GLOBAL COMMODITY OUTLOOK

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Global Commodity Outlook

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FIXED INCOME, CURRENCIES AND COMMODITIES

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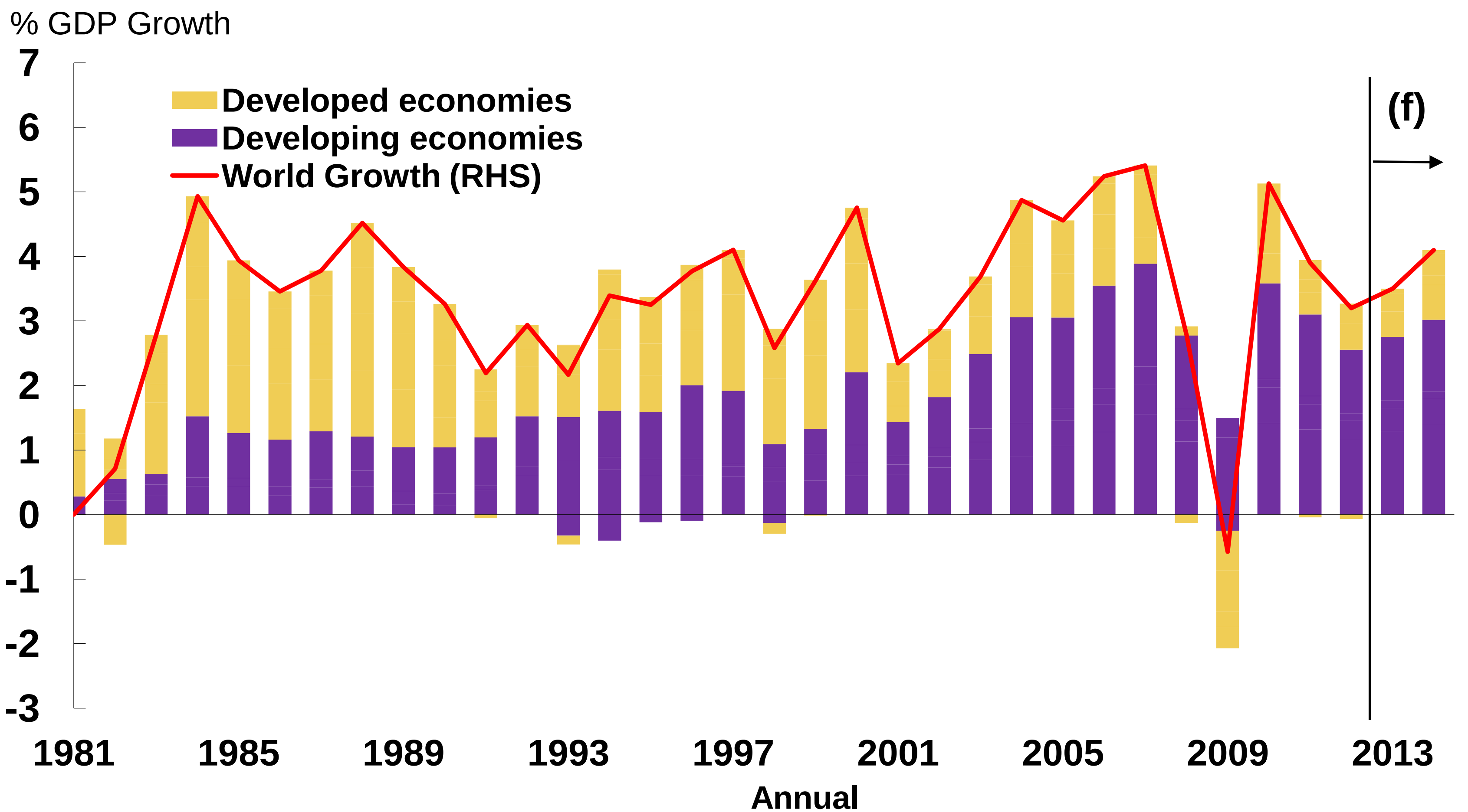
The Economic Outlook & Investor Sentiment has Improved Dramatically ...

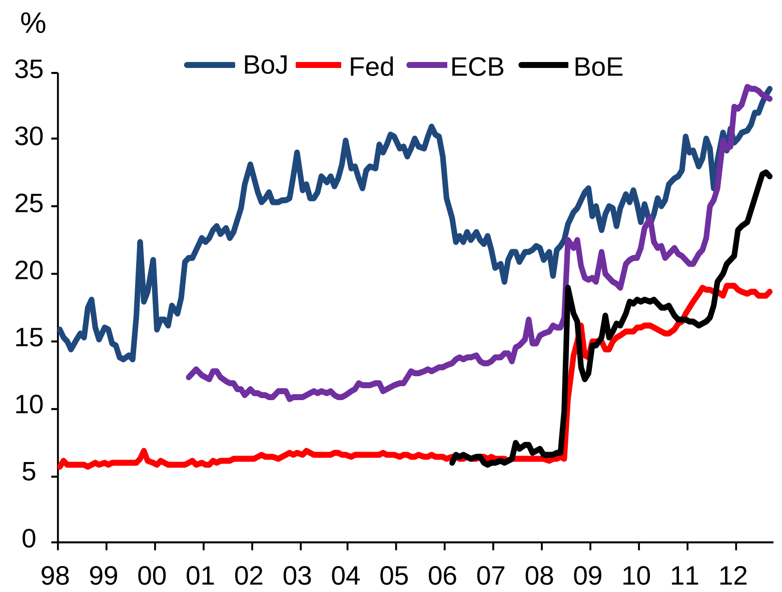
Developing economies have taken the weight of the world on their shoulders in recent years, and are expected to continue doing so



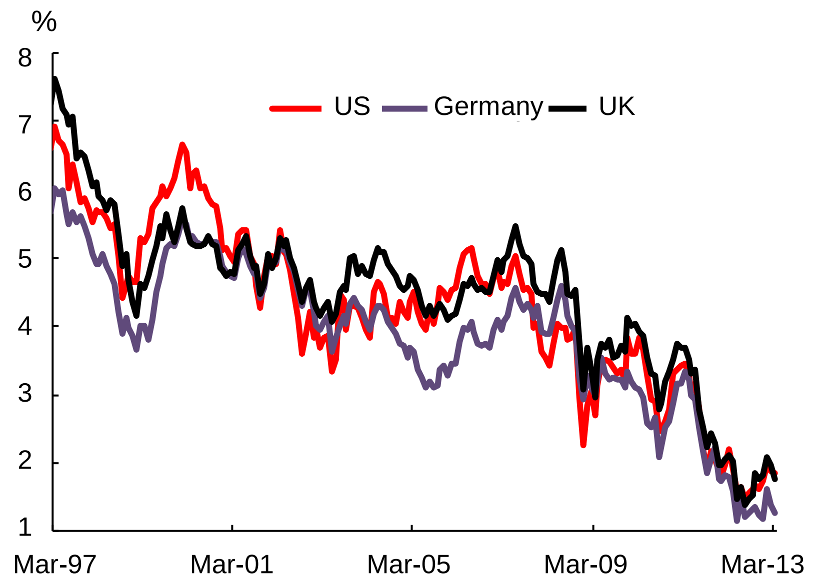
Source: IMF, Macquarie Research, April 2013

That said, quantitative easing is flooding the world with liquidity

Central Bank Assets as a Percent of GDP

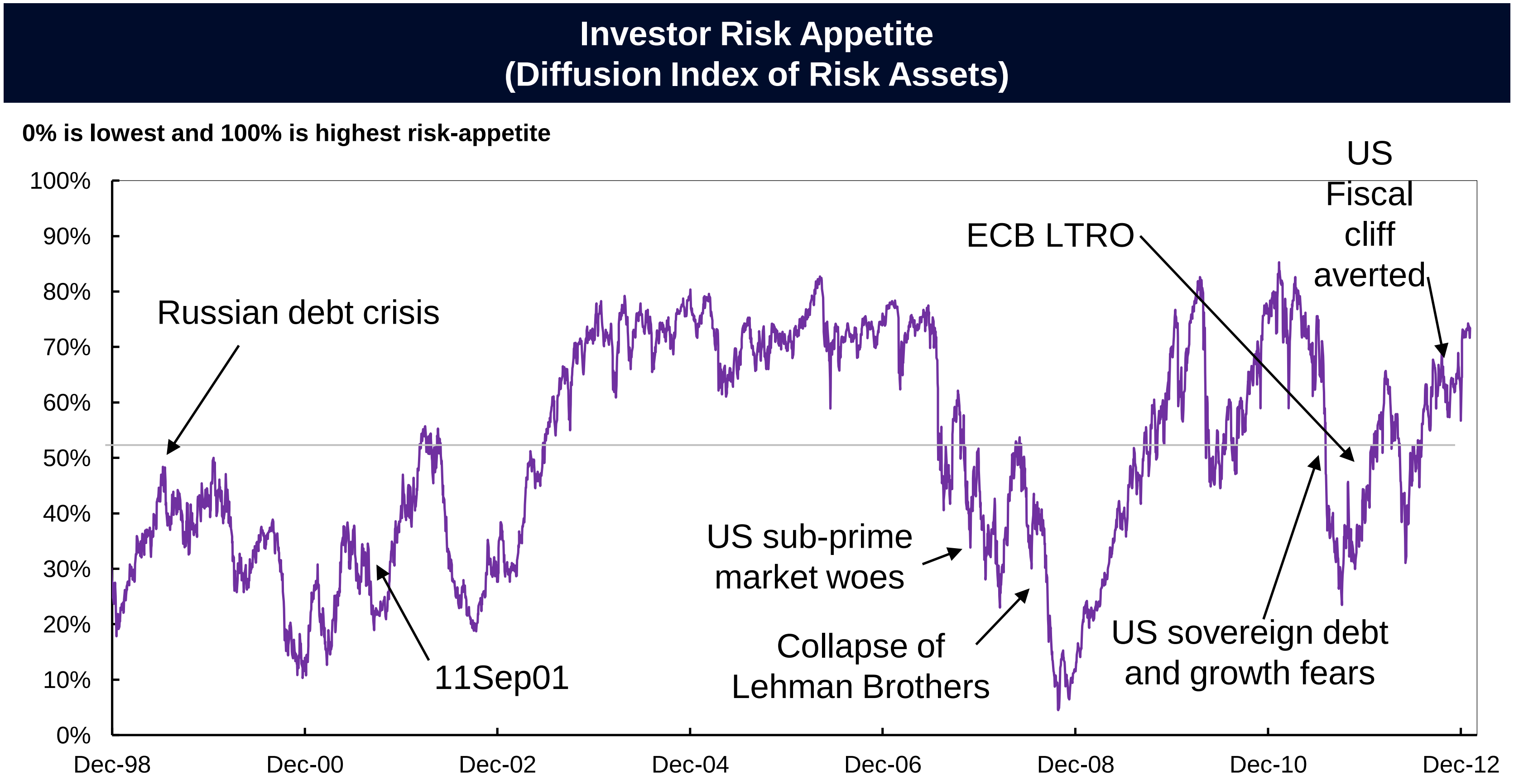


10 Year Government Bond Yields



Source: Datastream, Macquarie Research, April 2013

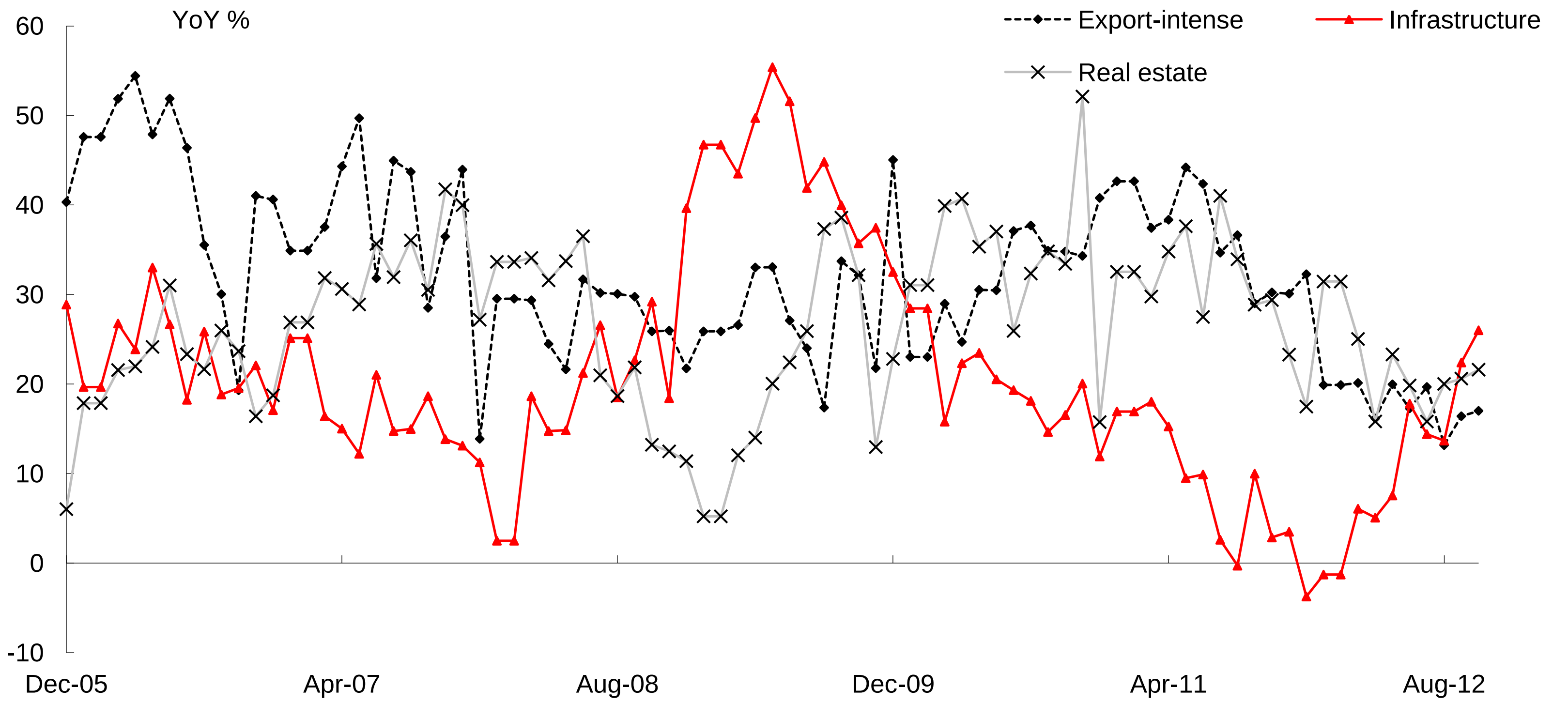
With a backdrop of improving investor sentiment



Source: Datastream, Macquarie Research, April 2013

Chinese growth is expected to be in the region of 7-8%. That said growth is expected to be consumption (rather than investment) driven

Growth in China will shift towards domestic consumption rather than exports and investment



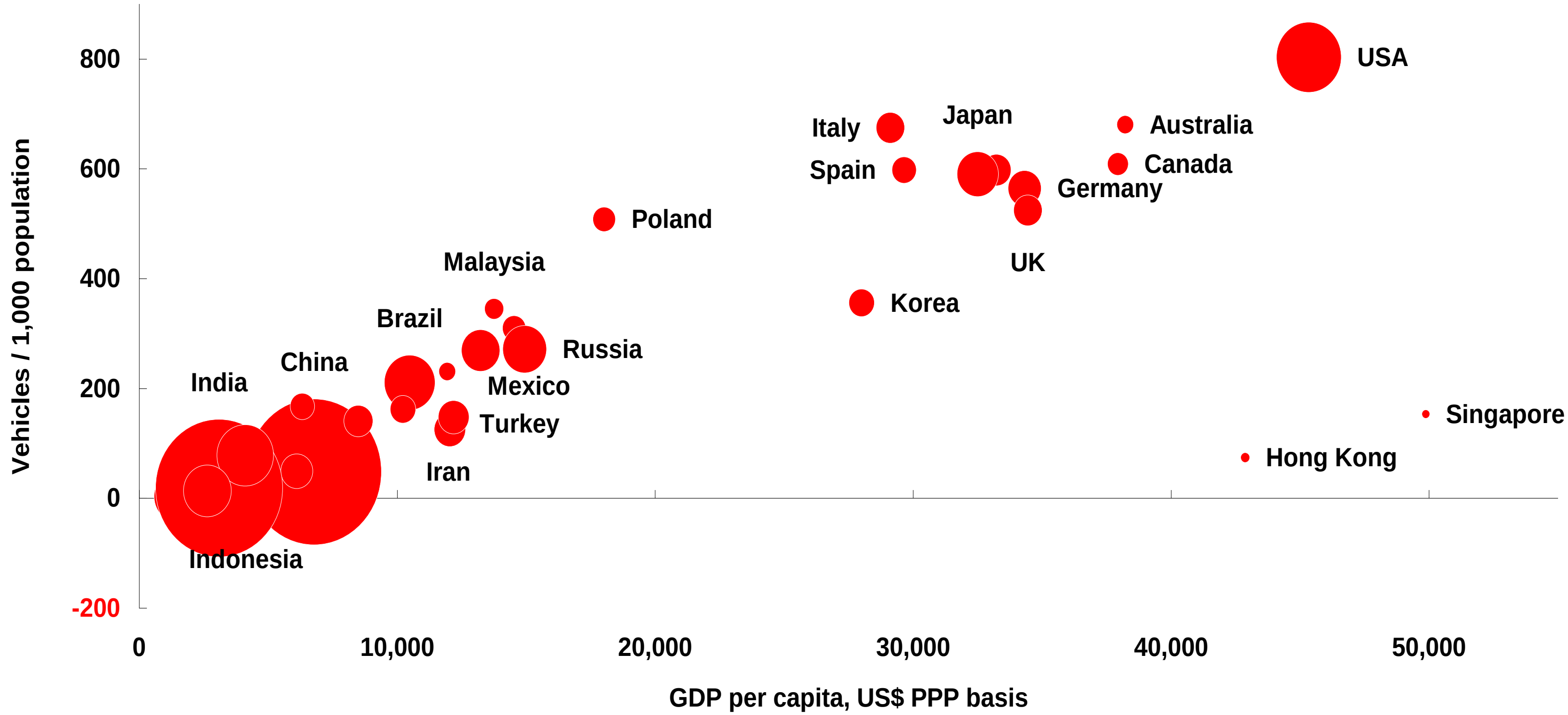
Source: IMF, Macquarie Research, April 2013

What Does This Mean For Commodities?

Commodity demand will continue rising with EM growth

There are almost 2 billion consumers with income of $5,000-$20,000 pa, buying their first vehicles, fridges, washing machines, houses, etc. What if they all want to live like Koreans or Europeans?

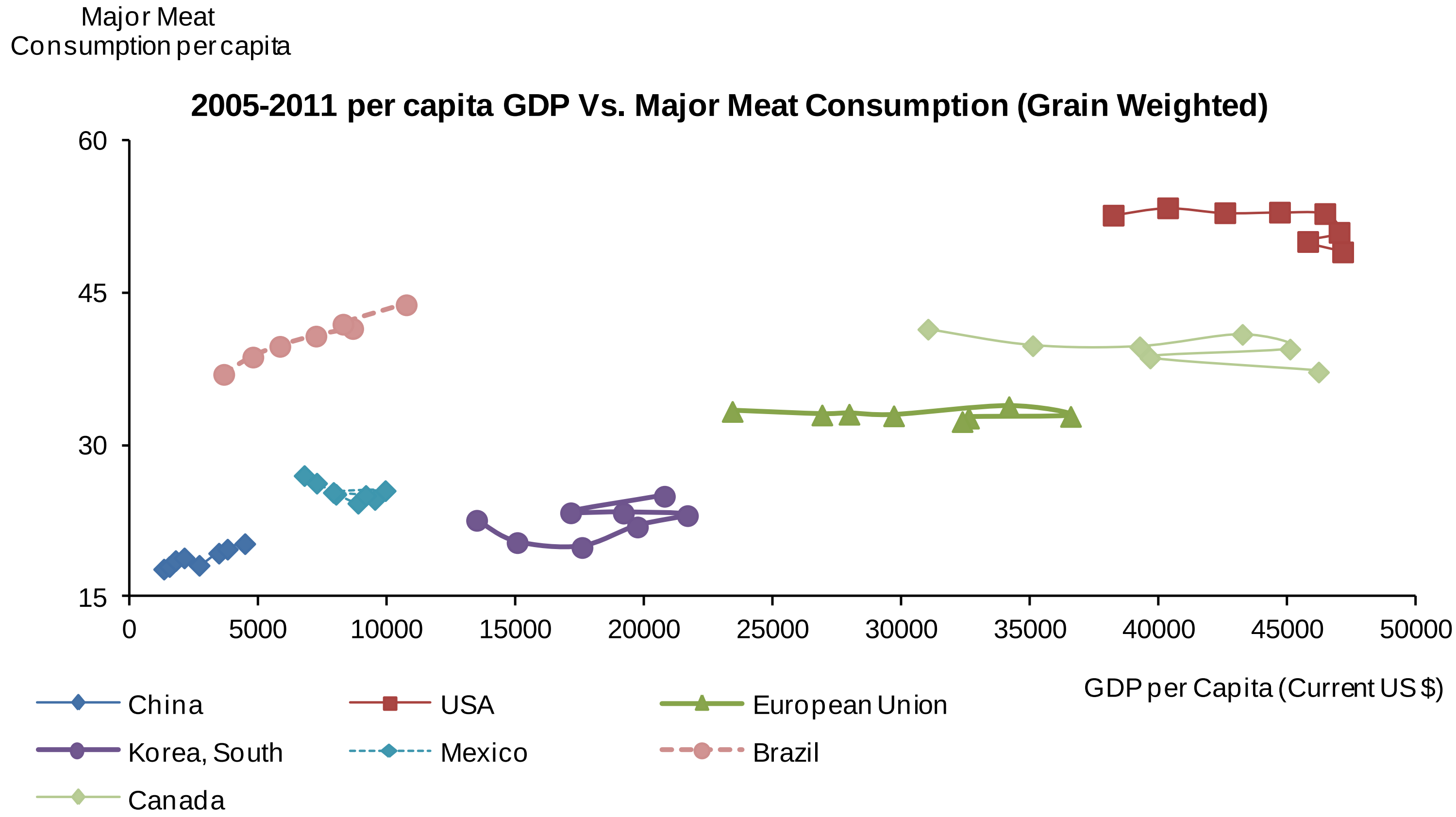
Motor vehicle ownership relative to average income



Source: CEIC, FHA, IMF, JAMA, Macquarie Research, March 2013. Note: 2009 data

Protein-rich diets require more grains consumption per capita

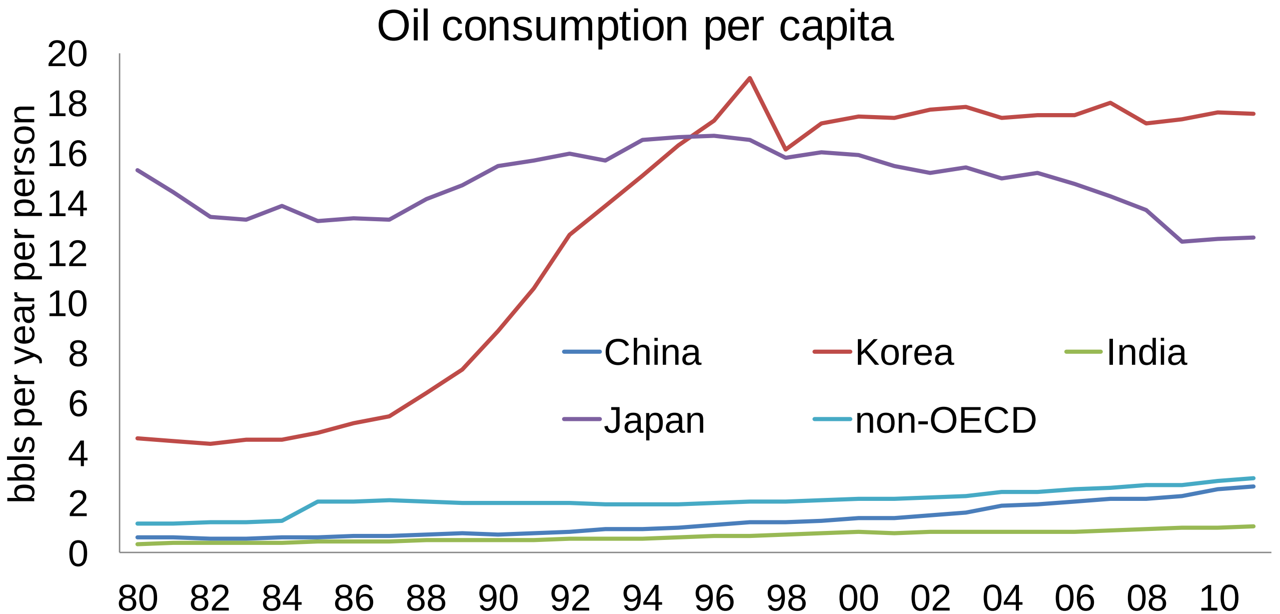
For grains demand growth to continue at pace will require further land expansion throughout the FSU and South America



Source: USDA, IMF, Macquarie Research, March 2013. Note: 2009 data

Can supply meet demand?

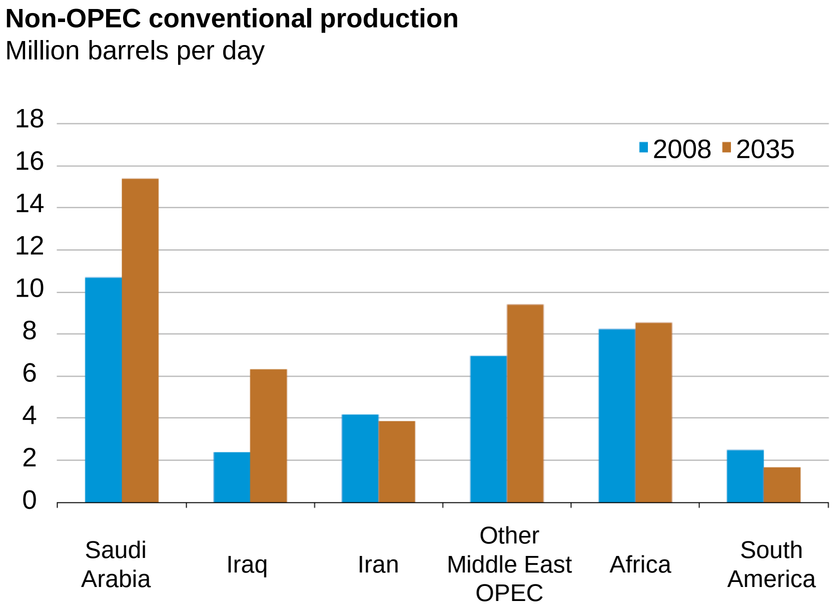
For China and India to get to the same level of per capita consumption as Korea we need Globally …	… If China and India get there in 20 years, we need to increase production by
1. 146% more crude oil,	1. 4.6% a year in crude oil,
2. 225% more copper, and	2. 6.1% a year in copper, and
3. 26% more beef (China only)	3. 1.2% a year in beef (China only)

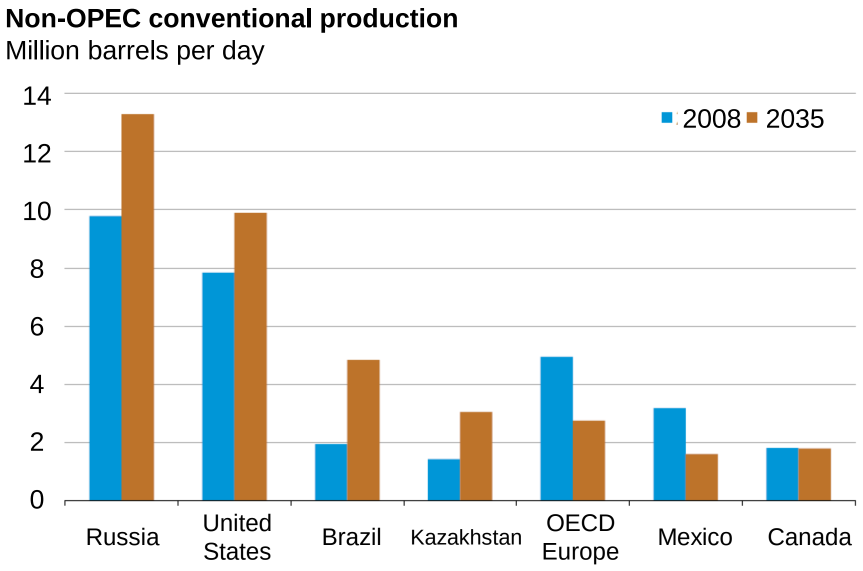


Source: BP, IMF, Macquarie Research, March 2013. Note: up until 2011

Yes, but not without investment in new capacity

Expanding production requires new investment in production capacity

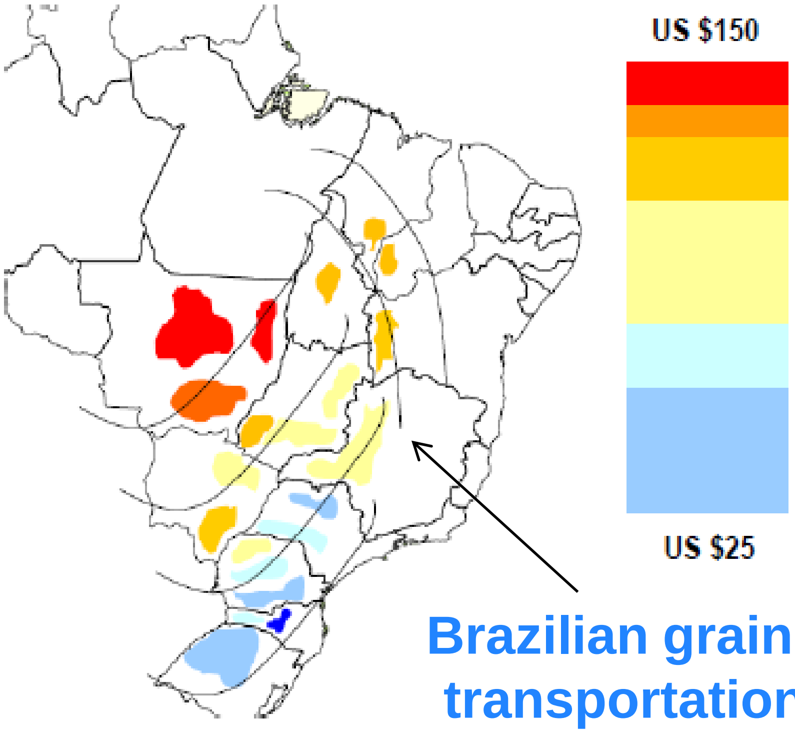




Source: IEA

Yes, but not without higher costs

Expanding production also requires investment in the distribution network



Brazilian grains transportation costs from farm to FOB

Source: Aprosoja, Macquarie Research, May 2012

Purchasing power is about nominal growth as much as it is about real growth

Who cares about oil prices at $150/bbl? Because of EM wage inflation and FX appreciation relative to the USD, EM workers are also getting richer in barrels of oil and bushels of corn

For EM consumers to feel the pain, commodity prices need to increase in ***real terms*** and in ***local currency***

Source: NBS of China, Brent crude oil prices from Bloomberg

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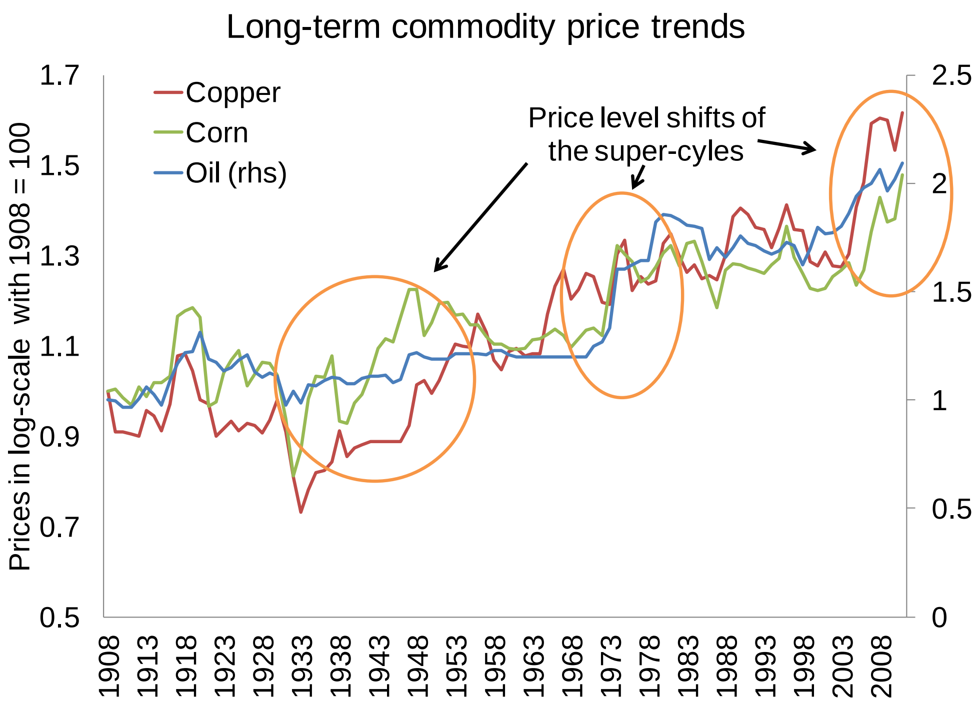
Putting this In the Context of the Current Super Cycle

What's a super-cycle?

A super-cycle is the <u>price level shift</u> necessary to attract <u>investment</u> into new production capacity



Source: BP, USDA, Macquarie Research

Why do super-cycles exist?

i. Investment is lumpy, with high sunk costs

ii. Higher breakeven prices needed for lower quality fields/mines/farms distant from ports/roads

iii. Natural resource nationalism

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Winners and Losers

Constraints Resolved

- Supply constraints have been resolved by innovation and new supply at lower end of marginal cost curve
- EM demand largely met by domestic production

Midstream Cycle

- Downstream processing or infrastructure investment required
- Raw material is accessible or relatively cheap to supply
- EMs are not yet self sufficient

Super-cycle

- New supply is at the upper end of marginal cost curve
- EM demand is growing and requires imports
- Price rises required to incentivise innovation

Winners and Losers

Constraints Resolved	Midstream Cycle	Super Cycle
❑ Aluminium	❑ Cotton	❑ Oil and Refined Products
❑ Natural Gas	❑ Cocoa	❑ PGMs (Platinum and Palladium)
❑ Nickel	❑ Livestock	❑ Copper
	❑ Wheat	❑ Corn
	❑ Coffee	❑ Soybeans
	❑ Sugar	
	❑ Zinc	

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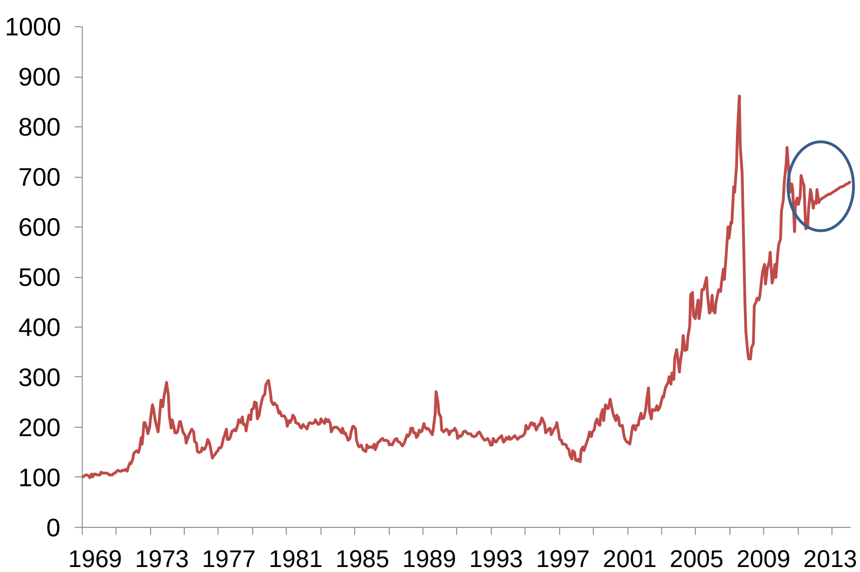
What Does This Mean For Returns?

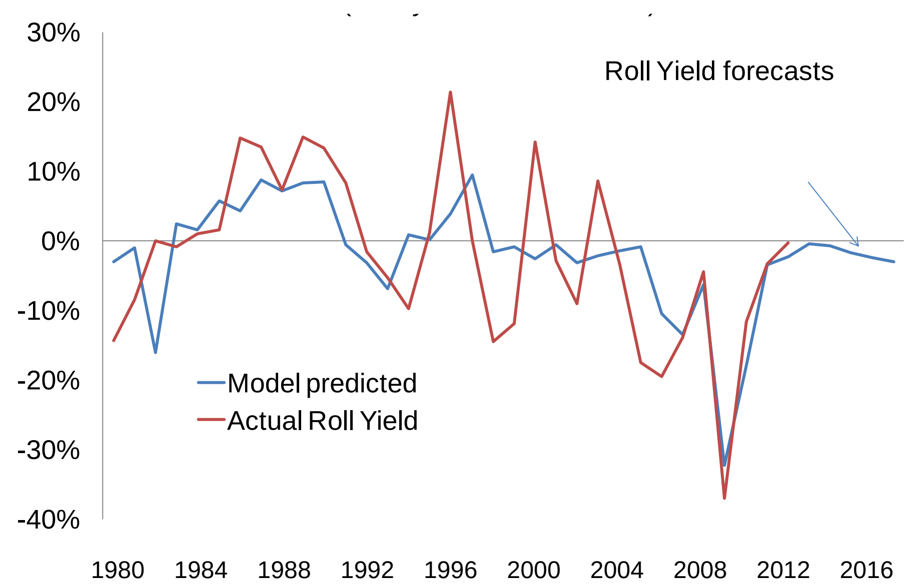
Commodity Returns = Price Appreciation minus Carry Costs plus Collateral Returns

With global inflation at 4% a year over the next 5 years, commodity spot prices will rise in tandem to maintain their real value

Carry costs are a function of spare storage capacity and borrowing costs. Given IMF projections, we predict 1% of carry costs pa



S&P GSCI Spot Index

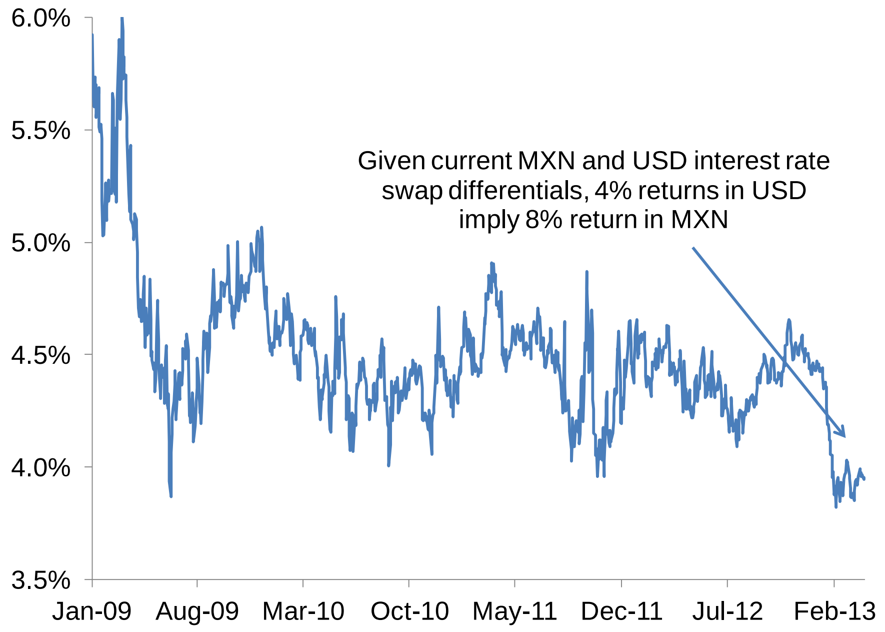


Predictive Model for S&P GSCI Roll Yield (Yearly from 1980 to 2016)

Source: IMF, Bloomberg

Commodity Returns = Price Appreciation minus Carry Costs plus Collateral Returns

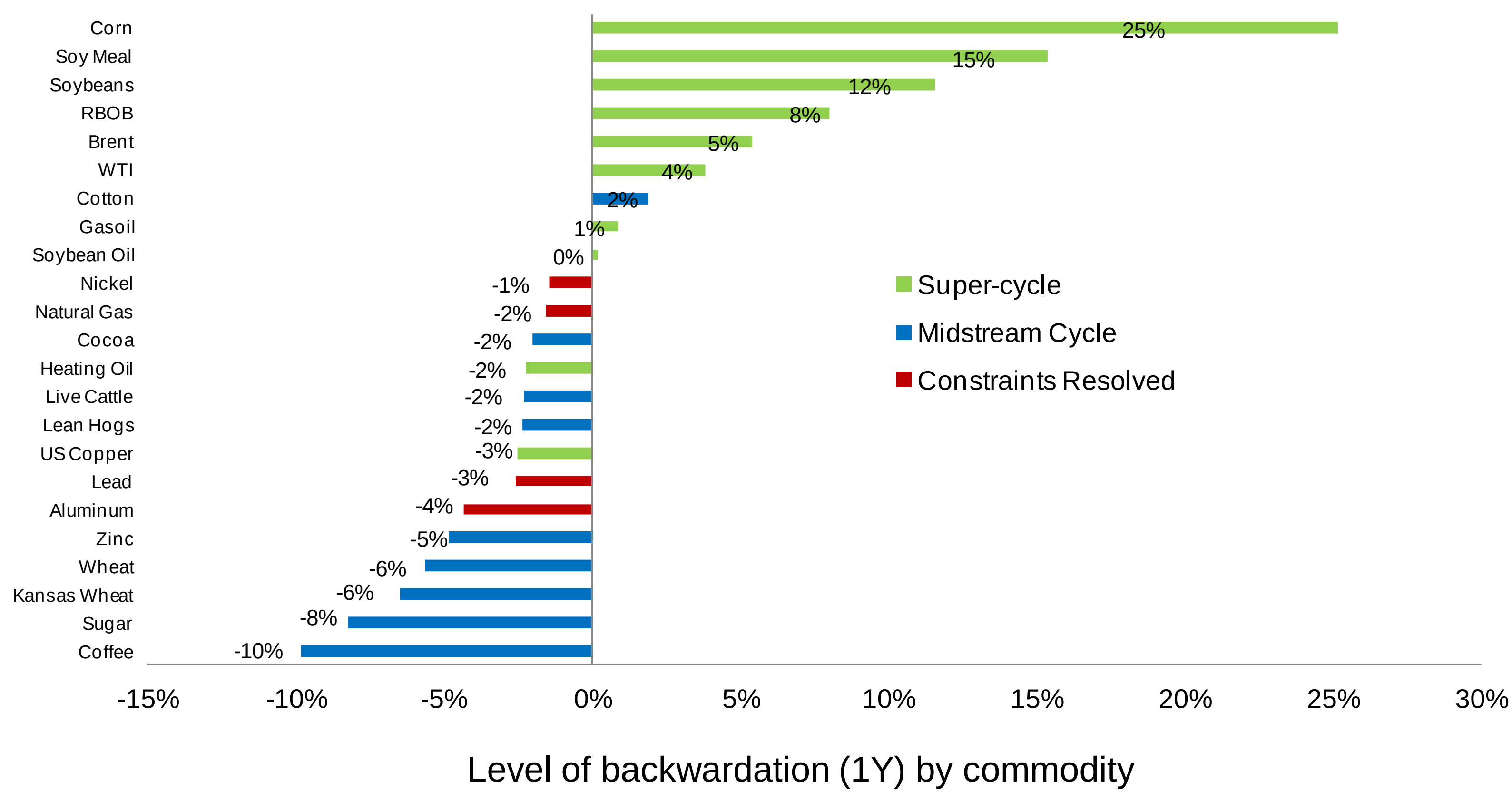
Commodities return in USD, but can be converted using MXN fwd rates, locking in the 4% interest rate differential



Source: Bloomberg

At a micro level curve shapes reflect fundamentals

Negative Roll yields are likely to be larger for commodities with high cost of carry and little demand



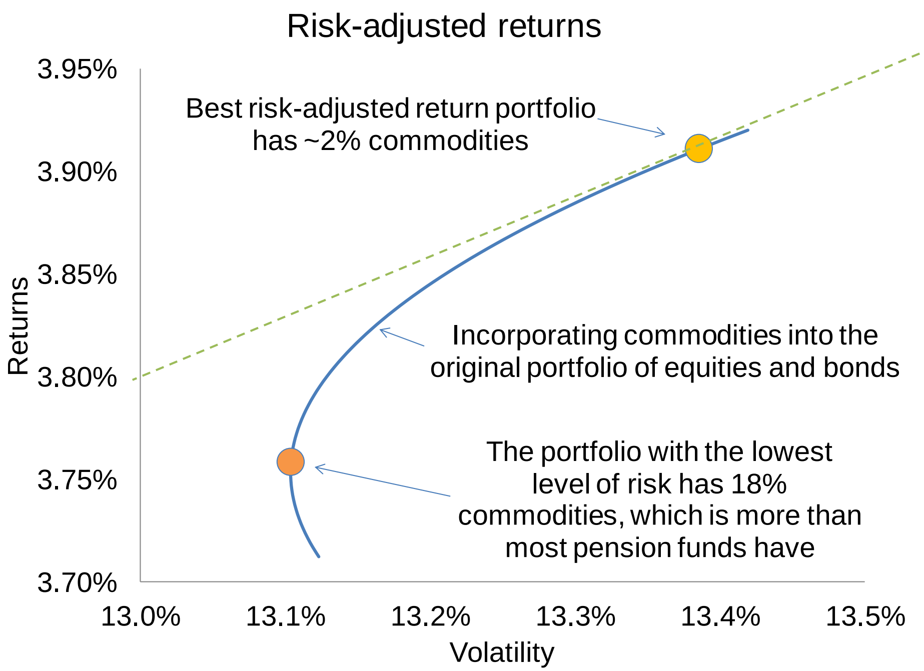
Source: Bloomberg

And In The Context Of The Broader Portfolio?

It’s not just about the Super Cycle

- Commodities are an asset class on its own merit, with equity-like risk and return characteristics and complement equities as long-term investments
- Commodities can reduce portfolio risk by generating diversification benefits through low correlation with other asset classes
- Commodities are one of the best hedges against inflation and loss of purchasing power by investors

Commodities generate diversification benefits to equity/bond portfolios



Asset Class	Typical Allocation
Equities	52%
Fixed Income	28%
Others	20%

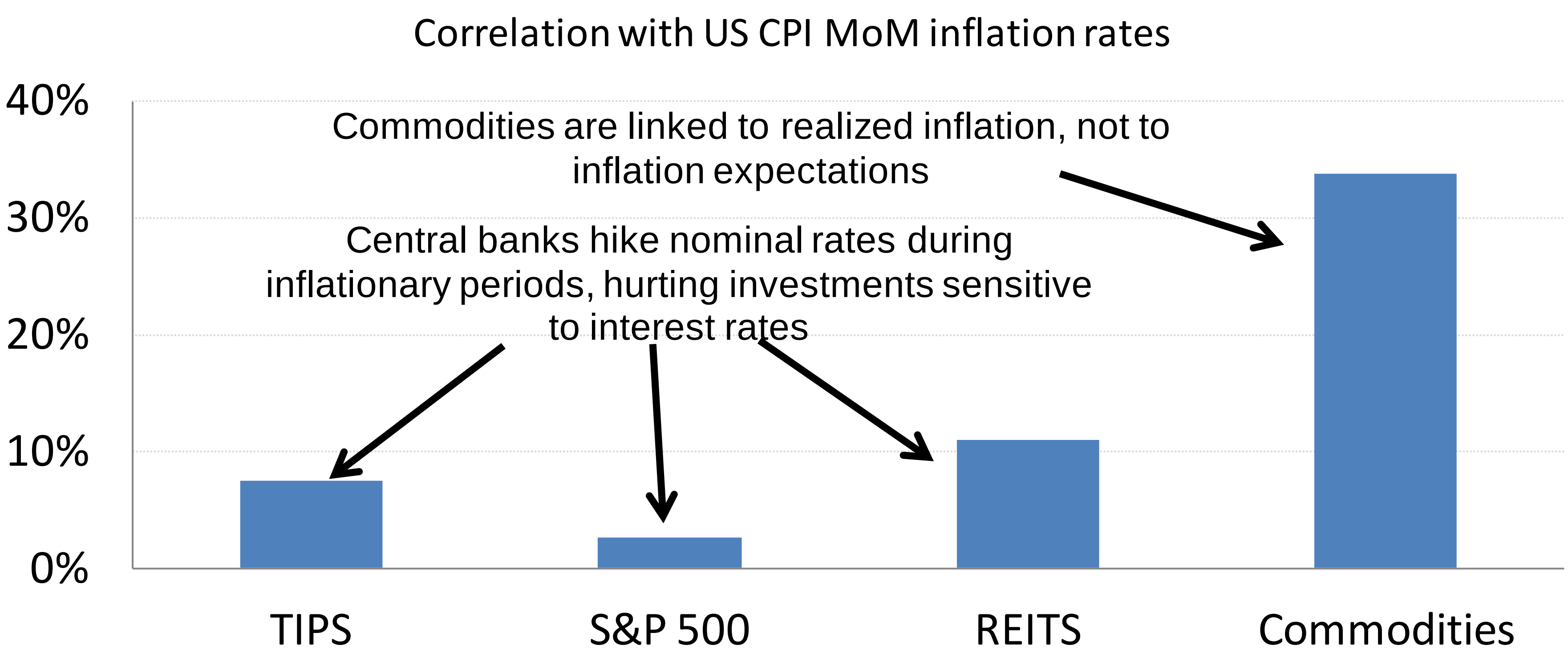
Depending on assumptions, we get 2%-5% of the equity/bond portfolio allocated to commodities instead

Asset Class	Returns	Volatility
Equities	5.5%	21%
Fixed Income	1.0%	3%
Commodities	***3.0%***	***19%***

Source: Return, Vols and correlation assumptions based on J.P. Morgan Investment Analytics & Consulting 2013 Long-term capital market return assumptions

Commodities are a hedge against loss of purchasing power by investors

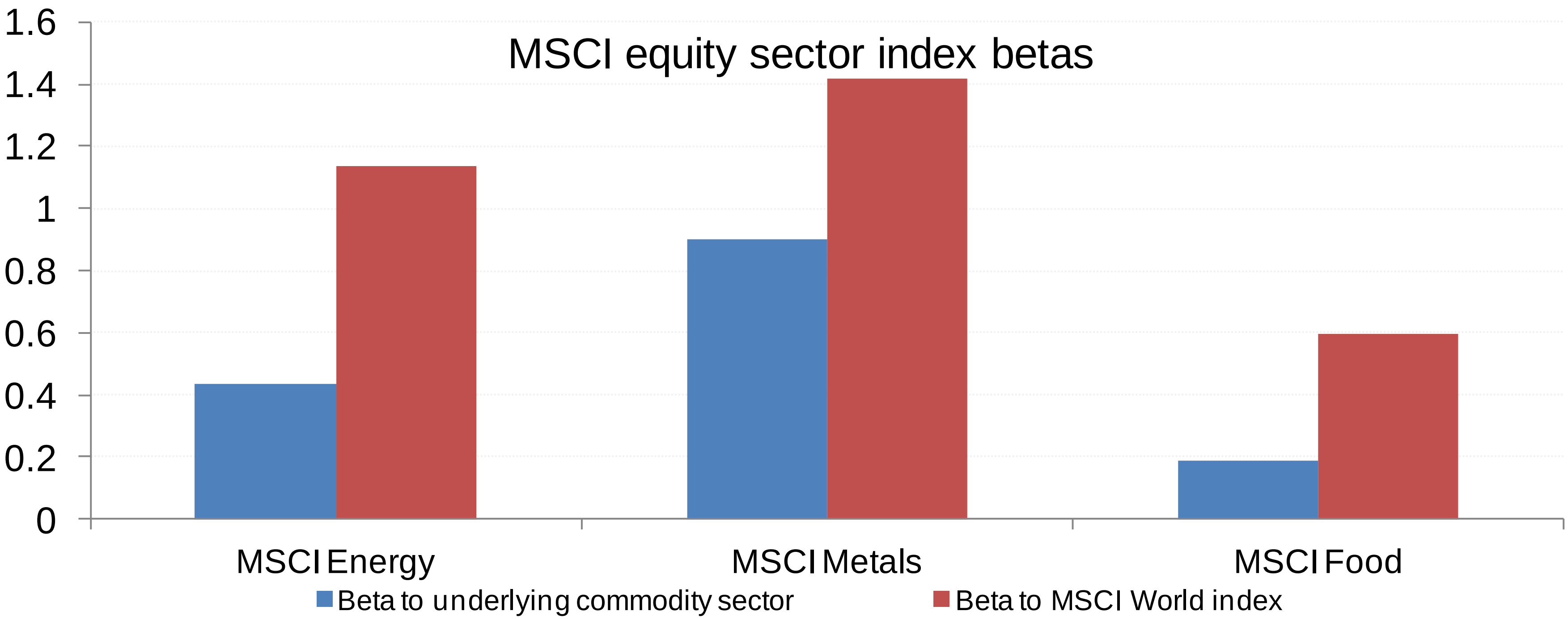
Maintaining purchasing power is key for investments. Commodities have negative correlations to bonds and defensive equity sectors



Source: Bloomberg
Calculations based on monthly pct changes from Feb-97 to Sep-12. We use DJ REIT index fore REITS, S&P GSCI for commodities, and BAML US inflation-linked bond index for TIPS.

Commodity indices are not the same as Commodity-linked equities

Commodity-related equities are often more exposed to the broad equity market than to commodity prices



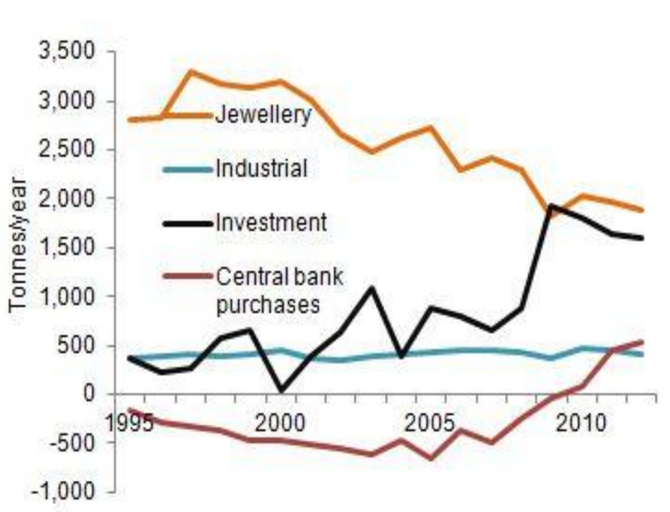
Source: Bloomberg
Calculations based on weekly returns from Jan-02 to Sep-12 using MSCI equity indices and DJUBS indices

In the very short term ....

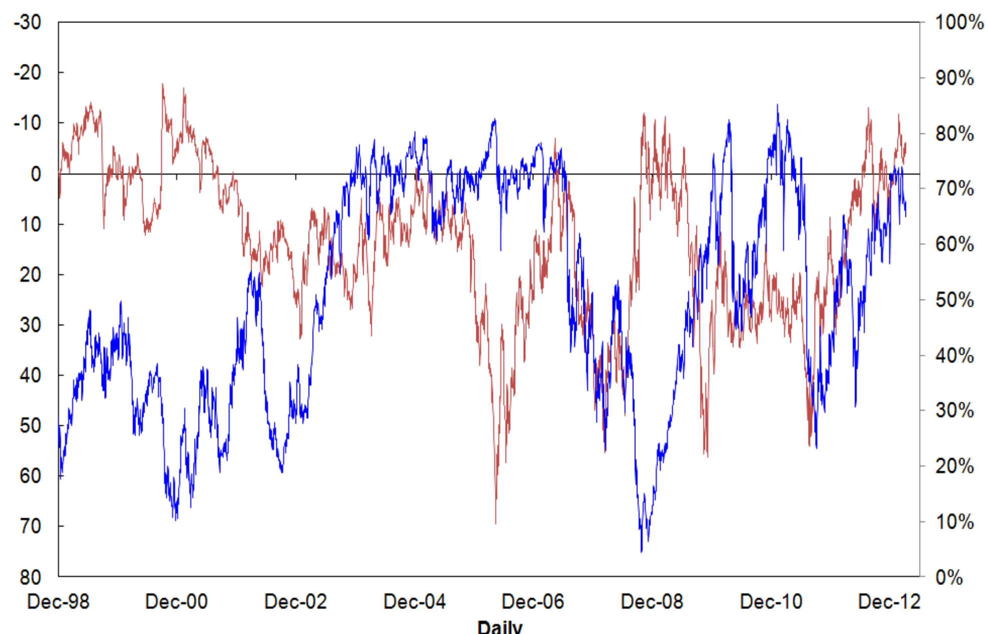
Gold is more a financial asset than a commodity

- Investment flows have driven price movements in recent years
- The growth of physically backed ETFs was a key milestone in this respect (2005)
- Minimal industrial use and declining jewellery demand has been offset by the increase in investment volumes post 2005
- Currency movements and tail risk/macro concerns have driven Gold investment in recent years

Investment Has Been the Driver



Investor Risk Appetite (Red) vs Change in Gold Price (Blue)



Source: Macquarie Research

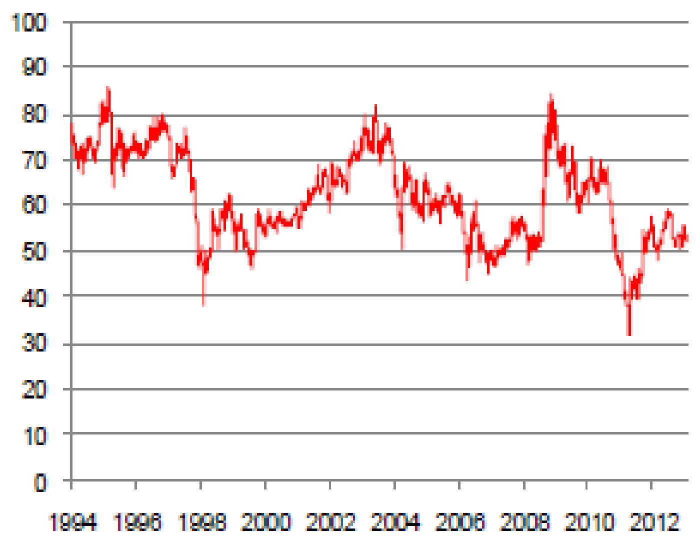
Gold price outlook

- Macquarie Research's **Gold** price forecast for **2013 is $1,530/oz**; nearly $150/oz lower than the 2012 average (current price as of 10Apr13 is $1,571/oz)
  - Weaker investment demand expected to continue, as tail risks are reduced and the chance of more quantitative easing falls
  - The projected result is a possible 400t ($20bio) decline in demand
  - Key risk to this forecast is an unanticipated change in investor demand, driven by renewed QE in the US, a worsening Eurozone crisis, or inflation
- Whilst investment demand is likely to weaken further from 2014 to 2017, increased central bank buying and jewellery demand will provide some support
- As a house, we are much more positive the PGMs

Silver price outlook

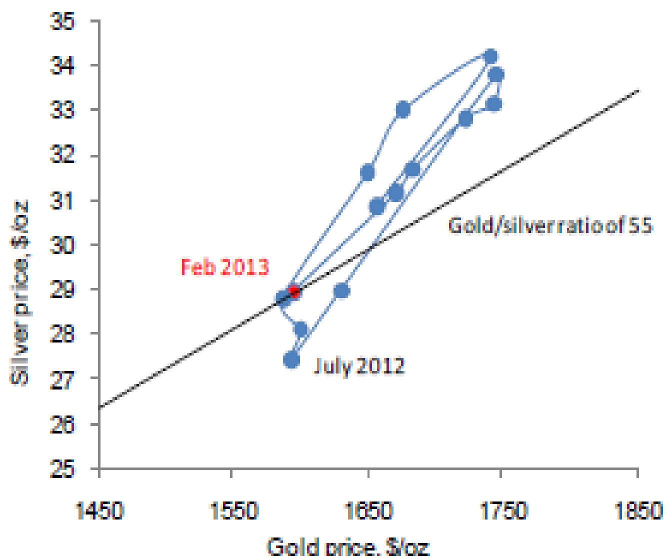
- **Silver** will not escape the implications of a lower Gold price; and Macquarie Research are forecasting an average of **$26/oz** (current price as of 10Apr13 is $28/oz)
- Gold/Silver ratio would be expected to widen when prices fall as Silver is more volatile

The gold / silver ratio



Source: Bloomberg, Macquarie Research, March 2013

Gold / silver relationship since the start of 2012



Source: Thomson Reuters GFMS , Macquarie Research, March 2013

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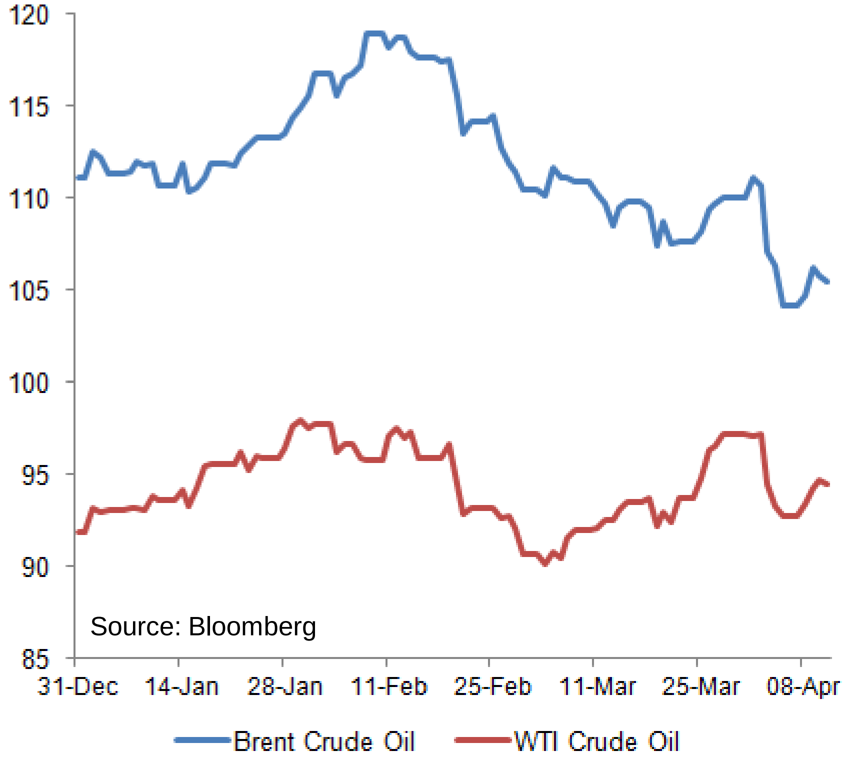
Oil Price Outlook

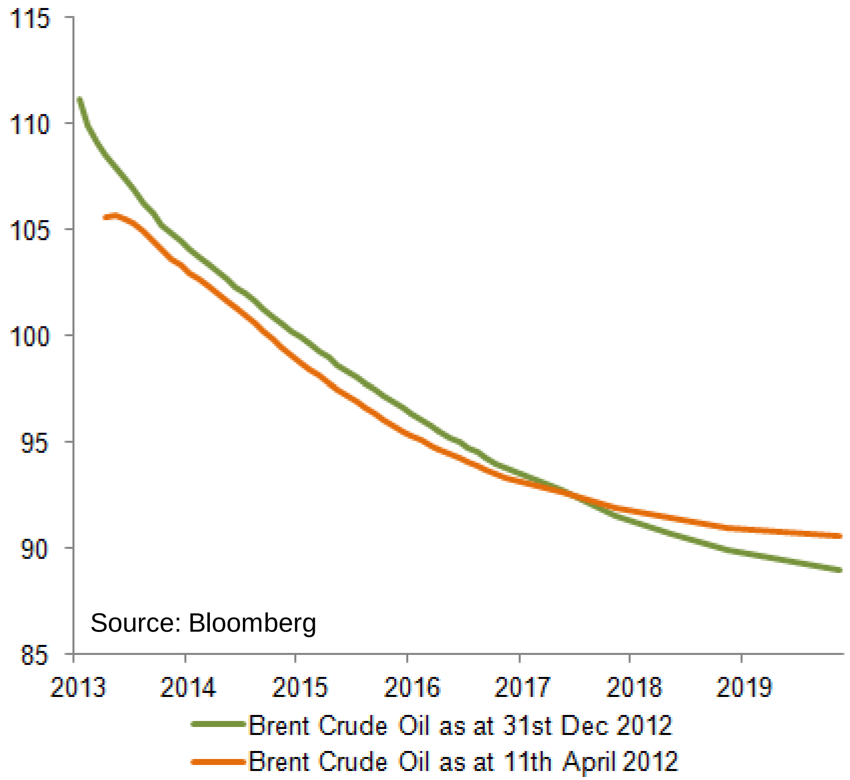
Which oil? 2013 Year to date performance of WTI Crude and Brent Crude Oil (Front Month)

- Brent Crude has underperformed WTI Crude for the year to date



Brent Crude Oil – forward curve, current and as at 31st December 2013

- In addition to the move in flat price, Brent term structure has also weakened



Oil Price Outlook

- Although structurally bullish in the medium and long term, we are bearish Crude Oil in the very short term
  - Seasonal refinery turnaround is continuing, with a particularly heavy turnaround season in Asia
  - We are seeing a slight reduction in refined product demand, with the DoE reporting implied demand for Gasoline 2.6% below the five year average in their latest update
- We expect the WTI Crude – Brent Crude spread to level out at current levels (low negative double digits)

Current price forecasts from Macquarie Research

		1Q/13	***2Q/13***	***3Q/13***	***4Q/13***	***CY/14***
Crude Oil WTI	US$/bbl	**89**	**90**	**94**	**96**	**104**
Crude Oil Brent	US$/bbl	**105**	**103**	**107**	**110**	**116**

Source: Macquarie Research

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