

**A commodity recovery you can see and believe  
As DM growth improves in 2011, shortages likely to become more visible**

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**Jeffrey Currie**

Goldman Sachs International

+44-(0)20-7774-6112

jeffrey.currie@gs.com

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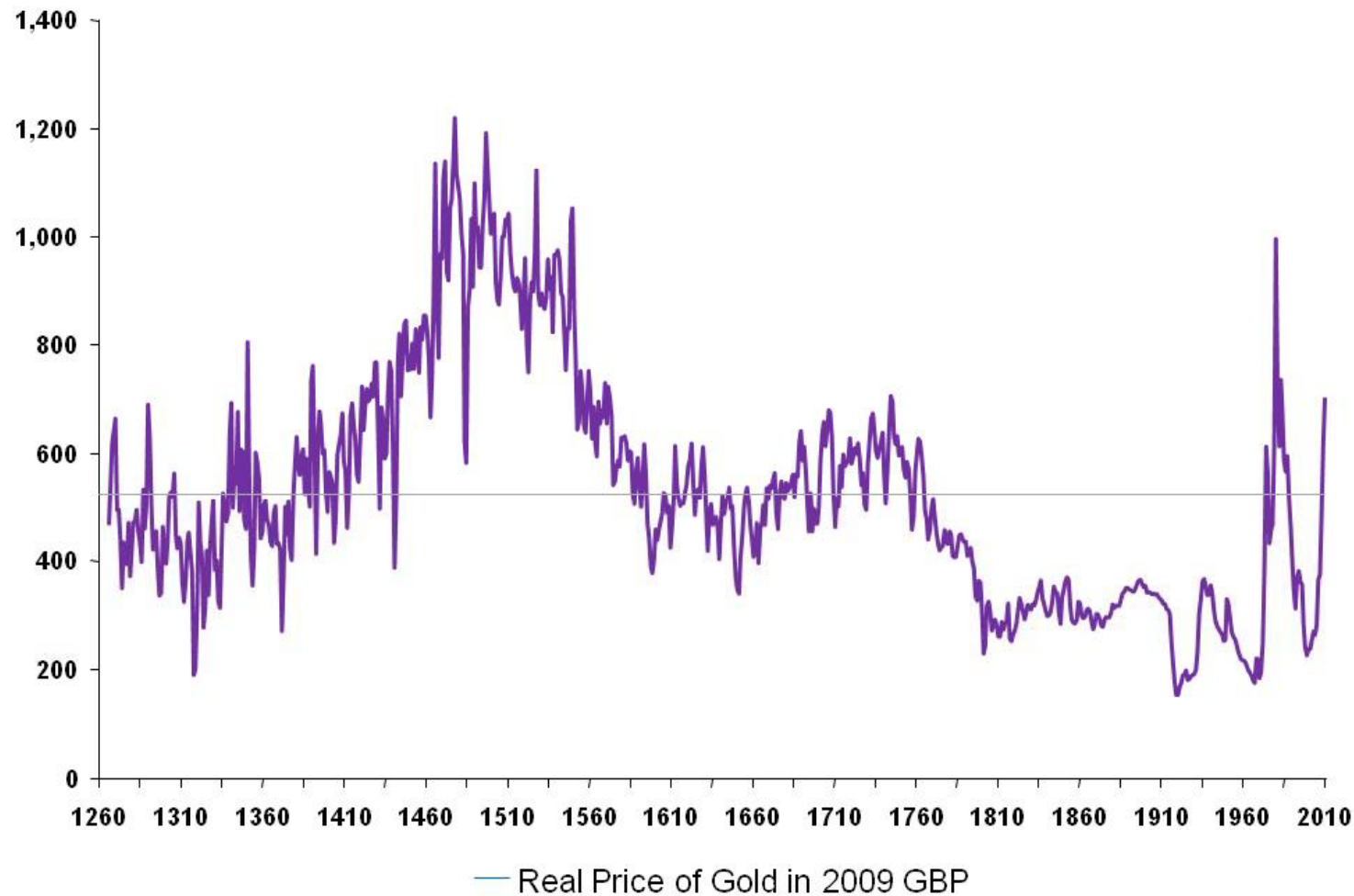
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## Precious metals and the pricing of debasement



The currency of last resort - over long periods of time the price of gold is relatively stable around £500/toz (\$750/toz)

2009 GBP/toz

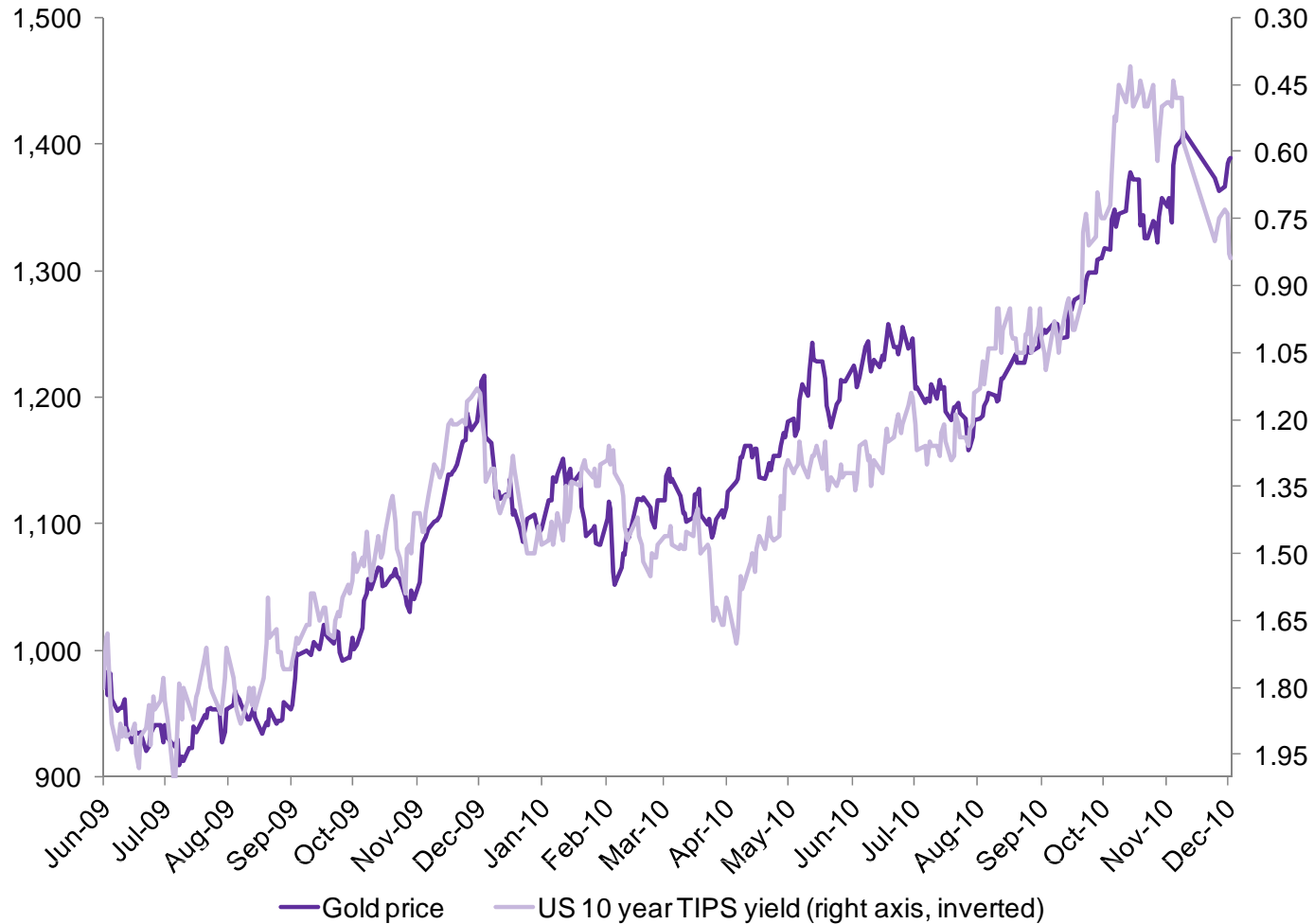


Source: US Geological Service (USGS), GFMS and GS Global ECS Research.



# “Gold as a commodity” is driven by real interest rates

Left axis: \$/toz; right axis: % yield (inverted)

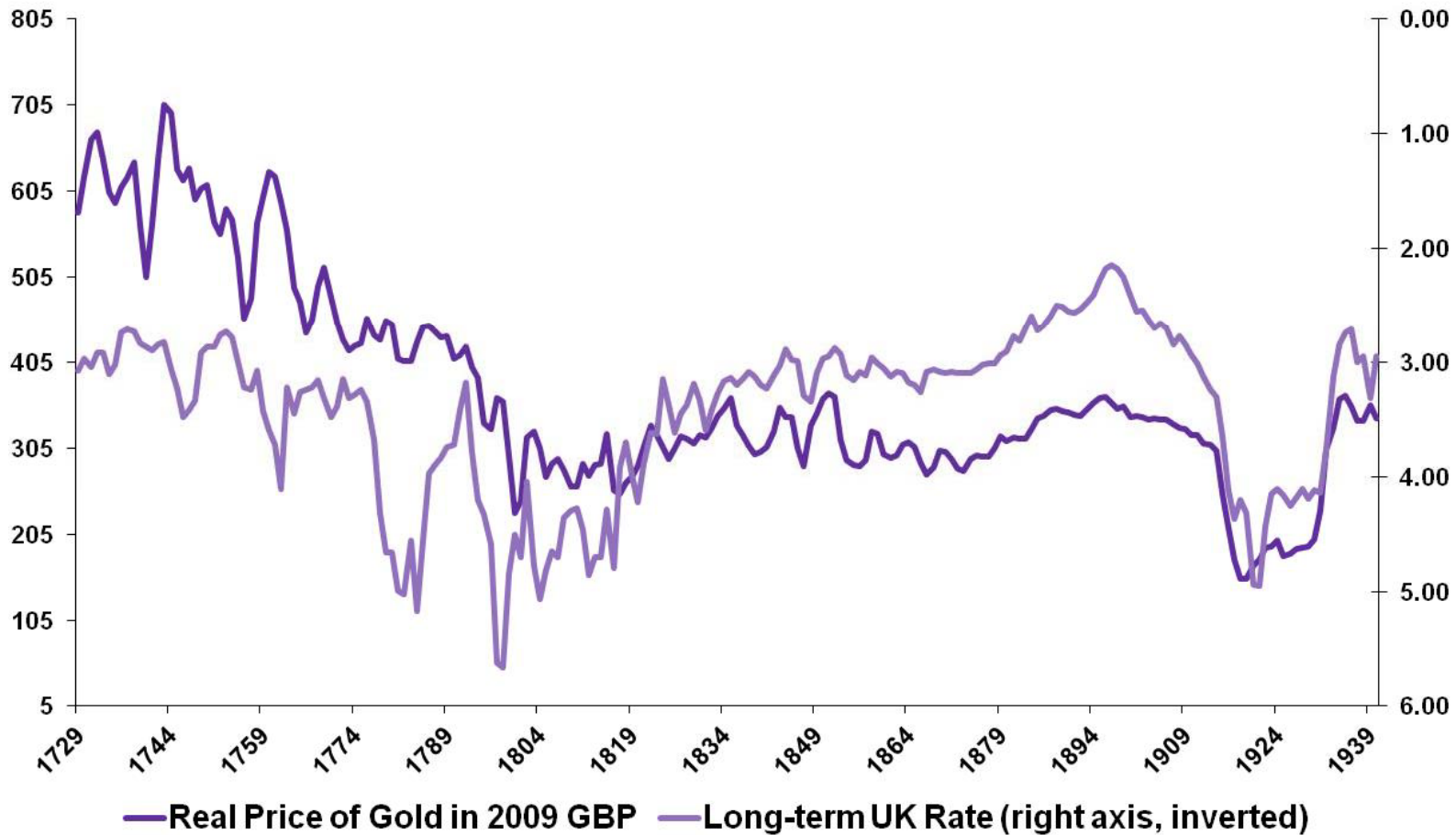


Source: COMEX and Goldman Sachs Global ECS Research.



This relationship has a very long history as gold is an alternative store of value, as it has no other uses making it the best currency of last resort

Left axis: \$/toz; right axis: % yield

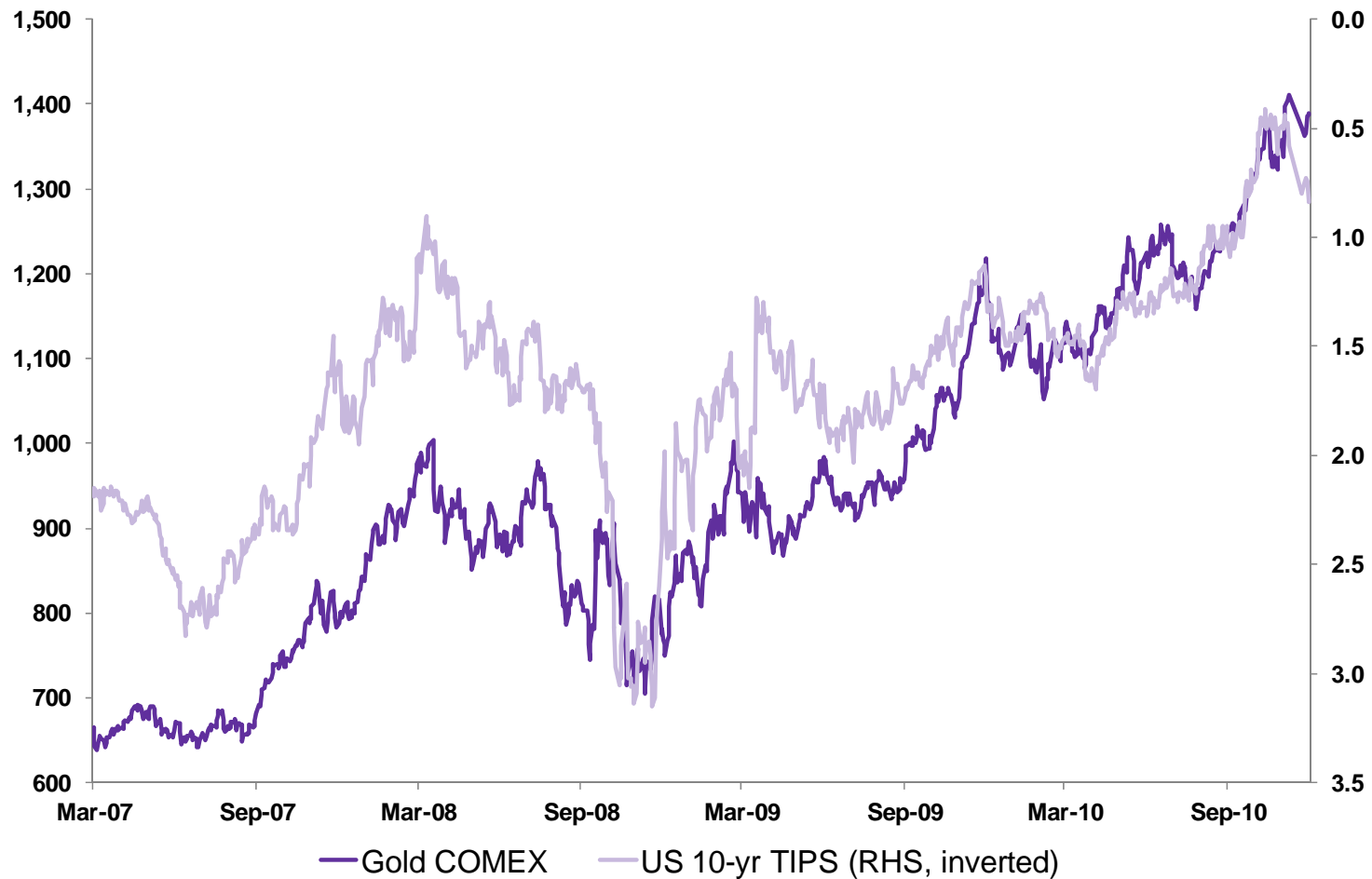


Source: COMEX and Goldman Sachs Global ECS Research.



# The "wedge" between gold prices in real rates is the ETF monetary demand

Left axis: \$/toz; right axis: % yield

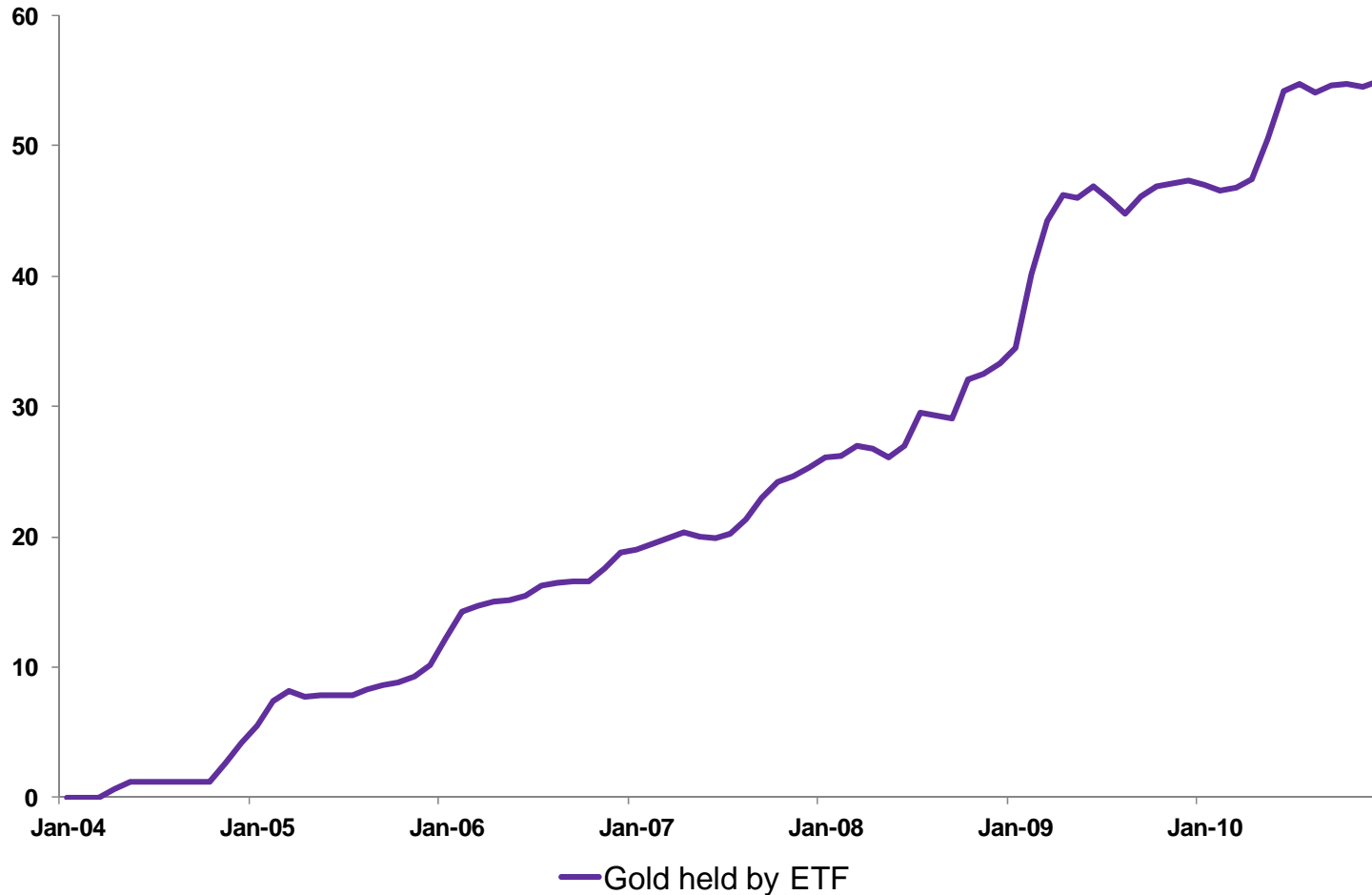


Source: COMEX and Goldman Sachs Global ECS Research.



# Monetary demand from the gold-ETFs has put upward pressure on gold prices, closing the gap

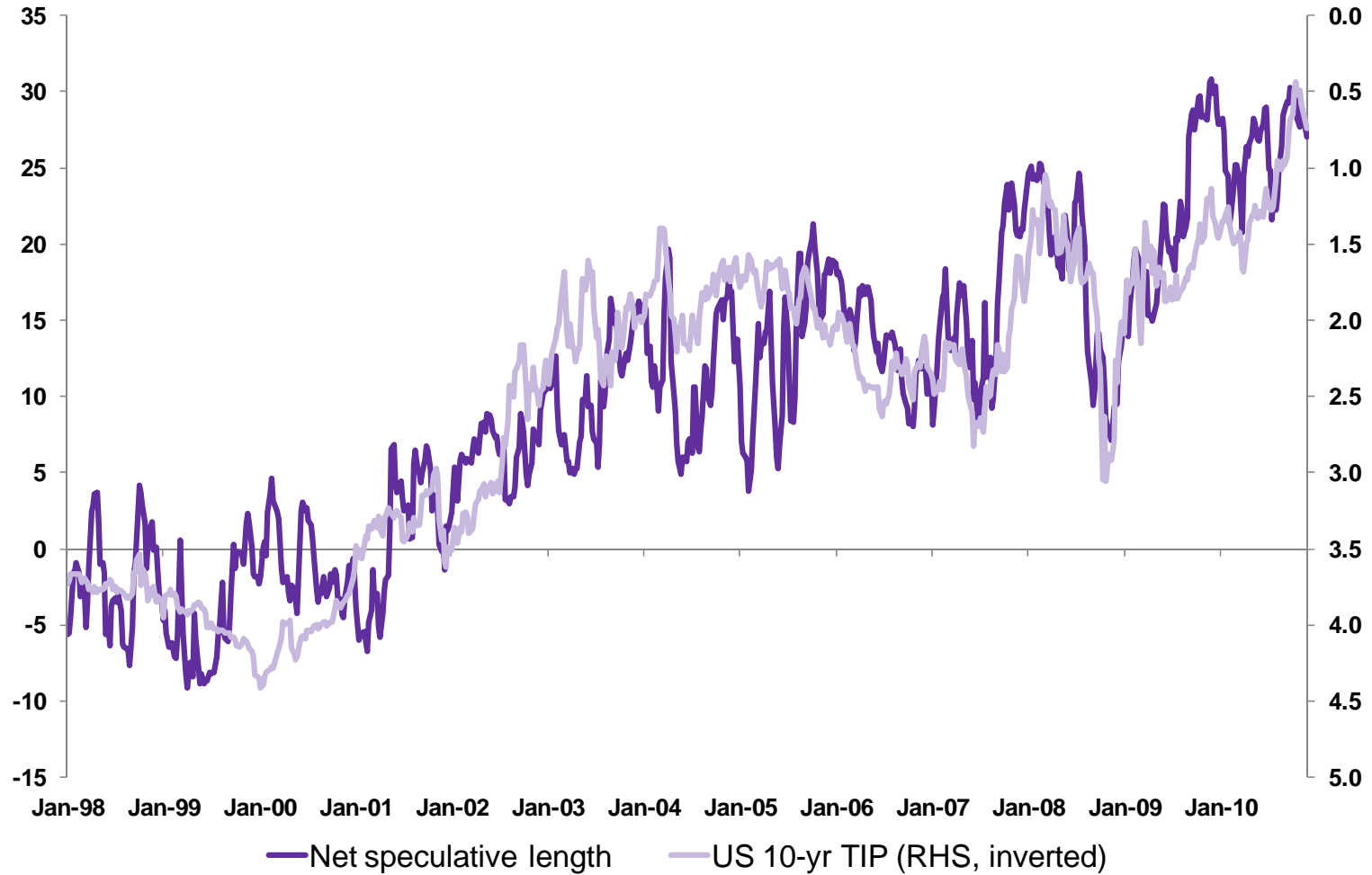
million toz



Source: The gold-ETFs and GS Global ECS Research.

# Speculative flows respond to changes in US real interest rates, highlighting their importance

Left axis: million/toz; right axis: % yield



Source: GS Global ECS Research.





## When will the Fed hike? US real interest rates will likely provide strong support to gold prices

US 10 yr TIPS yield % per annum	Front-month gold price 2010 USD/toz
0.00	1832
<b>0.50</b>	<b>1600</b>
<b>1.00</b>	<b>1397</b>
1.50	1220
2.00	1066
2.50	931
3.00	813
3.50	710
4.00	620

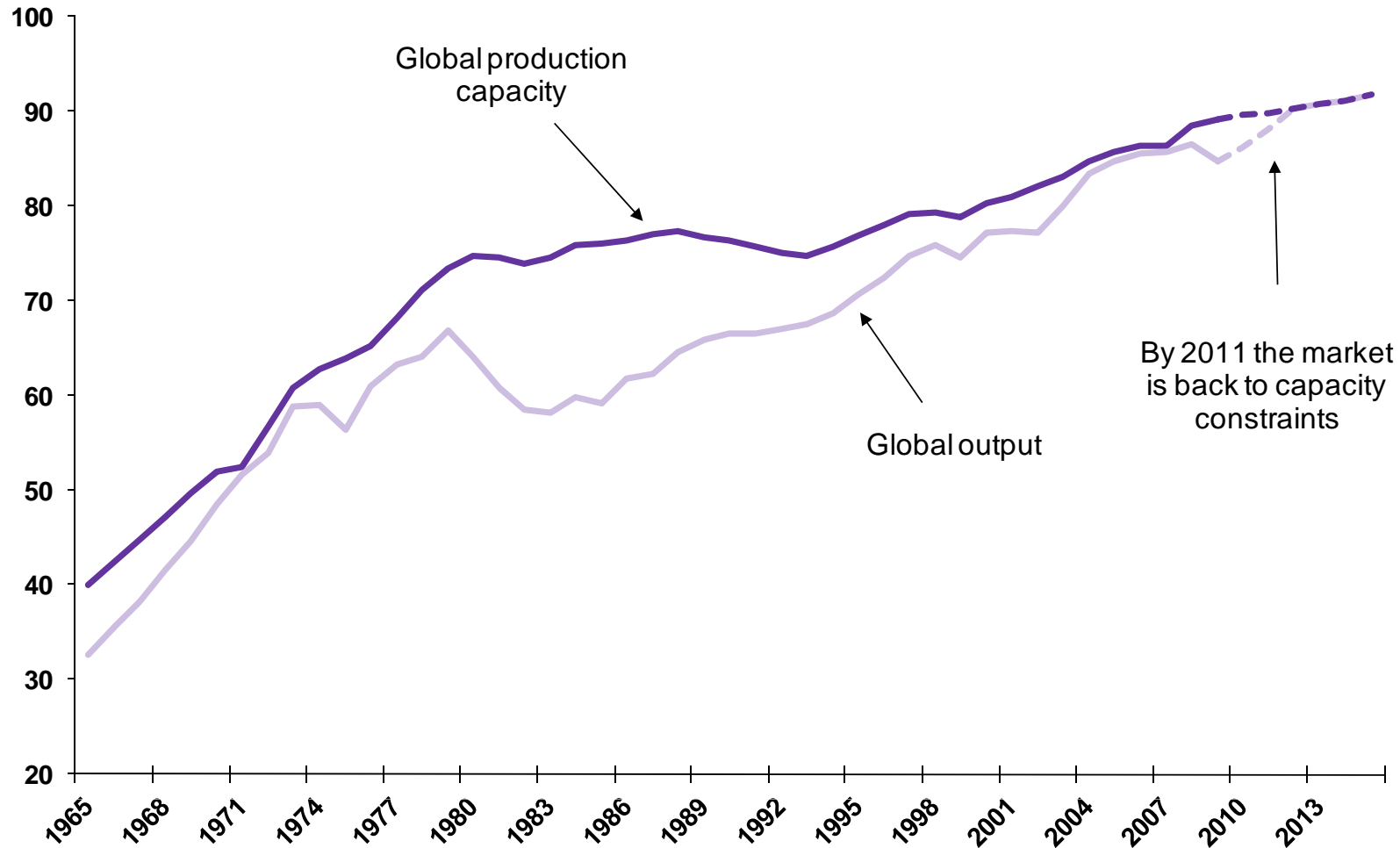
Source: CFTC, Goldman Sachs & Co., Goldman Sachs Global ECS Research.

## Industrial commodities and the pricing of scarcity



# The capacity constraints did not disappear, but instead were eased by weak demand

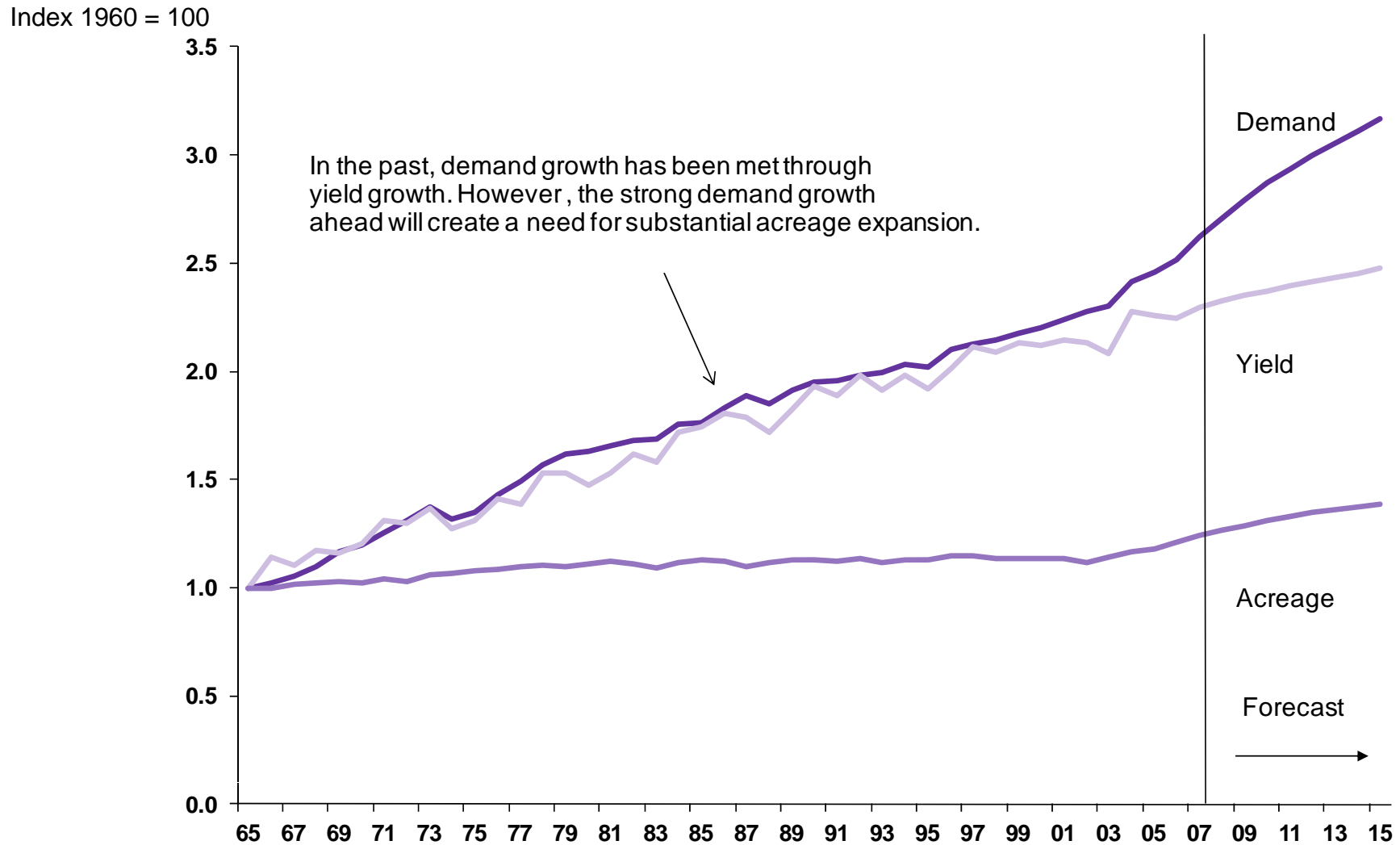
Million b/d



Source: IEA, GS Global ECS Research



# In 2010 a combination of weather events and technological issues pushed agriculture to capacity

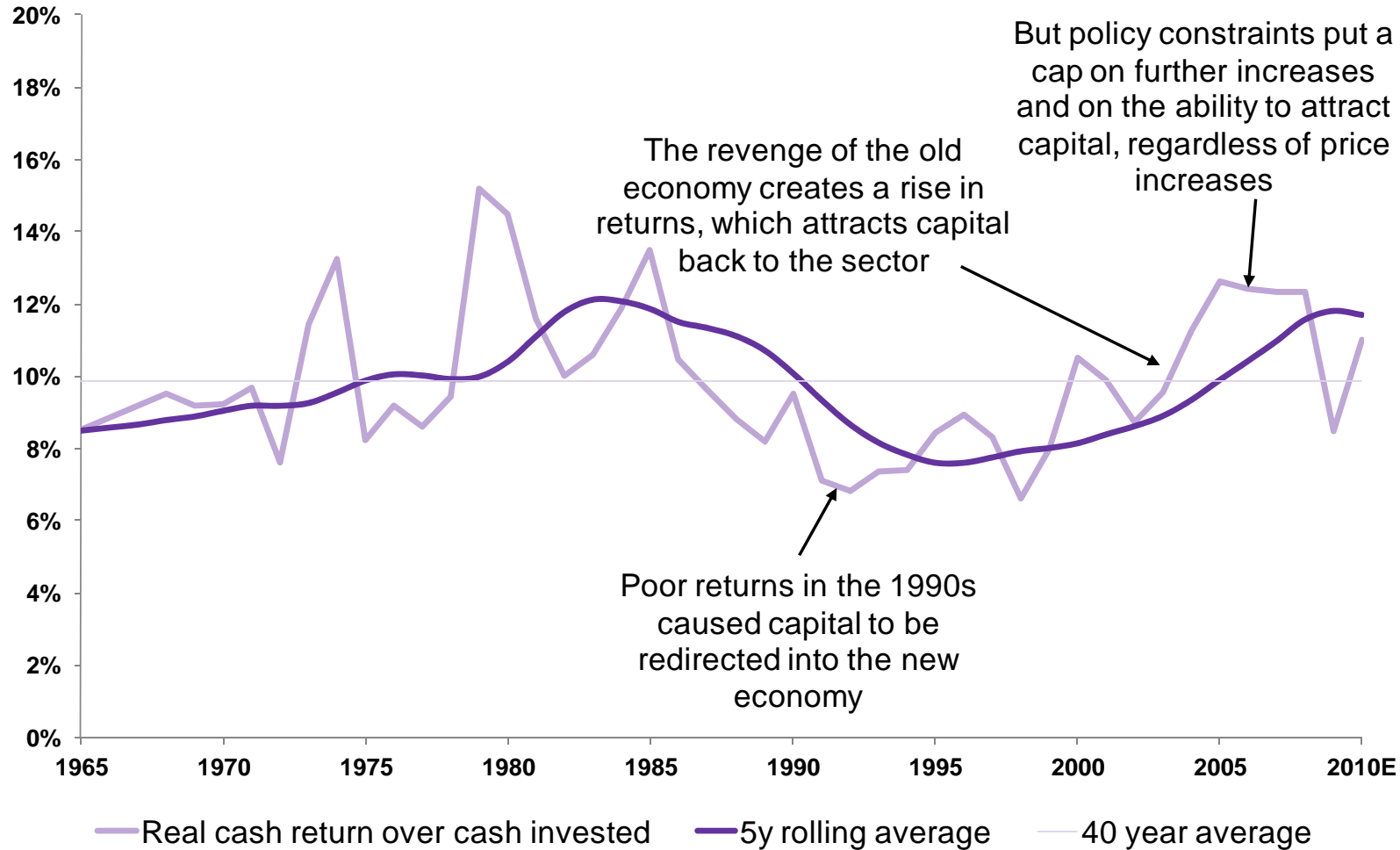


Source: USDA , FAO, Goldman Sachs ECS Research.



# The investment cycle slowed in 2009 and 2010 which will likely compound capacity issues in 2011

Average cash return among oil integrated companies



Source: Goldman Sachs Equity Research



The collapse in commodity demand was driven by the decline in GDP, not higher prices, which suggests that, as the economy continues to recover, so will demand

Percent change year-over-year – GDP on left axis



Source: IEA, GS Global ECS Research.



## Three emerging themes that are likely to dominate commodity pricing in 2011 and beyond

**1. Supply differentiation.** Differentiation between commodities driven by the extent of supply constraints that will likely drive greater price dispersion across the commodity complex i.e. the end of Btu convergence;

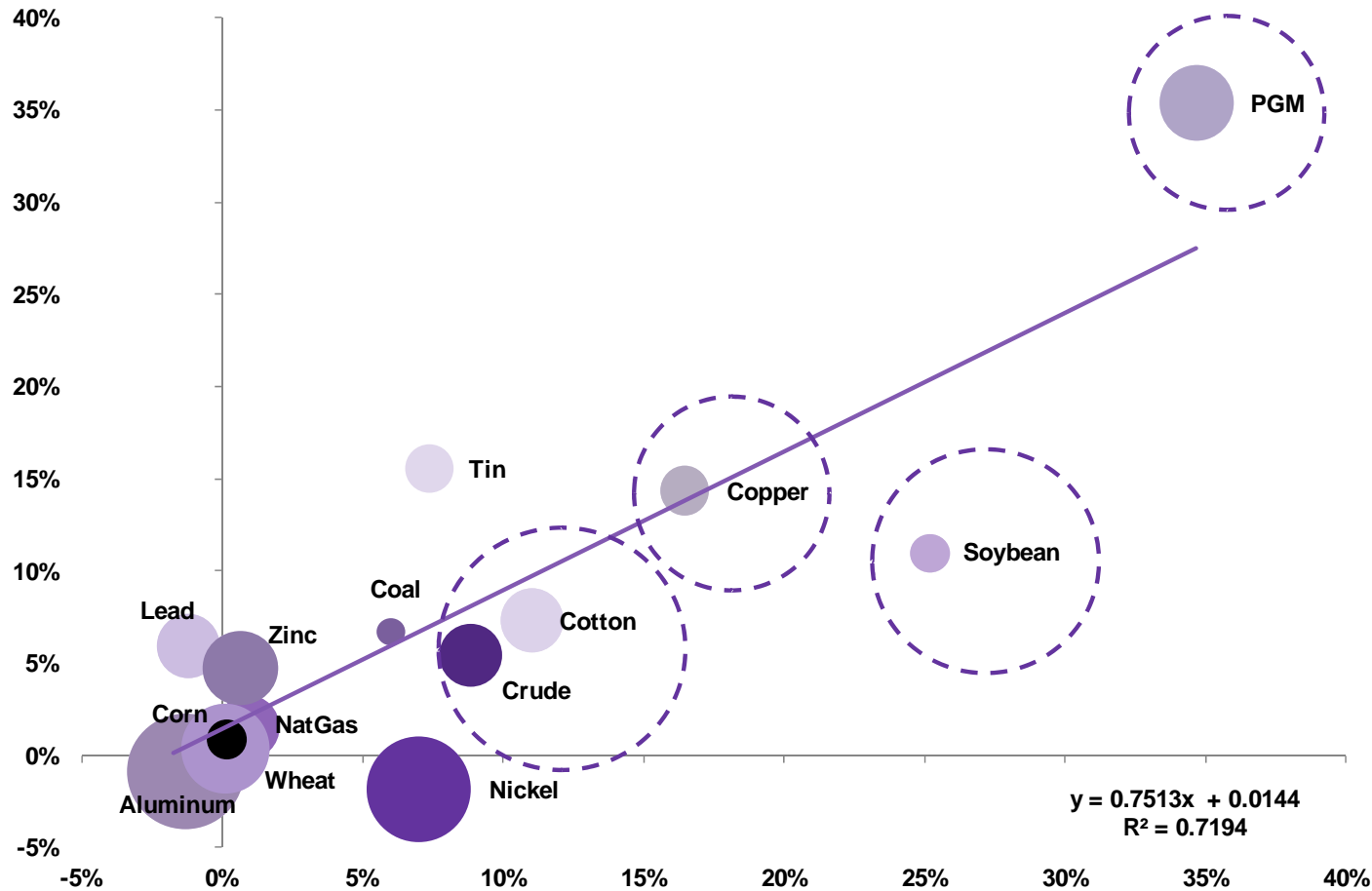
**2. Resource realignment.** Emerging markets are being forced to bid away scarce commodities from the developed economies, especially when supply constraints are more restrictive, which shifts the focus away from the sustainability of higher *prices* and towards the sustainability of higher *growth*;

**3. Macroeconomic relevance.** Increasing macroeconomic correlations as resource realignment will likely increase the relevance of the commodity prices and supply to the broader macroeconomic environment.



# Commodities with more restrictive supply constraints and greater leverage to emerging market demand growth have more positive outlooks: CCCP

Differential between change in China & India net imports (2007 – 2011E) and change in G3 net imports (2007 – 2011E), measured as % of 2010 global supply, vertical axis; China & India net imports (2011E) as % of 2010 global supply, horizontal axis; Spare capacity rate, bubble size



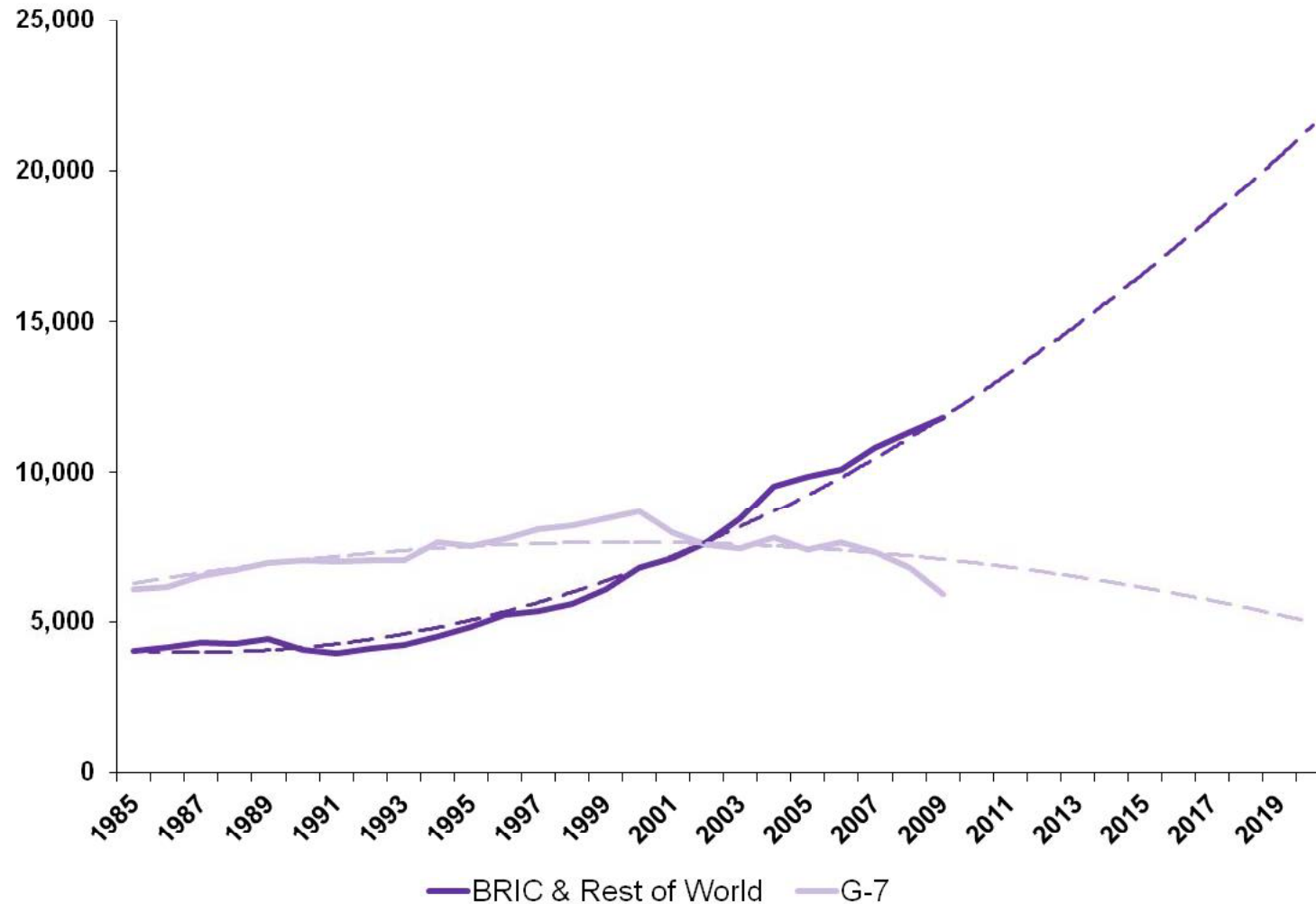
Source: Goldman Sachs Global ECS Research.ce: DOE.





Resource realignment has been the most pronounced in copper, which has seen the largest reductions in DM demand already

Copper demand in kmt



Source: Brook Hunt, GS Global ECS Research



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# Disclosures

January 4, 2011



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