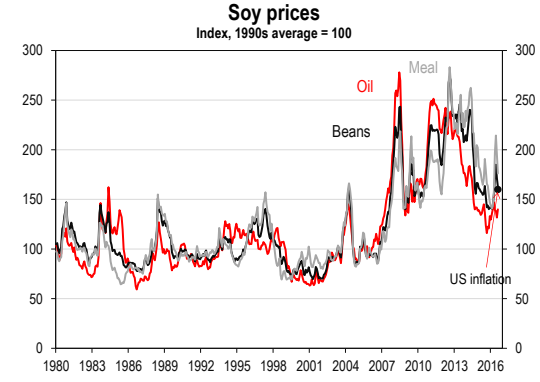
Source: IMF; HSBC

5.30. Salmon prices have picked up sharply this year



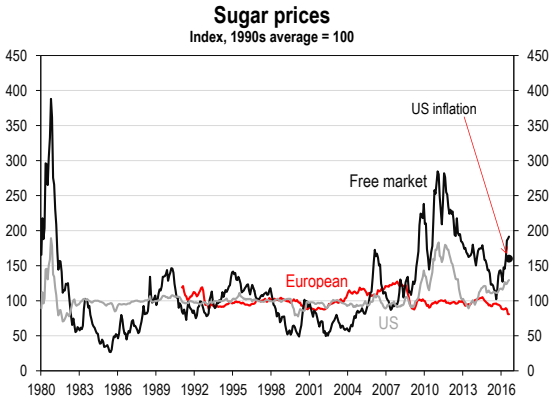
Source: IMF; HSBC

5.31. Soy prices have picked up strong this year so far



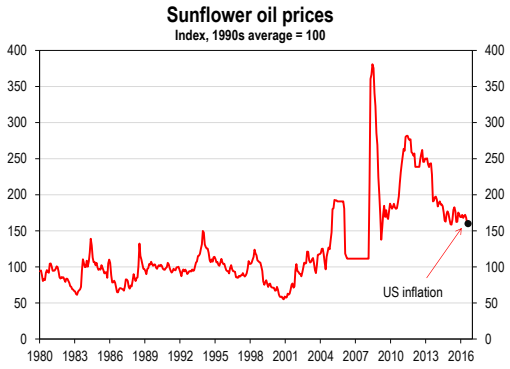
Source: IMF; HSBC

5.32. Sugar prices have risen strongly this year



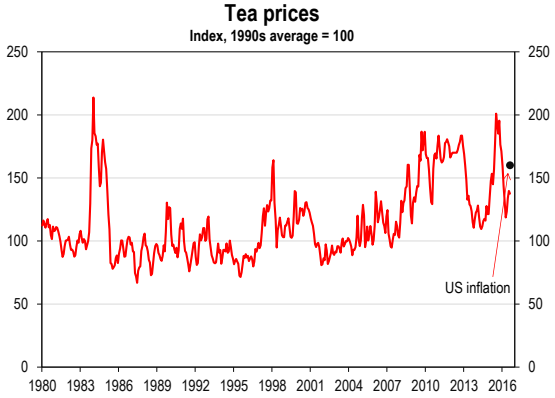
Source: IMF; HSBC

5.33. Sunflower oil prices have kept up with US inflation



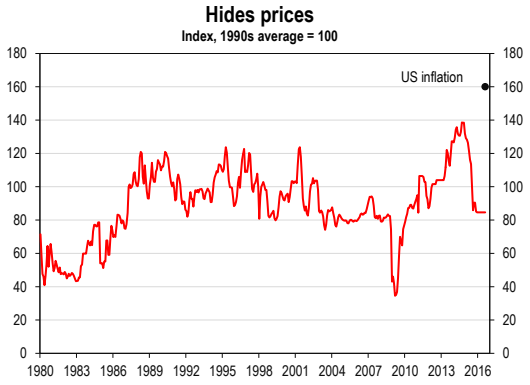
Source: IMF; HSBC

5.34. Tea prices have risen in recent months



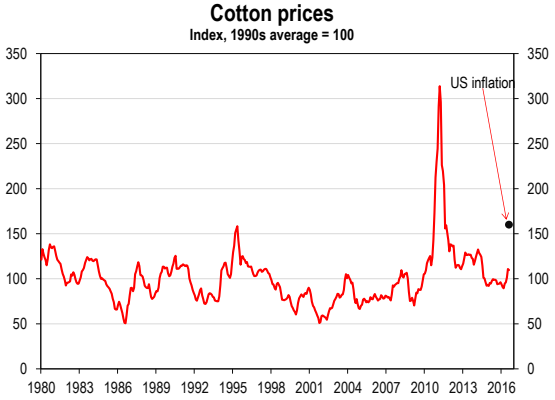
Source: GlobalDairyTrade; HSBC

5.35. Hide prices have fallen to low levels



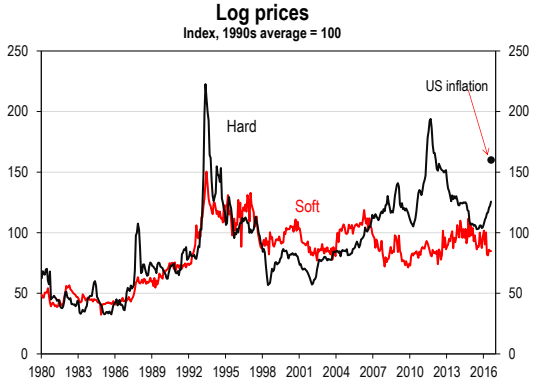
Source: IMF; HSBC

5.36. Cotton prices have picked up this year so far



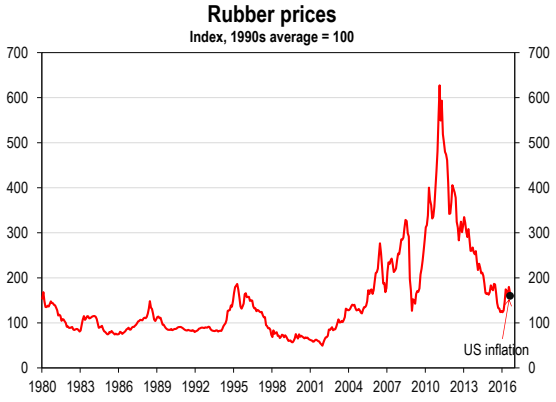
Source: IMF; HSBC

5.37. Hardwood prices have lifted in recent months



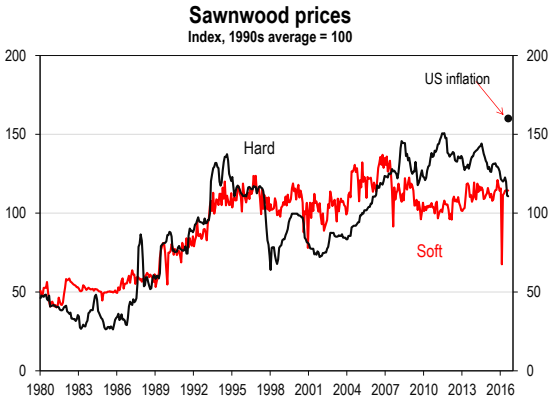
Source: IMF; HSBC

5.38. Rubber prices have picked up this year



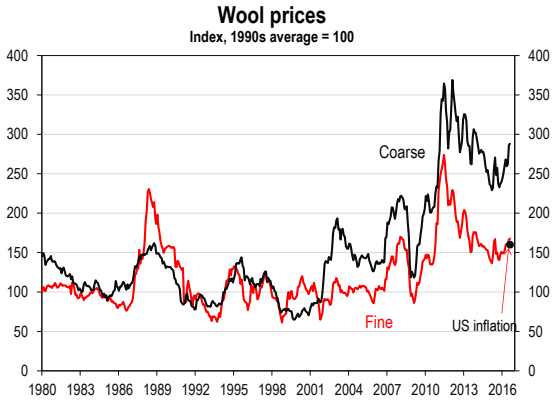
Source: IMF; HSBC

5.39. Sawnwood prices are well below 1990s real averages



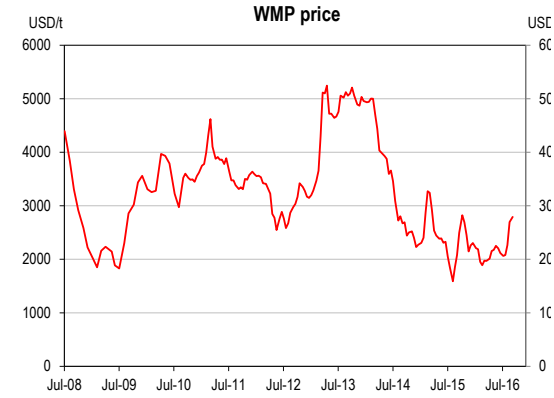
Source: IMF; HSBC

5.40. Coarse wool prices have picked up sharply recently



Source: IMF; HSBC

5.41. Dairy prices have lifted recently



Source: Global Dairy Trade

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Upside/Downside is the percentage difference between the target price and the share price.

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