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The global economic outlook after Brexit

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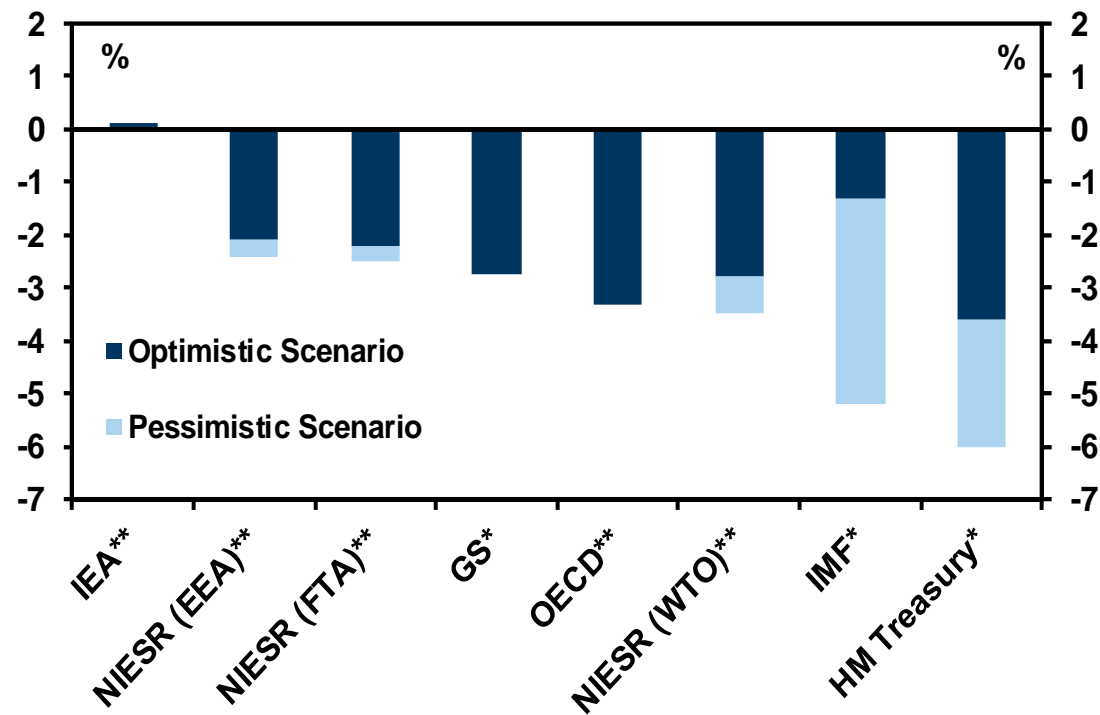
Brexit implications are now the main risk for the short-term outlook

Real GDP Growth										
Percent Change yoy	2010	2011	2012	2013	2014	2015	2016 (f)		2017 (f)	
							GS	Revision	GS	Revision
US	2.5	1.6	2.2	1.5	2.4	2.4	1.9	-0.1	2.0	-0.1
Japan	4.7	-0.5	1.7	1.4	0.0	0.5	0.6	0.0	1.0	0.0
Euro Area	2.0	1.6	-0.8	-0.2	0.9	1.5	1.3	-0.2	1.2	-0.3
UK	1.5	2.0	1.2	2.2	2.9	2.3	1.5	-0.5	0.2	-1.8
Sweden	5.7	2.7	0.1	1.2	2.4	3.9	3.4	-0.2	2.6	-0.3
Norway	1.8	1.9	3.6	2.3	2.3	1.0	0.9	-0.2	2.1	-0.3
Switzerland	2.9	1.9	1.1	1.8	1.9	1.5	1.5	0.0	1.5	0.0
China	10.6	9.5	7.7	7.7	7.3	6.9	6.6	0.0	6.4	0.0
Brazil	7.5	3.9	1.9	3.0	0.1	-3.8	-3.1	0.0	1.1	0.0
Russia	4.5	4.0	3.5	1.3	0.7	-3.7	0.5	0.0	3.0	0.0
Developed Markets	3.0	1.8	1.2	1.2	1.9	2.0	1.7	-0.1	1.7	-0.2
Emerging Markets	8.2	7.0	5.4	5.3	4.9	4.2	4.7	0.0	5.3	0.0
World	5.4	4.2	3.2	3.2	3.4	3.1	3.1	-0.1	3.4	-0.2

Source: Goldman Sachs Global Investment Research.

Most studies suggests a significant adverse impact on UK growth

Brexit's peak impact on GDP level

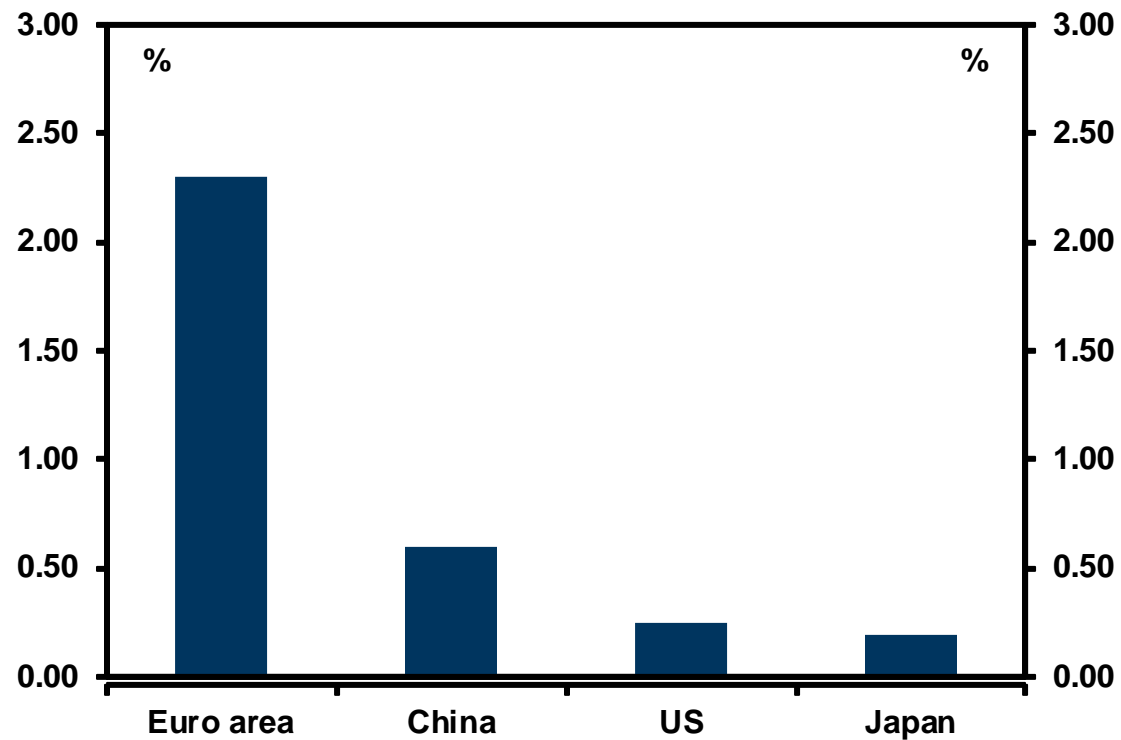


* Peak impact year is 2018 and ** is other.

Source: Haver, Goldman Sachs Global Investment Research

Trade channel is rather small

Exports to UK as a % of GDP



Source: Haver Analytics, Goldman Sachs Global Investment Research

Uncertainty and FCI changes to be the main transmission channels

Changes in key macro variables

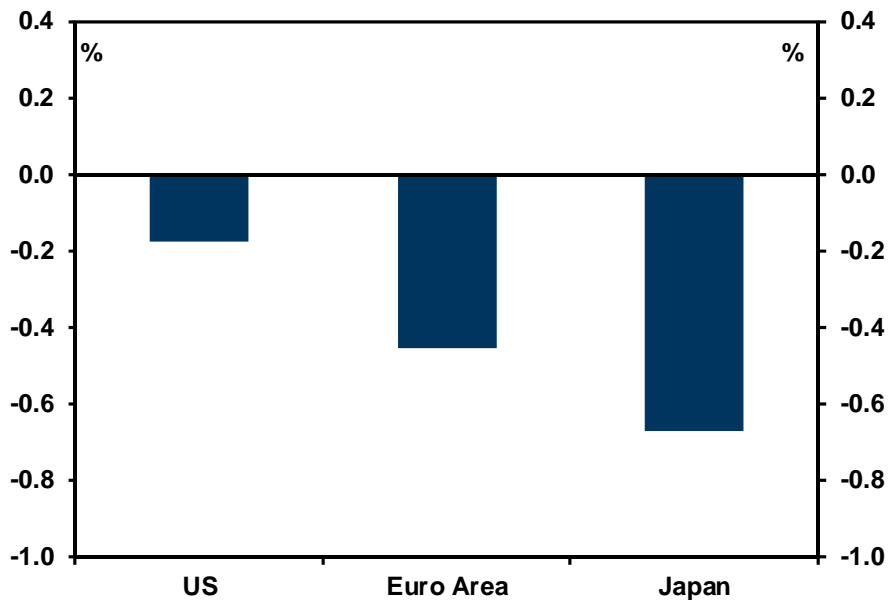
Spillover Simulations						
	Dom. FCI (pp)	TWI (%)	FCI (pp)	GDP (%)	Core CPI (%)*	Policy Rate (pp)
US	0.12	1.28	0.22	-0.17	-0.04	-0.21
Euro Area	0.41	0.18	0.43	-0.45	-0.04	-0.43
Japan	0.37	5.25	0.78	-0.67	-0.14	-0.55
UK	0.59	-6.01	-0.46	-2.51	0.01	-2.68
EM				-0.04		
DM				-0.43		
World				-0.20		

* Average year-over-year inflation rate over the next 8 quarters.

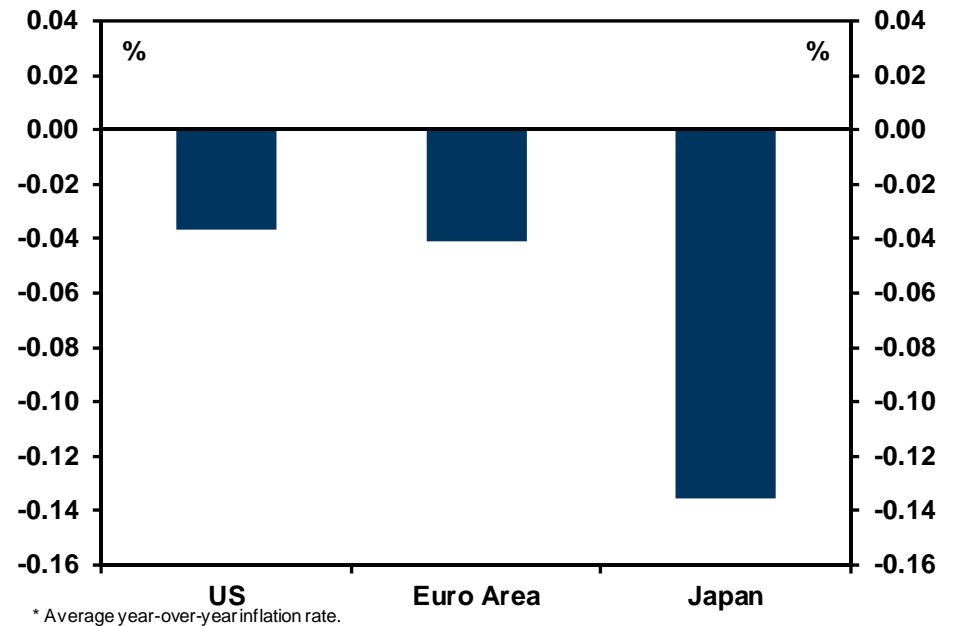
Source: Goldman Sachs Global Investment Research.

Impact to be felt most in Japan via FCI tightening

Impact on real GDP relative to base line



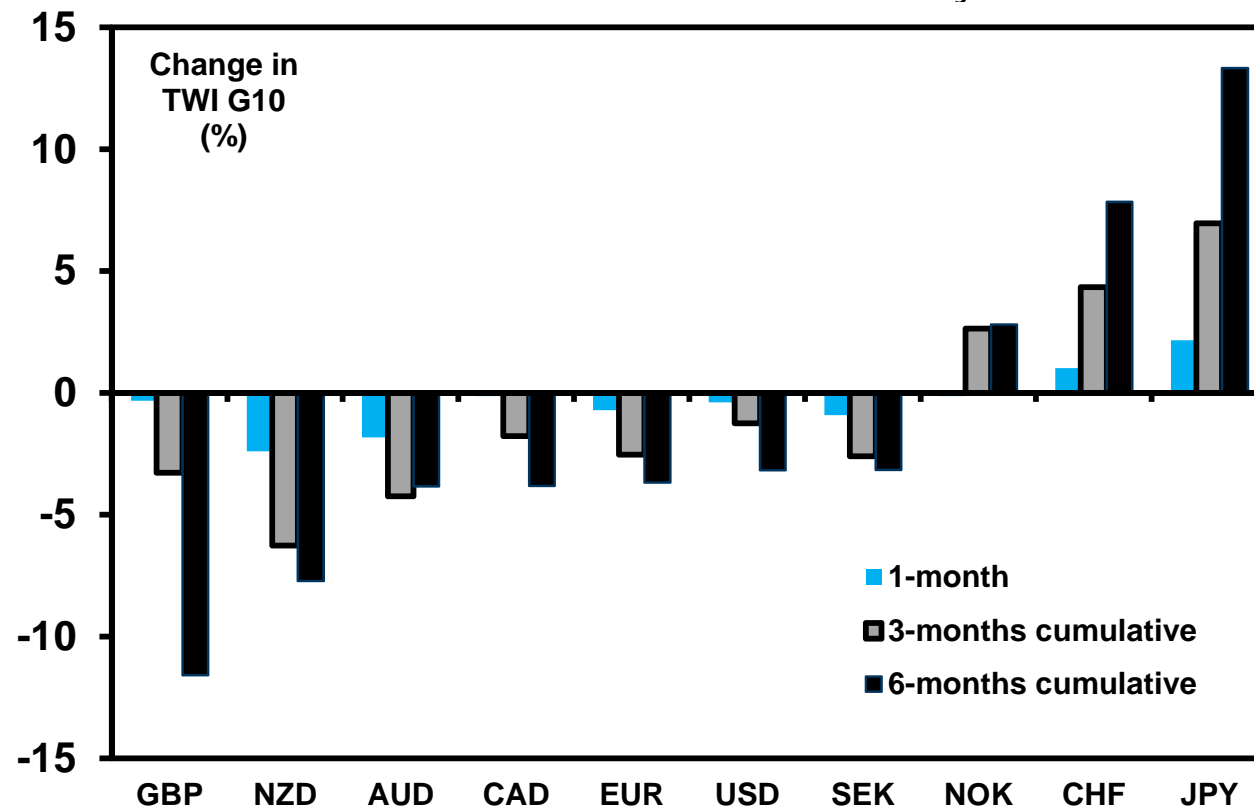
Impact on core inflation relative to base line



Source: Haver Analytics, Goldman Sachs Global Investment Research

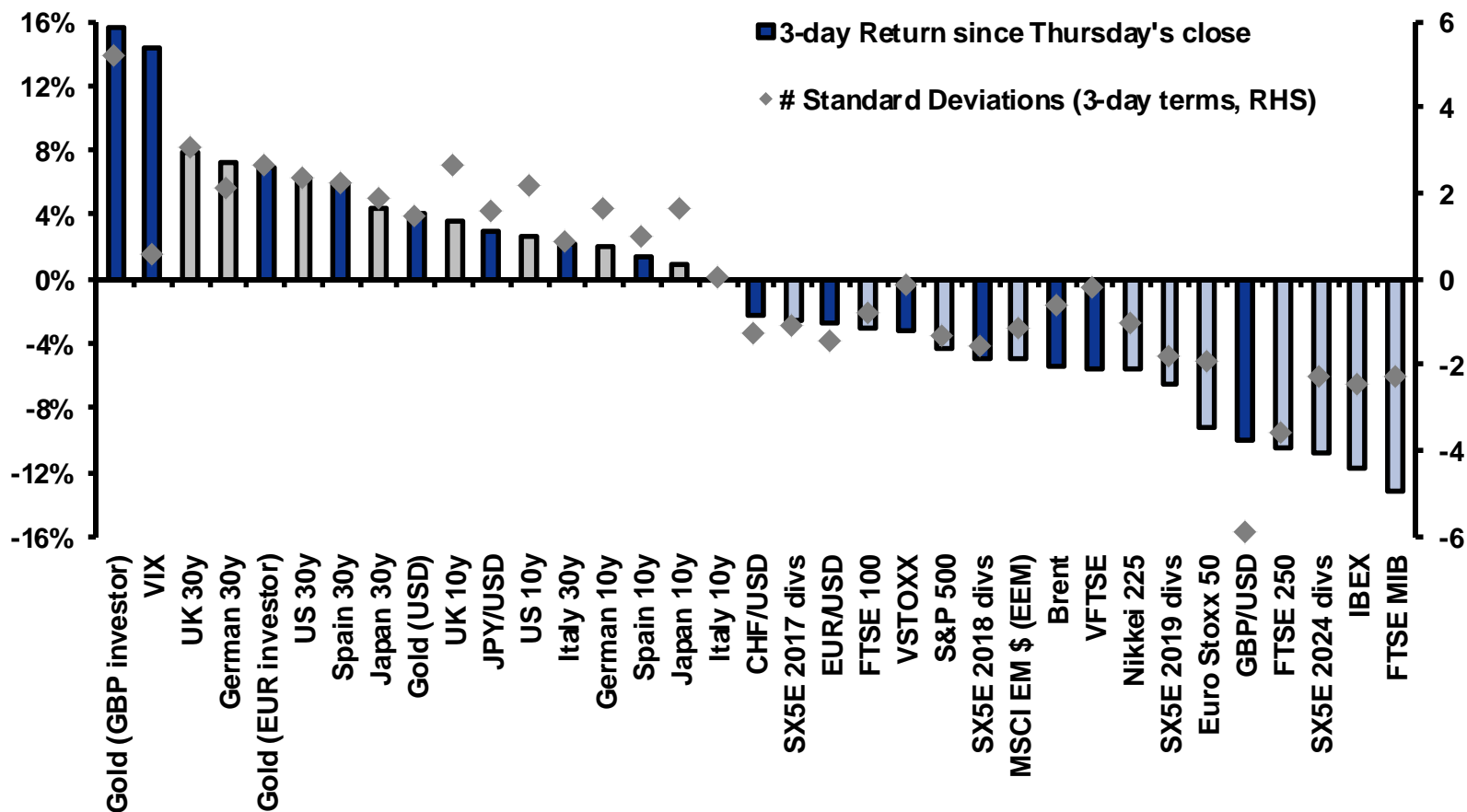
Currency moves in uncertain times

Cumulative impact on trade-weighted G10 nominal exchange rate indices to one st. dev. "uncertainty shock"



Source: Haver Analytics, Goldman Sachs Global Investment Research

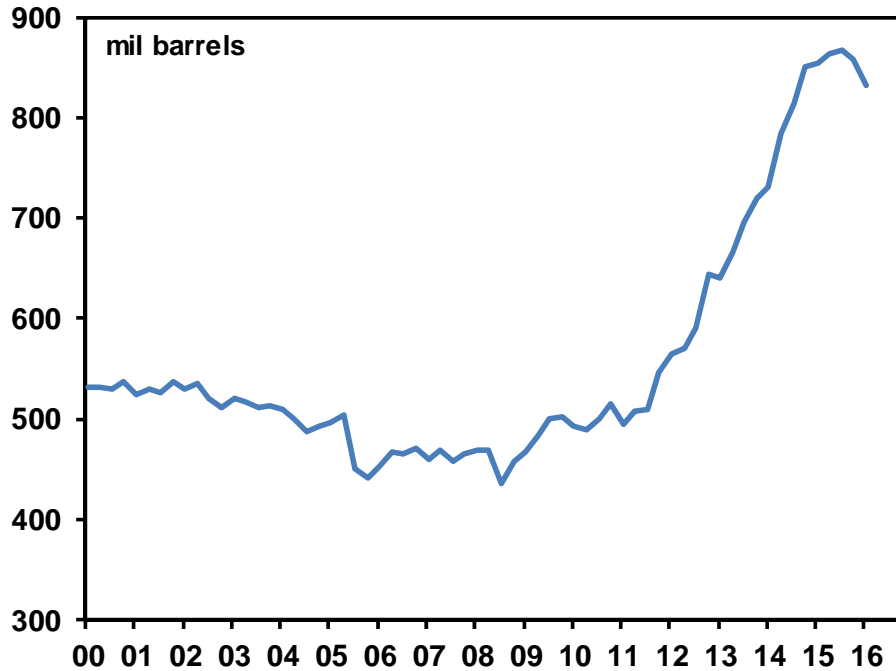
Equities hit hard during the Brexit sell-off



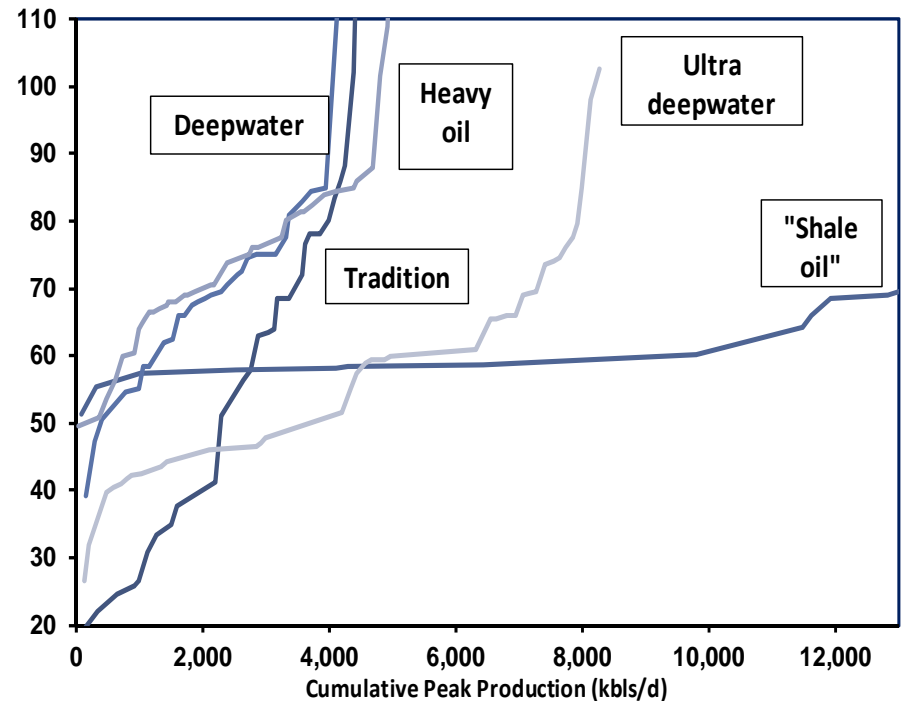
Source: Haver Analytics, Goldman Sachs Global Investment Research

A permanent lower oil price is good news for the Euro area – but it implies some global re-balancing

US crude oil production

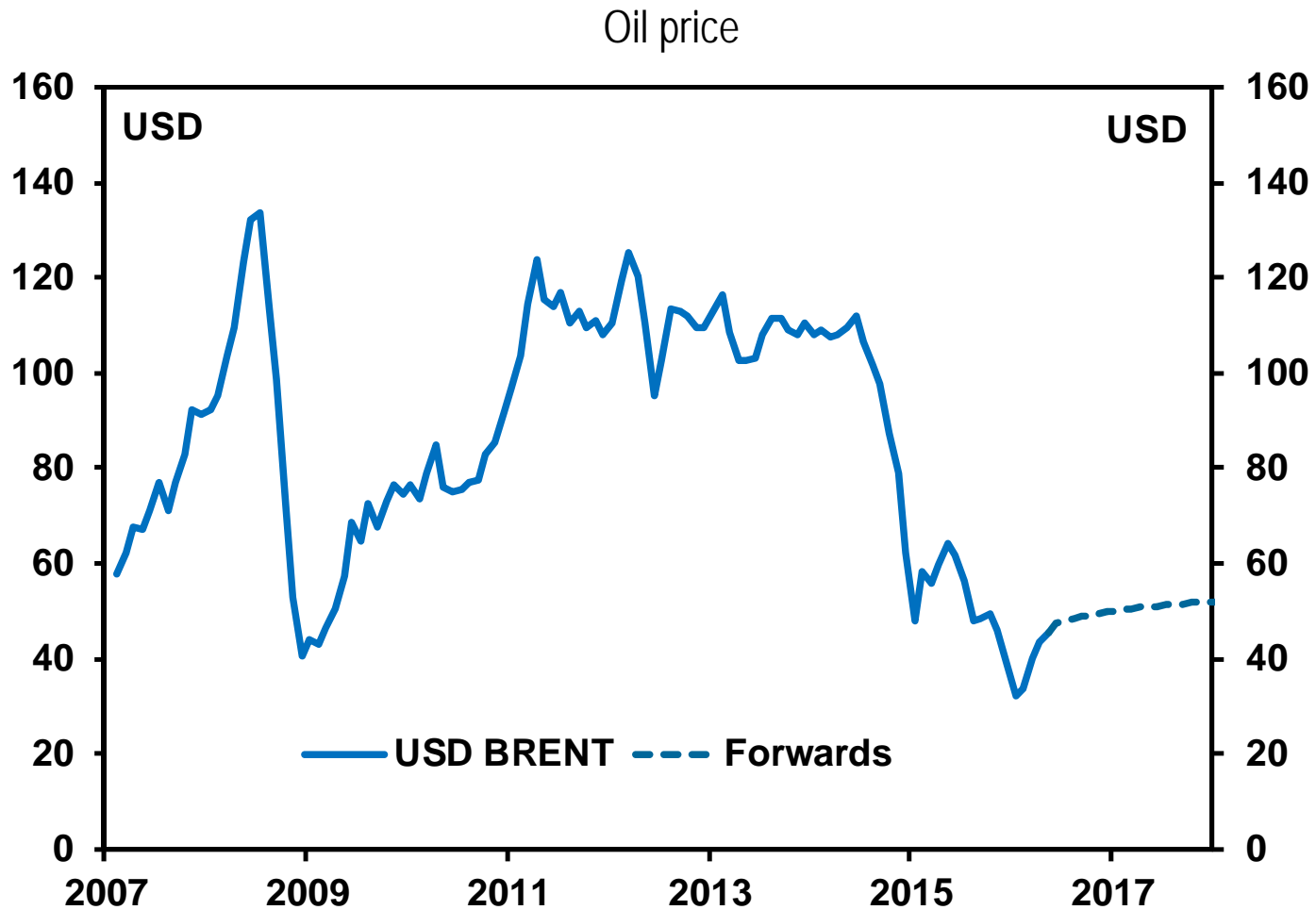


Breakeven oil price



Source: Haver Analytics, Goldman Sachs Global Investment Research

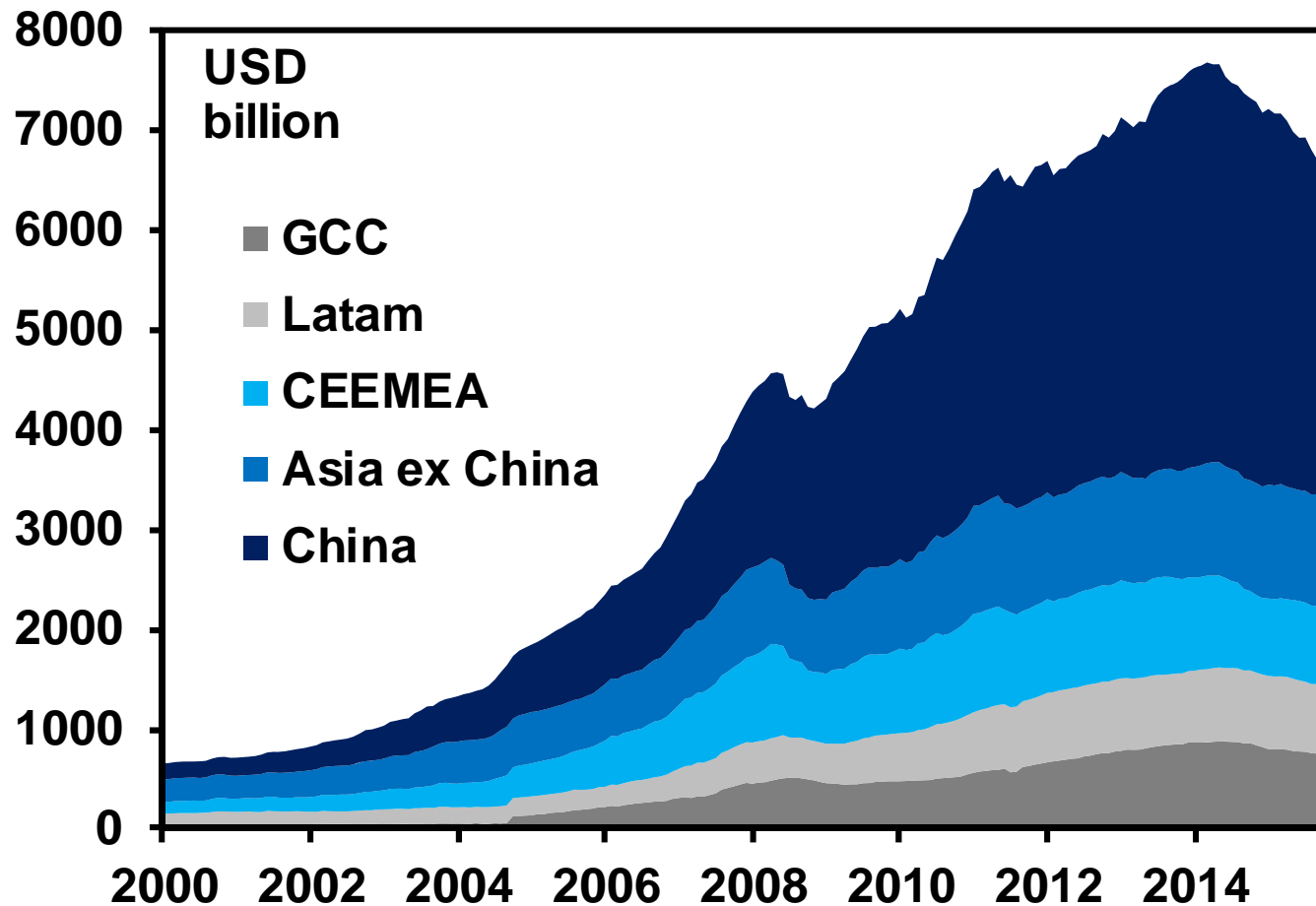
We expect the oil price to stay around the current level



Source: Goldman Sachs Global Investment Research

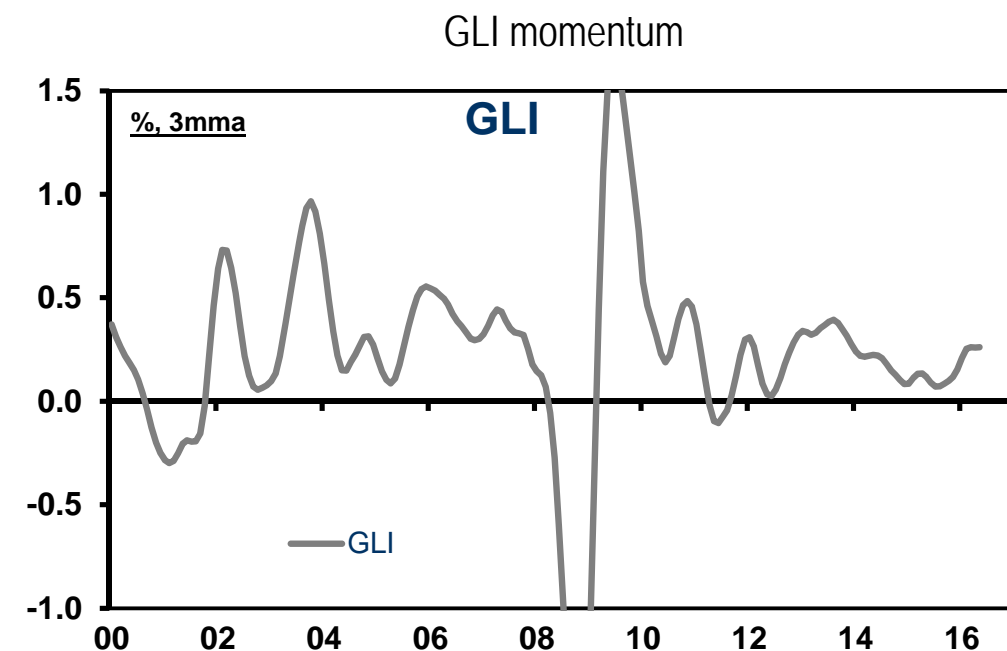
Low commodity prices and China re-balancing imply lower EM FX reserves

Official sector FX reserves



Source: Haver Analytics, Goldman Sachs Global Investment Research

Our Global Leading Indicator is showing – prior to Brexit – rising momentum

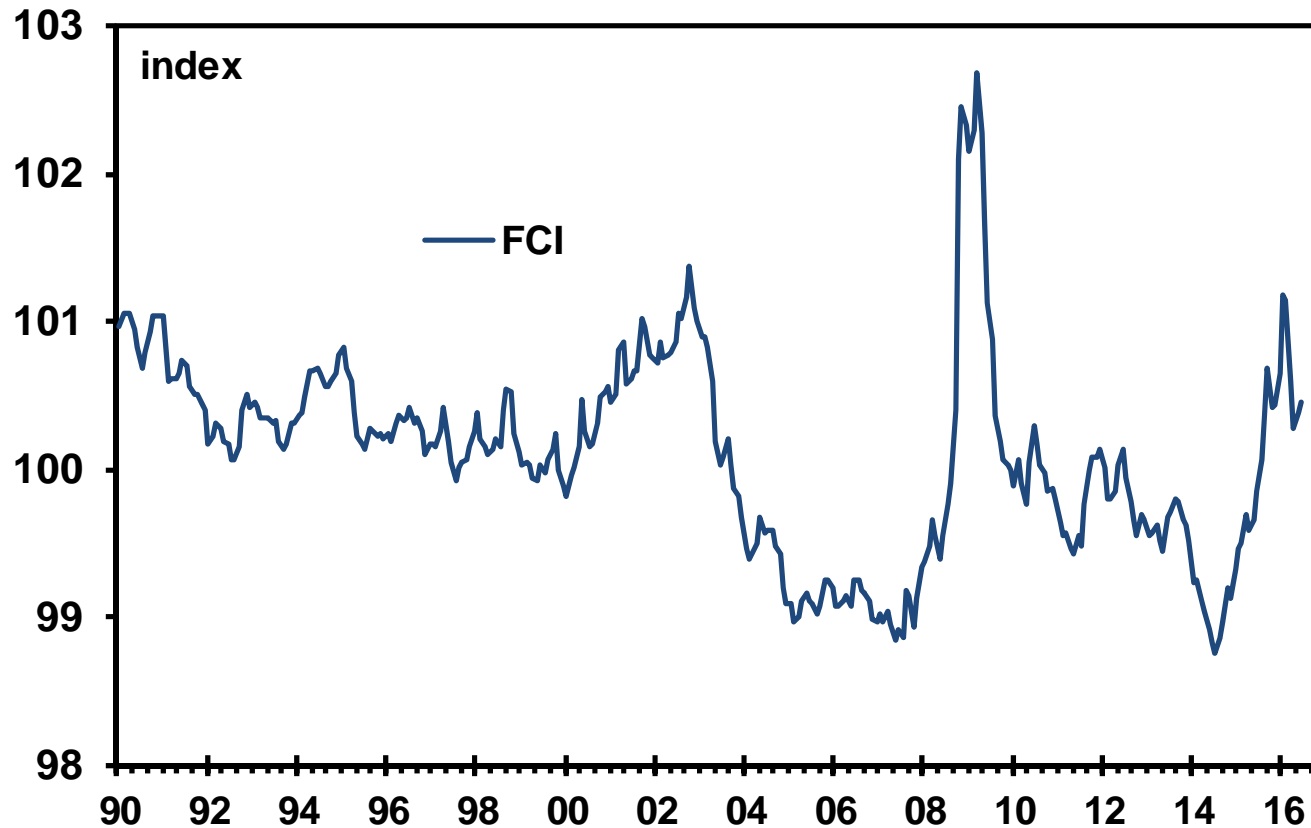


Source: Goldman Sachs Global Investment Research

GLI components

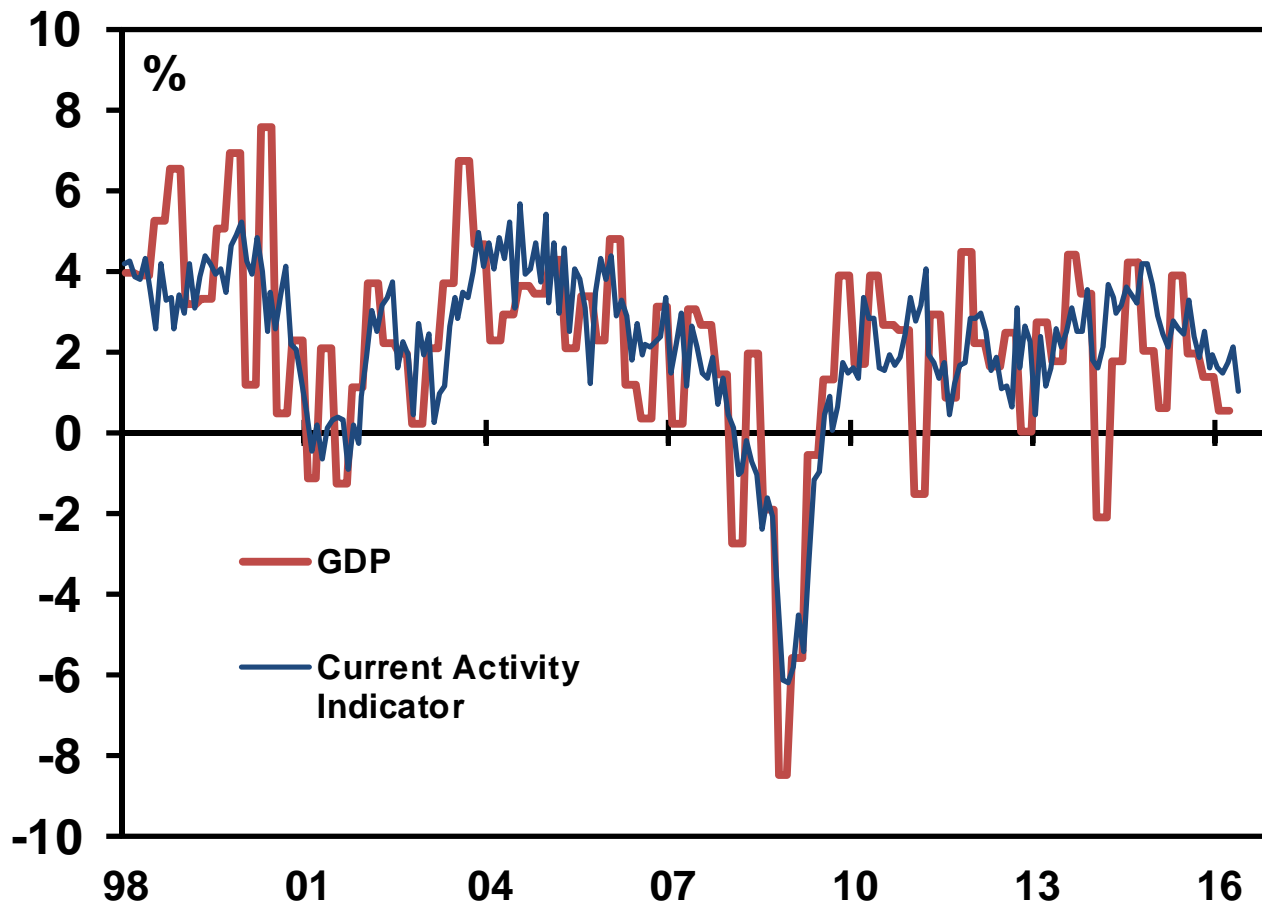
- Baltic Dry Index
- Belgian and Netherlands Manufacturing Survey
- Consumer Confidence Aggregate
- Global New Orders Less Inventories
- Global PMI
- GS Australian and Canadian Dollar Trade Weighted Index
- Japan IP Inventory/Sales Ratio
- Korean Exports
- S&P GS Industrial Metals Index
- US Initial Jobless Claims

US: Financial conditions are rising again – postponing the next Fed hike



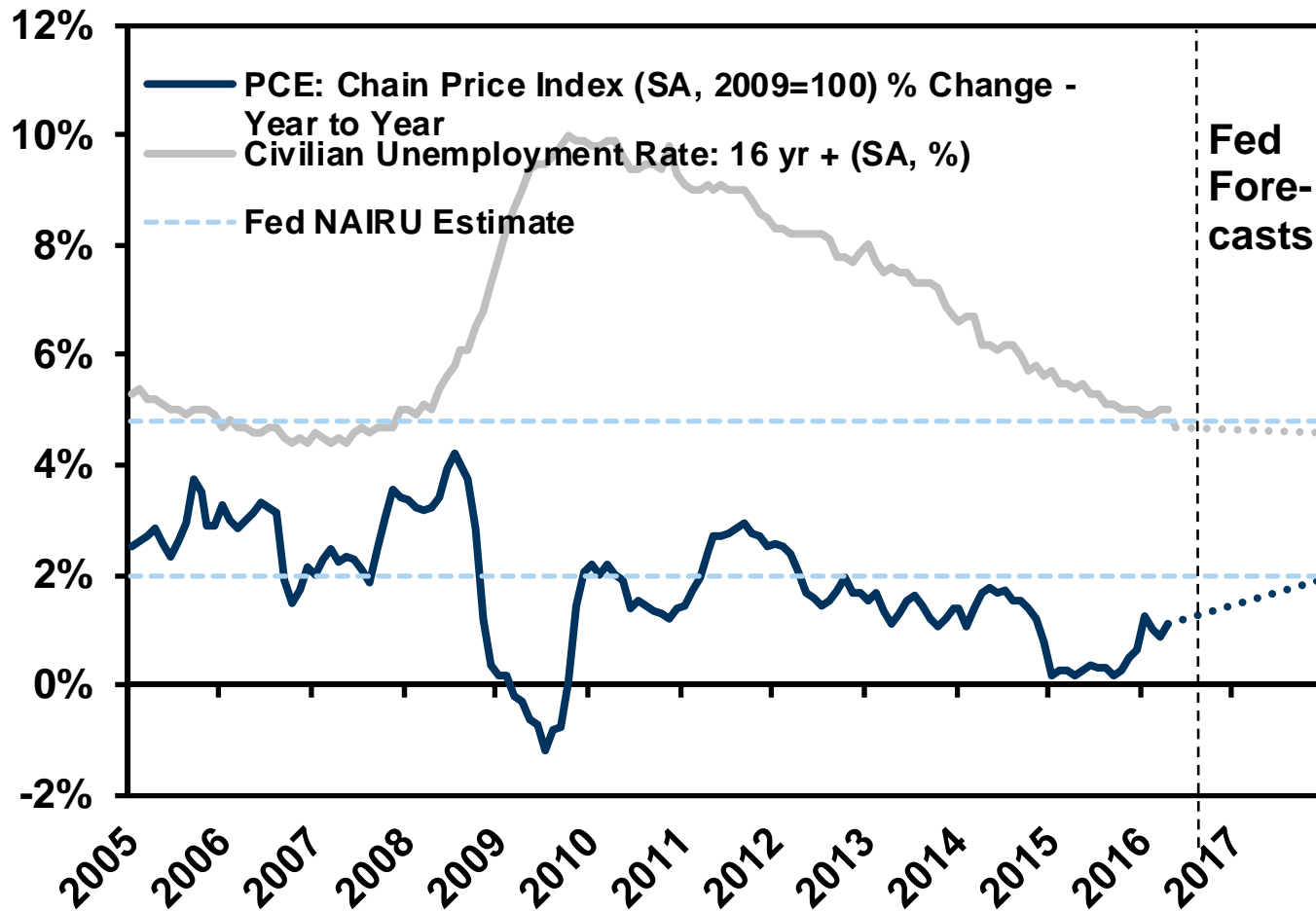
Source: Goldman Sachs Global Investment Research

US: Our Current Activity Indicator is easing again



Source: Goldman Sachs Global Investment Research

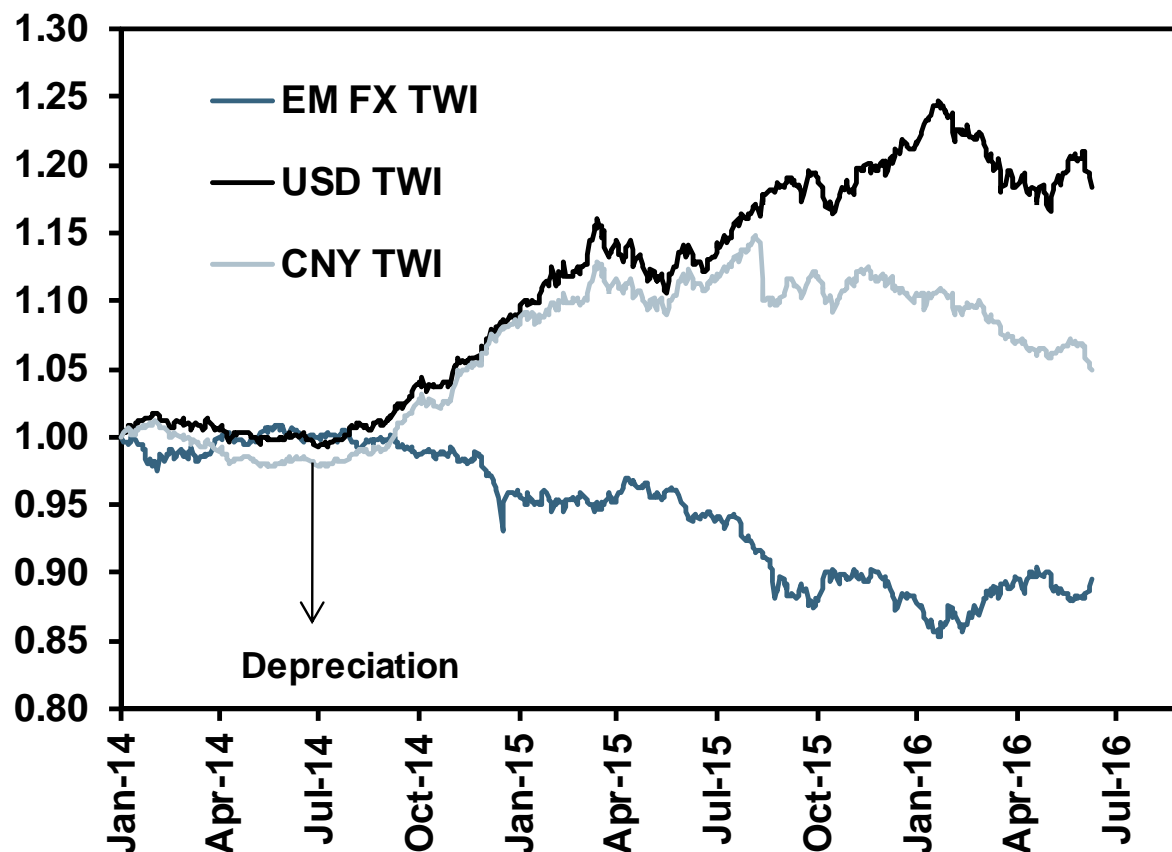
US: The Fed risks missing out on its mandate



Source: Haver Analytics, Goldman Sachs Global Investment Research

China: CNY to disconnect from US

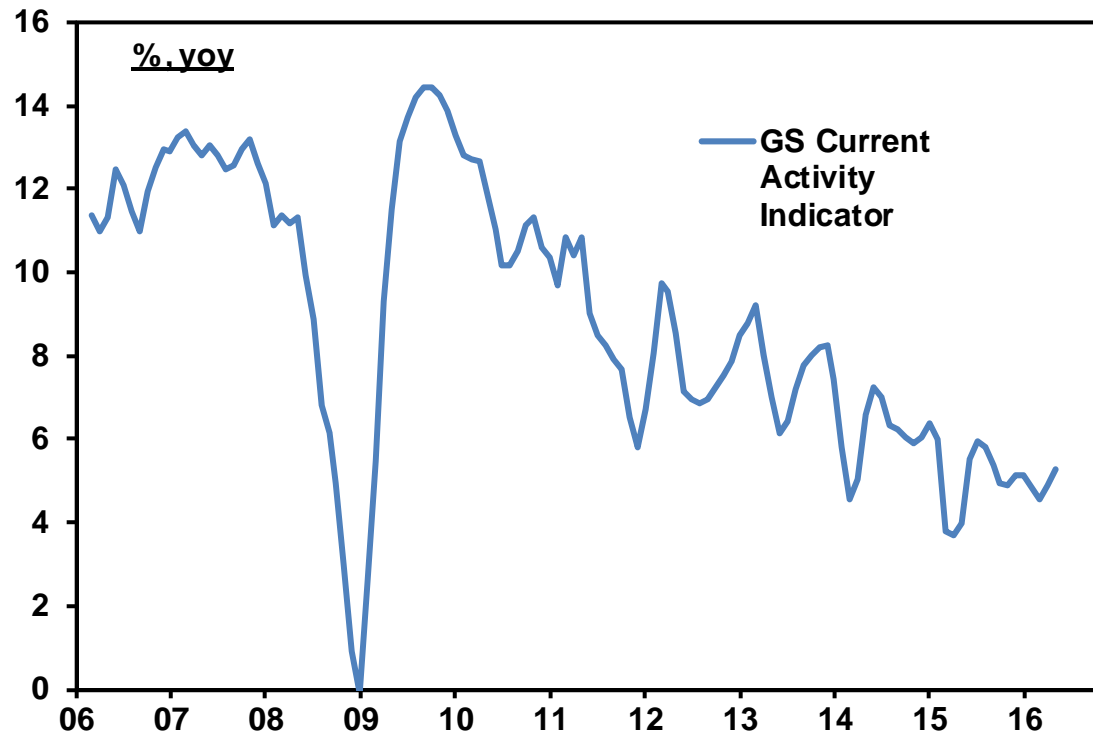
Trade-weighted exchange rates



Source: Haver Analytics, Goldman Sachs Global Investment Research

China: Growth keeps trending down

GS Current Activity Indicator



Source: Goldman Sachs Global Investment Research

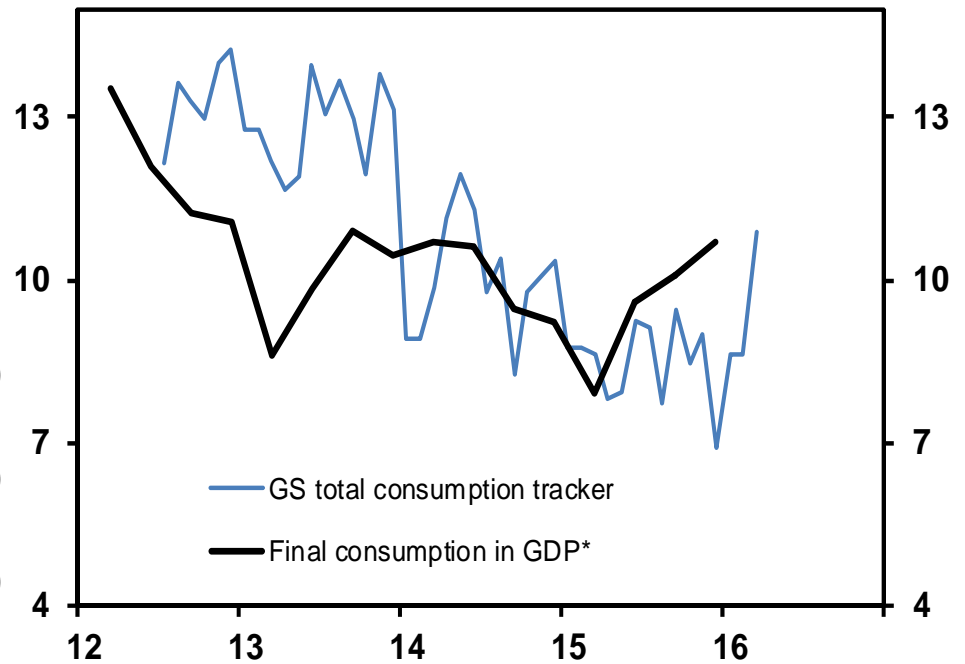
China: A bumpy deceleration

Different measures of Chinese growth



Source: Goldman Sachs Global Investment Research

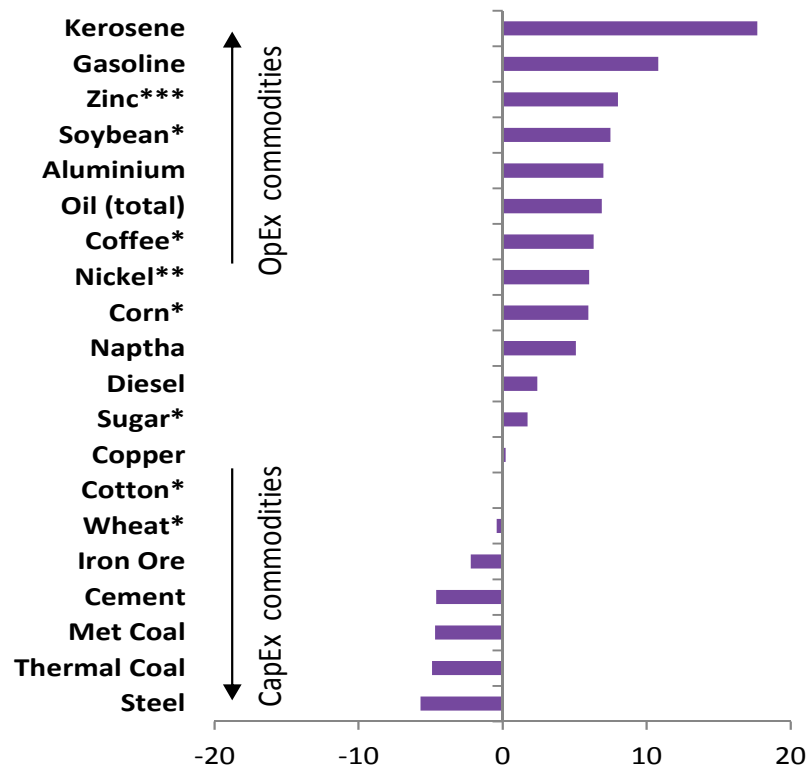
Private consumption picking up



Source: Goldman Sachs Global Investment Research

China: Breakdown of demand for different commodities points to re-balancing

2015 demand growth of different commodities



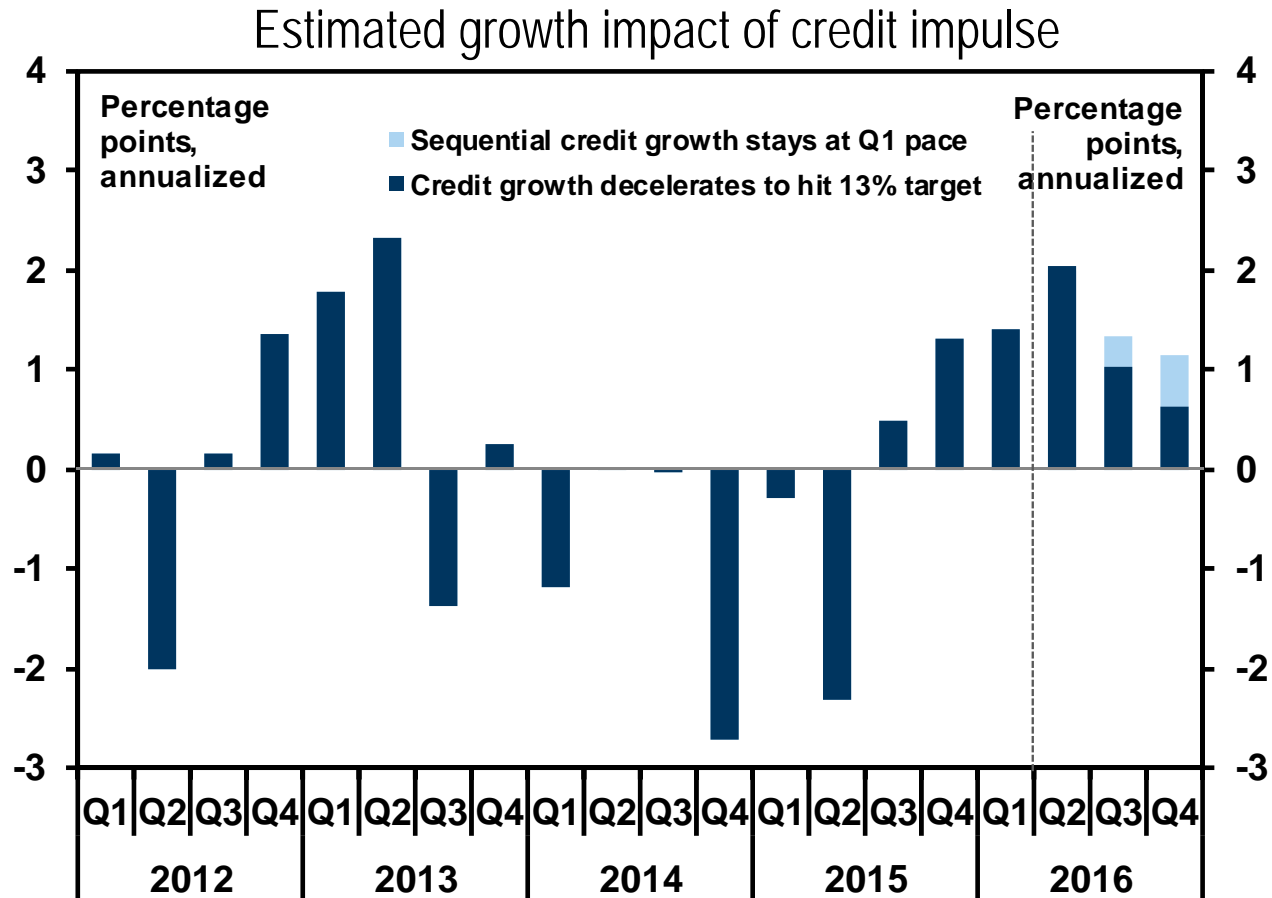
*Estimated 2015 annual consumption growth (no monthly data)

**calculated from apparent stainless steel demand

***calculated from zinc galv. production

Source: Goldman Sachs Global Investment Research

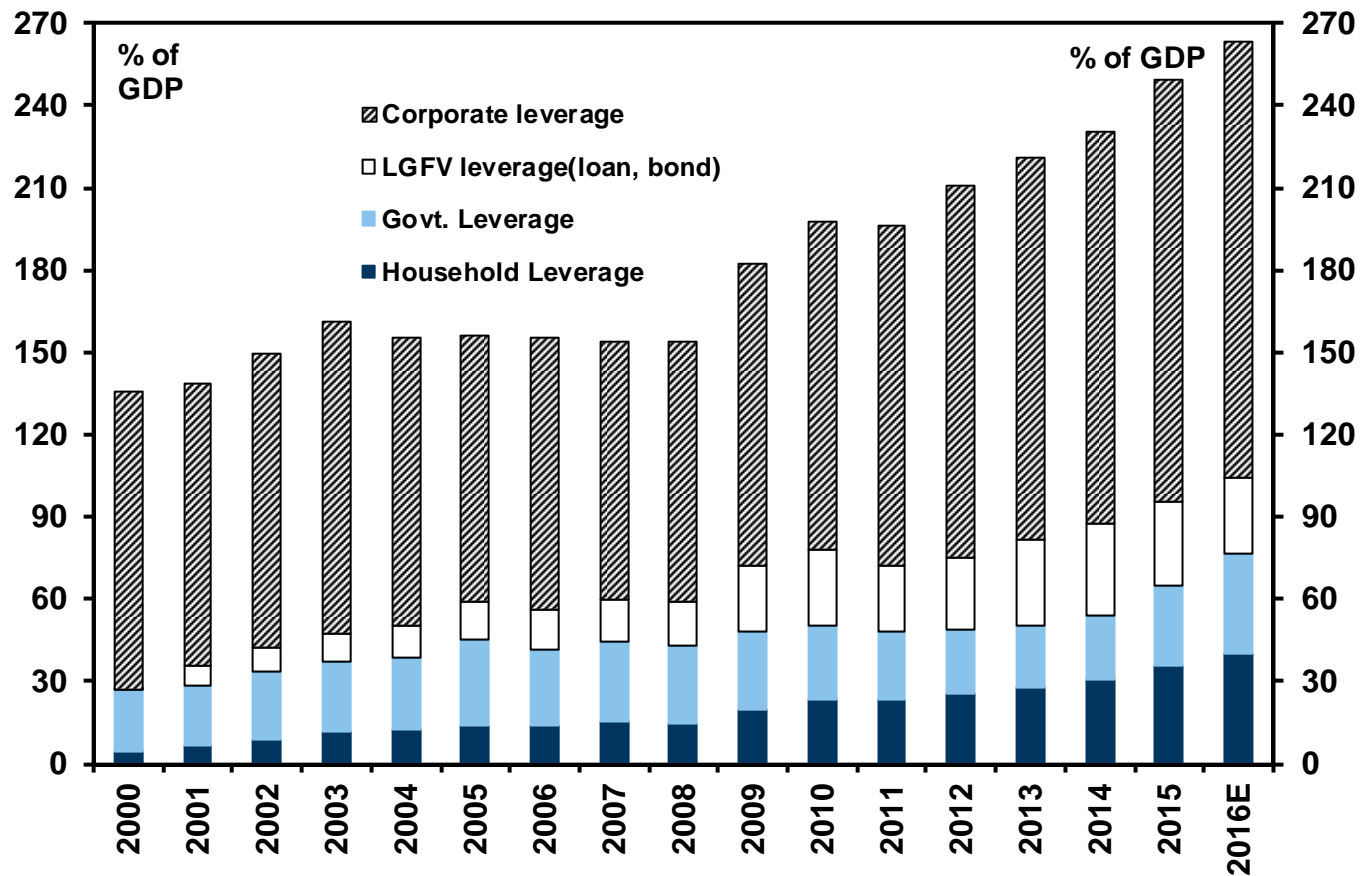
China: Short-term push through credit easing



Source: Haver Analytics, Goldman Sachs Global Investment Research

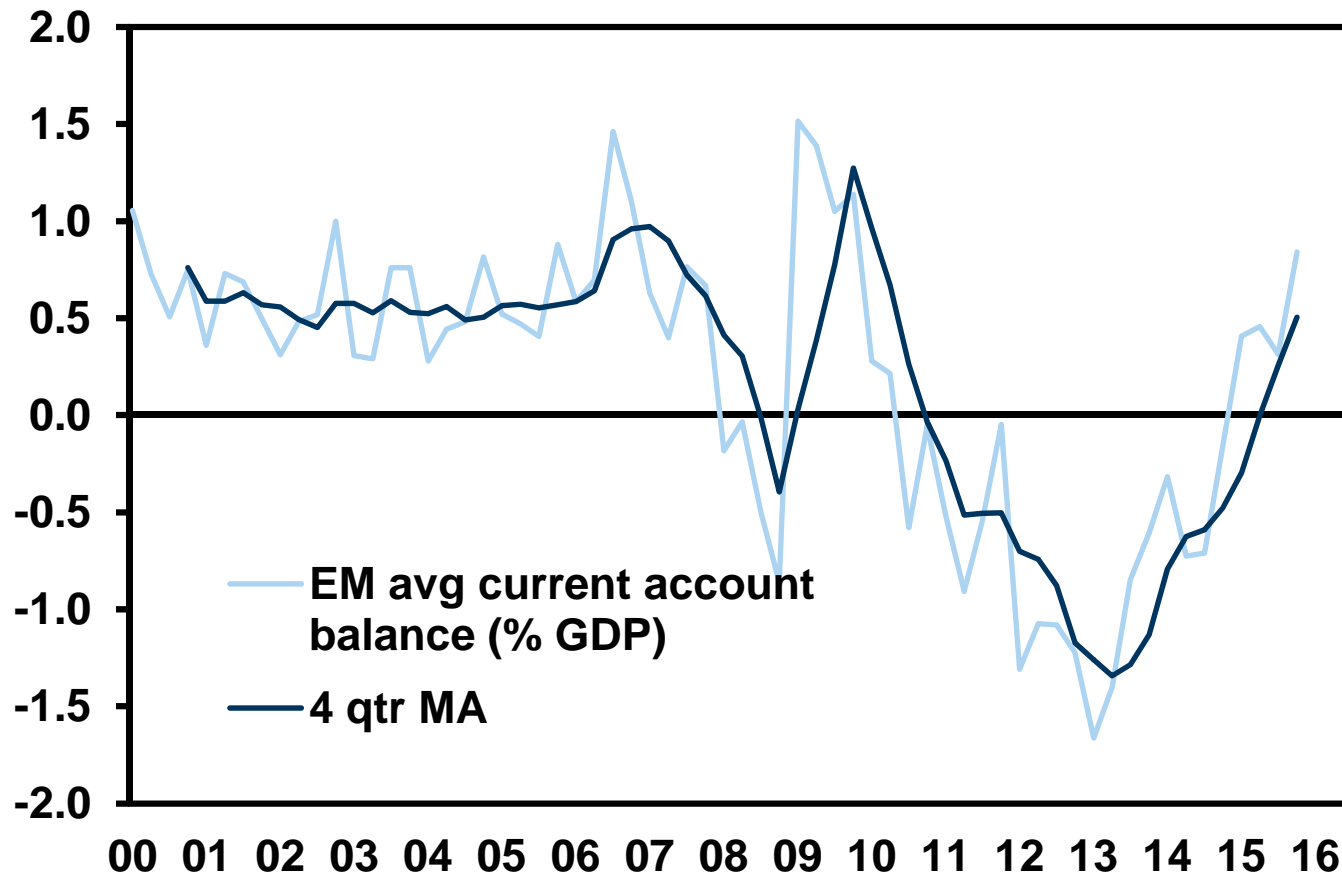
China: The level of debt looks worrying

Indebtedness of different sectors



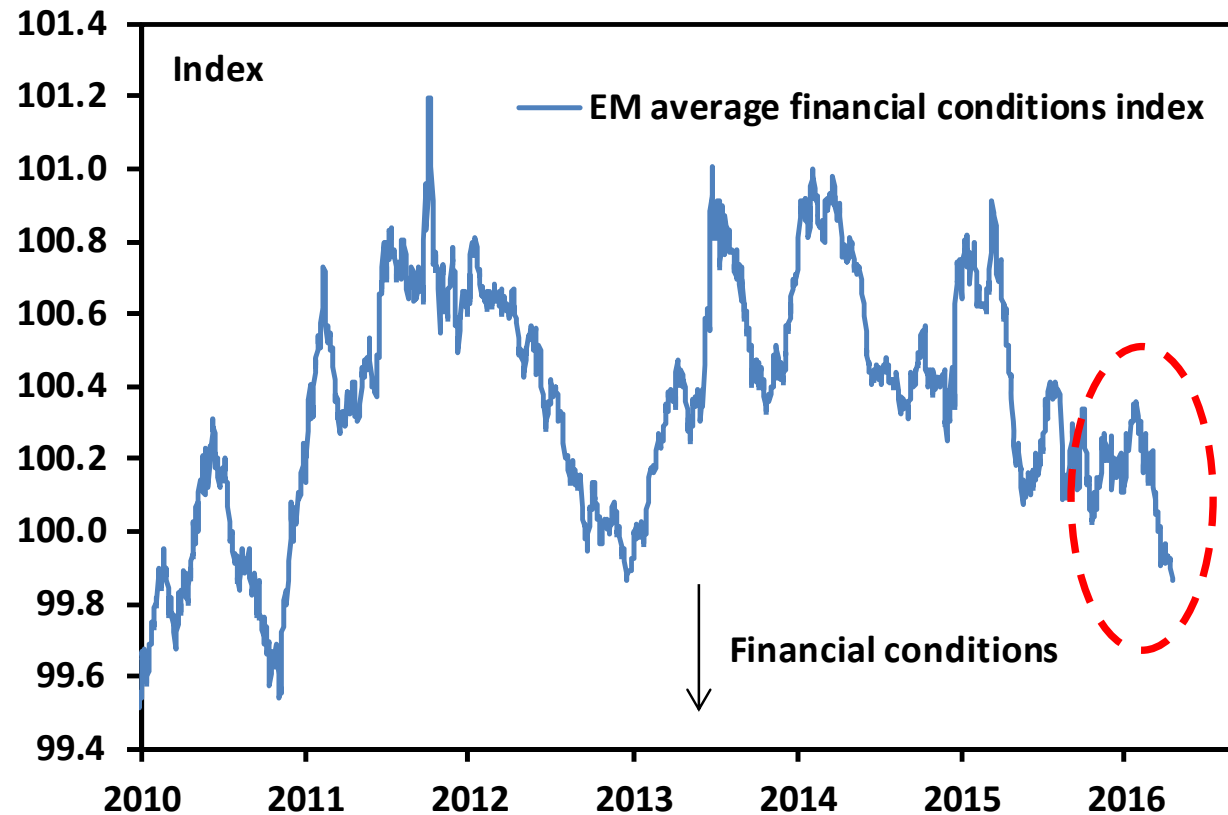
Source: Haver Analytics, Goldman Sachs Global Investment Research

Emerging Markets: Significant improvement of current accounts



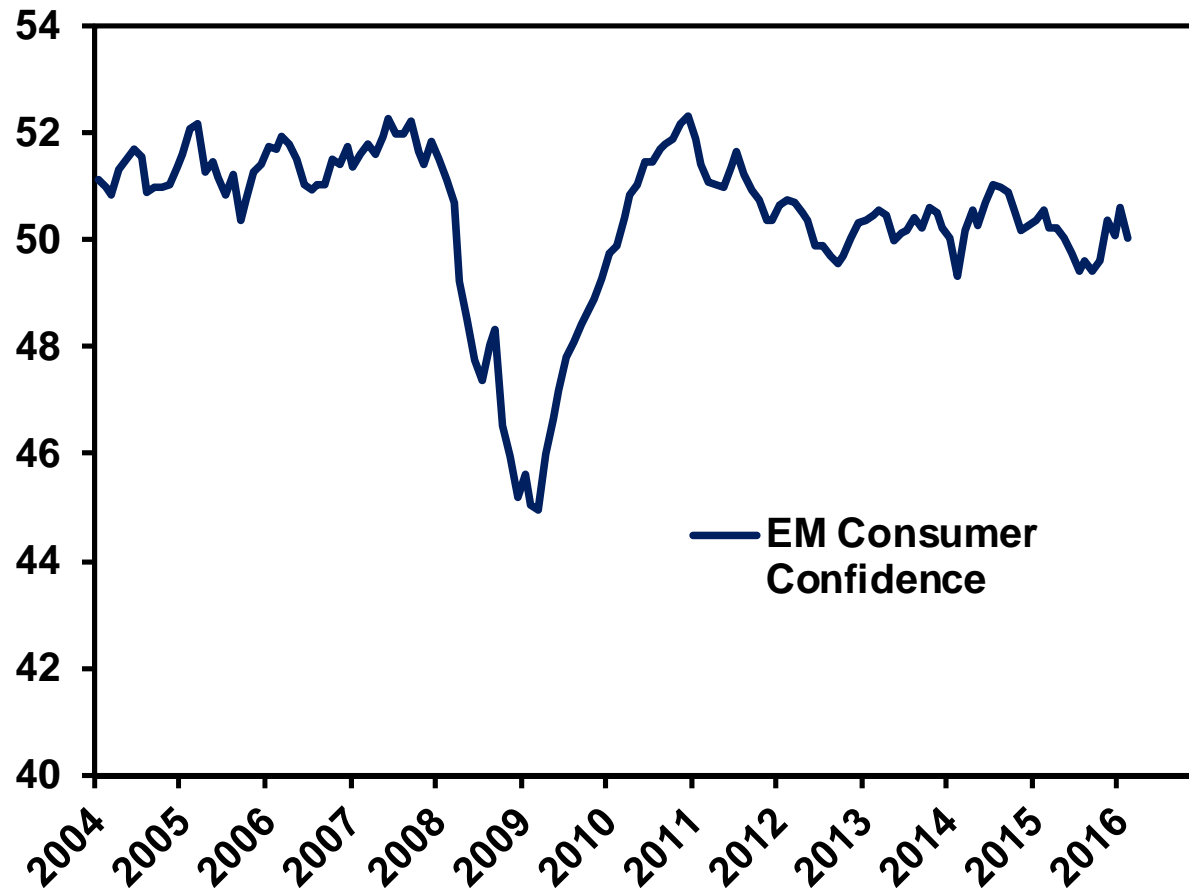
Source: Haver Analytics, Goldman Sachs Global Investment Research

Emerging Markets: Financial Conditions have eased again



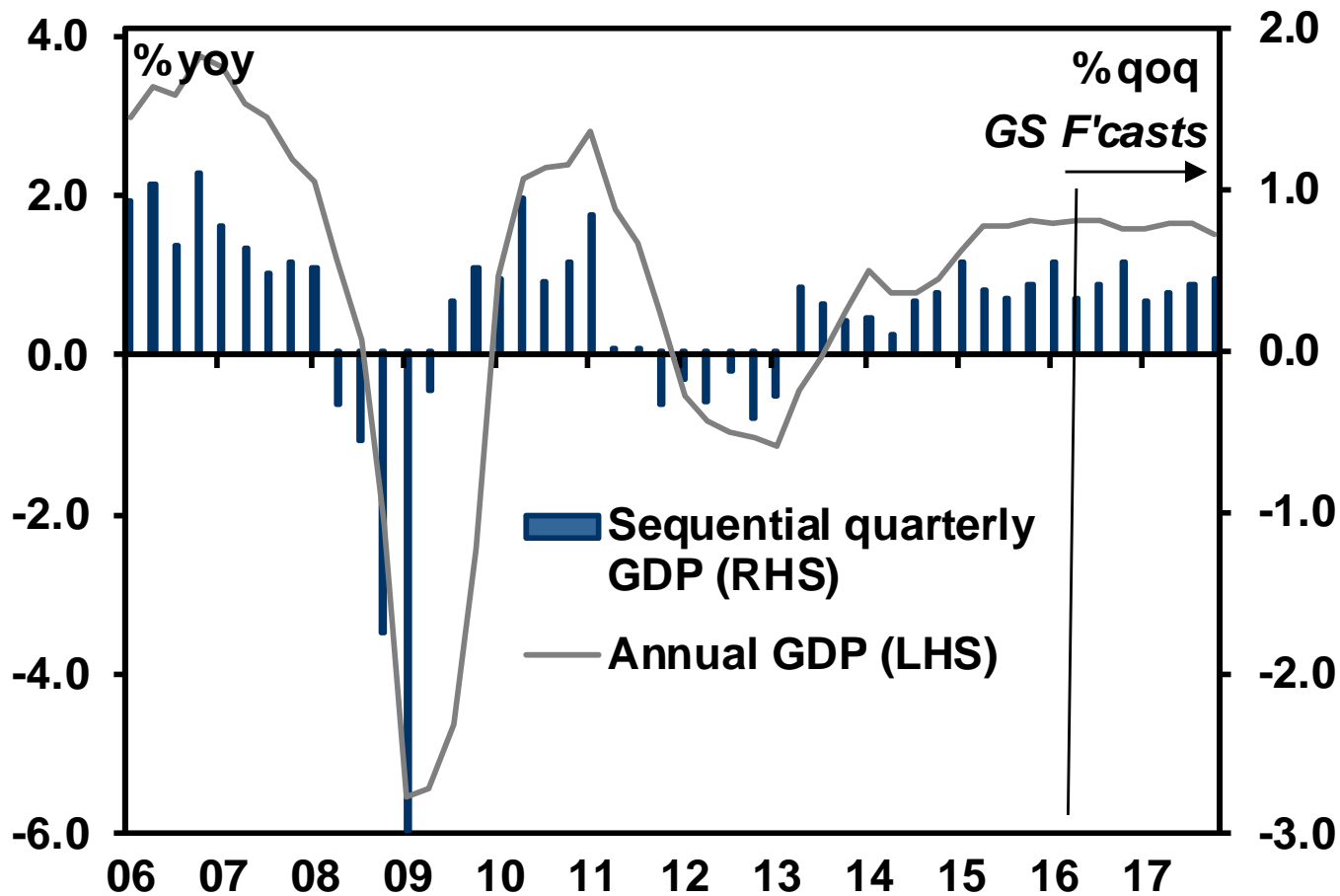
Source: Haver Analytics, Goldman Sachs Global Investment Research

Emerging Markets: Consumer confidence has stabilised



Source: Haver Analytics, Goldman Sachs Global Investment Research

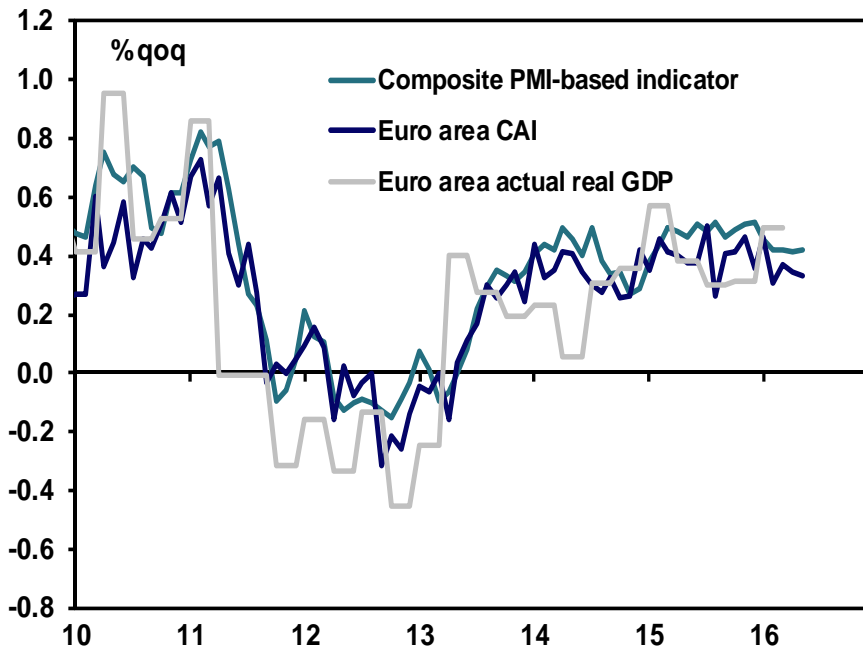
Euro area: A moderate, but broad based recovery



Source: Eurostat, Goldman Sachs Global Investment Research

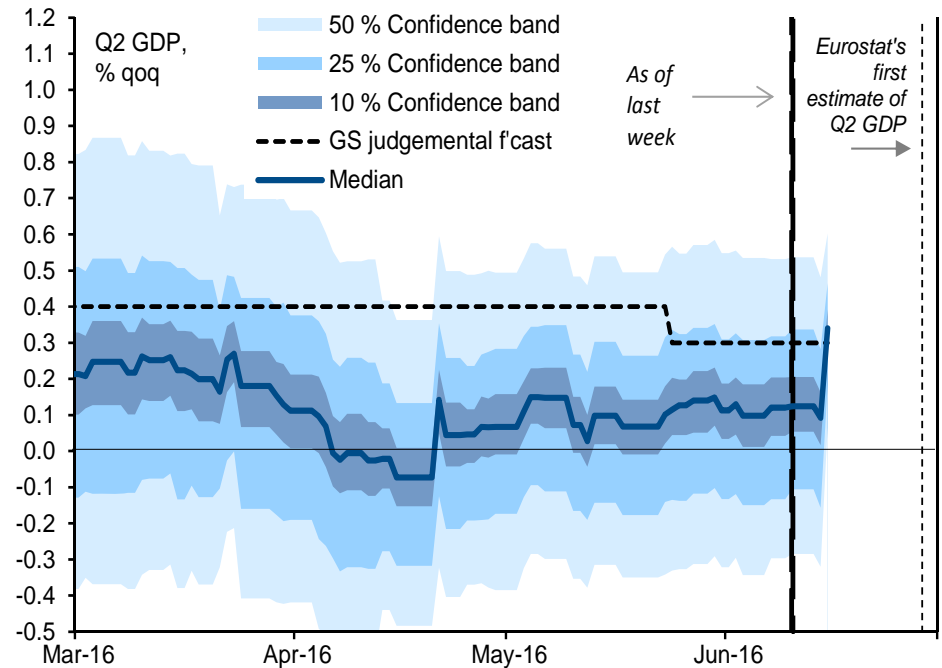
Euro area: Business sentiment remains consistent with solid growth during Q2 – our RETINA model has also rebounded

Composite PMI and CAI



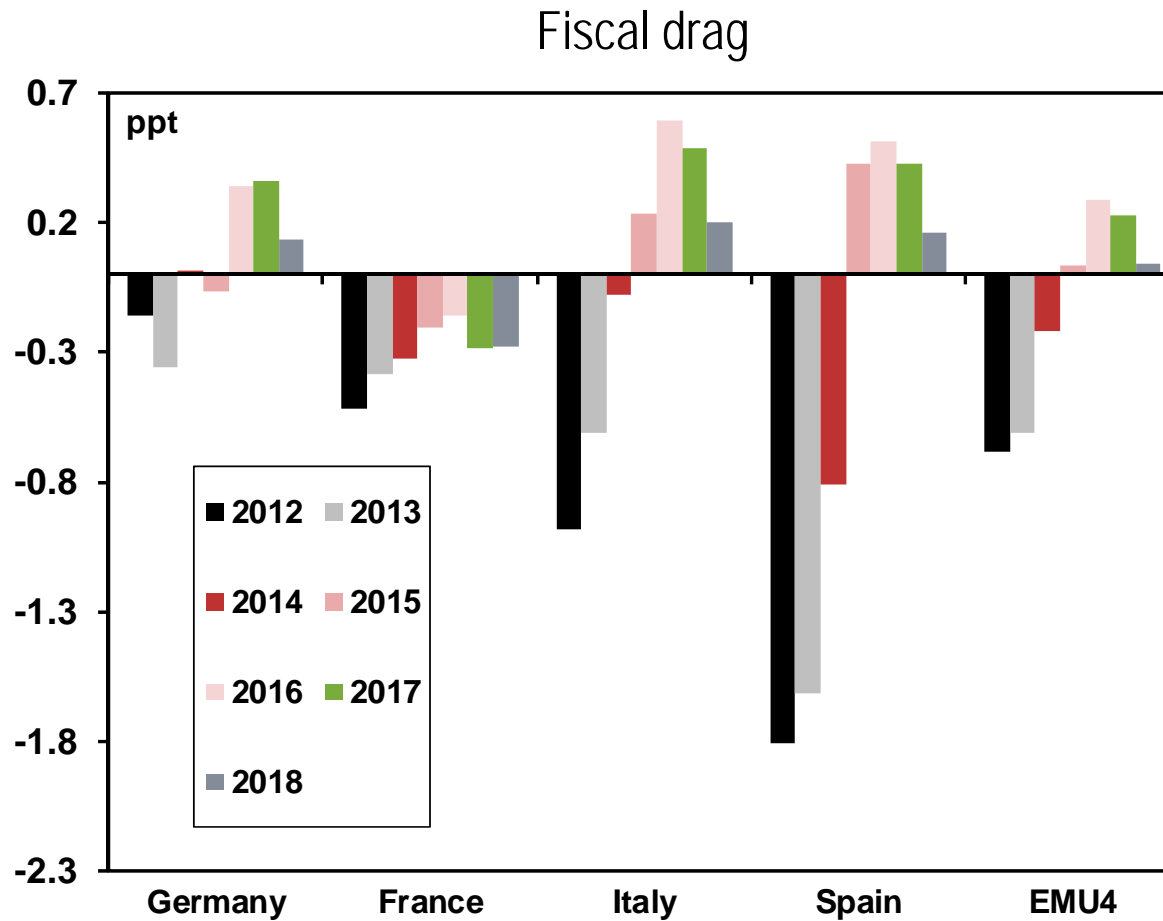
Source: Eurostat, Markit, Goldman Sachs Global Investment Research

RETINA



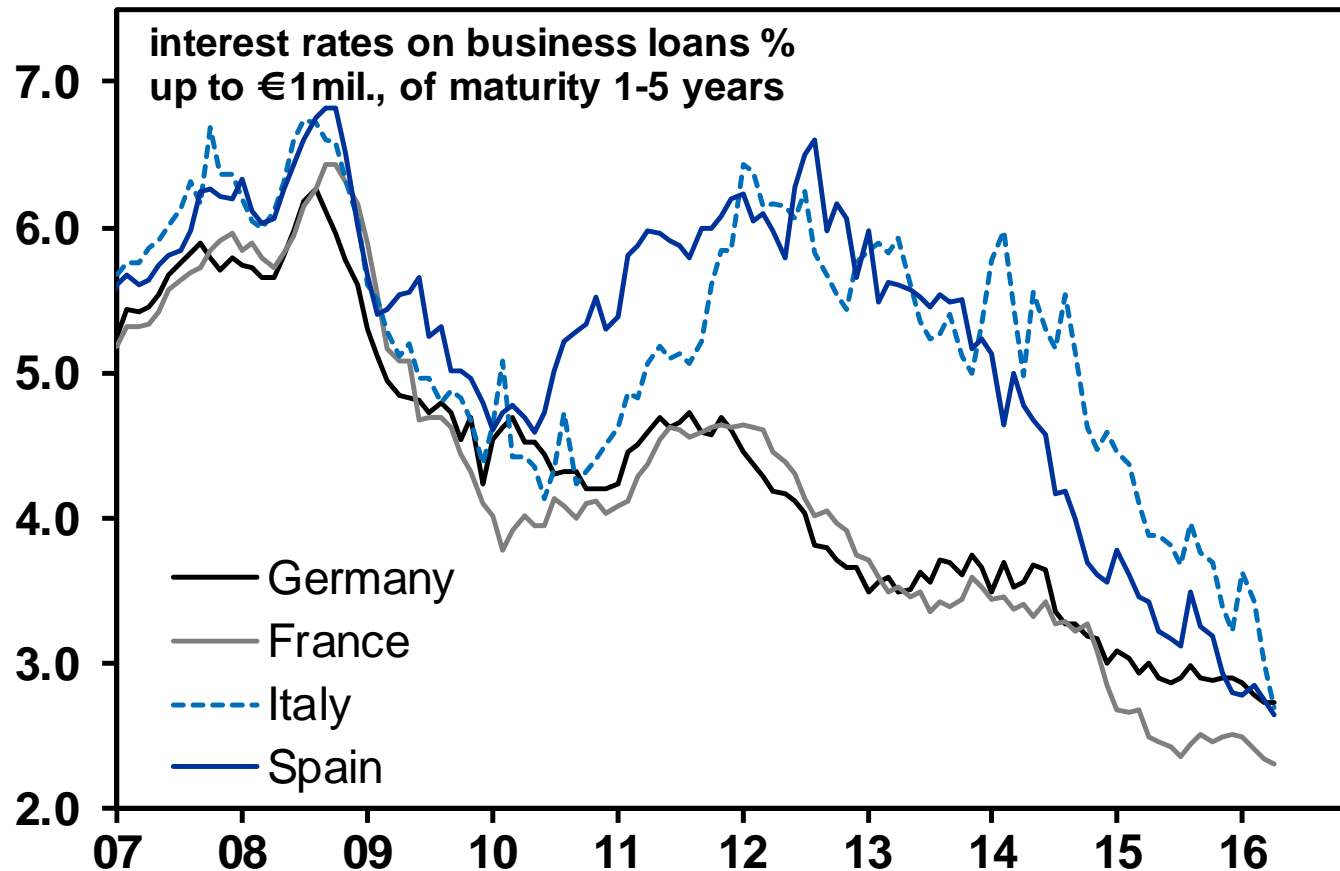
Source: Haver Analytics, Goldman Sachs Global Investment Research

Euro area: Less headwind from fiscal consolidation next year



Source: Haver Analytics, Goldman Sachs Global Investment Research

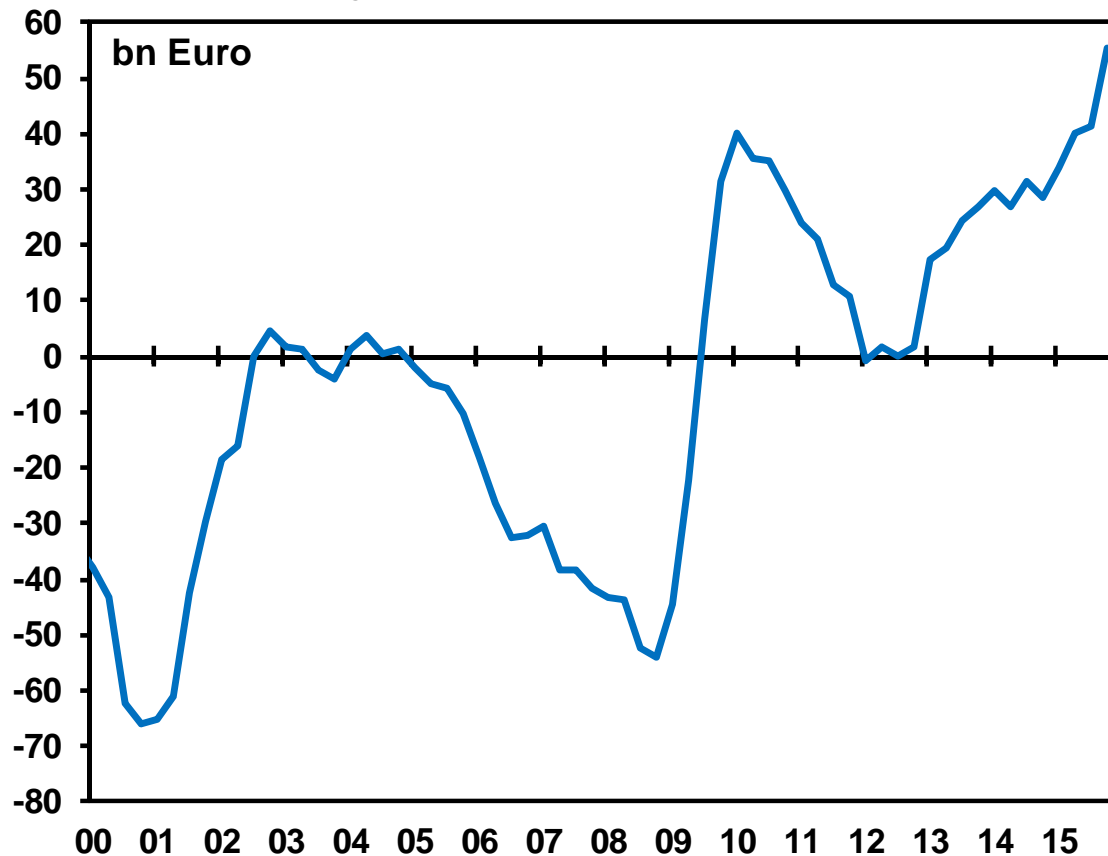
Euro area: Bank lending rates in Spain and Italy have come down significantly



Source: Goldman Sachs Global Investment Research

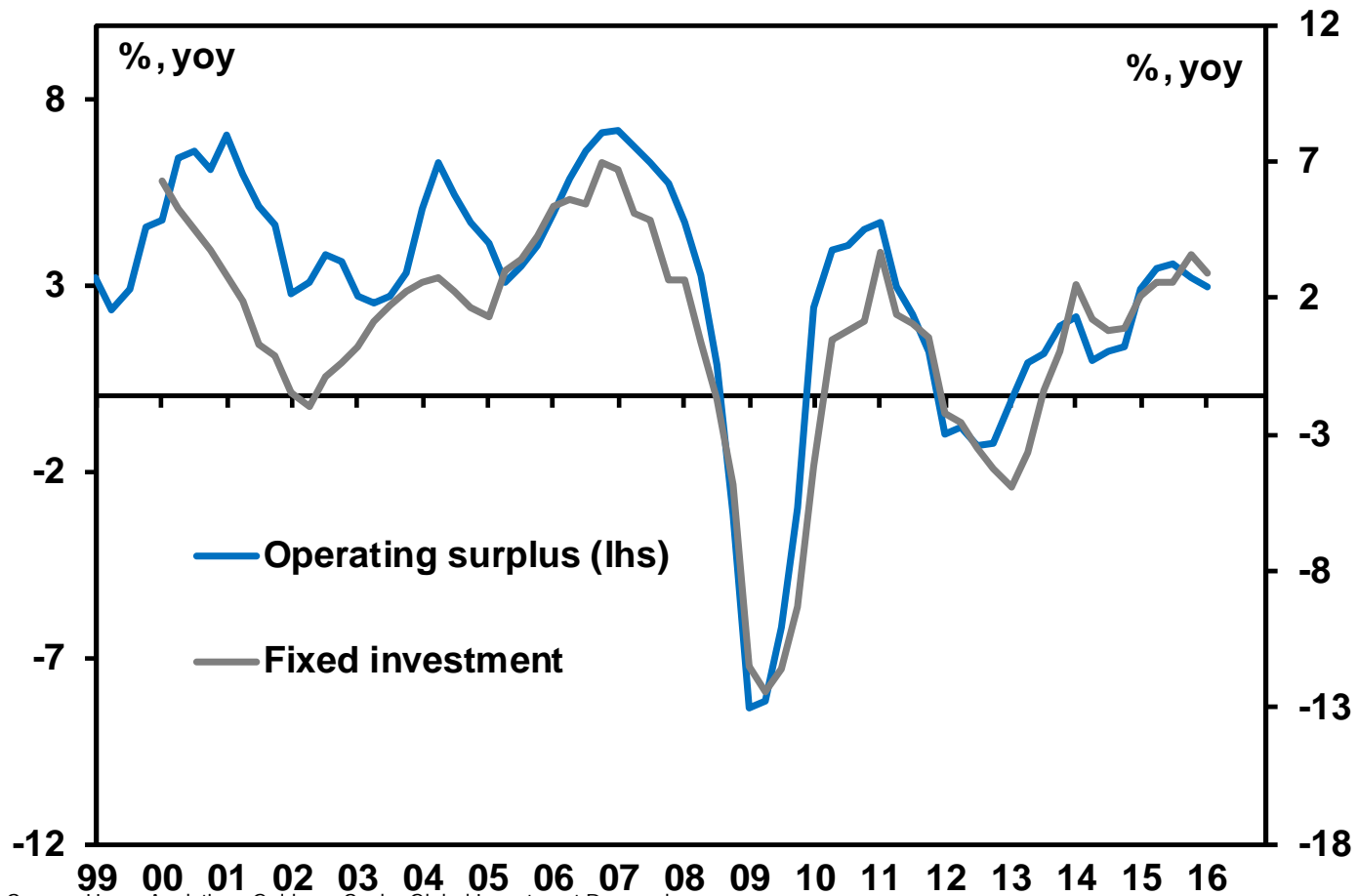
Euro area: Corporates still in deleveraging mood

Net savings of Euro area non-financial corporates



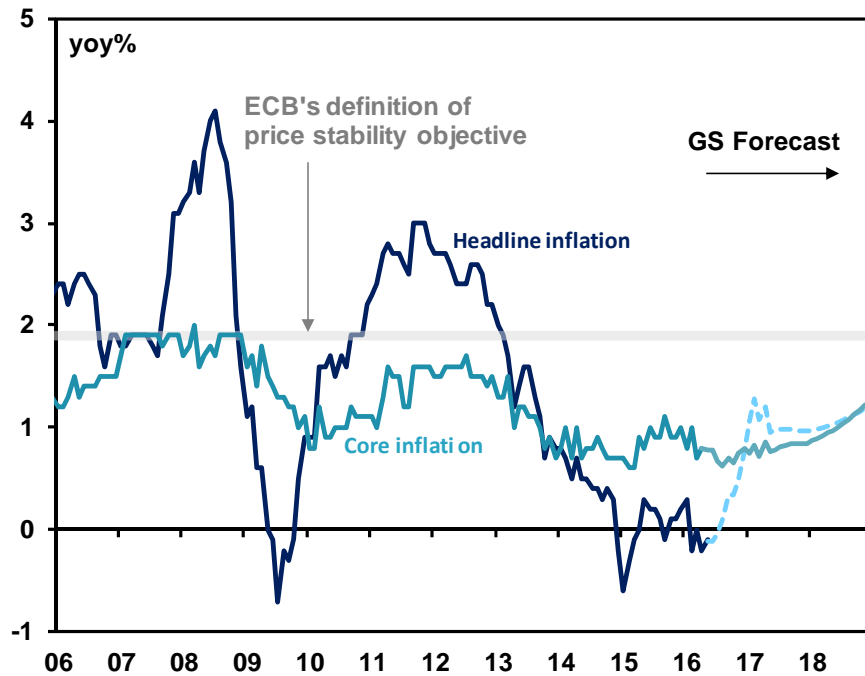
Source: Haver Analytics, Goldman Sachs Global Investment Research

Euro area: Profits growth is supporting investment spending



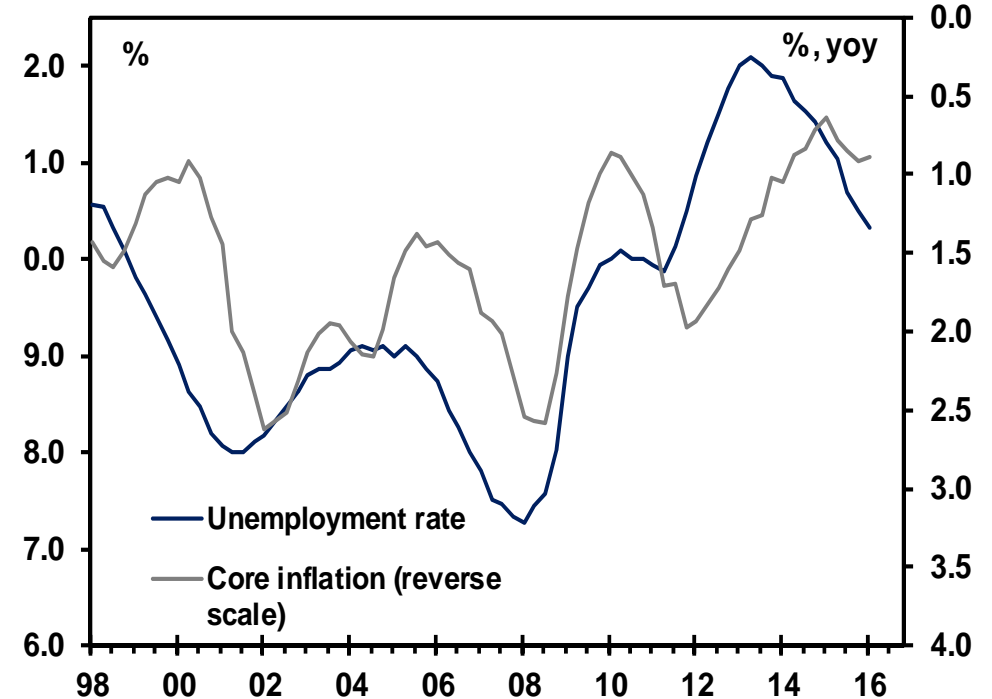
Inflation to rise in H2:2016 as the oil price effect dissipates

Euro area inflation



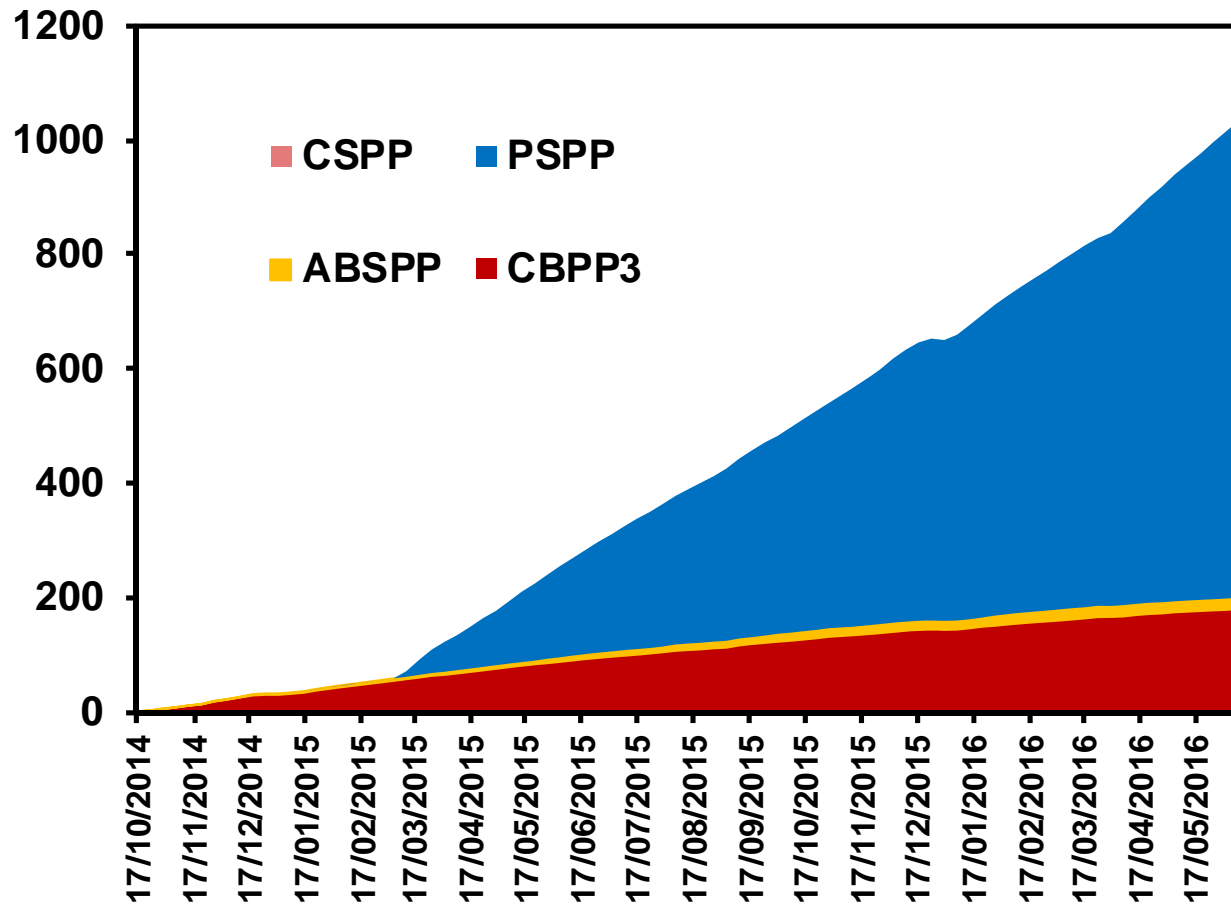
Source: Haver, Goldman Sachs Global Investment Research

Euro area core inflation and unemployment rate



Source: Goldman Sachs Global Investment Research

Euro area: ECB purchases continue steadily



Source: Haver Analytics, Goldman Sachs Global Investment Research

Euro area: ECB' CSPP – learning by doing

Breakdown of ECB purchases

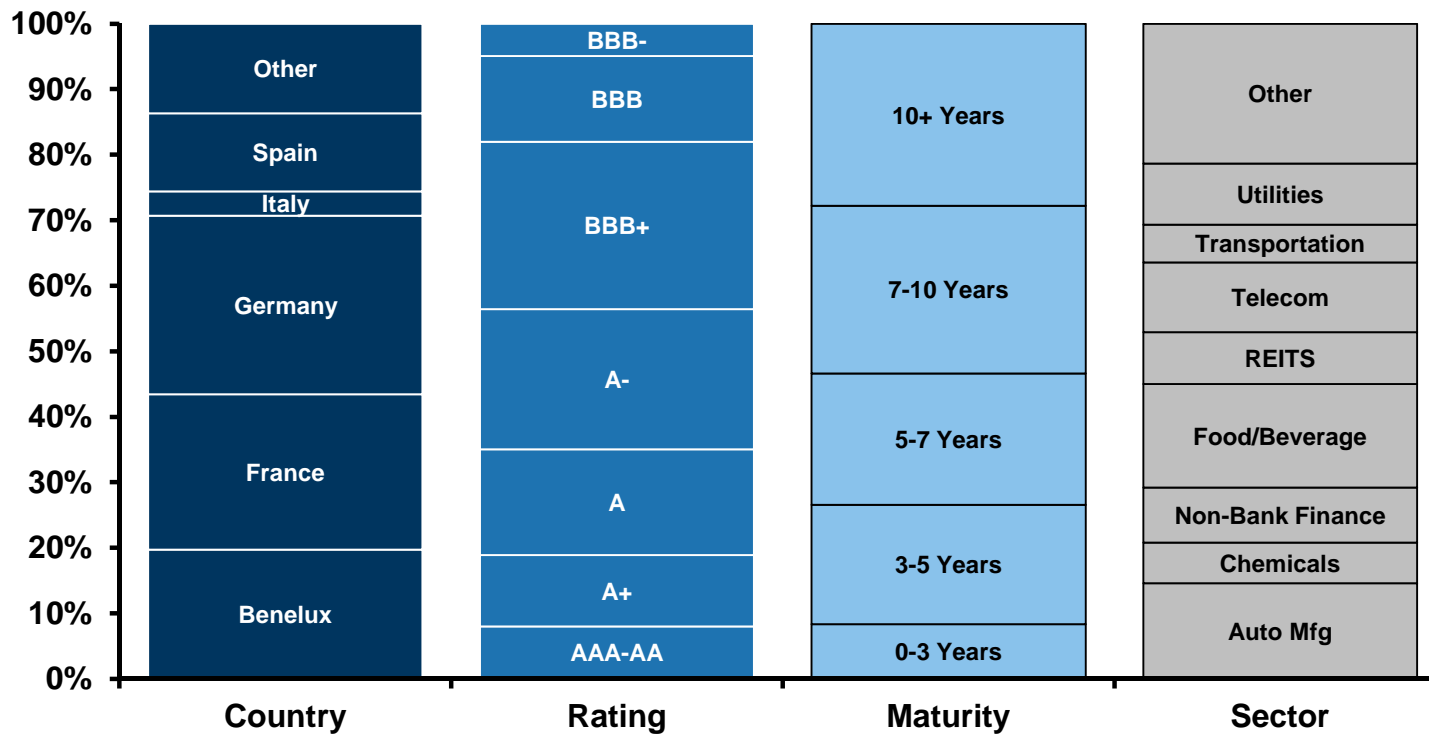
(in Euro Bn)	Actual	GS Estimates	
	Mar'15-Mar'16	Apr-June'16	July'16 - Mar'17
Monthly Purchases	60	80	80
Covered Bonds + ABS	10	8	8
Corporate Bonds	0	0	7
PSPP	50.0	72	65
Supras	6.0	7.2	6.5
Gov/Agency/Laender	44.0	65	59
Germany (25.6%)	11.8	16.6	15.0
France (20.16%)	9.4	13.1	11.8
Italy (17.5%)	8.1	11.3	10.2
Spain (12.6%)	5.8	8.2	7.4

Notes: 1) The numbers in brackets represent the capital key contributions of the countries

2) In the Actuals Column, the numbers denote the average of the monthly purchases under each category

Source: Haver Analytics, Goldman Sachs Global Investment Research

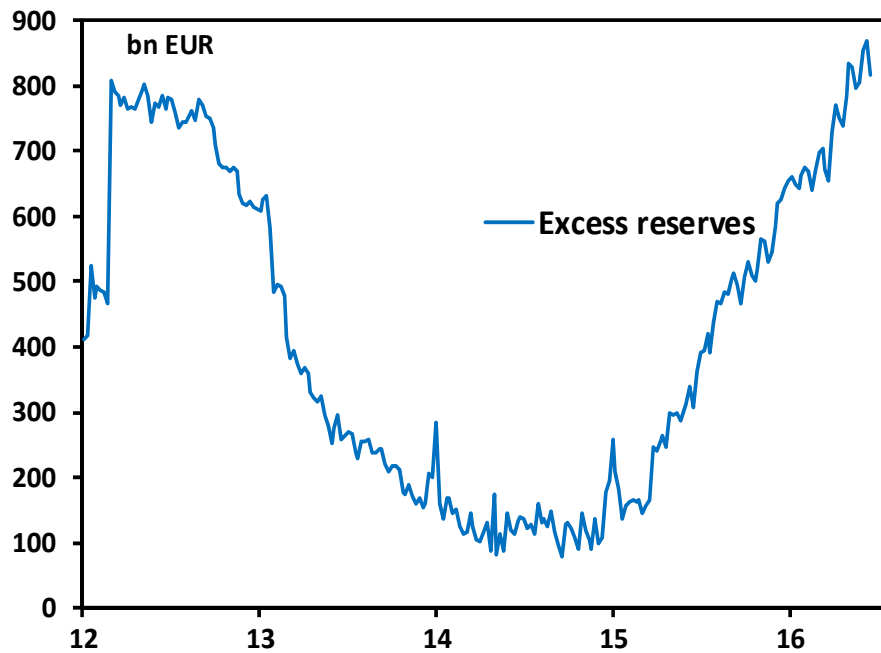
ECB: Breakdown of Euro area corporate bond market



Source: Haver Analytics, Goldman Sachs Global Investment Research

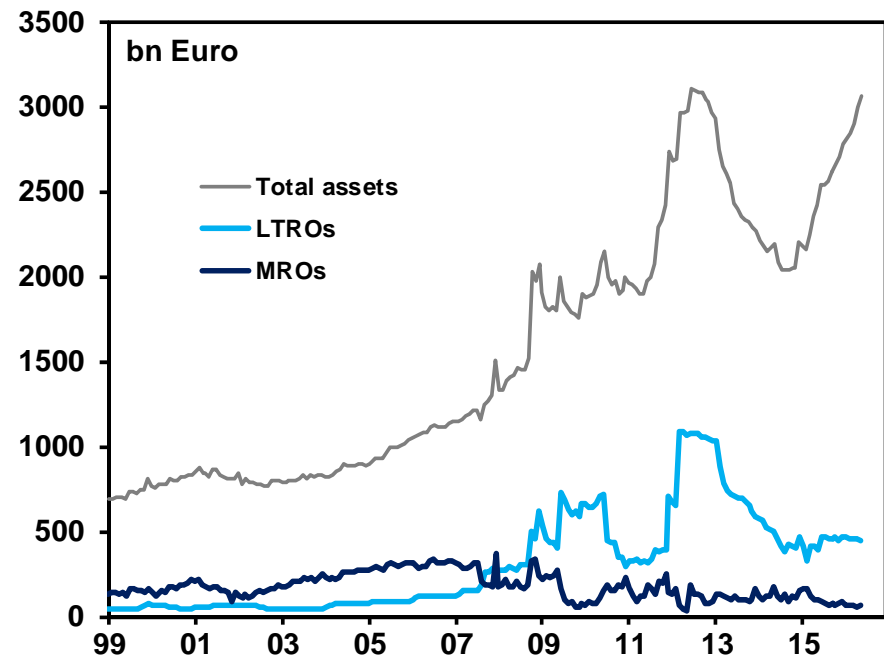
ECB: Excess liquidity to rise to €1.4 trillion by the end of the year ...

Excess reserves



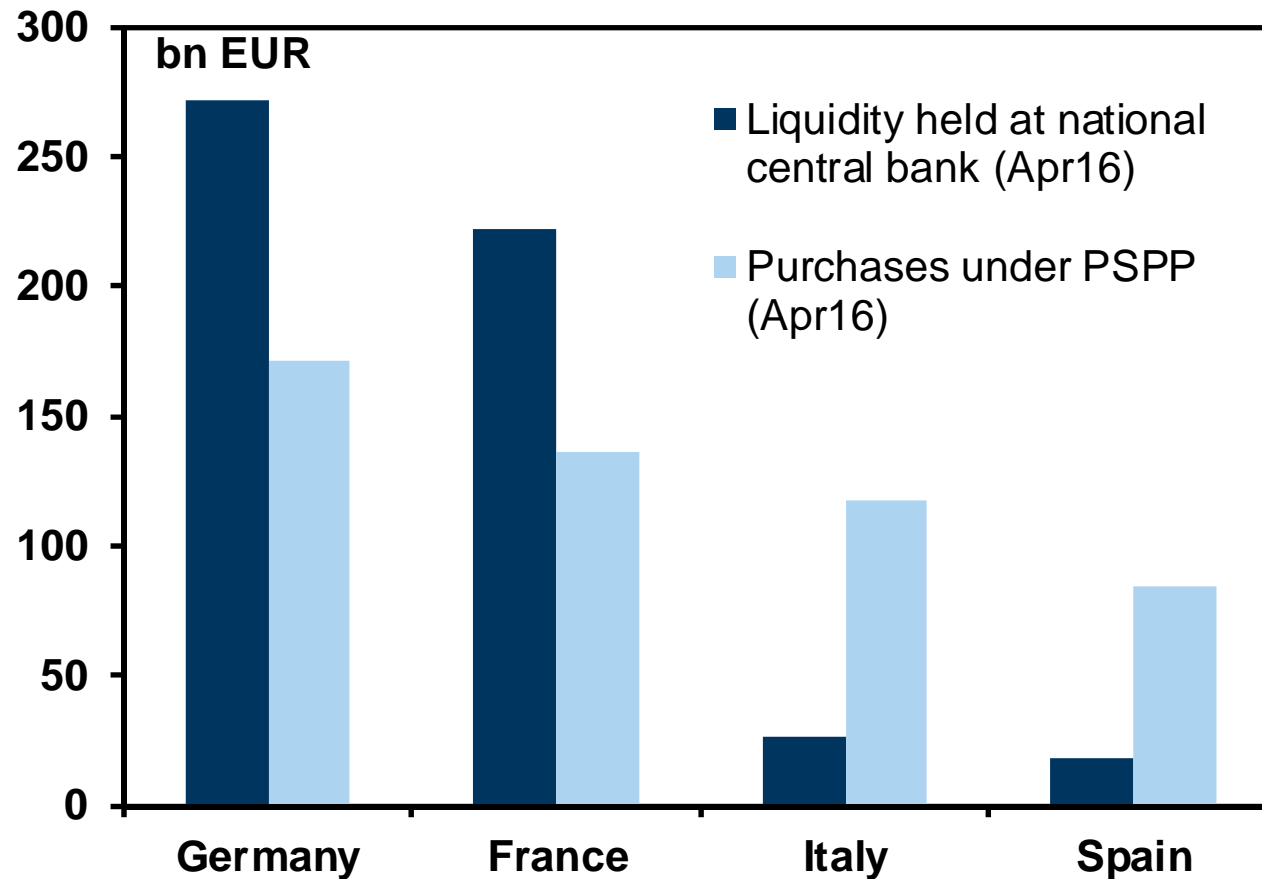
Source: Goldman Sachs Global Investment Research, Bloomberg

ECB balance sheet



Source: Haver Analytics, Goldman Sachs Global Investment Research

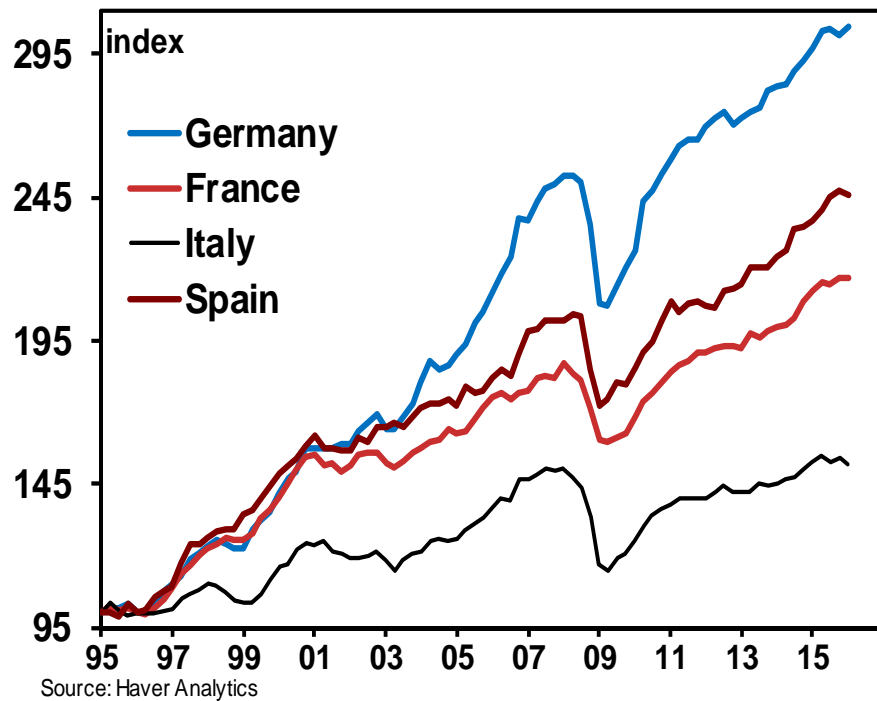
... which is unevenly distributed



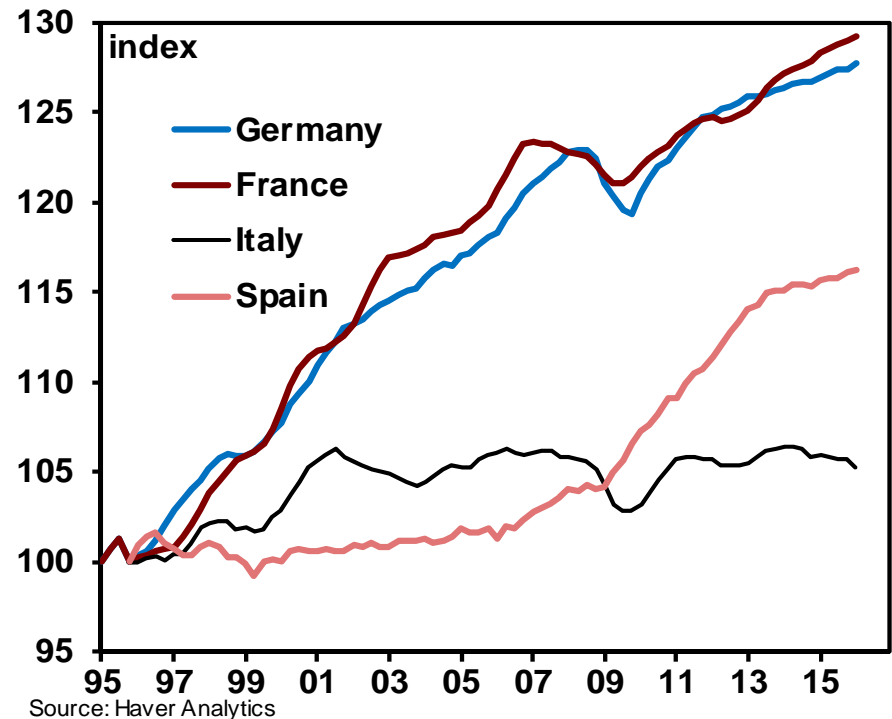
Source: Goldman Sachs Global Investment Research

Italian export weakness not a new phenomenon – neither is low productivity growth

Exports



Output per hour worked



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