

Global Commodities

Finding the new normal



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- ▶ **Slowing demand and rising supply have led to a sharp drop in commodity prices**
- ▶ **In the near term, prices will likely remain under pressure amid soft China demand**
- ▶ **But, long term, the rise of EM still offers support, notably for high-grade materials**

Super, really?

Commodities have had a rough ride recently. The sharp fall in oil prices is perhaps the most ‘spectacular’ example, but the IMF’s broad index of raw material costs is down by a significant 35% since July 2014, the sharpest fall since 2008. What’s going on? A combination of disappointing demand growth and a substantial ramp-up in supply is likely to blame.

The speed of this adjustment has taken many, including us, by surprise (see Bloxham, P. et al., *Global Commodity Prices: More Super, Less cycle*, 5 September 2013). This raises broader questions about whether the ‘super cycle’ in commodities has run its course. In the near term, at least, further softness may well be on the cards: growth in emerging markets (EM), above all China, the largest source of commodities demand, looks wobbly. At the same time, soaring investment in the resources sector in recent years has started to raise supply.

Further out, however, a few supporting factors are at work as well. First, assuming that growth in emerging economies will continue to exceed that in the developing world, global GDP growth should stay more ‘commodity-intensive’ than, say, in the 1980s and 1990s. Second, the recent sharp fall in prices, along with a broadly higher cost base for many commodities (think water shortages for agriculture, or non-conventional oil production) should ultimately lead to a shake out of excess capacity and help to stabilise prices.

This points to a new trend for commodities: differentiation. Whereas over the last ‘super cycle’ the price of most raw materials soared, in coming years, we expect higher grade commodities – like nickel and zinc – and ‘finer foods’ – such as meat, dairy and sugar – to outperform as EM development continues. Also, low-cost producers – like Australia (iron ore), Brazil (soft commodities), and Chile (copper) – should gain market share as high-cost ventures are exited.

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Commodities are way down, but are they out?

- ▶ Commodity prices fell surprisingly sharply in the past nine months, driven by both weaker demand and a sharp ramp-up in supply
- ▶ In the short run, more supply and the downswing in EM growth could exert continued downward pressure on commodity prices
- ▶ In the medium term, some support may come from the reduction in excess capacity and costly supply for a range of commodities and by solid medium-term demand as EM growth beats the developed world

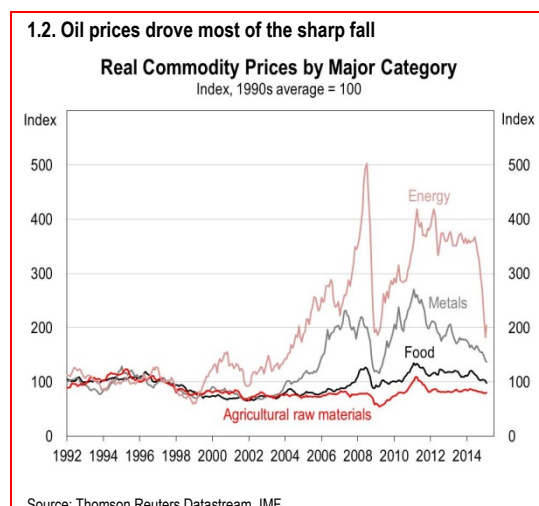
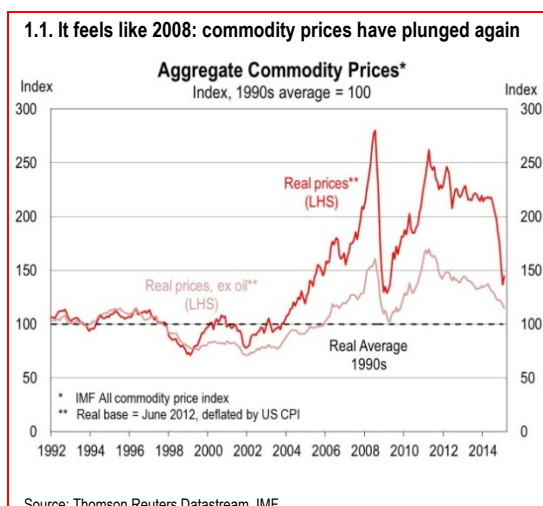
Surprised by the large price fall

We've been among those pointing to a 'super cycle' in commodities (see, for example, Paul Bloxham et al., *Commodities and the global economy: are current high prices the new normal?*, August 2012). In recent months, however, prices have plunged: the broad IMF index that we track is down over 35% since mid-2014, with 44 out of 52 commodities of the basket recording a decline (Chart 1.1). Does this mean the 'super cycle' has come to a crushing end? Well, yes and no. What we, and others, probably underestimated is the substantial supply that has come on stream in recent years. At the same time, there has been a dip in demand, particularly in China, arguably the largest driver of raw material prices in recent years.

In the near term, therefore, there may be further pain to come: excess supply will not vanish overnight and we remain cautious on the outlook for global growth, including that of EM for the time being (see, for example,

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1.3. Commodities with the largest price falls since June 2014 (as of February 2015)

Per cent	Change since June 2014	Change since peak in 2011	Relative to the 1990s average*
Oil	-49	-53	+47
Pork	-46	-33	-66
Iron ore	-32	-65	+322
Soybeans	-31	-27	+4

Source: IMF. *Inflation-adjusted terms

Stephen King, et al., *Global Economics Quarterly: The new Surrealism*, 20 March 2015). Those ‘eye-popping’ commodity prices – think back to Brent oil spiking to over USD140 a barrel or the iron ore benchmark topping USD180 a tonne – are, therefore, likely to be a thing of the past. From this perspective, in short, the ‘super cycle’ is probably over, meeting an earlier demise than we had expected.

At the same time, some of the trends we outlined in our previous reports are likely to remain intact over the medium term: the rise of EM means that global GDP growth should remain more commodity-intensive than it was a few decades ago. In real terms, therefore, prices may remain structurally higher than in the 1980s or 1990s for a while. This, of course, is of little consolation to firms currently facing a steep drop in prices. Especially, the myriad of ‘marginal’ producers that has entered the sector in recent years, sustained by thin margins, are feeling the pain. However, this also points to a possible shake-out that should finally bring about a stabilisation in prices: as excess capacity is shuttered, demand and supply should come back into balance.

Perhaps ‘super cycle’ is, therefore, no longer the most appropriate term to describe the ‘new normal’ for commodities (though judging from the large price swings over the last decade, it was certainly apt). However, amid all the recent volatility and headlines, it is also important to keep some broader trends in perspective – most of which suggest that the sector will still face relatively robust demand growth in years to come. In this report, we track some of the recent developments and argue that EM demand will remain a key driver over the longer term, especially for higher grade commodities like certain metals and foodstuff.

Last time, it was the global financial crisis

The fall in commodity prices over the past nine months has been the sharpest decline since 2008. Between July 2008 and December 2008 commodity prices fell by 55%. Although the recent 35% decline is less than the fall we saw in 2008, it was the second largest decline in the 23-year history of the IMF index. The decline is also comparable to previous large declines in commodity prices that have been observed over the past century (see below).

However, the 2008 decline appears to be easier to explain than the 2014 episode. The failure of Lehman Brothers, the freezing up of the global financial system, resulted in the first contraction in global GDP in the post-war period, which clearly weighed on demand for commodities. The extent of the negative demand shock in 2008-09 explains the substantial decline in commodity prices.

By comparison, the explanation for the fall in commodity prices in the past nine months is less obvious. What seems clear is that the world did not face a widespread demand shock like during the 2008-09 event. However, growth in emerging economies has surprised on the downside over the past year. And, importantly, it is these emerging economies that tend to drive marginal demand for commodities, given they are at the ‘commodity-intensive’ stage of their development. Although outright growth in emerging

economies remains faster than the developed world, the greater downside surprises to EM economic growth forecasts could be having a large effect on commodity demand (see King, S. (2014), [The economics of oil: Crude hope, complicated reality](#), 5 December). Realised demand was also clearly lower than expected demand, particularly than that expected by many resources companies; however, the size and speed of the decline in commodity prices suggests that the fall was not just due to a fall in demand.

This time it may be more than just demand

It seems likely that the strong ramp-up in commodity supply that has occurred over the past year has been a contributor to the price fall. To get a better handle on this, it helps to look at individual commodities. In particular, two key commodities that saw the largest falls recently were oil and iron ore.

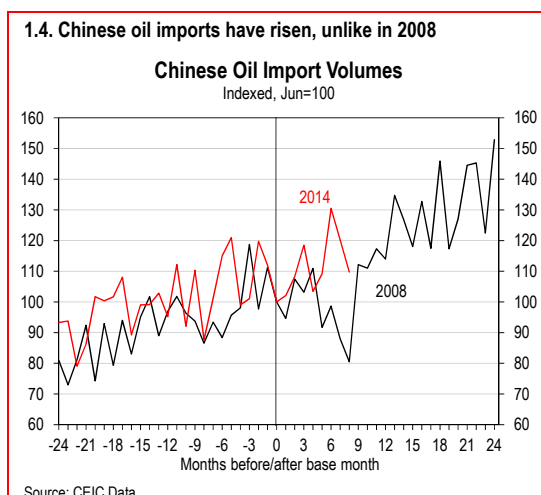
For oil and iron ore there is clear evidence of a strong ramp-up in supply in the past nine months and, although growth in demand has also slowed, the trend in demand is different to that which occurred in 2008-09. The strongest source of marginal demand for both of these commodities is China, and Chinese import numbers show significantly different trends to those observed in 2008-09.

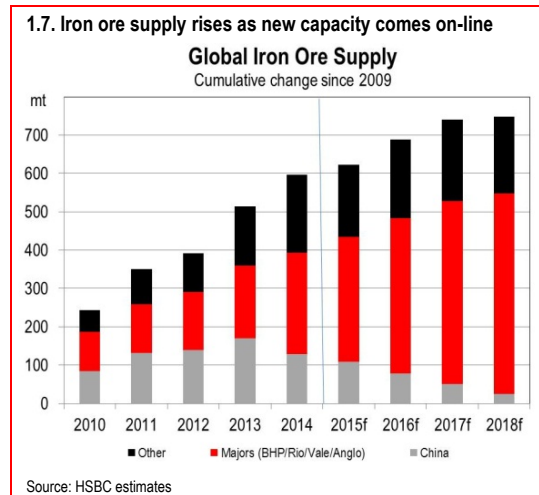
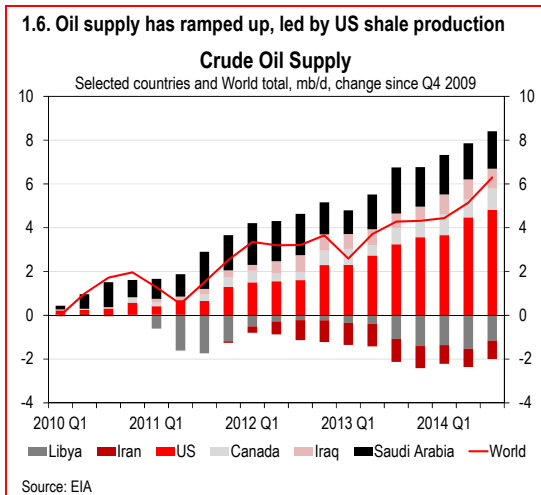
Oil import volumes into China have risen by 3.6% over the past nine months, while they fell by 1.0% over the nine months from June 2008 (Chart 1.4). Iron ore import volumes into China have also continued to rise over the past nine months (up 3.0%) and, although growth has slowed from the previous year, it is still much faster than in 2008, when Chinese iron ore import volumes rose by 1.9% in the nine months following June 2008 (Chart 1.5).

Broader estimates of global demand for oil and iron ore also show a similar picture, see Chapters 2 and 3 of this report for more details on demand for these commodities.

Largest falls for commodities in strongest supply

The timing of the decline in commodity prices also suggests that supply is likely to have been the major factor at work. The ramp-up in commodity demand that began in 2004-05, led by the industrialisation and urbanisation of China, also saw a significant ramp-up in global investment in the mining and oil and gas sectors. But, because it takes a number of years to explore, develop and then build capacity to extract

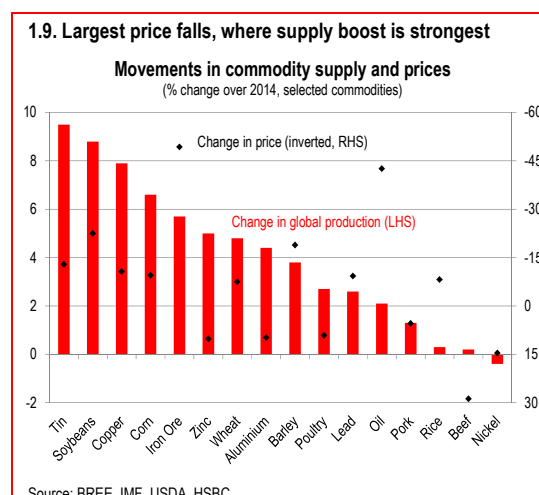
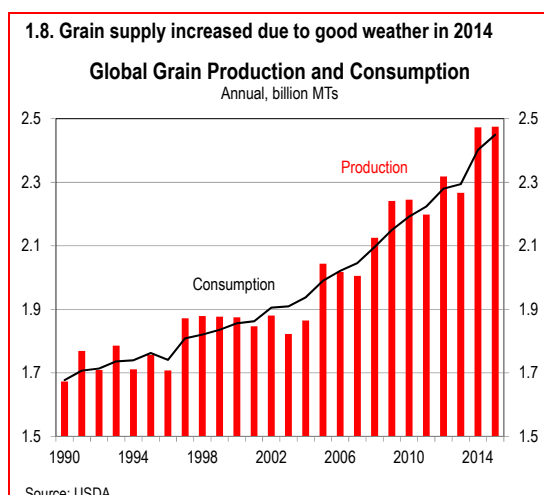




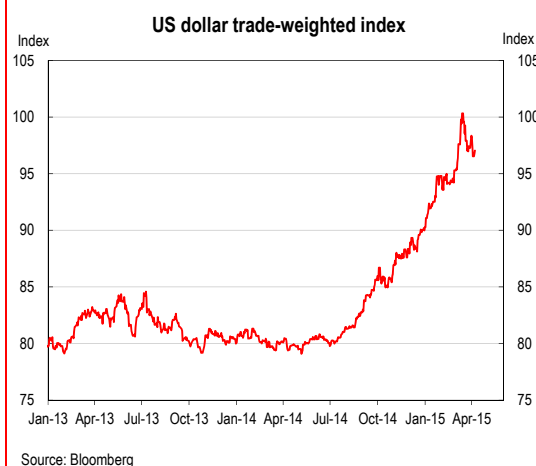
resources, there can be a long lead time between the ramp-up in demand and the arrival of commodity supply. History shows that these commodity investment cycles can typically take 7-10 years between exploration and production.

For oil, a key development has been that new technology has improved the economic viability of oil production from shale and there has been a significant ramp-up in oil production in the United States as a consequence. US oil production has increased by around 4.8m barrels a day over the past five years, which is around 5% of global supply (Chart 1.6). Iron ore supply has also ramped up significantly over the past year or so. Investment in capacity in Australia and Brazil has seen global iron ore production rise from 1.6bn tonnes in 2009 to 2.2bn tonnes in 2014 (Chart 1.7).

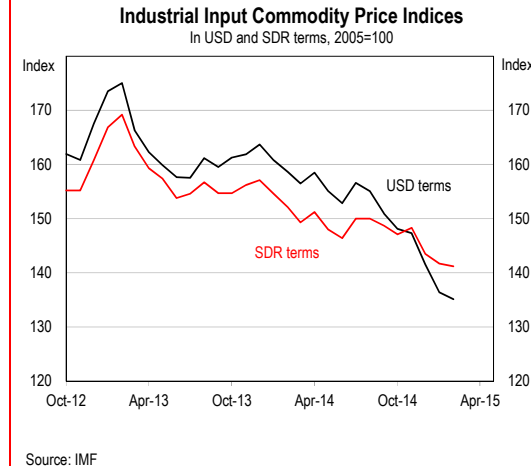
Other commodities that showed the sharpest falls in prices in the past nine months have also seen strong supply growth. The weather in the Northern hemisphere was particularly favourable for a range of grains during the 2014 growing season, which saw a jump in global grain production to record levels (Chart 1.8). Soybean production hit record levels in the US in 2014 due to favourable weather conditions in the main soybean growing regions. Pork supply also rose in the second half of 2014 as the impact of a porcine virus on US production faded through the year.



1.10. USD trade-weighted index is up 22% since June 2014



1.11. Industrial commodities have fallen less relative to SDRs



An examination of a range of commodities for which we have good estimates of global supply and demand shows that there have been strong increases in production across a broad range of commodities over the past year and that the largest price falls have generally been for the commodities with the largest ramp-up in supply over the past year, although this story, as always, is not universal (Chart 1.9). For example, strong increases in the supply of zinc and aluminium over 2014 were met with similarly large increases in usage/consumption.

USD strength matters

Another factor that has driven commodity prices lower recently has been USD strength. Typically, when the USD appreciates, commodity prices tend to fall in USD terms. This was observed during the previous periods of significant USD appreciation: for instance, between 1995 and 2001 non-oil commodity prices declined by 19% (oil prices rose following sharp cuts to OPEC quotas in 1998 and 1999). The recent appreciation of the USD has contributed to the fall in commodity prices (Chart 1.10). Comparing the recent fall in commodity prices in USD terms (-35%) to the measured decline in SDRs (-29%) gives some sense of the influence that USD strength may be having on commodity prices (Chart 1.11).

The long-run context

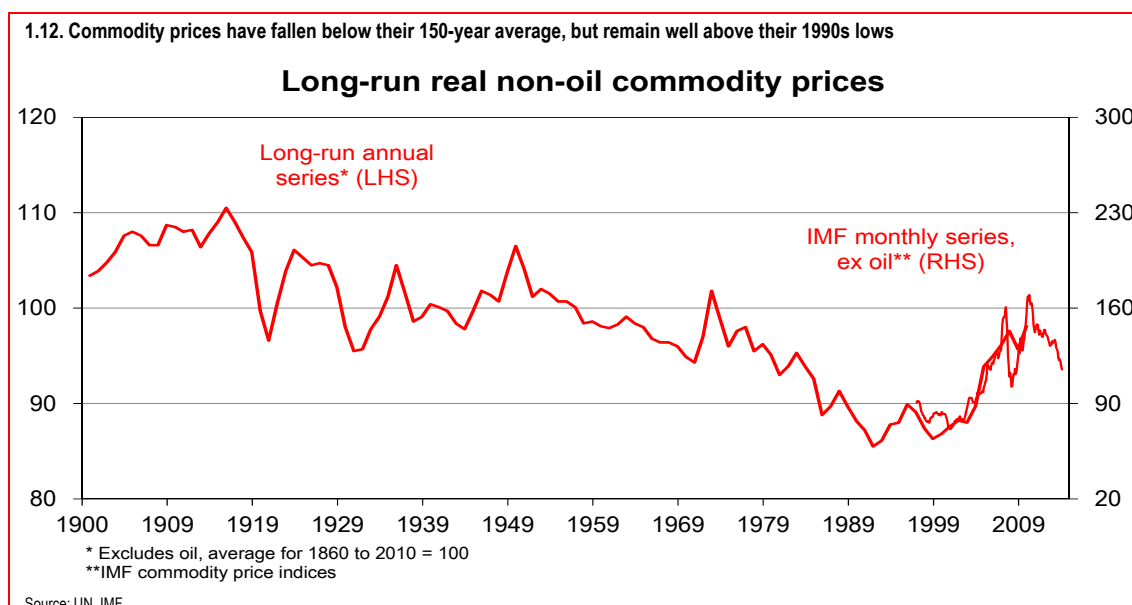
A long-run view reminds us that commodity prices still remain above the low levels of the 1990s. In inflation-adjusted terms, material prices (excluding oil) are now below their 150-year average but above their 1990s average (Chart 1.12). A quick look across the basket of commodities reveals that half of the commodities in the IMF index remain above their 1990s average in inflation-adjusted terms (Chart 1.13). Although oil and iron ore prices have fallen, they remain 47% and 322% above their 1990s averages, respectively (Chart 1.14). Most of the metals and energy commodities remain above the 1990s levels.

Cautiously, looking forward

Forecasting commodity prices is a tricky business and the recent sharp decline in prices reminds all observers that it pays to be humble. In the short run, it seems likely that commodity prices will remain subdued. On the demand side, this is likely to be driven by the current downswing in emerging economy growth. The supply side is also likely to keep prices subdued in the short run, as there is significant supply expected to come on-line across a range of commodities, particularly metals. Clearly, the dynamics differ for the demand and supply of different commodities. Chapters 2, 3 and 4 provide some more specifics about the various commodities.

We continue to expect that commodity prices will remain above their 1990s levels in the medium term. Back in 2012, we had in mind that materials prices (excluding oil) would eventually settle 30-60% higher than their 1990s levels, in inflation-adjusted terms, and we remain comfortable with this outlook (see Bloxham, P. et al (2012) *Commodities and global economy: Are current high prices the new normal?*, 8 August). Prices are currently around 35% above their 1990s average levels.

There are three key factors that should support commodity prices in the medium term. First, the cost of producing some commodities has risen (particularly oil) as producers have needed to apply more costly techniques to extract lower grade or less accessible resources (such as shale oil). Second, commodities have become an increasingly important ingredient in global growth, as emerging economies have become the largest contributors to global demand and their growth is more 'commodity-intensive' than developed economy growth. Finally, it is HSBC's view that the current USD bull run may be nearing its end, which should be broadly supportive of commodity prices (see Bloom, D. and Maher, D. (2015) [Currency Special: USD bull run: the beginning of the end](#), 19 March).



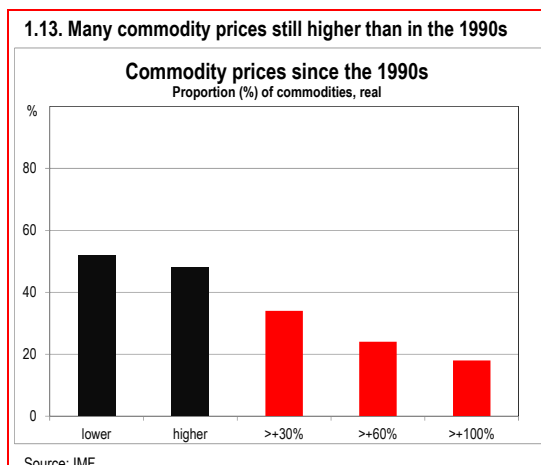
Costs expected to support prices

As commodity prices climbed through the decade leading up to 2011, more investment was made in higher cost projects that relied on higher prices to remain profitable. This reflected that lower quality and less accessible resources became profitable due to the higher prices of the commodities (such as shale oil). Project costs also increased as the significant ramp-up in resources sector investment put strains on the supply of skilled workers and equipment in these industries, although these factors are more cyclical than structural.

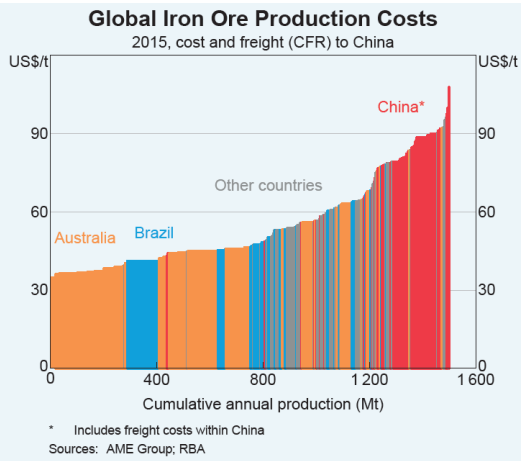
As these projects have come on-line, commodity supply has increased and prices have been falling, which puts pressure on some of the higher cost production facilities. Many resources companies have been aggressively seeking to cut costs so as to remain profitable despite lower commodity prices.

For some commodities it is also likely that the high cost of some of the more marginal production should see a reduction in supply as these projects become unprofitable.

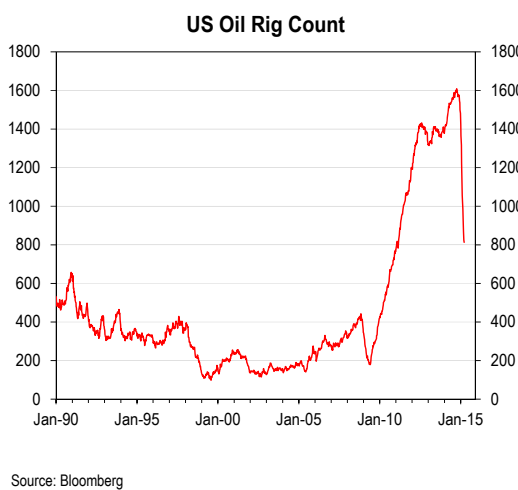
For iron ore, the cost of production of much of current global supply is above the spot price. Estimates suggest that around one-third of global iron ore supply is currently loss-making, with much of this supply coming from China (1.15). There is already clear evidence that this force is at work in US oil production, where the previous ramp-up in high-cost oil production is now running in reverse. A key gauge of this has been a sharp fall in the oil rig count (Chart 1.16).



1.15. USD60/t spot price of iron ore should reduce supply



1.16. The US rig count has fallen sharply in recent months

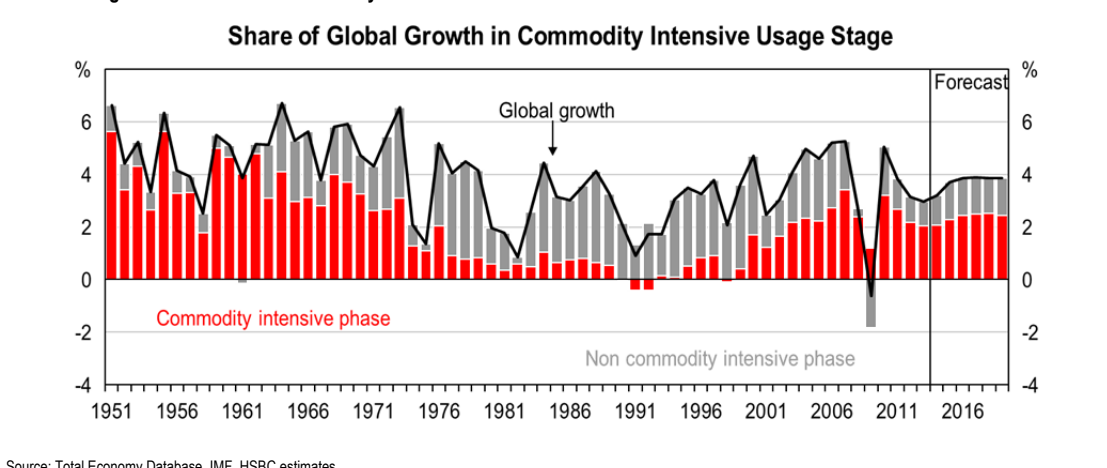


Medium-term demand expected to remain solid

We continue to expect solid medium-term demand for commodities, which should support prices. We remain of the view that demand should be stronger than it was in the 1990s, when commodity prices were low. Global growth appears to have become more ‘commodity-intensive’ in the past decade than in was in the 1980s and 1990s, because emerging economies are now larger drivers of global growth and they are at the stage of development, when commodity demand is high.

Our estimates still suggest that global growth should continue to be dominated by countries that are at the ‘commodity-intensive’ stage of their development. In previous work we have shown that countries enter the ‘commodity-intensive’ stage of development, when their per capita GDP rise is above USD3,000 but still below USD20,000 (see Bloxham, P. et al (2012) *Commodities and global economy: Are current high prices the new normal?*, 8 August). The bulk of global growth is still expected to come from countries that are at this ‘commodity-intensive’ stage of development (Chart 1.17). Much more of global growth is also now dominated by countries at this stage of development than was the case in the 1980s and 1990s, with the ‘commodity-intensive’ nature of global growth more similar to the 1950s, 1960s and 1970s.

1.17. Global growth is now more ‘commodity-intensive’



1.18. Types of commodities in demand may change as countries develop

	Commodity demand growth by development stage		
	Least developed	Emerging	Developed
Cereals	High	Modest	Low
Metals	Low	High	Modest
Animal products	Low	High	High
Vegetable oil	Low	High	High
Energy	Low	High	High

Source: HSBC

The recent improvement in economic conditions in India is of particular relevance to commodity markets. Last year's change of government in India, a recent lift in GDP growth, and the government's plans for a significant boost to infrastructure development are all promising developments for medium-term commodity demand. For more on India see Bhandari, P. (2015) [India's budget: Economics and FX views](#), 28 February, and Bloxham, P. and Neumann, F. (2014) *Commodities and India: If India lifts, commodity demand could too*, 28 May.

USD bull run may be near its end

The USD has risen significantly over the past year, which, as we discuss above, has been a contributor to the recent fall in commodity prices. However, HSBC's FX research team has recently shifted to the view that the USD bull run may be nearing its end. If this is the case, it is likely to lend support to commodity prices. See Bloom, D. and Maher, D. (2015) [Currency Special: USD bull run: the beginning of the end](#), 19 March.

Higher use commodities favoured

With aggregate commodity prices having fallen sharply, relative pricing becomes much more important. As might be expected, not all commodities are the same, and as countries get richer and global growth is increasingly dominated by emerging economies, some commodities are likely to be in higher demand than others. As we noted above, the 'super cycle' story has not really applied to agricultural commodity prices in the recent cycle.

Research we have done can help to determine with commodities are likely to be in high demand in the future. The general pattern is that at low levels of development, country demand is highest for basic foods, such as grains (Table 1.18). At higher levels of development, demand for metals and energy rises as urbanisation and industrialisation ramps up, while grain demand falls and demand for meat, sugar, oils and dairy products rises.

Using data from 37 different countries over available history we have demonstrated that the current stage of development of most emerging economies suggests that there should be: greater upside potential to medium-term demand for higher grade metals, such as zinc and nickel, than for iron ore; gas should be favoured over thermal coal; and demand for the 'finer foods' (meat, sugar, oils and dairy) should also be strongest (see Bloxham, P. et al (2014) *Global agricultural commodities: Demand is shifting to the finer foods*, 18 March). Of course, these estimates of demand need to be considered in the context of available supply of these commodities.

Chapter 2, 3 and 4 below set out some thoughts on the balance of demand and supply for metals, oil and gas and agricultural commodities, followed by a section looking at developments across 52 commodities.

Metals supply ramping up, while short-run demand has weakened

- ▶ New capacity has ramped up over the past year, as the 7-10 year investment cycle has finally delivered a boost to supply
- ▶ This ramp-up in supply is arriving at a time, when emerging economies are in an economic downswing
- ▶ In the medium term, the recent fall in metals prices should make the more marginal productive capacity uneconomic, reducing supply of some metals, which should, in turn, support prices

Capacity is ramping up

It takes many years to bring new metals supply onto the global market. Over the past decade, these long lead times were drawn out by underinvestment in exploration in the 1990s, as a result of low commodity prices during that period, and the 2008 global financial crisis, which disrupted progress, albeit only temporarily. Nonetheless, the ramp-up in investment in resources sector capacity continued until its peak in 2012 – this was apparent in key commodity producers, such as Australia (Chart 2.1).

Given that the ramp-up in mining investment generally began in around 2005, it should be unsurprising that it has started to deliver an increase in global metals supply in recent years. Typical cycles for investment in the metals sector take 7-10 years from the exploration to the production stage.

2014 was a significant year for supply

As we pointed out in the first chapter, however, few observers expected to see commodity prices fall as sharply as they did in 2014. For metals, there is clear evidence that the largest price falls occurred for those metals, where supply was strongest. A clear example of this is the stark contrast between iron ore and copper prices. Through 2014, iron ore prices fell by 50%, while copper prices fell by only 11%. Both of these metals saw some slowdown in demand, particularly as China's housing sector has been in a downswing, but the stark contrast in price performance mostly reflects supply-side factors. This supply-side story extends across the range of metals.

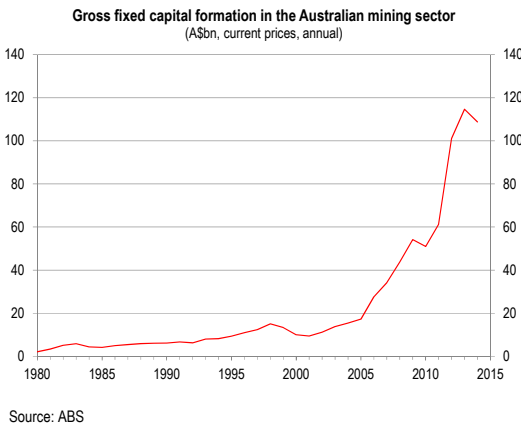
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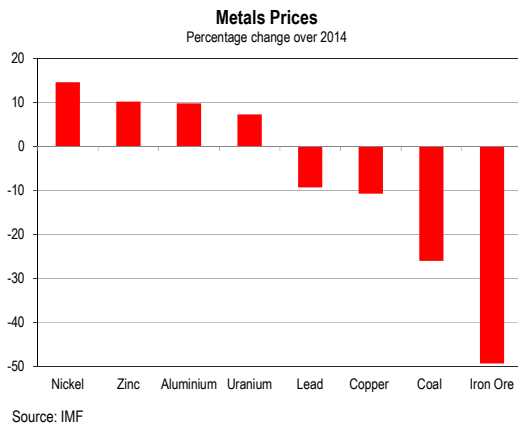
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2.1. Mining investment peaked at a high level in 2012-13



2.2. Prices fell most, where supply was strongest



A look at some key metals

Iron ore: Waiting for China to cut production – by Paul Bloxham

Iron ore prices have fallen by 75% since their peak in January 2011, with around 50ppt of this decline occurring over 2014. The current iron ore spot price is USD47 a tonne. The decline in the iron ore price followed a substantial run-up in the iron ore price, which saw it peak at over 1,300% above its 1990s average level (Chart 2.3). The decline also still leaves the iron ore price over 300% higher than it was in the 1990s and around its 2008 level.

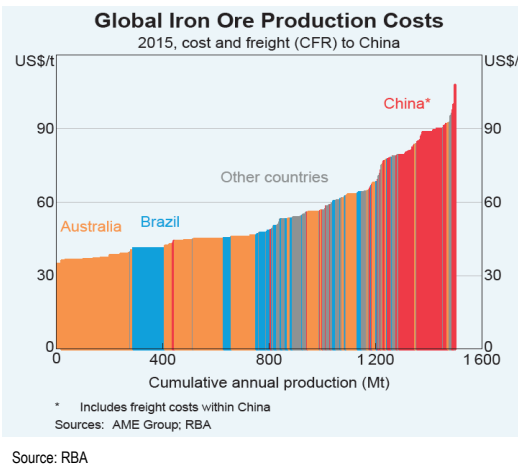
The substantial run-up in the price between 2008 and 2011 reflects the combination of the large boost to infrastructure and housing construction projects in China in the wake of the global financial crisis, which supported steel demand, and the fact that there is a long lead time for iron ore mines to come on-line.

We contend that although the fall in the iron ore price since its peak in 2011 reflects some easing in the pace of growth in Chinese demand, the main factor at work is the substantial ramp-up in iron ore supply as a consequence of significant investment in new capacity. The past year has seen particularly strong growth in iron ore production, with global exports rising by 10% in 2014, up from 6% growth in 2013.

2.3. Iron price is a long way down from its peak but still high



2.4. Current spot price below one-third of producers costs



2.5. Iron ore export forecasts

mt	2012	2013	2014	2015	% Change*
Australia	492	579	718	766	56
Brazil	327	330	362	388	19
India (net)	16	9	-3	-2	--
Canada	35	36	34	29	-17
South Africa	54	48	46	43	-20
World	1154	1225	1353	1392	--
(growth)		6.1	10.4	2.9	21

Source: Australian Bureau of Resources Economics. *2012 to 2015

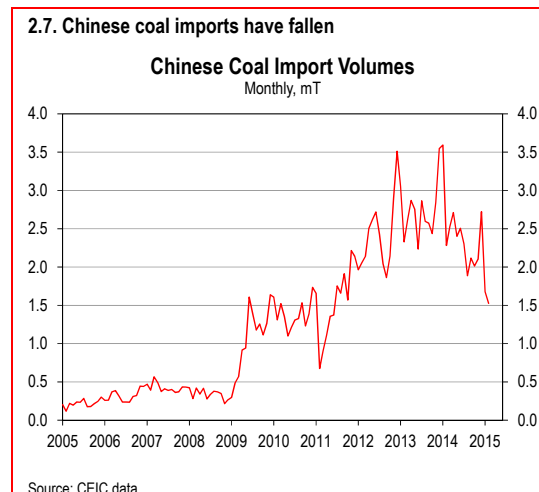
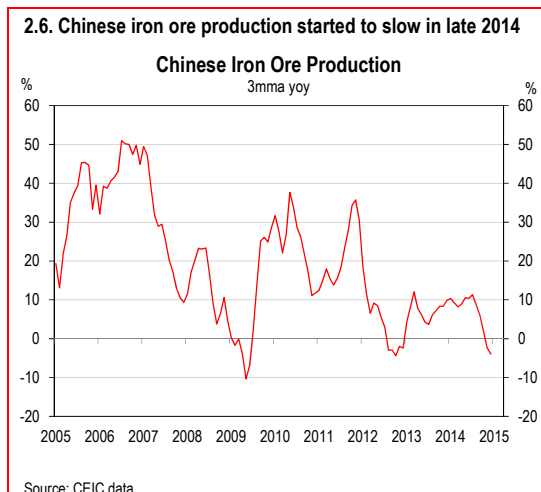
The pace of growth in exports is expected to slow to 3% in 2015, with slower growth in supply expected to support prices (Table 2.5).

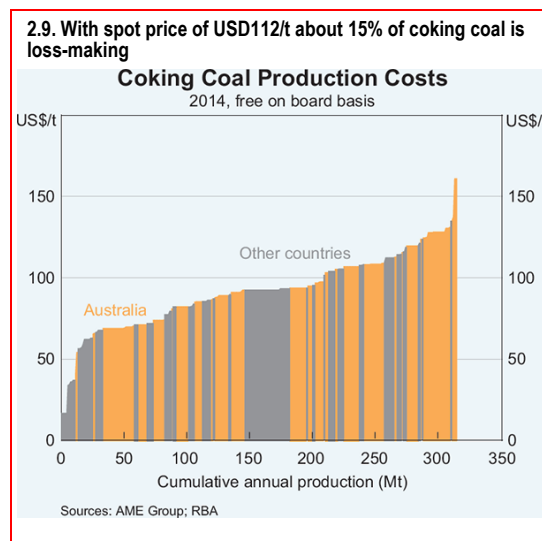
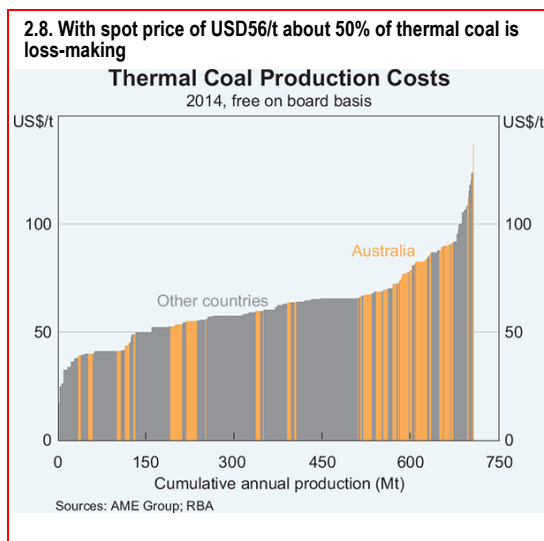
Another factor that may support iron ore prices is the nature of the cost curve. Current estimates of the cost curve suggest that around one-third of global production is currently operating at a loss. Much of this production is in China (Chart 2.4). At current spot prices, economics may suggest that the Chinese producers should reduce their production and choose to import more iron ore.

The challenge, however, is that many of these mines are operated by vertically integrated state-owned enterprises that may be willing to run at a loss on iron ore production, while generating profit elsewhere. Chinese iron ore production growth did show signs of slowing over late 2014; however, so far there has been little evidence of any significant cuts to output (Chart 2.6). For more on iron ore see, see Zimmermann, T. (2015) *No more iron awe: Lacklustre pricing to inhibit sustainable earnings momentum*, 16 March.

Thermal coal: Excess supply likely – by Daniel Smith and Paul Bloxham

Thermal coal prices have fallen steadily since early 2011 and are now a little over 50% below those levels, at USD56 a tonne. Growth in demand has slowed as preferences shift towards cleaner forms of energy. In particular, China has implemented restrictions on coal imports, as well as domestic production. These restrictions partly drove an estimated 11% fall in China's coal imports in 2014 compared to 2013. Despite these measures, China's coal inventories remain elevated.





The global market appears to be oversupplied, a situation that is likely to get worse before it gets better. New supply continues to come on-line, while producers have so far shown limited appetite to restrict production in an effort to support prices.

At the current price of USD55-60 a tonne, around half of global capacity may already be operating at a loss, with a number of Australian mines, in particular, likely to be running at a loss (Chart 2.8). Take-or-pay transport contracts, through which a number of the large coal miners have locked in transport volumes, mean that mine closures have been delayed as companies seek to cover the fixed costs associated with these contracts. In the absence of a significant rise in prices, however, it is likely that producers will have to scale back output at some point. Until that happens, prices are likely to remain low.

Although many countries, especially in the developed world, are increasingly turning to cleaner sources of energy, coal is likely to remain important to meeting new energy demands in emerging economies. In particular, India is likely to meet most of its energy needs from coal. The Australian Department of Industry and Science predicts that, even with strong growth in domestic production, India's coal imports are forecast to grow by an average annual rate of 7% between now and 2020.

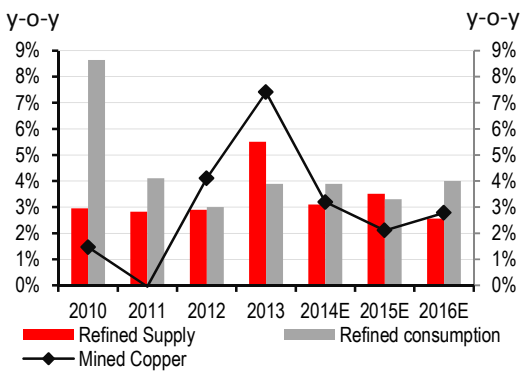
Over the medium term, the removal of high-cost production and continued growth in demand from emerging economies may support prices, although prices are likely to remain weak in the near term and are unlikely to return to the high levels reached in the late 2000s.

Coking coal: Still oversupplied – by Daniel Smith and Paul Bloxham

The coking coal market is also suffering from some apparent oversupply, although relative to the cost base, profitability is higher than for thermal coal. Prices have fallen by 65% since early 2011 and 16% over the past year. At current prices, of around USD112 a tonne, around 15% of global production could be operating at a loss (Chart 2.9). As a result, some producers have started to scale back output, with around 2% of global capacity (equal to 25m tonnes) closed during 2014.

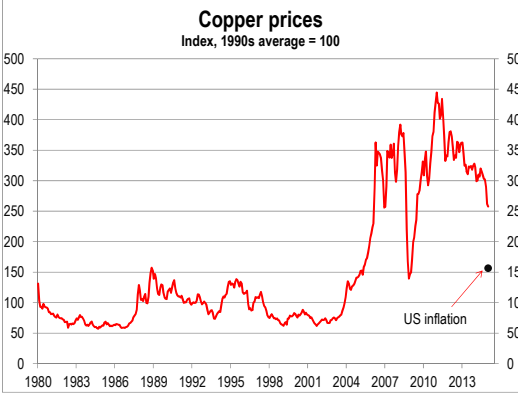
The demand outlook softened a little over 2014 as Chinese growth slowed and the construction sector, in particular, saw lower activity levels. One offsetting factor was a strong lift in import demand from India.

2.10. Copper is not expected to be over-supplied



Source: HSBC

2.11. Copper prices are still high, despite falling



Source: IMF

Indian demand is likely to continue growing strongly over coming years as infrastructure development and steel production increase. We also expect Chinese steel production to continue increasing, although given the significant ramp-up since 2003, at a much slower rate than in recent years. Given steadily increasing demand and some signs of a slowdown in supply, the coking coal market is likely to return to balance sooner than the market for thermal coal.

Copper: Not that much supply – by Jorge Morgenstern and Andre Loes

Demand for refined copper may slow down, but we believe it still maintains a healthy growth rate.

China explains almost half of the world’s consumption, so demand is highly correlated with its economic outlook. HSBC’s latest estimate is that the growth pace of global consumption for 2015-16, at 3.7% average, would only come down marginally from 3.9% in 2013-14 (Chart 2.10) (see *Metals Quarterly: Q1 2015*, 18 January). Besides China, higher GDP growth in the United States (8% of the world’s consumption) is expected to push copper consumption growth back to positive territory following a decline in 2014.

An investment ramp-up in the earlier part of the decade is resulting in a mini-surge in supply in 2013-15, with a 4.2% annual growth for the period, according to HSBC’s metals research team’s latest estimates. This contrasts with the 1.8% growth averaged in 2010-12.

Investment in the mining industry has retrenched since, and we believe it will continue to do so for the next 2-3 years. For major global mining corporations, capital expenditure would have fallen 40%. Remarkably, the cycle of capital spending has been so extreme that this – the largest contraction ever seen – is only expected to return total investment to levels similar to those seen in 2010 (see Zimmermann, T. *et al* (2014) *Seismic Shifts: Trends set to reshape the investment landscape*, 27 November). Such a slowdown in investment may lead to a significant slowdown in supply growth later in the decade. HSBC’s latest estimate is that growth of mined copper could come to a stop in 2018.

In 2014, larger-than-expected disruptions and delays in supply more than offset the impact of weaker-than-expected demand. As a result, surplus estimates for 2015 are now lower than previously thought. In the near term, significant production capacity is still in the pipeline, but the possibility of new disruptions and unforeseen delays could lead to tighter-than-expected market conditions.

It is worth highlighting that the consensus view is that the market could experience a significant surplus in the future. Official price forecasts from the Chilean Copper Commission, for example, are based on supply growth estimates averaging 6.2% growth for 2015-16, with demand expanding at an average 2.4% rate in the period (see Copper market trends report, Cochilco, April 2015).

In contrast, we believe the above mentioned reduction in investment may be reflected in market conditions later in the decade. In line with our general view of commodities, we see demand supported by higher 'commodity-intensive' growth as emerging market economies explain a larger share of global GDP. Higher extraction costs could also support prices, as ore grades deteriorate and resources required for copper production increase (Chart 2.11).

Aluminium: Cutting supply on costs – Daniel Smith and Paul Bloxham

Aluminium has experienced better support for prices than most other metals over the past year as consumption grew faster than supply; global stocks fell by 11% over the year. Aluminium prices have remained broadly steady over the past year, with the current spot price around USD0.81 a pound.

Since 2008, when the global financial crisis struck, prices have, though, been persistently lower than during the mid-2000s. As a result, many producers have willingly made cuts to production. That has kept supply running below demand outside of China. Within China, production has grown much more strongly, meaning that the local market is now running a persistent supply surplus. Chinese production has lifted from 36% of the world's total in 2009 to around 52% in 2014.

The outlook for demand has deteriorated a little over the past year due to slower growth in emerging markets. Consumption growth is likely to remain relatively robust, though, driven by demand from the construction, consumer durables and automotive sectors.

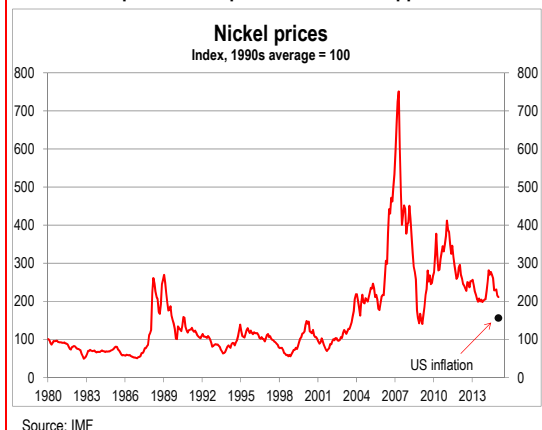
The experience of the past few years suggests that supply is quite responsive to prices. Further weakness may see more production cutbacks, while significantly stronger prices could be met by new production. An environment of low energy prices and, therefore, falling production costs may also limit the upside potential to prices.

Nickel: Export bans limit supply – by Daniel Smith and Paul Bloxham

Indonesia introduced a nickel ore export ban in 2014, which resulted in a 42% increase in prices over the first nine months of the year amid fears of reduced supply. However, the supply crunch was not as great as had been expected, with the Philippines stepping up supply to China. As a result, prices fell back quite sharply late in the year (Chart 2.12).

Overall, we estimate that global production was unchanged in 2014 from the previous year, having grown by 13% in 2013. Growth in overall supply is likely to remain limited over coming years, which should support prices. In addition, the cost of production is expected to rise as global nickel sulphide deposits are depleted over time. This should lead to a shift towards lower grade ores and higher cost of production. Demand growth is likely to remain strong, driven by rising stainless steel production, particularly in China and the US.

2.12. Nickel prices are expected to be well supported



2.13. Zinc prices have been rising recently



Zinc: Supply is struggling to keep up – by Daniel Smith and Paul Bloxham

While many other metals are tied to infrastructure development and the construction sector, zinc demand is more closely related to consumer goods and automobiles. As a result, zinc is less exposed to the slowing Chinese property sector.

Demand has been growing faster than supply for a number of years, which has seen inventories of zinc fall. Global zinc stocks have declined from 58 days of consumption in 2011 to 31 days in late 2014. Based on HSBC’s metals research team’s current forecasts for supply and demand growth, those stocks are likely to be virtually eliminated by 2018 (see *Metals Quarterly: Q1 2015*, 18 January). Recent prices, while well supported, have not been high enough to encourage major investment in new capacity. In addition, supply growth will be limited by the closure of several major production facilities, most notably the Century mine in Australia. Like nickel, much of the ‘low-hanging fruit’ may already have been exploited and so what growth in supply there is over coming years may be from lower grade ores. Such a trend could increase the cost of production and further support prices (Chart 2.13).

The combination of relatively strong growth in consumption and limited increases in supply are likely to support zinc prices in the short term (Table 2.14).

2.14. We generally expect metals prices to remain stable or rise in coming years

	Current spot price	2015e	2016e	Long term
Aluminium (USD/lb)	0.81	0.87	0.91	1.02
Copper (USD/lb)	2.72	2.92	3.63	3.20
Nickel (USD/lb)	5.90	9.30	9.98	9.34
Zinc (USD/lb)	0.96	1.09	1.22	0.89
Iron ore (USD/t)	47	59	59	58
Thermal coal (USD/t)	56	66	70	80
Coking coal (USD/t)	112	122	130	140

Source: HSBC estimates

Oil price fall set to drive weaker non-OPEC supply

- ▶ The main driver of the oil market imbalance has been the pace of growth in US unconventional supply in recent years
- ▶ This was exacerbated by demand growth downgrades in the second half of 2014, but these appear to have stabilised
- ▶ In the absence of supply cuts from OPEC, weak prices are set to rebalance the market: we expect prices to rise modestly over 2015-17 as non-OPEC supply growth slows materially

Confluence of factors behind crude price collapse

In our view, the sharp fall in crude prices in the past few months has several root causes.

Most material of these has been the pace of growth in US tight oil production in recent years (Chart 3.1). This drove total US output growth of 4mbd over 2010-14, which on its own outpaced the growth in global demand slightly.

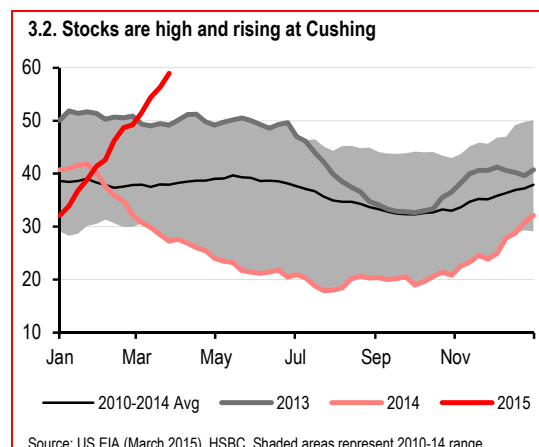
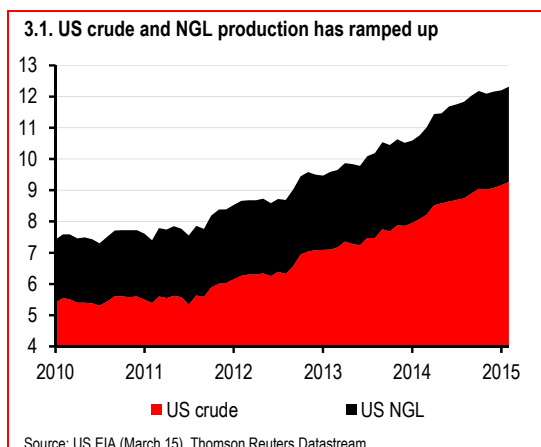
On top of this, the second half of 2014 saw a steady flow of downgrades to estimates of global demand growth. This put further pressure on the call on OPEC crude – or the amount needed from OPEC to maintain the market in balance. This call was flat at around 31mbd through 2011-13, but most estimates had it falling closer to 29mbd for 2015.

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In the face of this pressure on its market share, OPEC – driven by Saudi Arabia in particular – has refused to continue acting as a swing producer. This has left the market looking at a potential surplus of over 1mbd on average in 2015.

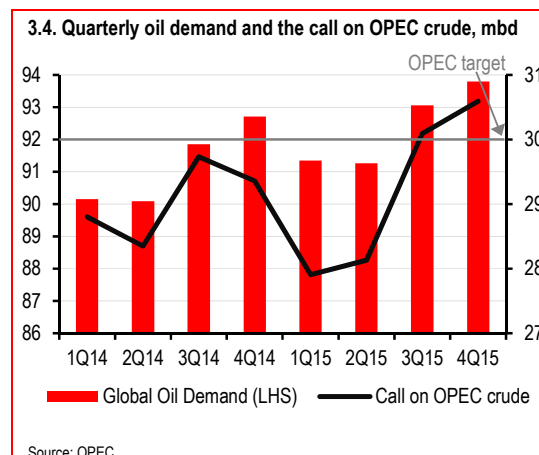
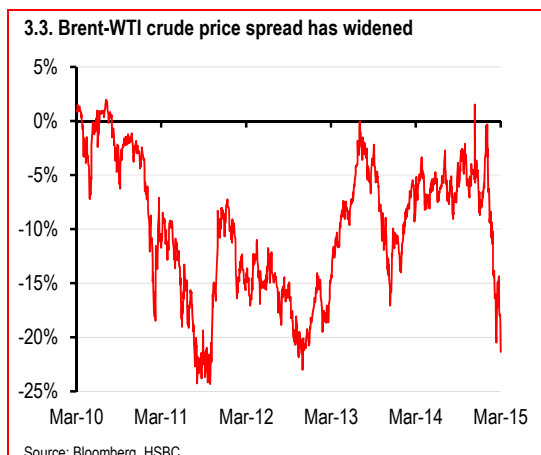
The strength of the USD has also had a marked negative effect on crude prices, although it is difficult to disaggregate the magnitude of this effect relative to the supply and demand dynamics.

Severe near-term pressure on inventories

US inventory data give the most immediate picture of the industry position, which points to a strongly oversupplied market at present (Chart 3.2). The latest data have shown US commercial stocks running 16.2% above their levels of this time last year, and more than 14% higher than their five-year seasonal average. Crude oil stocks at Cushing, Oklahoma (the delivery point for the NYMEX crude contract), have been rising rapidly to around 59mb in recent weeks, moving ever closer to the Cushing tank farm’s estimated working storage capacity of 70.8mb.

The steepness of the contango in the crude futures curve reflects this oversupply and the rising cost of storage, with significant amounts of floating storage having been contracted in recent weeks. If these stock builds continue, as they look set to do, the market may become increasingly concerned that global storage will hit its limits in the coming months – if this is the case, we could see crude test new lows again. The situation looks more severe in the US than elsewhere, as reflected in a rapid widening of the WTI-Brent spread in recent weeks (Chart 3.3).

It is worth remembering that there is a strong seasonal element to current market pressure. While the market looks roughly 1mbd oversupplied in 2015, global demand is normally much weaker in the first half and supply growth is set to slow in 2H15. This seasonal effect puts us right in the eye of the storm for the global imbalance at the moment. According to OPEC’s estimates, the call on OPEC crude (i.e., the amount needed to balance the market) is 29.2mbd for 2015, but this comprises a call of 28mbd in the first half, rising to 30.3mbd in the second half – above OPEC’s official output target (Chart 3.4). Therefore, we expect a market much closer to balance in the second half of 2015.



Signs of slower supply growth

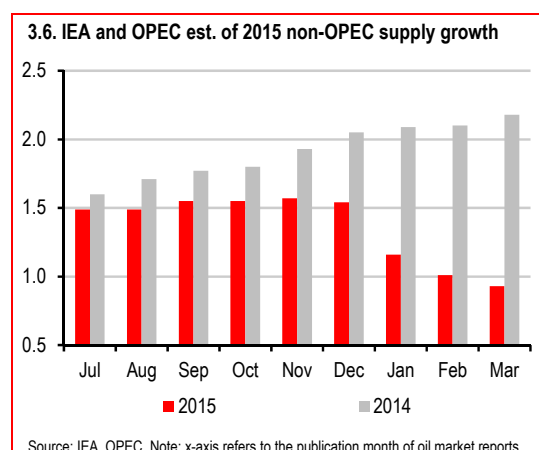
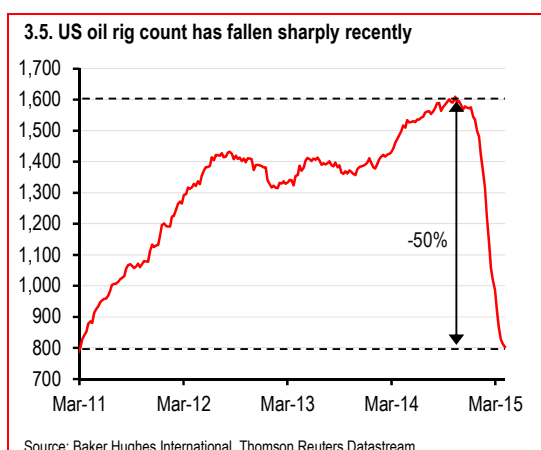
The US rig count data are becoming ever-more closely scrutinised as oil price pressure bears on the unconventional producers in particular. The US oil rig count (the amount of rigs active in drilling liquids wells, as compiled by Baker Hughes International) rose from 200 in early 2009 to a peak of 1,609 in October 2014 (Chart 3.5). Since then, the data have shown an aggressive contraction in drilling activity. The last data point showed the US oil rig count having fallen 50% from its October peak. The plunging rig count points to a deceleration in the rate of growth of US output.

A closer look at the data shows that the falls in the horizontal oil rig count in the three main tight oil producing basins (the Eagle Ford, Permian and Williston) were initially much smaller, with weekly declines of the order of 2.5-3.0% in January. This would support the notion that initial drilling cutbacks were focused mainly on less developed basins and less productive wells. However, cuts to rig activity in the big three basins now seem to be picking up too, with the latest rig count showing a 43% fall from the peak.

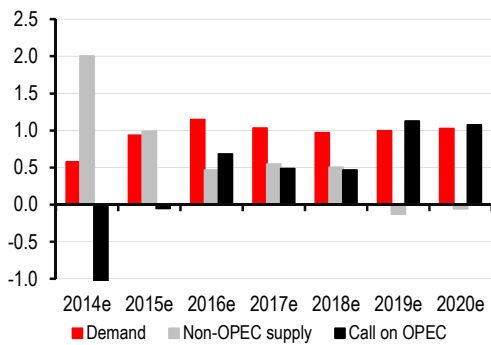
In addition to this, we have seen the first signs of cuts to estimates of non-OPEC growth from both the IEA and OPEC, after a relentless trend of estimate increases in 2H14. In the past three months, both agencies have cut their estimates of 2015 non-OPEC growth by around 0.6mbd.

Demand estimates from both have been broadly unchanged over this period, but the overall effect has been an increase in the estimated 2015 call on OPEC crude from both organisations, i.e. a narrowing of the scale of the perceived imbalance.

Meanwhile, we have seen a litany of comments from companies across the spectrum pointing to a severe contraction in capital expenditure. For the major oils, the brunt of near-term cuts are coming from exploration spend and from deferral of new project sanctions. Companies are seeing the opportunity to capture significant cost deflation before launching new projects, which will inevitably hit volume growth, albeit not really in the near term. However, it has also been interesting to hear several companies pointing to how much pressure their mature businesses are under, and how much scrutiny is going to be applied to near-term spending in these areas. We think the market could be underestimating the fact that while estimates of US tight oil growth are likely to come down in the coming months, it is declines in the rest of non-OPEC volumes (more than 50mbd vs. c5.5mbd of tight oil), which could be of far greater consequence to the global supply/demand balance in the longer term.

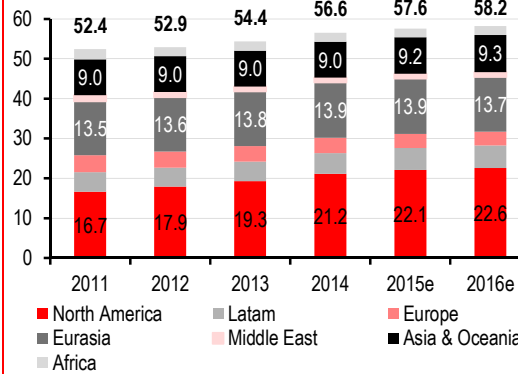


3.7. Changes in supply and demand, 2014-20e, mbd



Source: IEA, OPEC, HSBC estimates

3.8. Non-OPEC supply by region, mbd



Source: US EIA Regional Short-Term Energy Model (March 2015)

A robust medium-term outlook

We continue to believe the current price environment will have the effect intended by OPEC in curbing non-OPEC output and preserving its market share in the longer term. Between 2014 and 2020, we expect global oil demand to rise by 6mbd, with the effects of weakening economic activity offset to some degree by positive effects on developed world demand from price elasticity (Chart 3.7). OPEC's own view of global demand is similar to this; we believe its core aim at present is to ensure that this growth in global demand is not confined to continued growth in the non-OPEC world. In particular, we think OPEC is also aware of the need to accommodate the growth ambitions of its own members.

Outside OPEC, the sharp curtailment of capital spending will likely have some impact on 2015 output, mostly skewed to the second half of the year. We see non-OPEC growth of around 1.0mbd this year, marginally outpacing the growth in global demand and resulting in a call on OPEC crude (the amount needed to balance the market) of 29.4mbd, close to 1mbd below current OPEC production. However, we see non-OPEC growth slowing to 0.5mbd in 2016 and the call on OPEC crude rising to 30mbd – indicating a balanced market within the realms of forecasting error.

From a 2015 base, we see the likelihood that the lasting effects of current weak prices result in non-OPEC growth of less than 1.5mbd in total to 2020, as further growth in areas, such as Canada and Brazil, are offset by declines elsewhere. As a result, we see the call on OPEC crude rising to over 33mbd by end-decade.

This return to market balance, coupled with: 1) the need for OPEC members to preserve revenue streams in the medium term, and 2) the marginal costs of supply from the likes of Canada and the ultra-deepwater – both of which will be needed to satisfy long-term demand – reinforce our confidence in a return to prices in

3.9. HSBC oil and gas price assumptions

Yearly		2011	2012	2013	2014	2015e	2016e	2017e	2018e
Brent	USD/bbl	110.9	111.7	108.7	99.5	62.5	75.0	90.0	95.0
WTI	USD/bbl	95.1	94.1	97.9	93.1	55.5	70.0	85.0	90.0
W Canada Select	USD/bbl	78.4	71.8	73.5	74.4	46.7	56.1	67.3	71.1
Dubai	USD/bbl	106.1	108.9	105.4	96.6	60.2	72.7	87.7	92.7
Nymex gas	USD/mcf	4.03	2.83	3.73	4.27	3.20	4.00	4.25	4.25
UK spot gas	GBPp/th	56.4	59.7	68.2	50.2	44.3	48.3	56.3	61.8

Source: Bloomberg, HSBC estimates

at least the USD90's in the medium term. In fact, the worse the price pressure on a 1-2 year view, the more likely the medium-term price upside if the damage to non-OPEC supply becomes severe enough.

We assume Brent prices average USD62.5/bbl in 2015 (with a quarterly progression of USD55/60/65/70/bbl), USD75/bbl in 2016 and USD90/bbl in 2017 (Table 3.9).

Agricultural commodities: a different story

- ▶ Agricultural prices did not see the ‘super cycle’-related upswing in the early 2000s, unlike metals and energy prices
- ▶ Cereals prices have been cycling around long-run averages, mostly driven by weather variations, with 2014 a particularly good production year, which pushed prices to cyclical lows
- ▶ We still see upside to demand for the ‘finer foods’ – meat, dairy, sugar and edible oils – where we expect on-going strong demand, from emerging economies, and a less responsive supply side

The food story is different

As yet, there has been no ‘super cycle’ effect on agricultural products. Agricultural product prices have risen broadly in line with other consumer prices in the past couple of decades, unlike metals and energy prices. Cereals and higher grade food products have lifted by as much as the US CPI since the 1990s, leaving them broadly flat in inflation-adjusted terms (Charts 4.1 and 4.2). At the same time, raw non-food agricultural product prices have risen by less than the US CPI.

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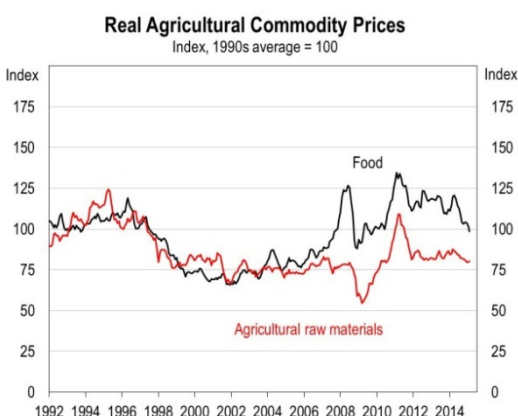
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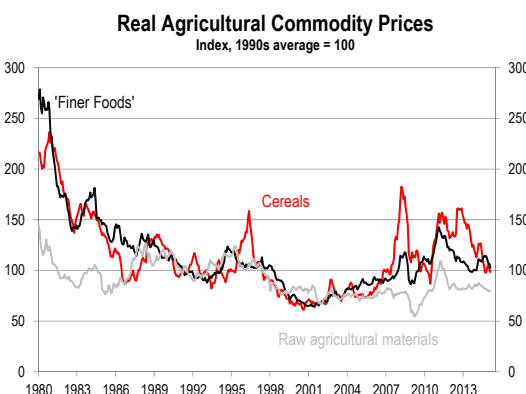
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4.1. Agricultural product prices have moved with inflation



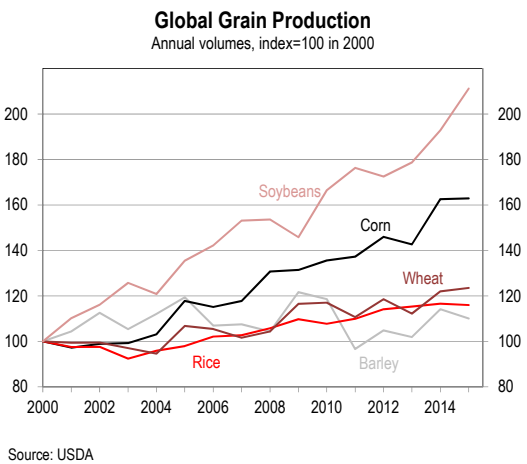
Source: IMF

4.2. Cereals prices have fallen more than 'finer foods'

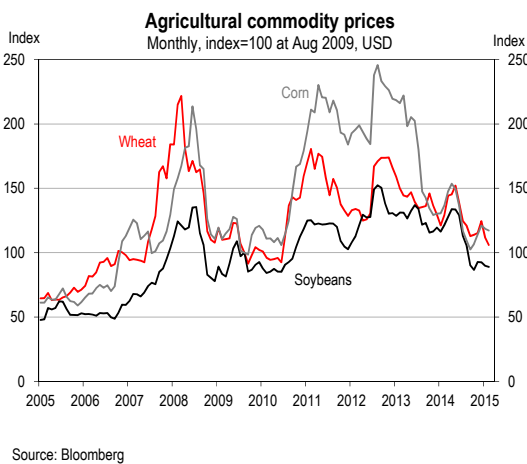


Source: IMF

4.3. Grain production has been strong, particularly for soy



4.4. Most grain prices have fallen over the past year



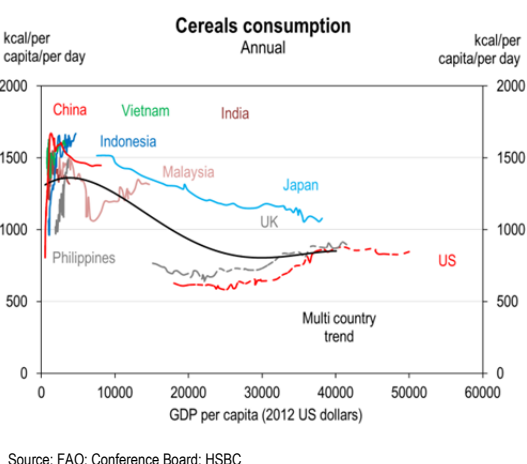
Positive grain supply in 2014

With less variation on the demand side for agricultural commodity prices, than for metals and energy, changes in the prices of these commodities have tended to be driven by developments on the supply side. So it was with 2014. As it turns out, last year was a bumper crop for a range of grains, given good growing weather in the Northern hemisphere. Soybeans and corn saw the largest ramp-up in supply, as production of both grains reached record levels in 2014 due to favourable growing conditions (Chart 4.3). Both of these commodities saw sharp declines in their prices through 2014 (Chart 4.4).

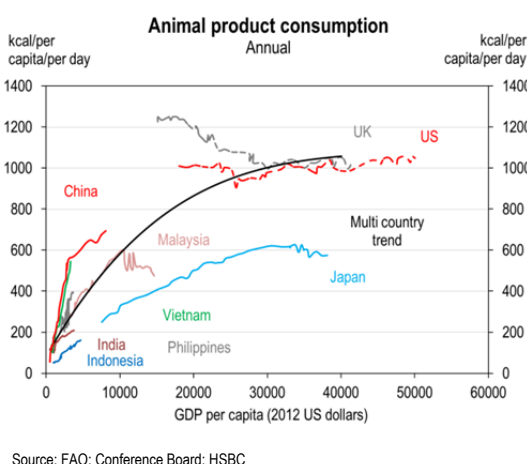
Not all food is the same

To the extent that we see a positive demand story for agricultural commodities in the future, our previous work suggests that it is more likely to occur for meat, dairy, edible oils and sugar – what we have called the ‘finer foods’ – than for grains (see Bloxham, P. et al (2014) *Global agricultural commodities: Demand is shifting to the finer foods*, 18 March). Our argument is based on demand data for the range of food products for 37 countries and all the available time series. In this work we showed that, as countries

4.5. Cereals demand peaks at low economic development



4.6. Animal product demand rises through middle incomes



develop, they consume more of the ‘finer foods’ and fewer grains. Cereals consumption typically peaks at low levels of per capita GDP (Chart 4.5). This analysis shows that per capita cereals consumption, being well passed its peak in developed economies, is, indeed, also past its peak in emerging economies, such as China and India. By contrast, per capita consumption of animal products, such as meat and dairy, typically continues to rise as countries develop and only starts to level out at high levels of per capita GDP (Chart 4.6). As we also pointed out in the previous report, demand for edible oils and sugar tends to follow similar patterns to animal products, rather than cereals in these analyses.

As yet, there is limited evidence of a divergence between price trends for grains and the ‘finer foods’, as we showed in Chart 4.2. This may reflect a positive supply-side response for production of sugar, oils and dairy over the past year. Below we take a look at each of the ‘finer foods’ in more detail as we are continuing to look for signs that these agricultural commodities will outperform grains over time.

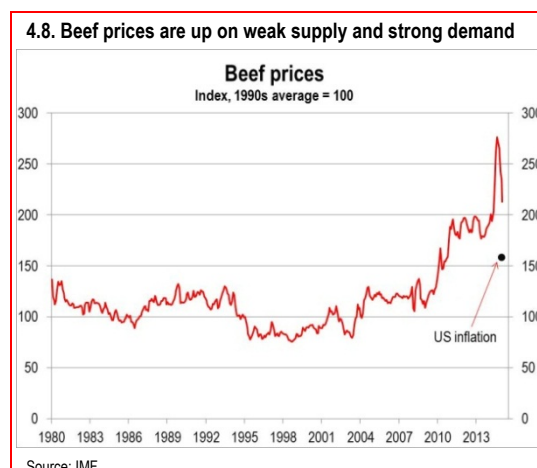
A look at each ‘finer food’

Sugar: Likely to go up from here – by Gustavo Gregori and Alex Falcao

We remain positive on the outlook for sugar prices, despite recent falls (Chart 4.7). We expect that supplies should continue tightening over the coming years, causing deficits and driving prices higher. We expect decreased export availability as key markets, such as Brazil and India, struggle to increase export capacity.

In Brazil, the fall in the exchange rate has helped compensate local producers for the recent drop in future prices, with the price received by mills staying relatively stable despite the drop in the BRL. Going forward we believe prices will have to increase to trigger capacity expansion in the sector as global supplies tighten. Furthermore, the improvements in ethanol dynamics could remove as much as 3.8m tonnes per year of sugar supply as players will continue to use more raw materials for ethanol production.

India’s high cost structure leaves the sector dependent on government subsidies to maintain current levels of crushing rates. We expect subsidies to have lesser impacts this year as export subsidies will not be enough to compensate low short-term prices.



Beef: Downbeat view on grains favours protein players – by Henry Nasser

Beef prices have been rising over the past year, as demand had picked up, particularly from China, and supply has been somewhat constrained (Chart 4.8). Combined with lower grain prices and key restructuring strategies related to liability management and efficiency goals, results from protein companies in Brazil have been boosted over recent quarters.

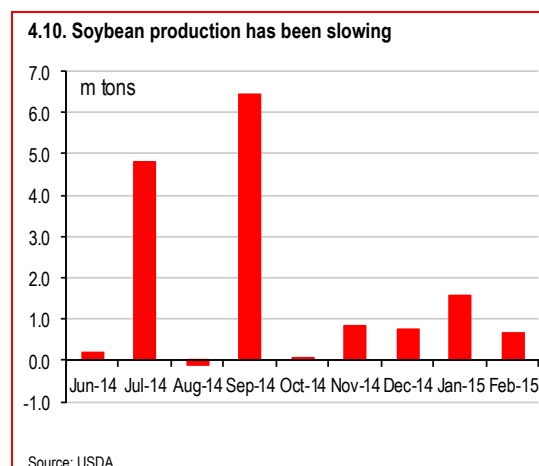
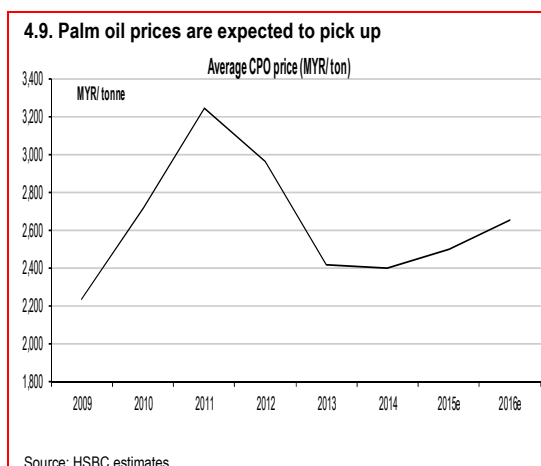
From a macroeconomic perspective, we see Brazilian meat exporters well positioned to benefit from a combination of a favourable exchange rate and lower grain prices, which favours directly poultry and pork margins. Corn, soy and soybean meal together account for c25-40% of poultry/pork businesses' COGS, depending on the mix (fresh versus processed products).

Major cattle supply constraints in the US and Australia and growing beef consumption from emerging economies (especially Asia Pacific and the Middle East) may also lead Brazil to gain market share in global beef exports. This environment should sustain export prices at high levels, helping Brazilian companies to offset increased cattle costs. In this scenario, we believe that players with strong geographic diversification, exposure to the poultry business and successful leverage control strategies, as well as high pricing power and traditional brands in the domestic market should outperform.

Edible oils: Some upside potential in 2015 – by Thilan Wickramasinghe

We believe palm oil prices will see a moderate recovery in 2015, after three years of declines (Chart 4.9). While we are sensitive to falling global commodity prices, most negative factors for palm oil are well known and priced in, in our view.

- ▶ The bumper 2014-15 soybean crop in North America has now completed harvesting; therefore, there is little possibility of further upgrades (Chart 4.10). While there are expectations of a strong Latin American crop from the growing season that is now under progress, this has also been well flagged since 4Q14.
- ▶ The disappointment of the El Niño weather phenomenon and the resultant palm oil production drop not appearing as expected in 2H14 is now well known.



We believe the known unknowns for FY15, on the other hand, have the potential to be positive catalysts. Tree stress from Malaysian floods (the worst in a decade) and the Indonesian droughts last year could disrupt palm oil supply through the course of FY15, tightening inventories (Chart 4.11).

In addition, there may be margin upside potential for producers as 30-40% of input costs are linked to oil prices through fertilisers and transport.

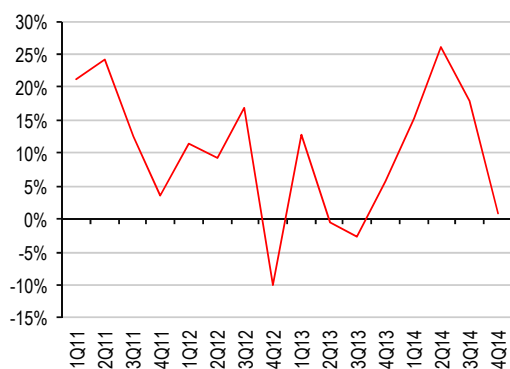
Dairy: Medium-term story still promising – by Chris Leung and Alice Chan

Despite the recovery of international milk powder prices in recent months, China's raw milk price has remained fairly weak. The raw milk price was down 9% year-to-date, while New Zealand and Europe's whole milk powder prices were up 12% and 7%, respectively (Chart 4.12). Historically, China's raw milk price had a relatively high positive correlation to international milk powder prices. However, given excess inventory and sluggish demand in China, we believe there is a possibility to see a disconnect in the short term.

Weather conditions are one of the key uncertainties for the global milk powder price movement and could be a big swing factor to supply dynamics in the short term. Another factor that could also affect global supply is the European Union quota removal on 1 April 2015, as the milk production volume in the EU-28 will increase by 1.6% in 2015, according to the European Commission's Directorate-General for Agriculture and Rural Development.

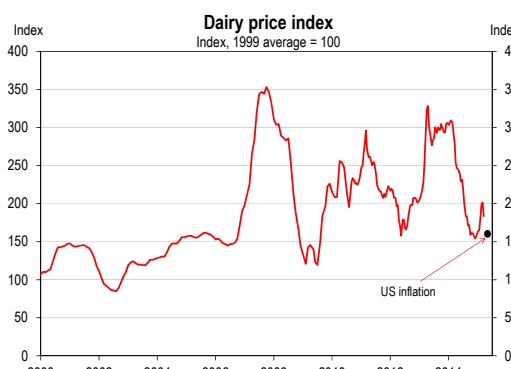
While there are uncertainties on the supply dynamic in the short term, we believe structural demand growth from emerging markets is likely to still be a key growth driver to the global dairy market in the long run. In particular, per capita milk consumption in China is still among the lowest in the world, and we believe, as household incomes rise and dietary patterns continue to evolve, demand for dairy products is likely to rise in line with trends seen in developed economies in the coming years.

4.11. Indonesian palm oil production has been slowing



Source: Company data

4.12. Dairy prices have increased recently, after falling



Source: GlobalDairyTrade

A quick look at each commodity

- ▶ Despite recent price falls, half of the 52 commodities in the IMF price index still have higher prices than in the 1990s, in real terms
- ▶ Those commodities that still have high prices include iron ore, gas, fishmeal, uranium, tin, oil, lead and copper

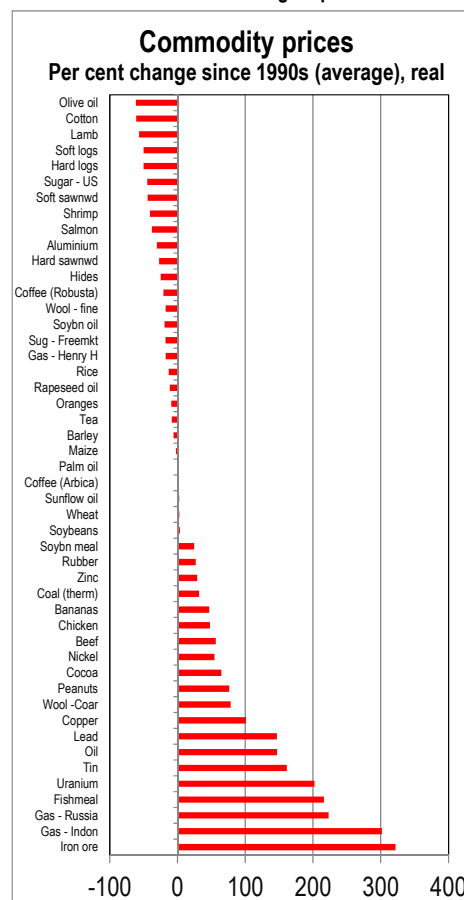
Many still above 1990s levels

Recent commodity price falls mean that half of the commodities in the IMF index now have prices that are higher than they were in the 1990s in inflation-adjusted terms.

Amongst those with higher prices are key commodities, where we expect price to remain structurally high, as we have discussed in the earlier chapters. This includes iron ore, oil, lead and copper prices.

This section goes through each of the commodities in the IMF commodity prices index and describes recent price dynamics in the context of the previous 30 years of price history.

5.1. Half of the commodities still higher priced than in 1990s

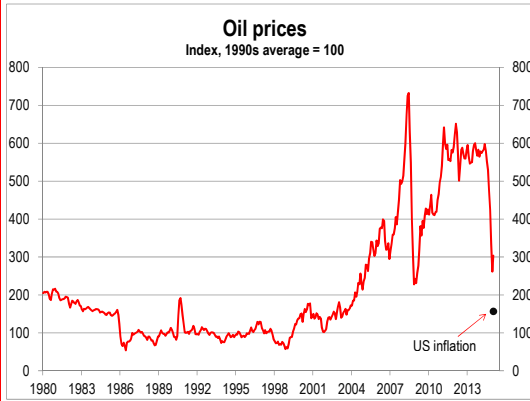


Source: IMF

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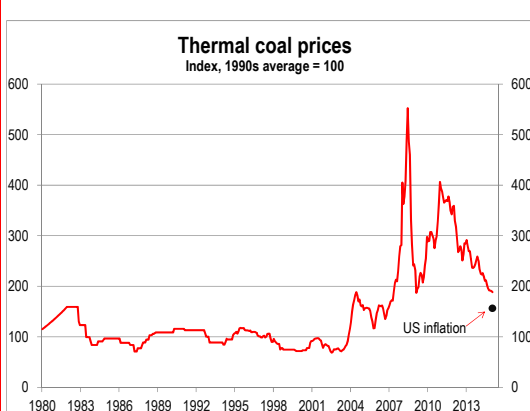
5.2. Oil prices have fallen sharply in the past nine months...



...driven by supply and demand factors

- ▶ Oil prices have fallen by 50% in the past nine months, which is the largest decline since 2008, when the global financial crisis saw a sharp decline in demand for oil.
- ▶ This time the decline has also been driven by a significant ramp-up in global oil supply, particularly from the US. Nonetheless, oil prices are still well above their 1990s average levels.
- ▶ Oil prices have ticked up in the past month or so, partly reflecting an expected reduction in supply as higher cost producers curtail their operations and new exploration activity is reduced.

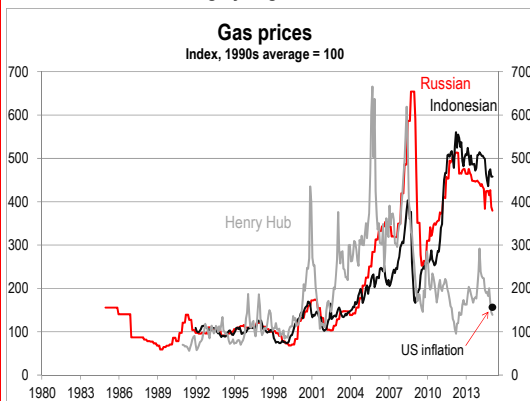
5.3. Thermal coal prices are trending lower...



...due to weaker demand and a large ramp-up in supply

- ▶ Thermal coal prices have fallen significantly from the high levels reached just prior to the global financial crisis, when China's GDP was increasing at over 15% y-o-y and the levels just after the global financial crisis in 2010, when Chinese fiscal stimulus once again drove strong demand.
- ▶ The steady decline in prices reflects some slowing in Chinese demand, but also increased supply coming on-line and substitution towards cleaner energy sources. Demand from emerging economies, particularly China, continues to grow, albeit at a slowing pace. Chinese authorities are planning to cease the building of new coal-fired power stations.
- ▶ Strong supply and weakening demand are likely to keep thermal coal prices low relative to recent history, although they remain above their 1990s levels.

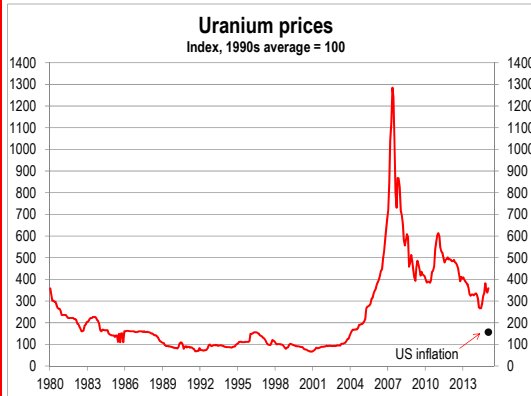
5.4. Gas markets are highly segmented...



...US onshore prices have fallen most sharply recently

- ▶ Gas prices have fallen over the past nine months, reflecting a ramp-up in gas supply and the falling price of oil, which is a key substitute for gas. In Asian markets, many gas pricing contracts are also tied to oil prices.
- ▶ The sharpest falls have occurred in the US gas market, where the Henry Hub gas price has fallen by 38% lower since June 2014. US gas prices have been persistently low over recent years as unconventional drilling methods have boosted domestic supply.
- ▶ Other markets for gas have seen smaller price falls as the global gas market remains highly segmented.

5.5. Uranium prices have risen recently...

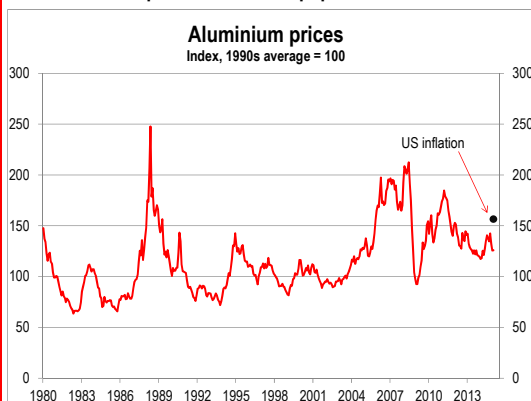


Source: IMF

...partly due to expectations of increased Japanese demand

- ▶ Uranium prices have risen strongly over the past nine months (+35%) and remain well above their 1990s average levels in inflation-adjusted terms (202% higher).
- ▶ The recent lift in uranium prices partly reflects expectations that authorities will soon restart some of Japan's nuclear power generators. Nuclear power production was halted following the 2011 earthquake and the Fukushima disaster.
- ▶ There were also several notable supply disruptions during 2014, including a strike at the world's largest uranium mine in Canada during September 2014.

5.6. Aluminium prices have not kept pace with inflation...

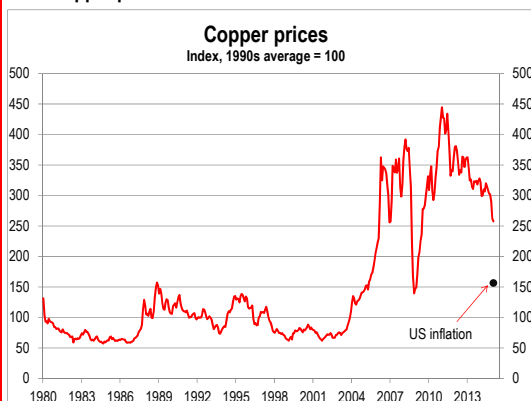


Source: IMF

...reflecting strong supply growth

- ▶ Aluminium prices have been the poorest performer amongst the base metals, with prices underperforming inflation since the 1990s. Aluminium prices doubled from 2003 through 2005, but output increases were such that the market has been in a state of oversupply since then.
- ▶ However, the degree of oversupply has diminished over recent years as producers (outside of China) have voluntarily cut back on output. Perhaps, as a result, aluminium did not experience the sharp price declines seen in other metals prices over 2014.
- ▶ HSBC's metals research team is forecasting aluminium prices to pick up towards USD2,100 a tonne over the next few years, from around USD1,800 a tonne currently, as the degree of oversupply is likely to remain limited.

5.7. Copper prices are well ahead of inflation since 1990s...

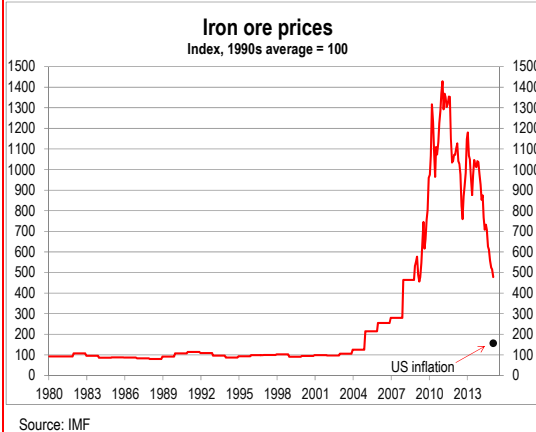


Source: IMF

...with limited supply expected to keep prices high

- ▶ Copper prices are one of the strongest performers since the 1990s, with prices still 100% higher than in the 1990s in inflation-adjusted terms. Apart from a short-lived dip in 2009, after Lehman Brothers failed, copper demand has been growing steadily and is expected to continue doing so, driven by demand for building construction and electronics.
- ▶ Prices have drifted slightly lower over the past few years as the market has moved into a small surplus.
- ▶ The market is expected to return to a position of undersupply from 2016 onwards, supporting prices.

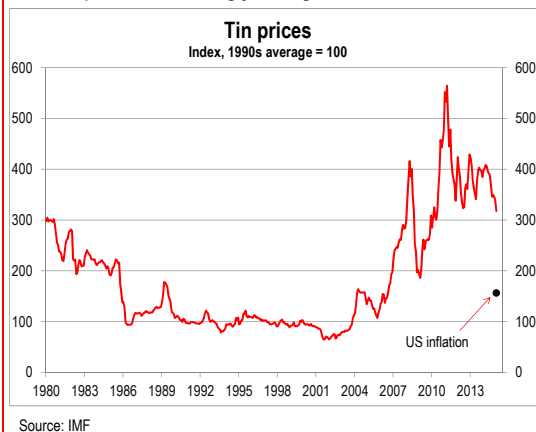
5.8. Iron ore prices have fallen sharply...



...as supply has ramped up and demand growth has slowed

- ▶ Iron ore prices soared during the mid-2000s as demand from China accelerated strongly and supply was slow to come on-line due to the long lead times between investment and production. More supply is now coming on-line, with a further surge in supply expected in 2015 and 2016.
- ▶ Current prices are, however, below the marginal cost of production for around one-third of global suppliers, which is expected to prevent prices from falling too much further.
- ▶ HSBC's metals research team is forecasting prices to average USD58.50 a tonne in 2015 and 2016.

5.9. Tin prices rose strongly through the 2000s...



...with limited supply growth likely to support prices

- ▶ Tin prices surged during the 2000s and have held up at a high level due to supply limitations.
- ▶ Solder used in electronics is the most important source of demand for tin, which should support steady demand growth.
- ▶ The pipeline of new supply coming on-line is limited, and new restrictions on Indonesian exports may also restrict supply over coming years. The emergence of Myanmar as a major potential supplier may be an important offsetting factor.

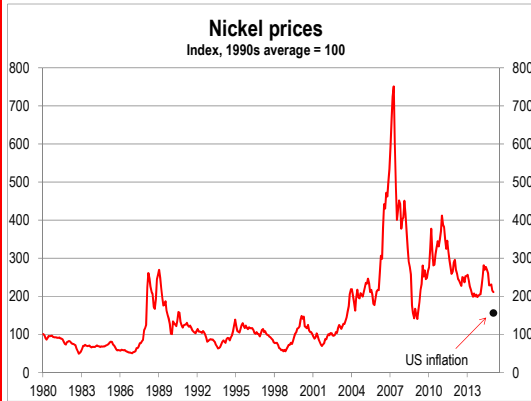
5.10. Lead prices rose strongly through the 2000s...



...with limited supply growth likely to support prices

- ▶ Demand for lead is expected to remain strong, as it is used for a range of goods, including batteries and automobiles, where demand is rising strongly. Slower Chinese construction growth has, however, reduced the degree of undersupply in global markets over the past year.
- ▶ Supply growth is expected to be relatively modest over the next few years, with the closure of major mines, such as Australia's Century project, in 2015, expected to partly offset strong growth in Chinese production.
- ▶ Slow growth in supply is likely to see an undersupply of lead continue, supporting prices.

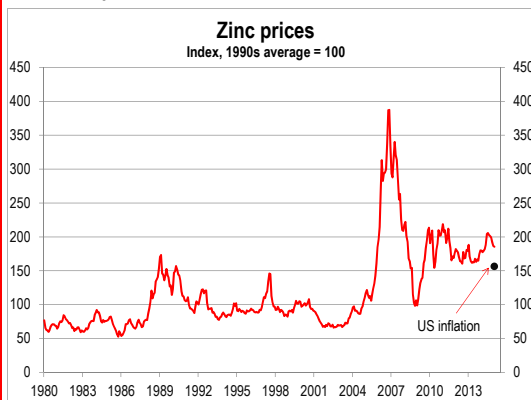
5.11. Nickel prices are well below their 2007 peaks...



...but demand is starting to run ahead of supply

- ▶ Nickel, mostly used in stainless steel production, saw a large price spike prior to the global financial crisis. Prices have fallen back since then.
- ▶ Nickel prices increased through 2014, when Indonesia, which is a leading supplier of nickel, announced a ban on exports of unprocessed nickel ores, which commenced in January 2014. Since then, more supply has come on-line from the Philippines, which has seen the price fall back a bit recently.
- ▶ Supply and demand for nickel are expected to remain broadly in balance this year and into 2016, supporting prices.

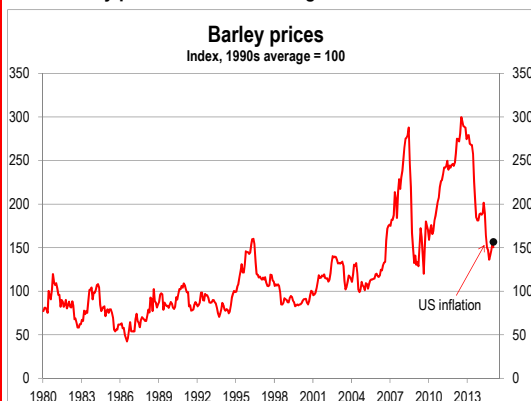
5.12. Zinc prices have risen a little ahead of inflation...



...but supply constraints are starting to emerge

- ▶ Demand for zinc in a range of uses, including in batteries, automobiles and construction, suggest steady growth across both the developed and developing world.
- ▶ Supply growth is expected to be relatively modest over the next few years, with the closure of major mines, such as Australia's Century project, in 2015, partly offsetting strong growth in Chinese production.
- ▶ HSBC's metals research team is forecasting a continuing undersupply over the next few years, supporting a further modest rise in prices.

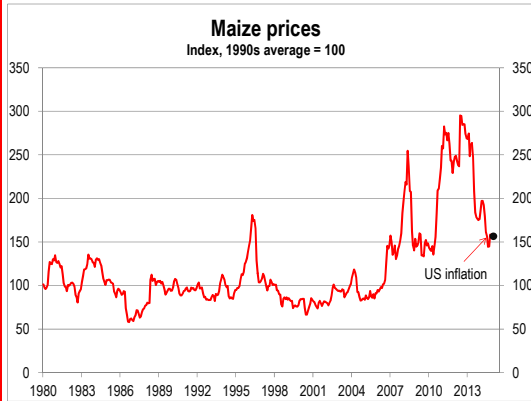
5.13. Barley prices have trended higher in the 2000s...



...and in line with broader inflation

- ▶ Demand for barley is mostly driven by feedstock demand and in brewing/distilling. It is highly substitutable with other coarse grains, such as maize.
- ▶ Barley prices rose sharply both before and after the global financial crisis. In both cases, the move was driven by reduced global stocks. There has been a long-term trend of less land being used to grow barley, possibly in favour of other coarse grains.
- ▶ More recently, prices have fallen quite steeply as better weather saw strong harvests in the US and Russia in 2014.

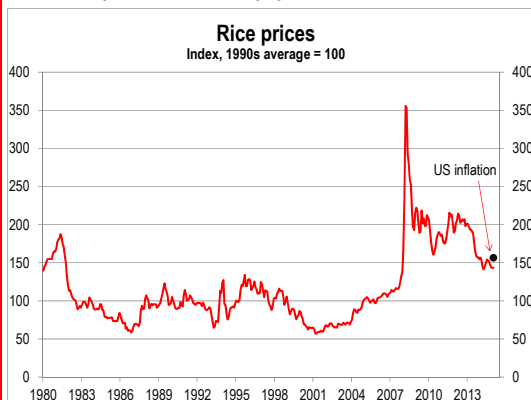
5.14. Maize prices rose through the 2000s...



...but are in line with inflation since the 1990s

- ▶ Maize's main uses are as food and feedstock for livestock. It is often substitutable with other coarse grains, such as barley.
- ▶ Much like barley prices, maize prices rose sharply both before and after the global financial crisis. In both cases, the move was driven by reduced global stocks, exacerbated by events like a severe US drought in 2012.
- ▶ More recently, prices have fallen quite steeply as good weather saw strong harvests in the Northern hemisphere in 2014.

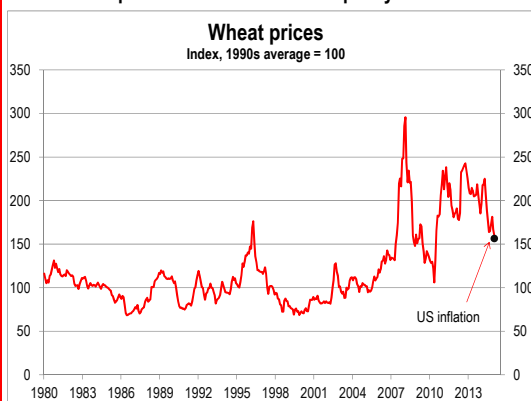
5.15. Rice prices have not kept pace with broader inflation...



...although they have risen solidly through the 2000s

- ▶ Despite a short-lived spike in 2008, rice prices have risen by less than inflation since the 1990s.
- ▶ For rice, supply growth has more than kept up with demand. As a result, global rice stocks have been steadily growing and price growth has been restrained.
- ▶ A major factor in rice consumption trends over the longer term is likely to be shifting diets in developing Asia. As incomes rise, significant numbers of people are expected to shift from rice-based diets to higher quality diets featuring more protein (meat and dairy in particular), which could see further downward pressure on rice prices.

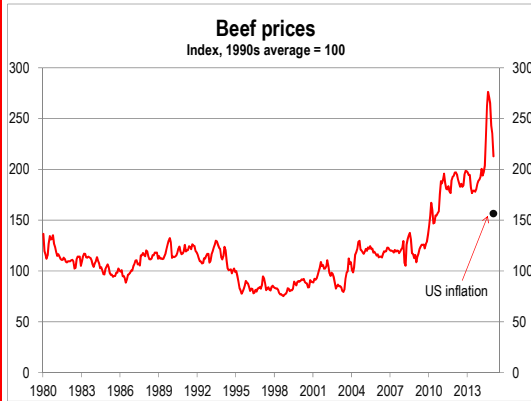
5.16. Wheat prices have fallen over the past year...



...to now be in line with inflation since the 1990s

- ▶ Most wheat is used in food production for human consumption. Unlike coarse grains, only low-quality or damaged wheat is used for livestock feed.
- ▶ Up until the mid-2000s, supply and demand generally grew at a similar pace, which kept price movements restrained. In the mid-2000s, demand growth started to outstrip supply, pushing stock levels down and prices up. Since then, stocks have recovered.
- ▶ Good growing conditions in 2014 saw prices fall through most of the year to now be in line with broader inflation since the 1990s.

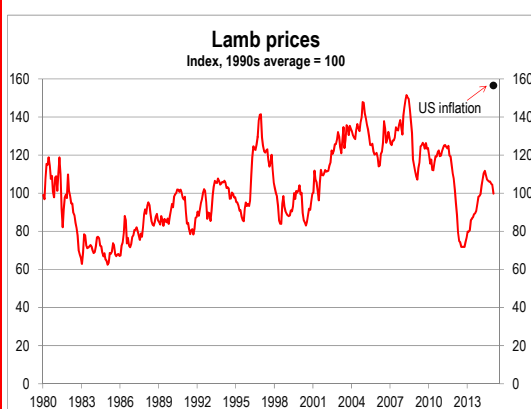
5.17. Beef prices have been ramping higher in recent years...



...and are running well ahead of inflation since the 1990s

- ▶ Beef prices were fairly stable through the 1980s, 1990s and 2000s. But over the past year prices have increased quite sharply.
- ▶ Recent higher prices appear to have been driven by weather impacts on cattle herds. There have been several major droughts in recent years, which have increased feed prices and seen farmers downsize their herds, particularly in the US. US cattle inventories are around their lowest levels in 60 years.
- ▶ Several years of good weather, like 2014, will be needed for herd sizes to grow meaningfully. The other key factor over the medium term will be the speed of demand growth in the developing world as preferences shift towards consuming more meat.

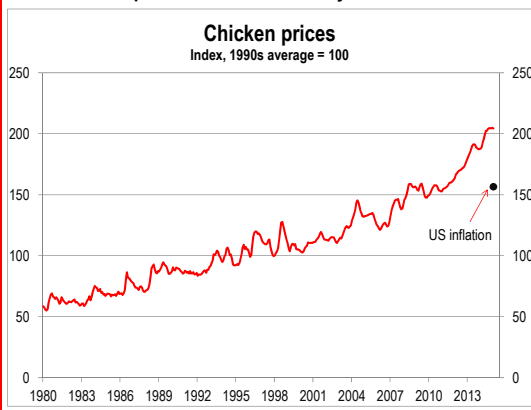
5.18. Lamb prices have not kept pace with inflation...



...but have generally trended higher in recent years

- ▶ Lamb prices have historically been fairly stable and compared to most other commodities are essentially flat relative 30 years ago in nominal terms.
- ▶ In 2012, lamb prices reached their lowest level since the 1980s. This was partly driven by farmers reducing herd sizes in response to drought and high feed prices, with the increased slaughter rates driving a short-term boost to supply.
- ▶ However, prices have recovered since then. Looking ahead, lamb supplies are not likely to grow strongly without significantly higher prices, given the higher profits on offer in dairy or cattle farming. Demand in emerging economies is expected to continue growing strongly though.

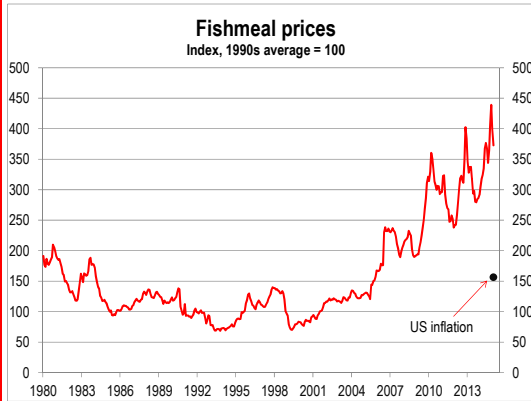
5.19. Chicken prices have risen steadily...



...and are running ahead of inflation since the 1990s

- ▶ Chicken prices are far less volatile than many other commodity prices, rising at a steady rate a little ahead of overall inflation. Because of short breeding times, supply is able to adapt quickly to short-term shifts in demand.
- ▶ Prices have grown at a faster rate over the past few years, most likely influenced by higher feed costs. The recent decline in grain prices may reverse some of that impact.
- ▶ As with other meats, the growth of demand in the developing world is expected to be a key driver of demand going forward.

5.20. Fishmeal prices have risen strongly in the 2000s...

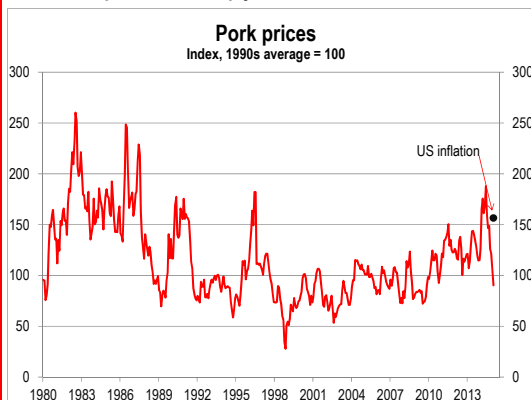


Source: IMF

...and are running well ahead of inflation since the 1990s

- ▶ Fishmeal prices ended a gradual downwards trend in 2000 and have risen strongly since then.
- ▶ The long-term upwards trend is most likely a result of increased demand from the aquaculture industry, where fishmeal is an important feedstock.
- ▶ Marine and inland seafood capture has plateaued since the early 1990s. Increased demand for seafood is, therefore, likely to be met from continued growth in aquaculture (see Wikramasinghe, T and Prahan, T, (2014) *Asia Animal Protein*, 31 July). This is expected to continue to provide support for fishmeal prices.

5.21. Pork prices fell sharply in the H2 2014...

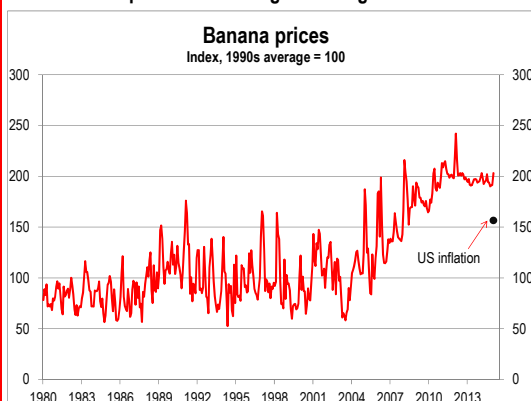


Source: IMF

...as the effects of the porcine virus faded, boosting supply

- ▶ Pork prices fell sharply in the second half of 2014, after a virus outbreak in the US impacted supply and sent prices sharply higher in late 2013 and early 2014. As the impact of the virus faded, prices fell back sharply.
- ▶ This has left pork prices well below broader inflation since the 1990s.
- ▶ Chinese consumption of pork has so far risen far more rapidly than for other meats. In fact, China has one of the highest per capita pork consumption rates in the world. However, production has also expanded rapidly due to more industrialised farming methods. The Chinese government also runs a 'pork reserve' to regulate prices.

5.22. Banana prices trended higher through the 2000s...

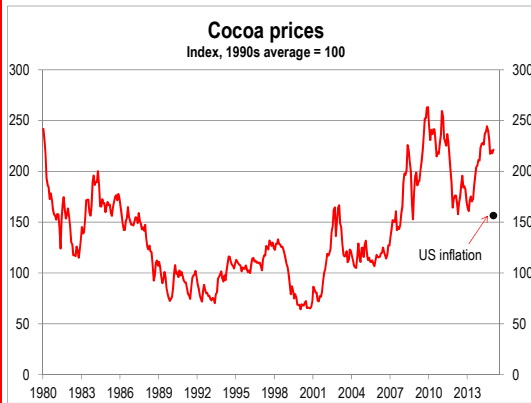


Source: IMF

...and are running ahead of inflation since the 1990s

- ▶ Banana prices followed a generally flat trend over the 1980s, 1990s and for much of the 2000s. From 2005 to 2010, prices shifted higher, and have been flat since then.
- ▶ That increase was started by the pre-global financial crisis increase in general commodity prices, especially oil, and continued thanks to solid demand and reduced supply, in particular from the Philippines (a key exporter).

5.23. Cocoa prices trended higher in the 2000s...

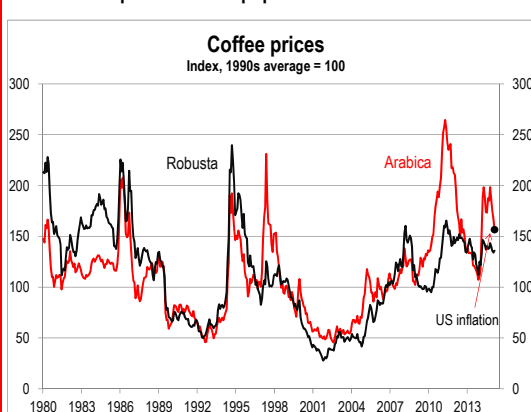


Source: IMF

...and are running a little ahead of broader inflation

- ▶ Cocoa prices rose steadily through the 2000s, but then fell back in 2010-11 due to a bumper crop and modest demand growth.
- ▶ Over the past year or so, prices have surged, thanks to stronger demand growth in the developed world. At the same time, supply growth has been limited since the 2010-11 price declines.
- ▶ Supply is expected to respond to the recent surge in prices, but may lag behind demand growth for several years, given the economic recovery in the developed world and increased demand for higher grade foods in the emerging world.

5.24. Coffee prices have kept pace with inflation...

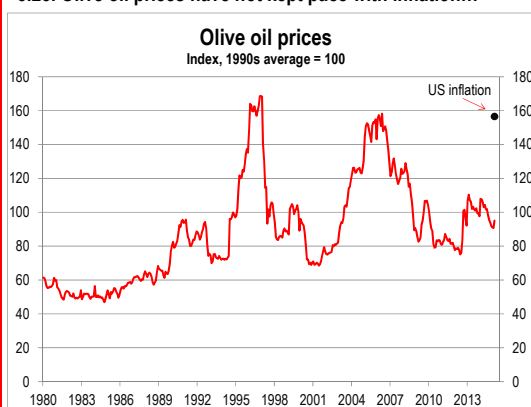


Source: IMF

...and have been on an upward trend through the 2000s

- ▶ Coffee prices rose steadily over the 2000s, but have not outpaced overall inflation in the longer term.
- ▶ Prices for Arabica beans spiked in 2010-11 due to poor harvests. There was another price spike in early 2014 following a severe drought in Brazil, a major supplier, as well as diseased crops in many other Latin American countries. More recently, better rainfall in Brazil and the depreciation of the BRL have seen prices fall back.
- ▶ As with other 'luxury' commodities, demand in developing Asia is likely to grow rapidly in coming years. The ability of supply to keep pace with this additional demand will be key to the long-term price outlook.

5.25. Olive oil prices have not kept pace with inflation...

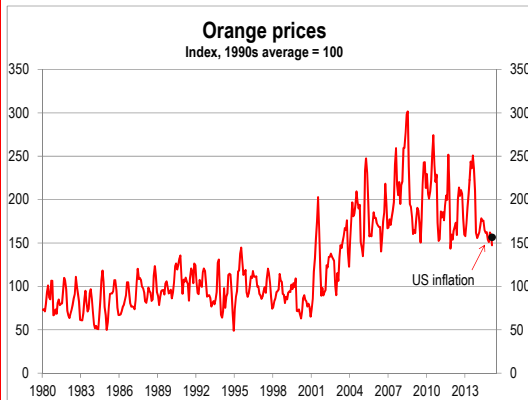


Source: IMF

...as there has been ample supply to meet demand

- ▶ Olive oil prices are a little below their 1990s average in nominal terms, meaning that inflation-adjusted prices are now significantly lower.
- ▶ Prices did increase through the early 2000s, but then fell back again, thanks to strong supply growth. More recently, prices increased in 2012-13 due to limited supply growth and a brighter demand picture, particularly in the developing world.
- ▶ Drought in Spain saw prices rise in early 2014, though they have since fallen back and supply has increased.

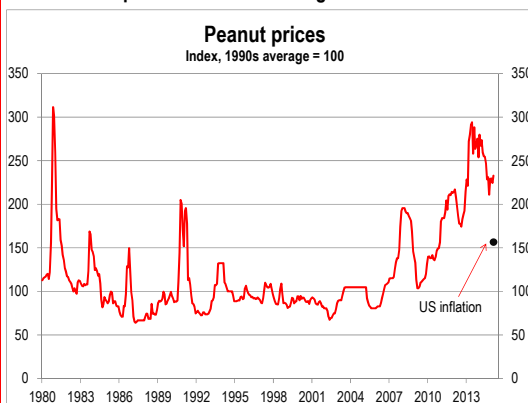
5.26. Orange prices are volatile due to weather effects...



...and have kept up with inflation since the 1990s

- ▶ Orange prices have historically been volatile, subject to seasonal and weather variations. The general trend, though, saw a sustained lift in prices during the 2000s, followed by prices tracking sideways since 2008.
- ▶ US orange production has been on a downward trend for several years due to widespread disease in Florida, one of the world's largest producing regions. This factor has provided some support to prices.

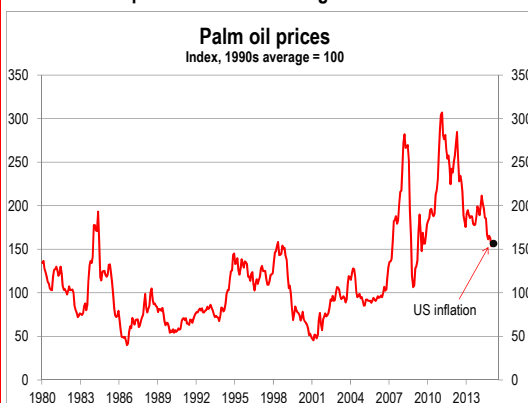
5.27. Peanut prices have risen through the 2000s...



...as demand has increased across Asia

- ▶ Peanut prices fell through the 1980s and were largely flat during the 1990s. Since the mid-2000s, prices have climbed substantially and are currently near historical highs.
- ▶ Prices have been supported recently by the high use of peanut oil in cooking in Asia. Strong demand from Asia has kept prices high despite strong growth in production.
- ▶ China – the world's largest producer of peanuts – began importing significant quantities for the first time in 2014.

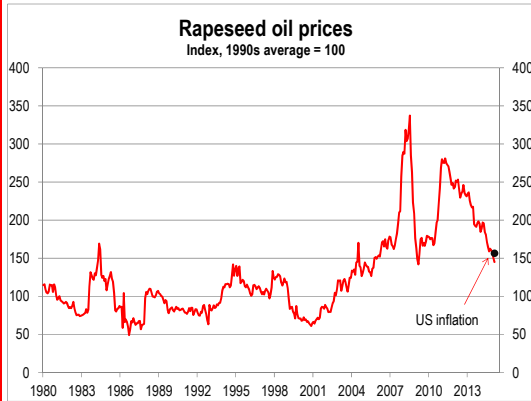
5.28. Palm oil prices have trended higher in the 2000s...



...but remain in line with broader inflation since the 1990s

- ▶ Palm oil prices have risen in line with the rate of overall inflation since the 1990s. There were price spikes before and after the global financial crisis, but prices fell back around 2012, as a result of weak demand growth and soaring inventories in Indonesia and Malaysia, the world's largest producers.
- ▶ Since 2012, prices have remained fairly steady, influenced by stable crude oil prices and low prices for soybean oil, a substitute product.
- ▶ A good 2014 harvest in the Northern hemisphere saw soybean oil prices fall in the second half of 2014, which had a flow-on effect on palm oil, a key substitute.

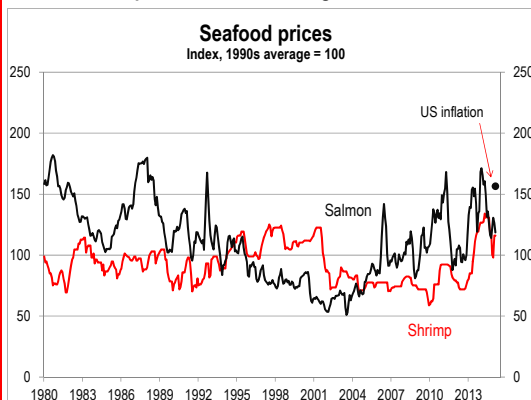
5.29. Rapeseed oil prices have trended higher in 2000s...



...but have fallen due to rising supply of substitutes

- ▶ Rapeseed oil prices surged both before and after the global financial crisis. Over the past few years, they have eased slightly lower but are still higher than during the 1980s and 1990s.
- ▶ Rapeseed oil prices are influenced by prices for other vegetable oils; the 2010 price surge was influenced by higher palm oil prices.
- ▶ Increased consumption of oils in developing Asia should support demand going forward. Rapeseed oil's future may also be influenced by the biofuels industry.

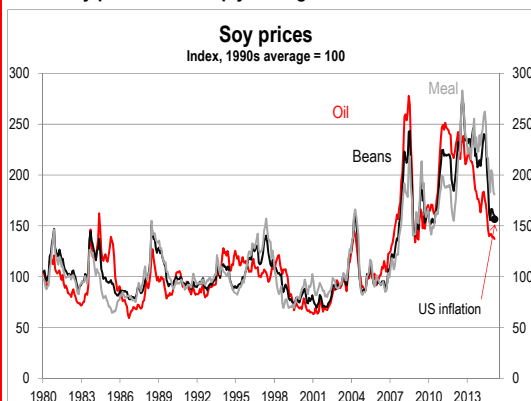
5.30. Seafood prices have trended higher in the 2000s...



...but have not kept up with inflation since the 1990s

- ▶ Seafood prices have risen slightly below the rate of broader inflation. Shrimp prices were pushed higher by a disease outbreak in 2013, but have fallen back since then.
- ▶ Seafood is likely to see strong demand growth from emerging economies, while developed world consumption is also likely to continue growing.
- ▶ Marine and inland seafood capture has plateaued since the early 1990s. Increased demand is, therefore, likely to be met from continued growth in aquaculture (see Wickramasinghe, T and Pohan, T, (2014) *Asia Animal Protein*, 31 July).

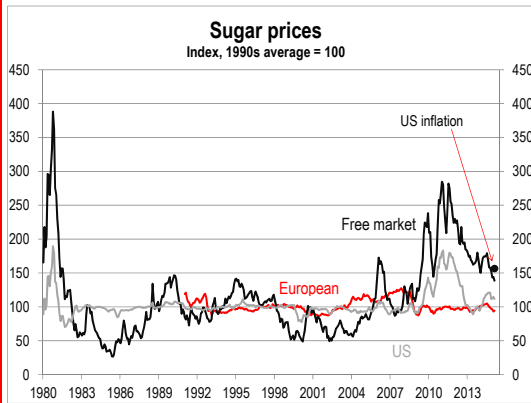
5.31. Soy prices fell sharply through 2014...



...due to a ramp-up in supply because of good harvests

- ▶ Positive supply conditions in 2014 saw a strong harvest of soy products, which drove a decline in soybean and soy oil prices
- ▶ Soy prices have risen by a similar amount to overall inflation since the 1990s.
- ▶ Rising demand for oils and protein – soybean is used as feed for livestock – in developing Asia should continue to support soy demand over coming years.

5.32. Sugar prices have not kept pace with inflation...

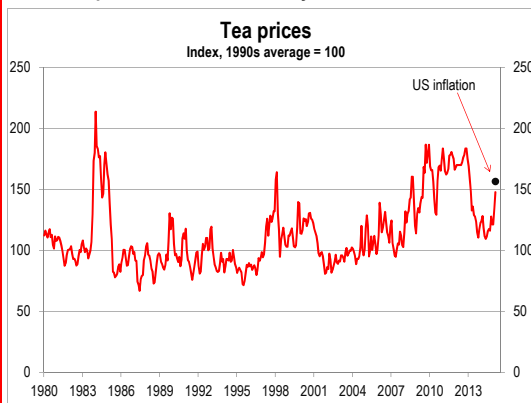


Source: IMF

...we expect rising demand to support prices

- ▶ Sugar prices been broadly flat over the past 30 years. US and European prices did rise in 2011, but have since eased back.
- ▶ Over the past few years, prices have declined due to weak demand growth and strong supply, especially from Brazil (the world's largest producer).
- ▶ Consumption of sugar tends to rise quickly in the earlier stages of economic development (up to around USD10,000 per capita). That suggests potential for strong growth in developing Asia (see Bloxham, P. et al (2014) *Global agricultural commodities: Demand is shifting to the finer foods*, 18 March).

5.33. Tea prices have risen recently...

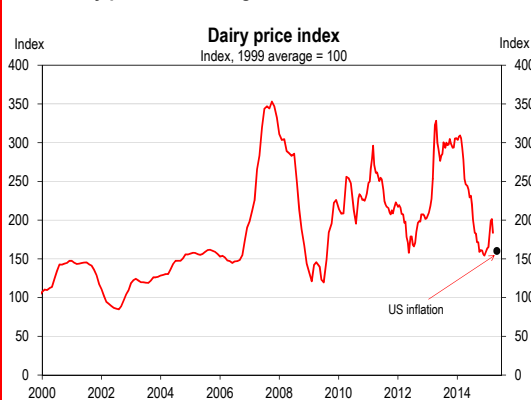


Source: IMF

...reflecting dry conditions in India and Kenya

- ▶ Tea prices have risen sharply over the past few months. The main driver has been dry weather conditions both of the world's two largest producing countries, Kenya and India. Those weather conditions are expected to significantly impact the 2015 crop and could, therefore, create supply shortages.
- ▶ The recent rally in prices has partly reversed the sharp fall seen in 2013, when, in contrast, favourable weather boosted production and political unrest in Egypt restricted import demand.
- ▶ Overall, tea prices have risen roughly in line with inflation since the 1990s.

5.34. Dairy prices fell through 2014 due to weak demand...

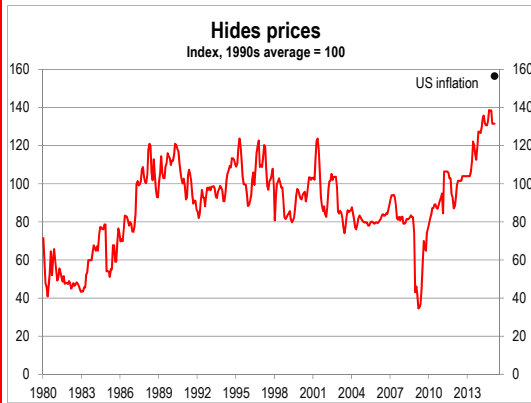


Source: Global Dairy Trade

...and strong supply, but have since lifted

- ▶ Dairy prices fell over 2014, from high levels in 2013. Between February and early December 2014, the GlobalDairyTrade index fell by 50%. Key factors pushing prices lower were reduced Chinese import demand, as inventories were run down, and the expectation of boosted supply from the removal of EU milk production quotas which occurred in April 2015.
- ▶ Since December, prices have rebounded somewhat. Chinese imports have picked up a little, but the main driver of higher prices has been a drought in New Zealand, which is expected to limit production growth.
- ▶ For more on dairy, see Bloxham, P. and Smith, D. (2015) [New Zealand Digest: Dairy price rally under way](#), 18 February.

5.35. Hides prices have not kept pace with inflation...

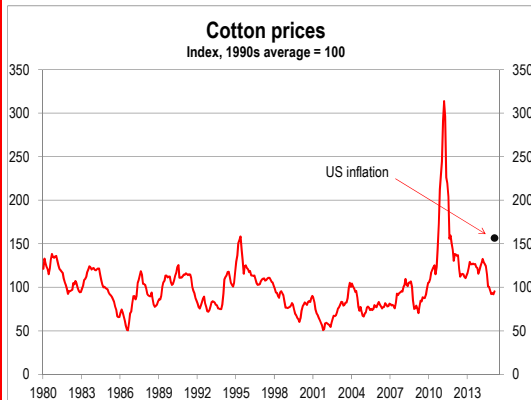


Source: IMF

...but they have risen significantly in recent years

- ▶ Hide prices were relatively flat through much of the 1990s and 2000s. Prices briefly fell sharply during the global financial crisis, but recovered and are currently trading at historical highs.
- ▶ Prices are rising due to a number of factors. Demand for leather is growing in developing Asia, particularly China, as consumer incomes rise. The global automobile industry is also recovering from the global financial crisis, adding another source of growing demand. At the same time, supply is limited – the US cattle herd is at a 60-year low.
- ▶ Demand from consumers in emerging economies should continue to grow as incomes rise. However, historically, supply has matched changes in demand well.

5.36. Cotton prices spiked in 2011 due to weak supply...

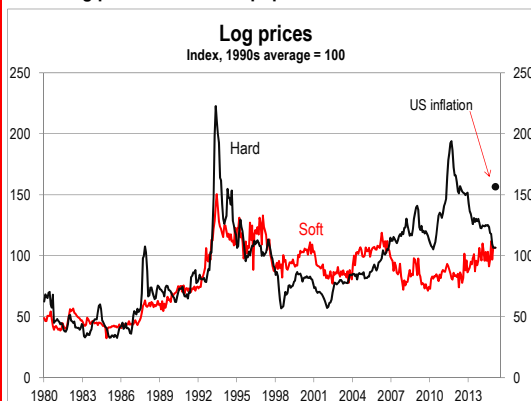


Source: IMF

...although they have since fallen back to below inflation

- ▶ Cotton prices have been relatively stable over the past several decades.
- ▶ The exception was a sharp price spike in 2011 that resulted from supply disruptions created by floods in major production regions (particularly Pakistan).
- ▶ Supply is expected to keep pace with global demand over coming years. In particular, the Chinese authorities have built up a significant cotton reserve. The accumulation of this reserve has supported prices over the past few years, but that process is now expected to reverse.

5.37. Log prices have not kept pace with inflation...

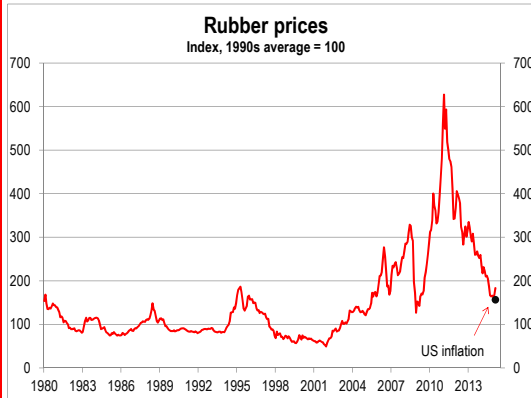


Source: IMF

...Chinese demand has been the driver of recent trends

- ▶ Log prices have not kept pace with overall inflation. Softwood prices have been relatively flat since the early 1990s. Hardwood prices rose in 2010-11 due to weak supply, but have since fallen back.
- ▶ The emergence of China as a major importer of softwood logs has been the key development in recent years and has supported modest price growth.
- ▶ However, with China's property market slowing and significant log inventories accumulating, prices have fallen recently.

5.38. Rubber prices spiked sharply in 2011 on weak supply...

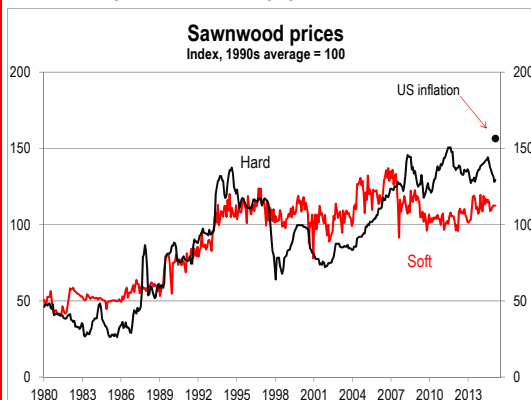


Source: IMF

...as supply is now coming on-line, prices have fallen

- ▶ Rubber prices rose strongly through the 2000s, peaking in around 2010. That was a result of reduced supply combined with strong demand growth, especially in China. Since then, prices have fallen back quite sharply.
- ▶ Price falls have come about as supply has rapidly caught up with demand. Plantations set up during periods of high prices (2005-08 and 2010-11) are now starting to add to supply.
- ▶ Supply is expected to continue growing strongly over the next few years as those plantations continue coming on-line. How this compares to demand, particularly from rising automobile use in emerging economies, will be key for the outlook.

5.39. Wood prices have not kept pace with inflation...

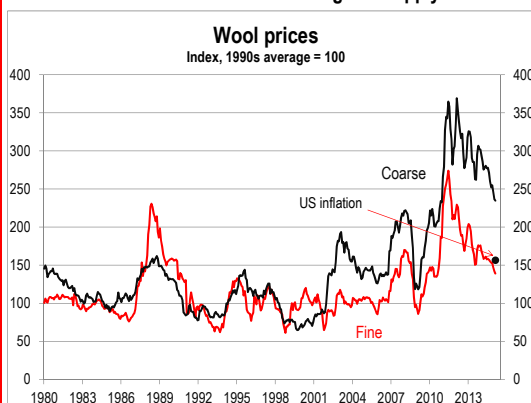


Source: IMF

...although they have risen solidly since the 1980s

- ▶ Wood prices have not kept pace with overall inflation. Softwood prices have been relatively flat since the early 1990s. Hardwood prices have been higher in recent years.
- ▶ The emergence of China as a major importer of softwood has been the key development in recent years.
- ▶ However, with China's property market slowing and significant log inventories accumulating, prices have fallen recently.

5.40. Demand for wool has been strong and supply weak...



Source: IMF

...since the global financial crisis

- ▶ Wool prices showed some volatility but generally tracked sideways from 1980 to the mid-2000s.
- ▶ Following the global financial crisis, wool prices rebounded strongly, driven by lower sheep numbers and a recovery in demand. Coarse wool prices have outperformed fine wool due to the stronger recovery in the construction sector compared to clothing.
- ▶ Like lamb, wool supply is likely to remain weak due to the higher profits on offer in cattle and dairy farming. Over the medium term, demand should continue to be supported by ongoing urbanisation in emerging economies.

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Notes

Notes

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*A stock was classified as volatile if its historical volatility had exceeded 40%, if the stock had been listed for less than 12 months (unless it was in an industry or sector where volatility is low) or if the analyst expected significant volatility. However, stocks which we did not consider volatile may in fact also have behaved in such a way. Historical volatility was defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility had to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

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