The Global Economy: Ending 2012 on a positive note 2013: Year of global healing?

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The global macro outlook

- **Year 2012 is ending on a more positive note.** The risk of a global recession (double-dip) has decreased further. Systemic risks (US fiscal cliff, €-crisis, Middle East) have not vanished but markets are taking a more benign view about them.
- **Global financial markets are, again, in risk-on mode.** This time, market and real economy signals are sending consistent and modestly bullish signals.
- **US economy:** ISM-based Surprise Gap and housing market have improved further in November, pointing at an incremental but real healing of the economy at large.
- **An agreement to avoid an automatic fiscal tightening (fiscal cliff) is likely but might come at the last minute.** In all likelihood**,** the Fed will stick to its aggressive monetary stance beyond 2014. **Long term rates will remain under control.**
- **China's growth is marginally accelerating,** thanks to robust exports and resilient domestic demand. PBoC is actively managing liquidity. Fiscal policy is supporting the economy, to a limited extent. Not big policy initiative is expected until the new leadership is fully in charge.
- **In Europe, Q4 GDP readings are likely to be negative. Yet, a tiny ray of hope came with more positive business surveys, especially from Germany**. Hence, the recession might be relatively short-lived. This needs confirmation.
- **The ECB's commitment to guarantee the integrity of the €-area has put a lid on the euro crisis.** New fiscal rules are more credible than the defunct Stability Pact; yet, political divergences about the governance of the euro area, including the banking union, are not settled. **A crisis relapse cannot be excluded, given political uncertainties**.
- **Growing divergences between France and Germany,** in terms of performance as well as strategic vision will have to be addressed. If not, the long term stability of the monetary union is at risk.
- **As the global economy moves into healing mode in 2013, global equity markets will benefit from powerful tailwinds. 'Safe' government bonds are excessively expensive but yields will rise only incrementally as a result of quantitative monetary policies. For some time at least, corporate bonds will continue to shine: the risk of a global recession is low and financial re-regulation is generating robust inflows.**

Main macro risks

Short term (3 to 6M):

- Inconclusive negotiations on the euro Banking Union
  The initial project was watered down. A 'sneak' return to the national level would backfire
- Mismanagement of the US 'fiscal cliff'
  Debt could reach ceiling by February. No agreement = fiscal contraction worth 5% of GDP)
- Italy reneging on reforms and fiscal commitments
  Main case scenario for upcoming elections: continuity. Yet, populism is a risk
- Oil price spike: Straight of Ormuz blocked would send crude at $250/bl
  The civil war in Syria is a major source of uncertainty. A Israel-Iran war cannot be ruled out
- Inflation scare (rather than actual inflation)
  QE3, OMTs, currency wars, commodity supply shortages could fuel another inflation scare

Medium to long term:

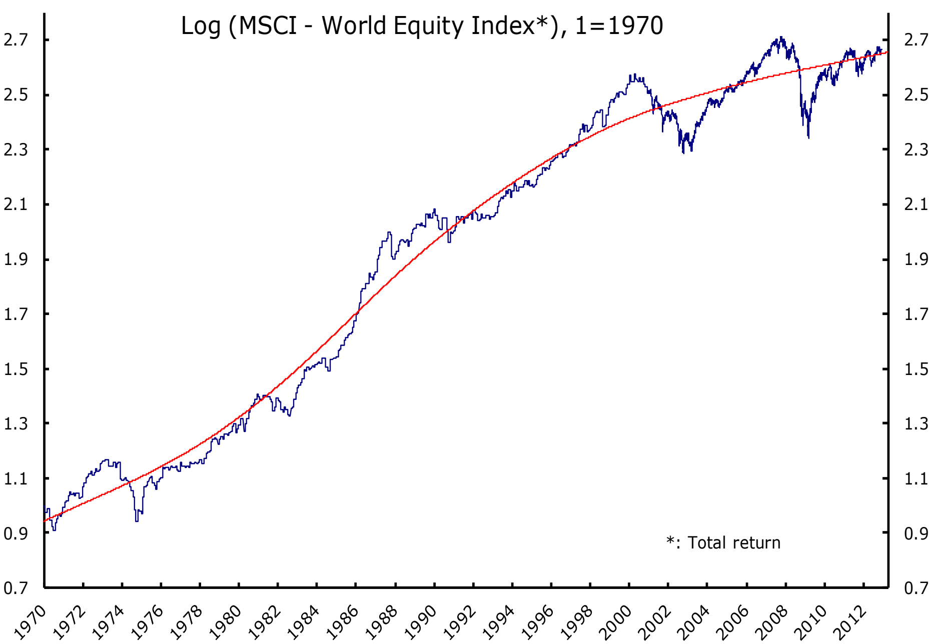
- Further Spain/ France/ Italy downgrades
  A sequence of sovereign downgrades caused by the recession might initiate a vicious circle
- Large divergence French / German public debt, markets testing France
  Consequences depending on the speed of political reaction. If slow, could be really bad
- Rejection of 'more political union' by €-area constituencies – end of euro ('eurogeddon')
  In the end, the future of the €-area will be decided by the peoples themselves
- Dual deleveraging (government and private sector) keeping LT rates < 2% for longer
  Disinflation could turn into Japanese style deflation, anchoring LT rates around 1 / 1.5%
- Ill designed 'exit strategies' by big central banks
  At some point, Fed/ECB/BoE will have to shrink their balance sheets. This will be tricky

Global equities: ending 2012 in good mood

As of:	12/12/2012				
World	**US**	**EMU (€)**	**EU ($)**	**EM ($)**	
30.8%	27.1%	28.7%	36.8%	78.7%	Through 2009
12.3%	15.4%	3.3%	4.5%	19.2%	Through 2010
-5.0%	**2.0%**	**-14.1%**	**-10.5%**	**-18.2%**	**Through 2011**
15.5%	**16.1%**	**17.6%**	**17.8%**	**7.3%**	**Since 02 Jan 2012**
6.2%	**5.7%**	**6.1%**	**7.3%**	**0.8%**	**Last four weeks**

MSCI total return indexes (source MSCI)

- Markets had welcome the announcement of ECB conditional interventions and the Fed's QE3
- Since then, economic indicators and the fiscal uncertainty in the US have had a sobering effect
- Liquidity conditions are supportive



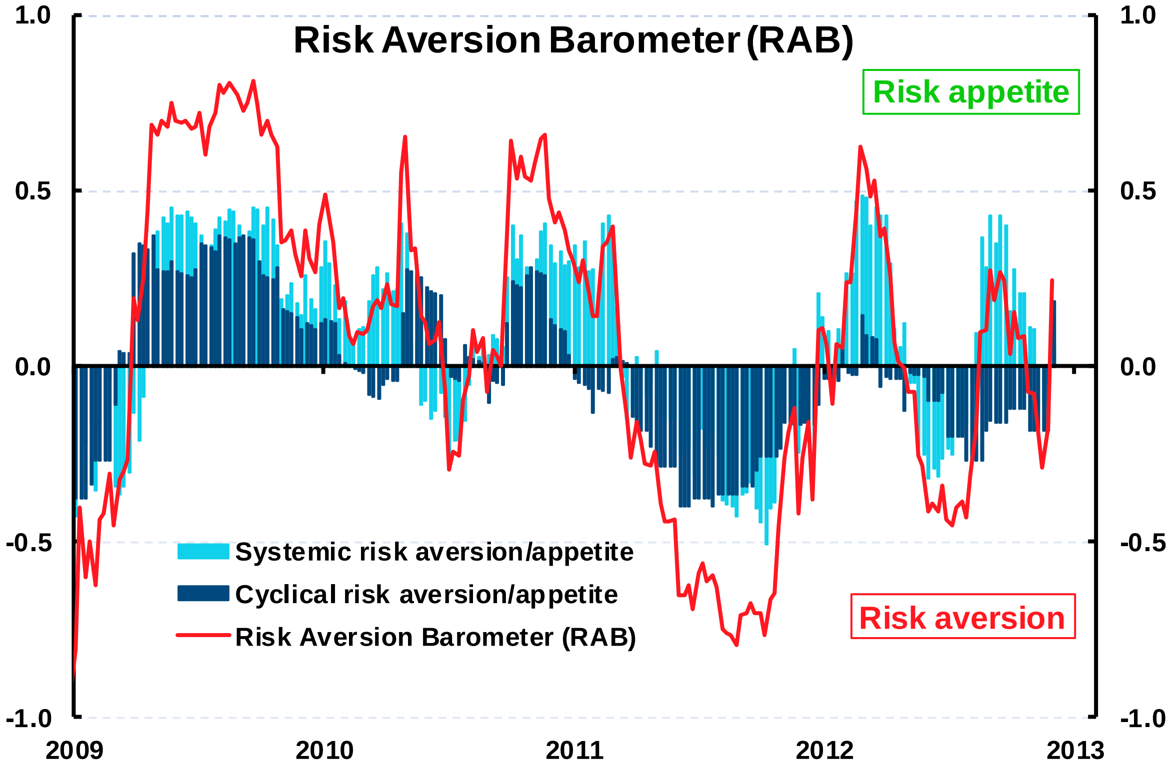
Source: MSCI, AXA IM Research

What our models say
Equities: Risk Aversion Barometer (RAB) now positive

- Appetite for risk assets is coming back
- Both components of AXA IM's RAB have turned positive: systemic (including liquidity) and cyclical (based on US and €-area Surprise Gaps). This convergence is good news
- The markets does not seem to be scared by the fiscal cliff as reflected by the perfect neutrality of our 3-month price momentum indicator and the never-ending decline in BBB versus AAA bond spreads

Rescaled weighted average of four scores (AXA IM surprise gap, Corporate bond spreads, Average pair-wise correlation of stocks & 3-month equity price momentum)

Cyclical risk: first score / Systemic risk: weighted average of the last three scores

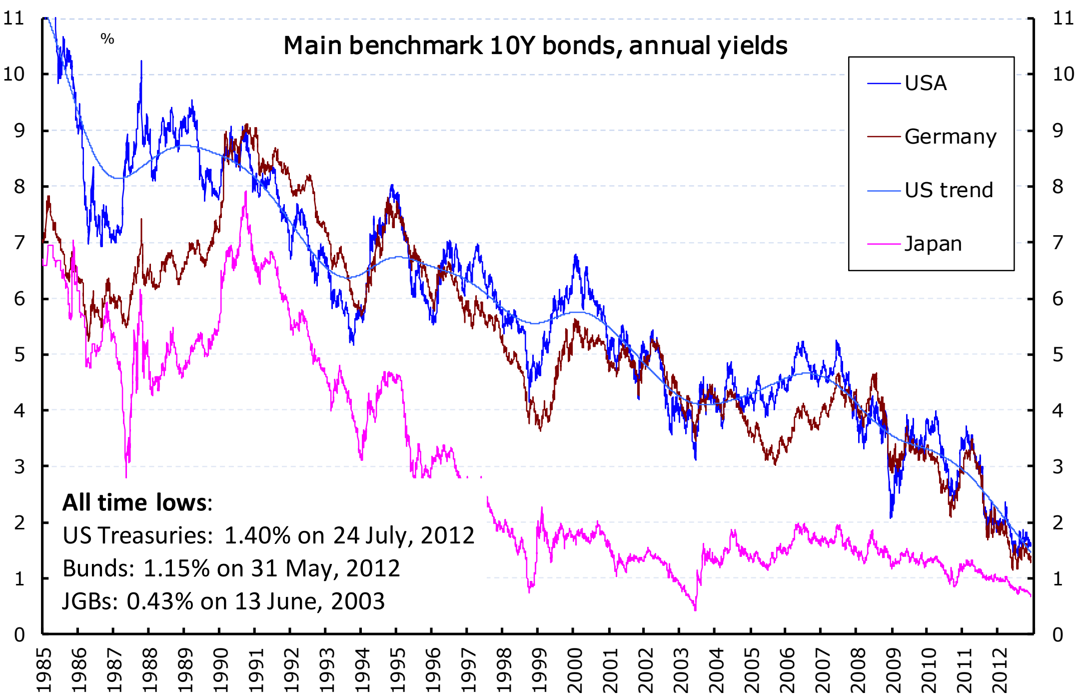


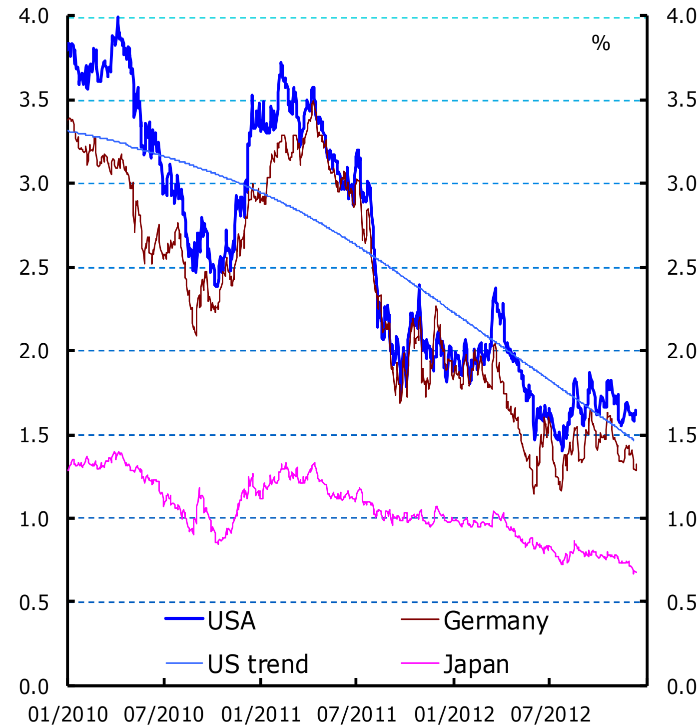
Source: Bloomberg, Datastream, AXA IM Research

More details about the RAB

Bond yields: ending 2012 without conviction

- German, US and UK 10Y bond yields have declined substantially since mid-October, in sync with the correction in global equities: markets continue to see these assets as safe havens, despite rising uncertainties about future exit (from quant policies) strategies. In addition, the current Fed policy, aiming at keeping long term interest rates low, is vindicated by the re-election of Barack Obama.
- Valuations are at odds with fundamentals (expected monetary rates + 'normal' term premium).



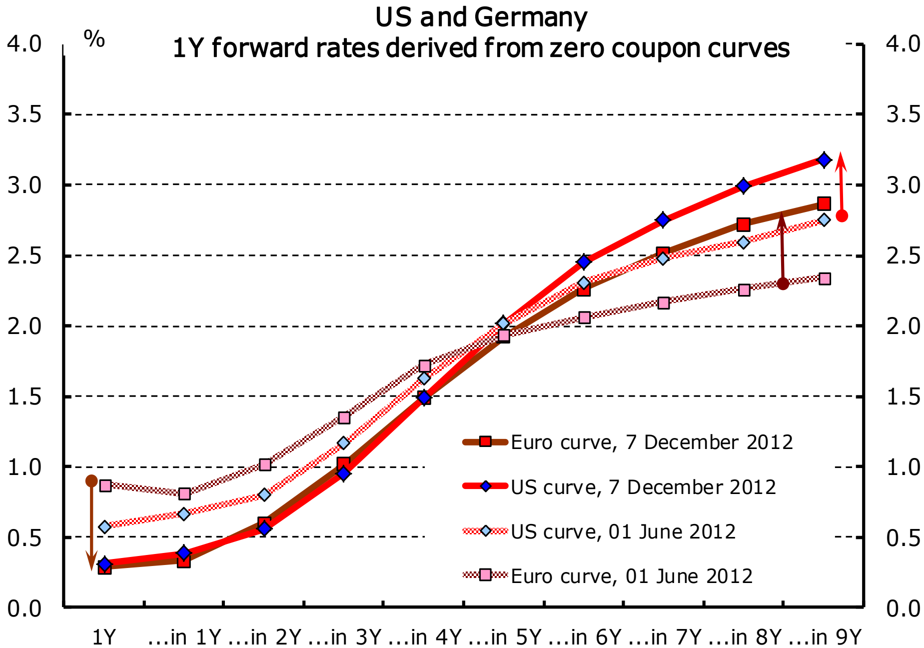


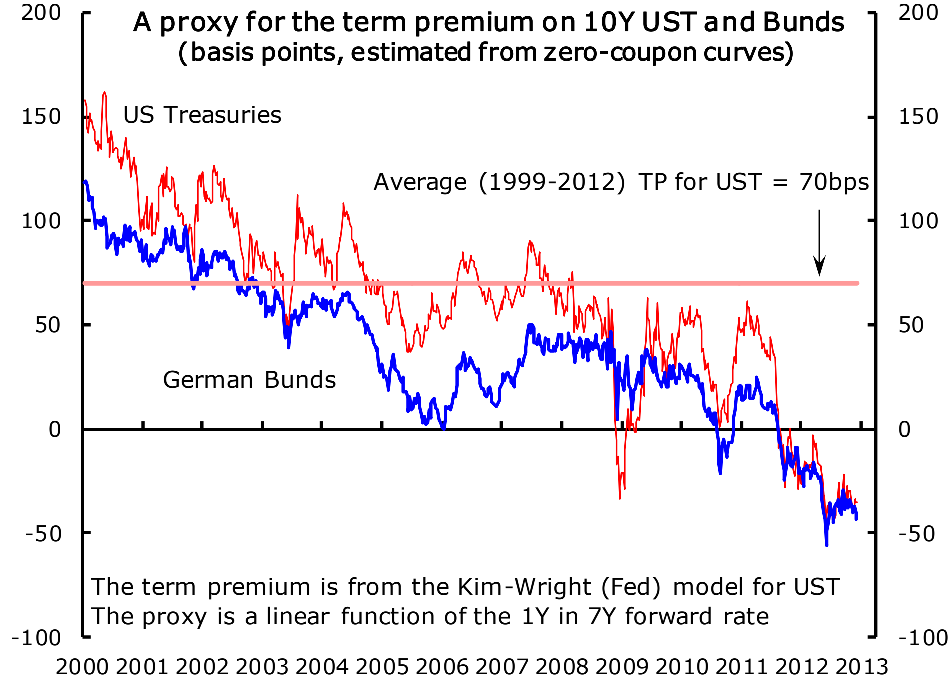
Latest data:
10 December 2012

Source: Datastream, AXA IM Research

Bonds: (long) term premium stabilised

- UST curve: Long forwards (a proxy for the term premium) have risen further since the QE3 announcement. Post US election, the term premium declined, as markets see financial repression here to stay, as a consequence of the Fed strategy, before stabilising
- German Bund curve: The term premium has increased, in sympathy with the US and as a result of the ECB's pledge to do 'whatever it takes' to keep the euro area in one block. See it this way: the negative term premium Bunds are enjoying is slightly less negative.



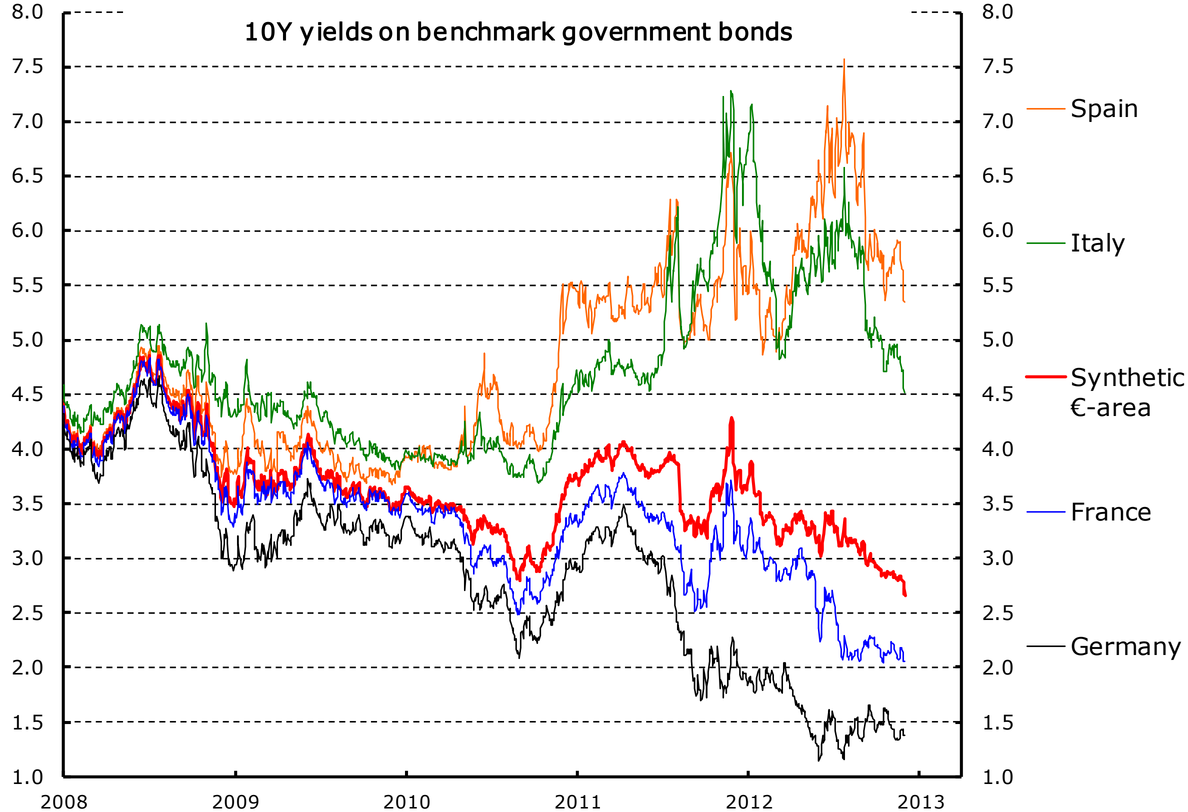


Source: Datastream, AXA IM Research

What the markets say

€-sovereigns: virtuous dynamics –but reversible

- The GDP-weighted € 10Y yield has fallen below 3.0% for the first time since August 2010
- The news is that, this time, the decline came exclusively from the periphery
- Markets have bought the ECB strategy (OMTs) and they are also taking positively the fiscal efforts of Italy and Spain, as well as the structural reforms undertaken in these countries.
- This is reversible: any reneging on reforms could quickly backfire

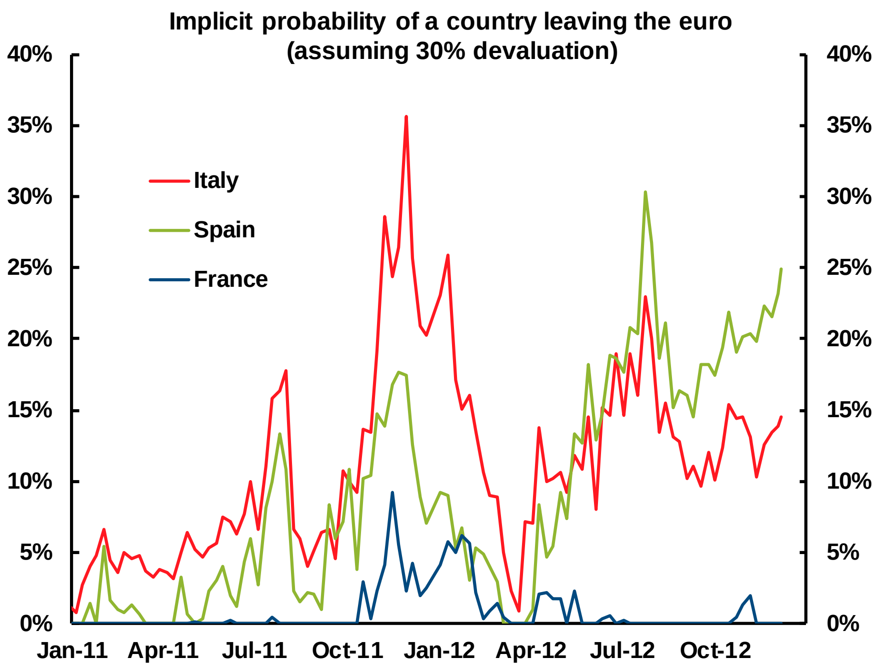


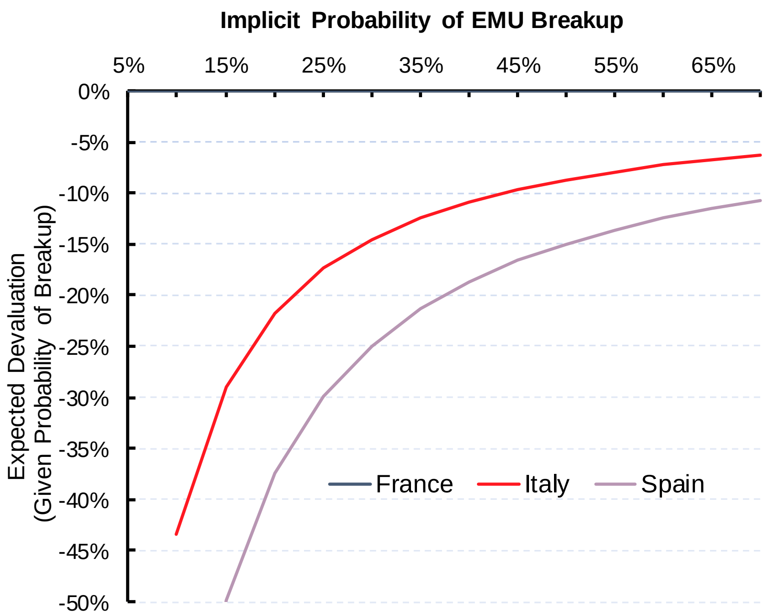
Latest data	14/12/2012

Source: Datastream, AXA IM Research

€-sovereigns and CDS: Doubts about Spain rising

- The strong commitment to the euro expressed by Mario Draghi, consistent with the decisions of the June 29 €-summit, has significantly reduced the risk premium associated with a possible break-up of the euro area, before any concrete action.
- Yet, since September, markets are steadily pushing up the ‘convertibility’ premium of Spanish governments bonds, as a result of political procrastination.





Calculations based on 5Y zero-coupon bonds and 5Y CDS (r = 40%)

As of 7 December, 2012

Source: AXA IM Research

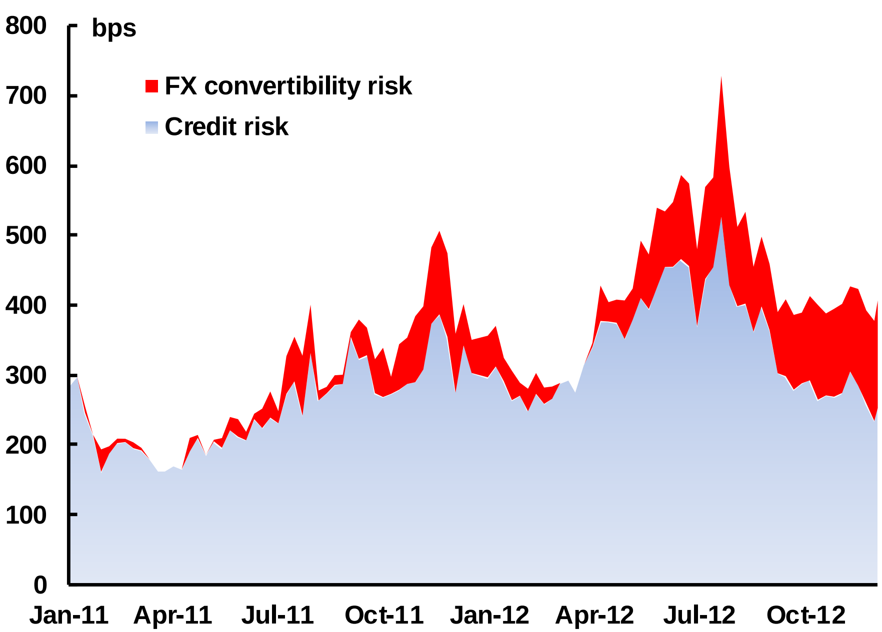
Methodology: 5Y zero-coupon bond prices are adjusted for credit risk, using 5Y CDS. The expected loss of holding a 5Y bond of country X vs. Germany is the product of the expected devaluation and its probability. In the left hand chart, we assume a 30% devaluation, for the sake of comparison

What the markets say

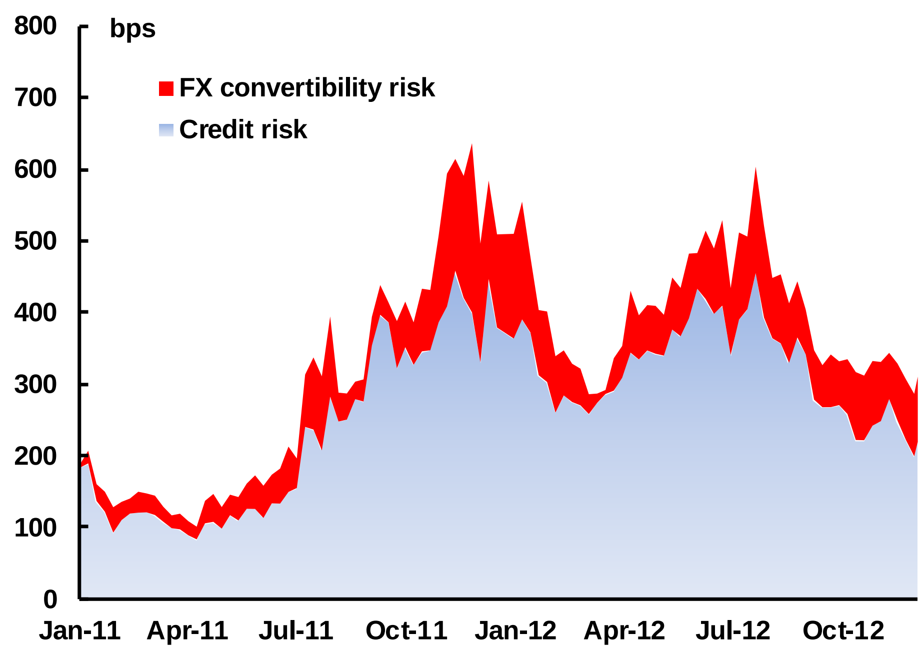
€-sovereigns spreads: what the ECB can/ cannot do

- The Greek PSI was a painful reminder that governments can fail, even in a ruled-based currency union. In the future, credit risk premia will depend on national fiscal policies as well as on the credibility of the new rules. The ECB cannot do much about that.
- Yet, spreads are not fully explained by credit risks. Expectations of a partial or full €-breakup are also priced in. This is what the ECB may target through OMTs. As of 11/30, we estimate the 5Y currency premia at 90 bps for Italy and 155 bps for Spain, significantly up from their August lows.

Spain: Breakdown of 5Y gov't bond spreads vs. Bunds



Italy: Breakdown of 5Y gov't bond spreads vs. Bunds

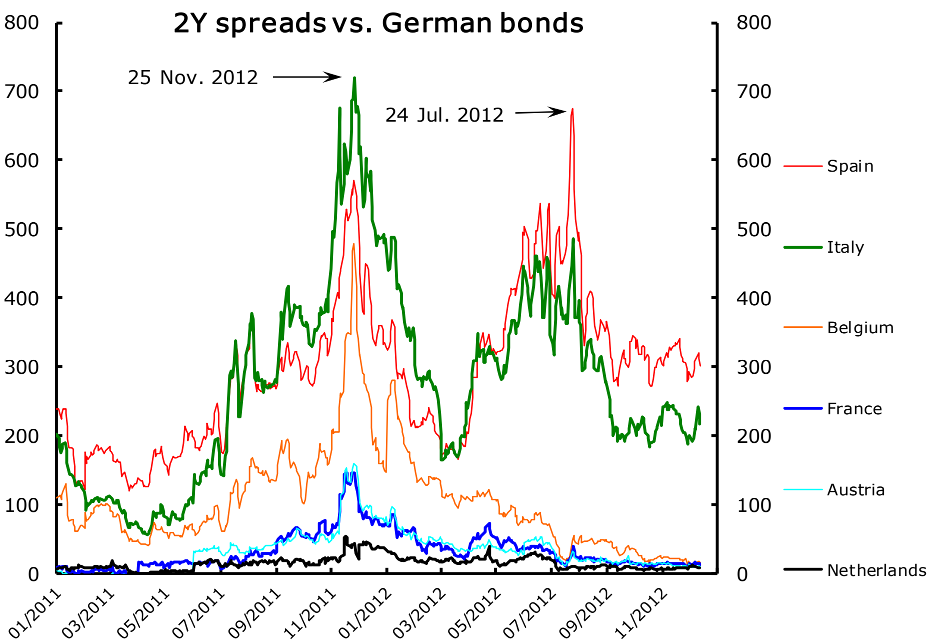


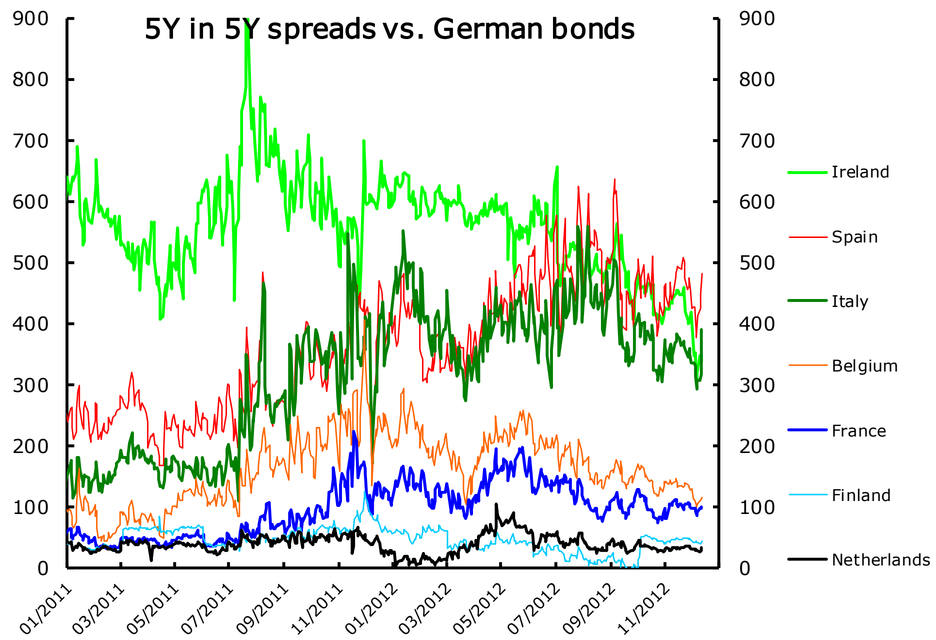
Source: AXA IM Research Methodology: A 2-factors model where 5Y zero-coupon spreads are broken down into a credit risk calculated from 5Y CDS and a 'currency risk', the latter being the residual. Other factors such as different liquidity premia are ignored. Therefore, the information is more about the relative size of the two factors than about their absolute levels.

What the markets say

€-Spreads: convergence at the short end halted

- Consistent euro politics (€-Summit + potential OMTs) had reversed the dynamics of spreads, in favor of Spain and Italy, especially for short durations. The reluctance of Spain and Italy to apply for ESM support has nevertheless weakened the downward momentum.
- Meanwhile, 5Y in 5Y spreads, are still above 300 bps. They are surprisingly similar for Ireland, Italy and Spain. Markets continue to foresee a large credit risk and/or a smaller euro club in the longer term.

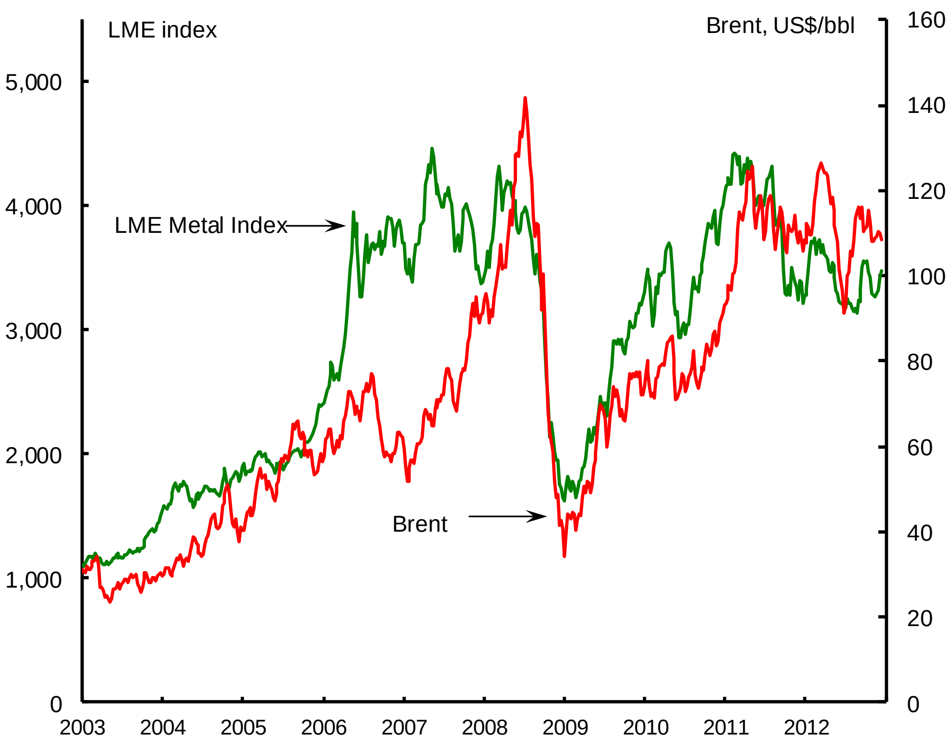


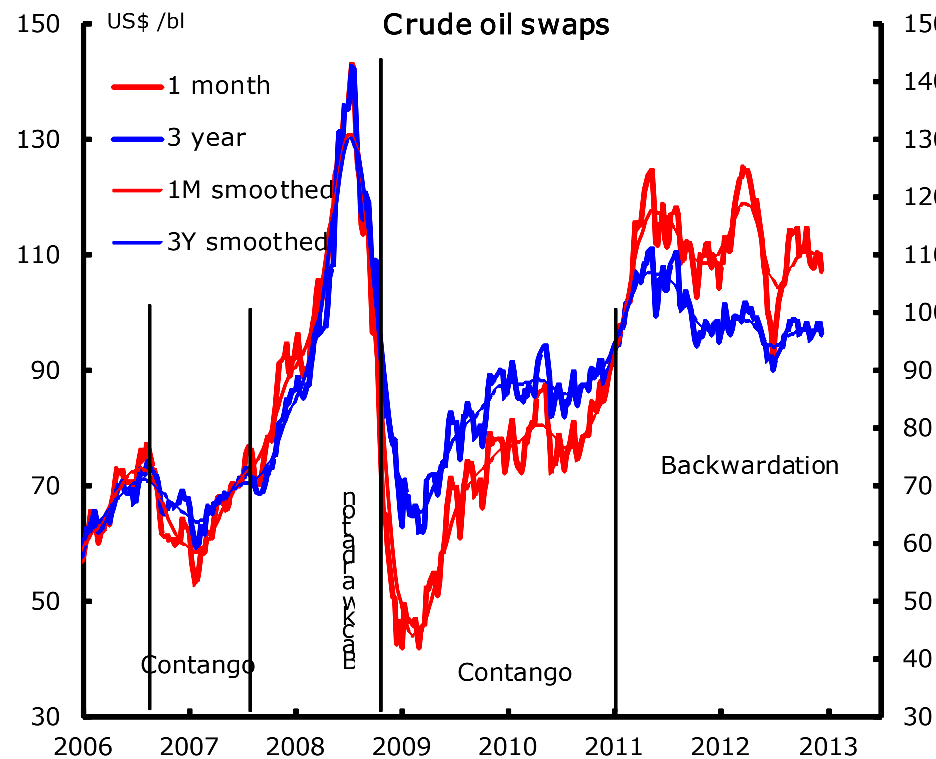


Source: Bloomberg, Datastream, AXA IM research

Commodities: cooling

- **Crude oil price: tentative correction, consistent with global slowdown**
  - The oil market remains in backwardation, with Brent spot 13% higher than 3Y quotes
  - The risk premium is caused by possible Israeli airstrikes on Iran followed by a war and uncertainty about the outcome of the civil war in Syria. Israel wouldn't go to war without US support
  - Saudi Arabia has made clear that $100/bbl is a 'fair' price. The Opec basket is standing at $106/bbl





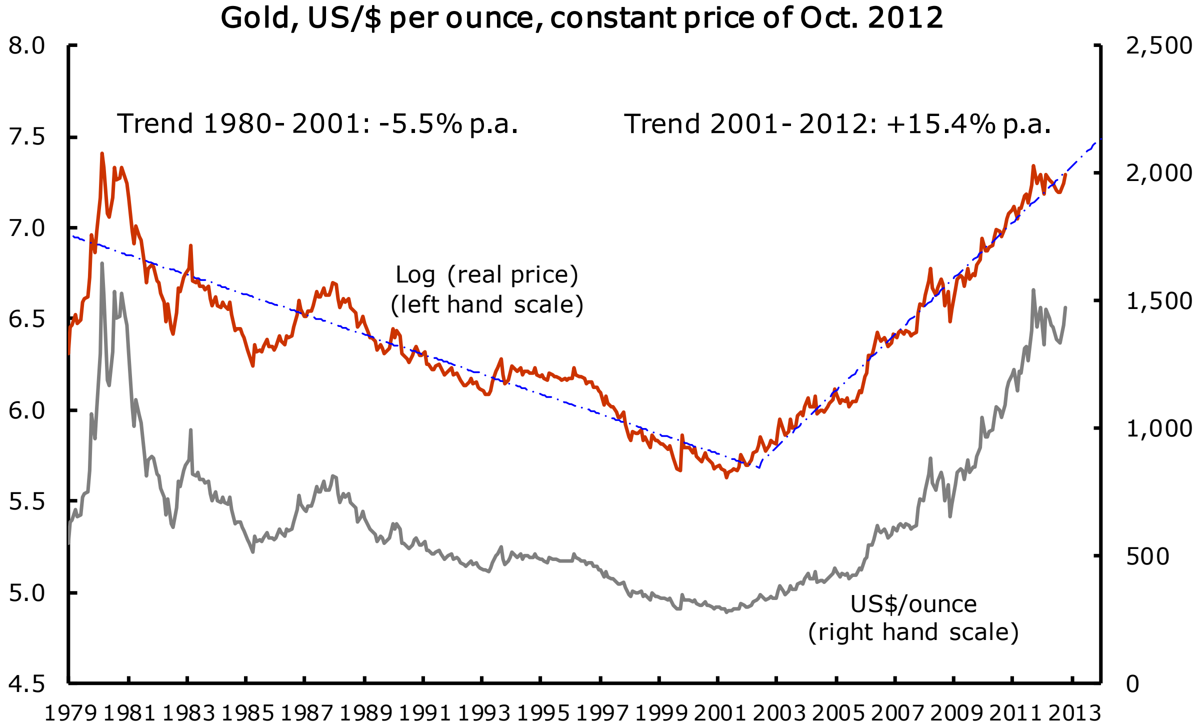
Latest data point: 10/12/2012

Source: Datastream AXA IM Research

What the markets say

Gold: pricey, yes, but irrelevant as signal

- **From 1980 to 2001, the real price of gold was declining. Since then, it has been steadily increasing**
  - The rise of the price of gold is often attributed to the scare of inflation or of currency debasement
  - Data do not support this thesis: since 2001, the real price of gold has been steadily increasing by 15.4% p.a., without deviating significantly from its path, neither before nor after the 2009 crisis
  - The only event that seems to match the change in the gold price trend is China joining the WTO and thus the global market place



Souce: London bullion market, deflator: US CPI, computations: AXA IM

What the markets say

Currencies: € rising / US$, away from fair value

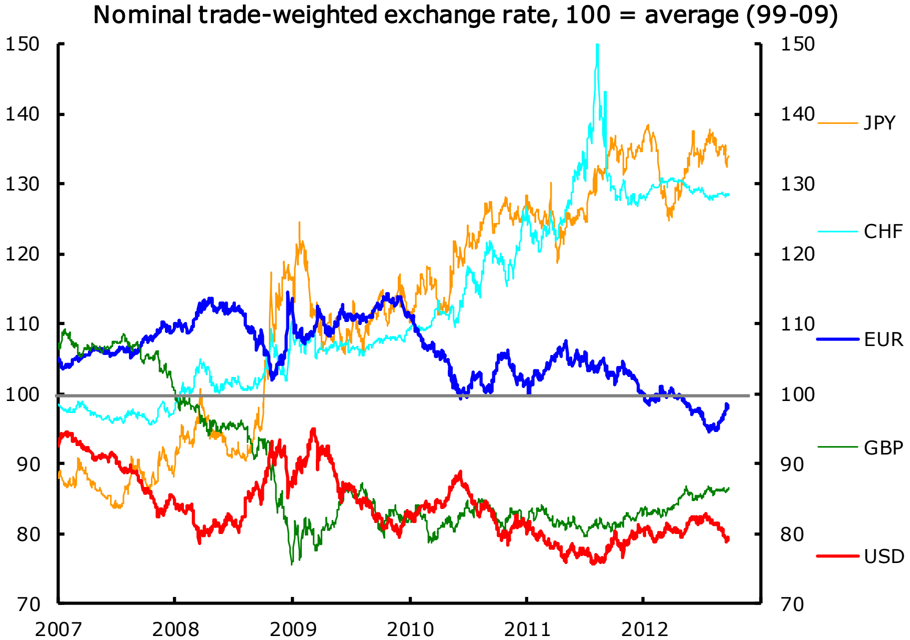
- US$ weakened (on purpose) by QE3
- JPY weakened by BoJ action
- € appreciating by default
- CHF firmly anchored by SNB

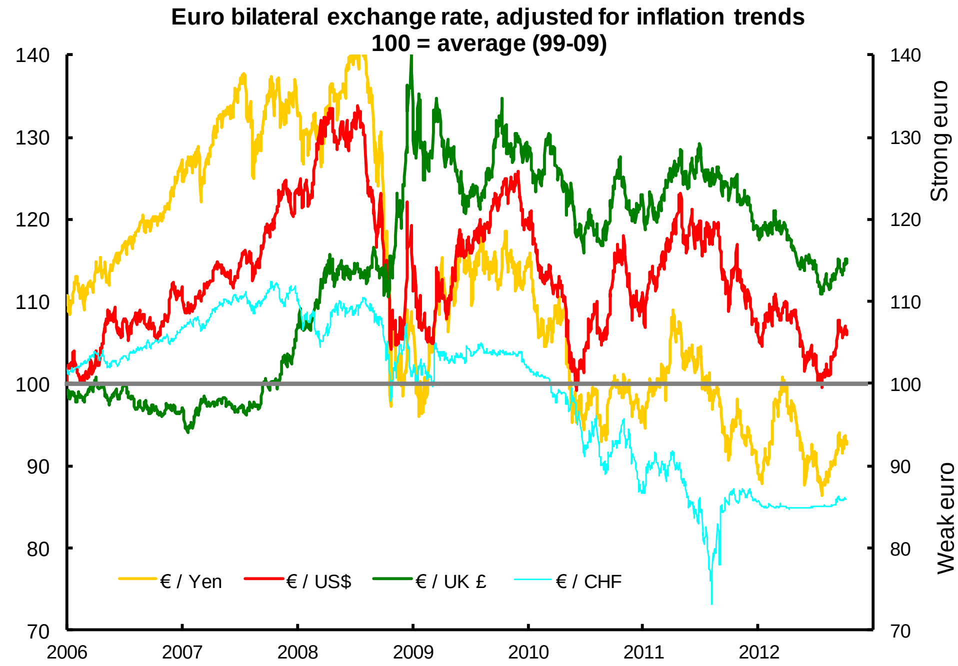
Nominal TW rate: Deviation from average(1999-2012)					
As of:	UK £	Euro	JP Yen	Swiss franc	US $
06/12/2012	**-14.5%**	**-1.4%**	**27.1%**	**29.1%**	**-19.3%**

US$ real bilateral rate: Deviation from(1999-2009)				
As of:	US$ /Yen	US$ / CHF	US$ / UK£	US$ / €
06/12/2012	***-8.2%***	***-21.9%***	***7.5%***	***-6.9%***

Euro real bilateral rate: Deviation from(1999-2009)				
As of:	€ / Yen	€ / US$	€ / UK £	€ / CHF
06/12/2012	***-0.8%***	***7.4%***	***15.6%***	***-13.8%***

JPY real bilateral rate: Deviation from(1999-2009)				
As of:	Yen/€	Yen/ US$	Yen/ UK£	Yen/ CHF
06/12/2012	***-1.3%***	***8.1%***	***15.0%***	***-14.7%***



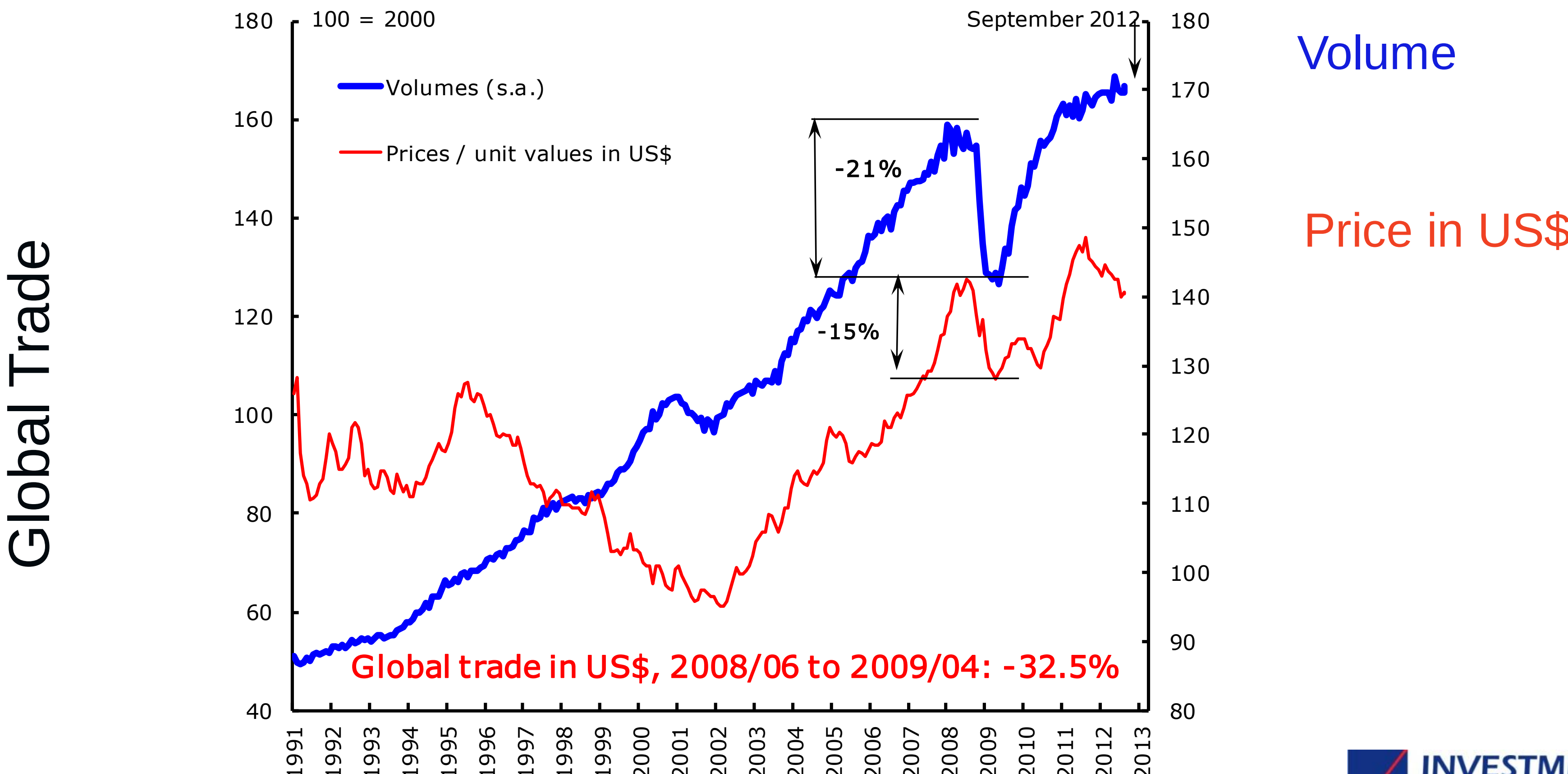


Source: Federal reserve, ECB, BoE, AXA IM Research

What real economic indicators say

Global trade is stalling

- After a dead cat bounce in May, global trade stalled in 3Q
- Short term prospects are not brilliant. Yet, fiscal (China) and monetary stimulus (Fed, ECB, PBoC, BoJ) should prevent a significant contraction
- Trade prices are showing a distinct deflationist pattern.

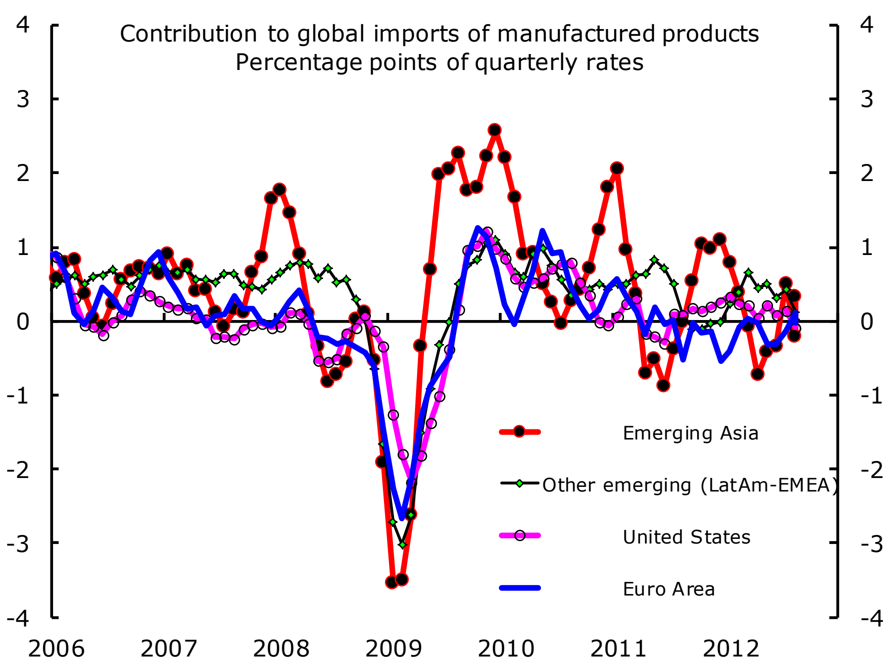


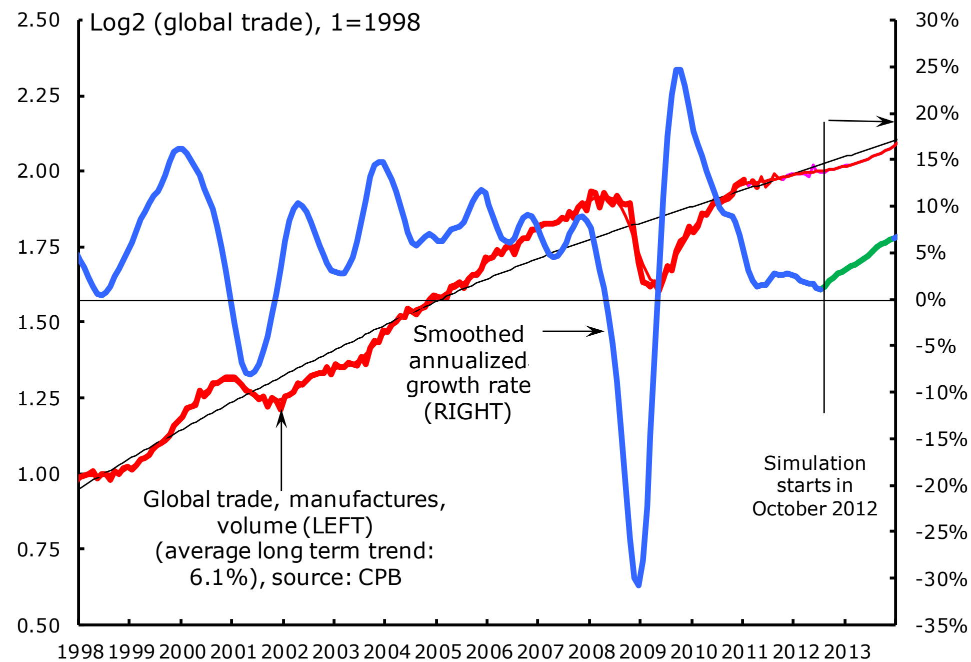
Source: CPB, AXA IM Research

What real economic indicators say

Trade weakening is widespread

- The euro area has become the ‘black hole’ of global trade, which is likely to contract, as the €-area crisis starts reverberating globally: imports to other regions are also slowing
- Going forward, policy reactions aiming at supporting demand (quantitative easing, lower interest rates, fiscal expansion in some countries) should boost domestic demand in Asia, Middle East, Africa and the US.



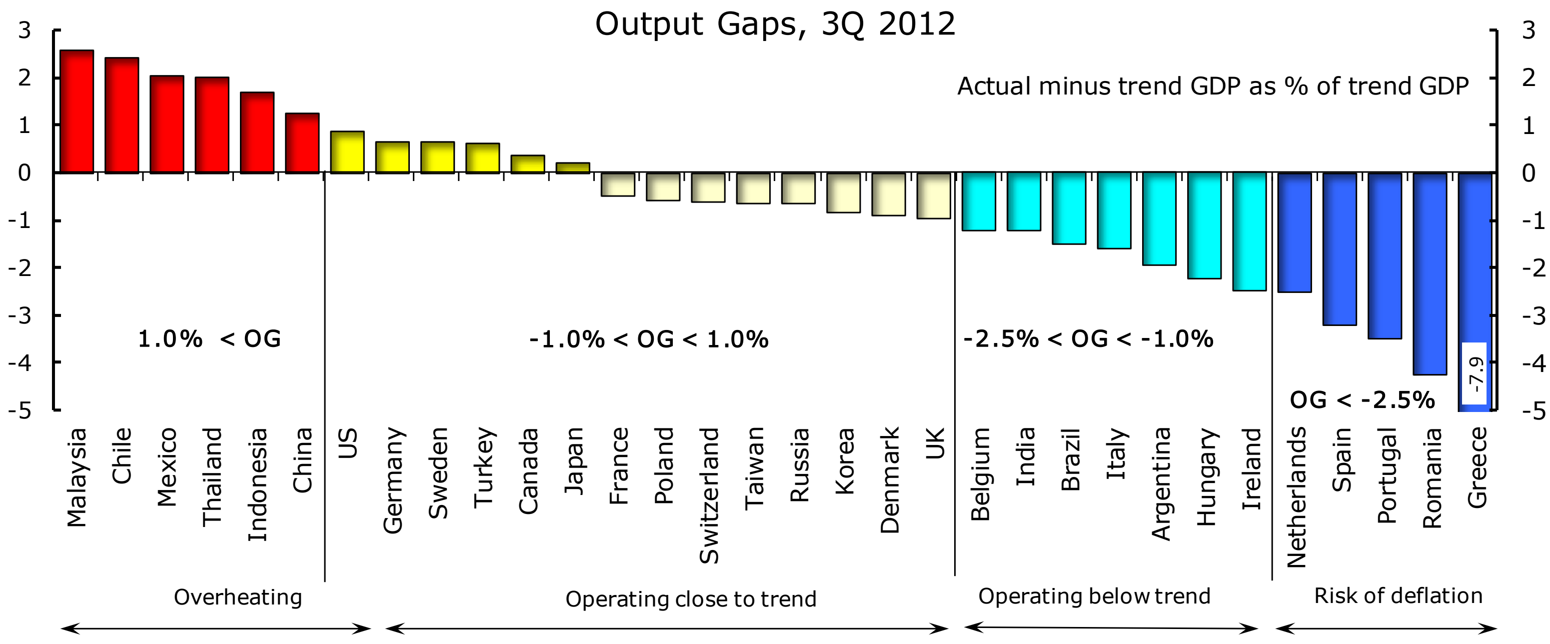


Source: CPB, AXA IM Research, latest data: September 2012

What real economic indicators say

Inflation: cursor moving from red to blue

- Previously overheating economies (China, Indonesia, Turkey, Germany) have slowed
- Deflation is gaining ground in Europe, with Spain and the Netherlands moving in the distressed region.
- Overall, the ‘blue camp’ is recruiting faster than the ‘red camp’
- Bear in mind that the global component of inflation explains 70% of local inflation (*)



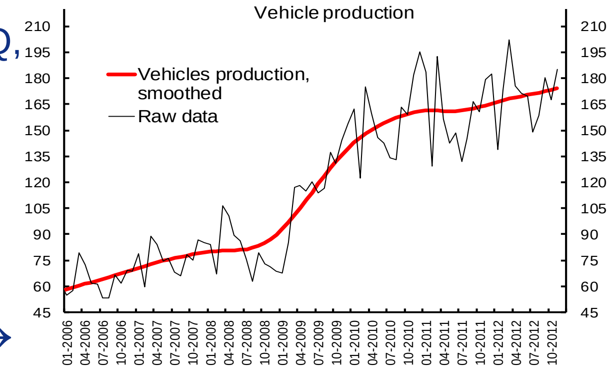
(*): More precisely, the share of inflation variance explained by a measure of global inflation is 71%, on average, for Oecd economies. This share ranges from 60% for Germany to 68% for the US and 89% for France
Source: Ciccarelli and Mojon, Global Inflation in The Review of Economics and Statistics, August 2010.

Source: Datastream, AXA IM Research

What real economic indicators say

China: soft landing behind us

- GDP growth accelerated further in 3Q (9.1% SAAR, 7.4%Y, after 8.2%Q, 7.6%Y in 2Q,), broadly in line with the official policy target
- CPI inflation (1.7% in Oct.) and GDP deflator are hinting at disinflation.
- PBoC is injecting liquidity and infrastructure spending is on the rise.
- PMI and hard data are re-synchronizing, pointing at accelerating growth



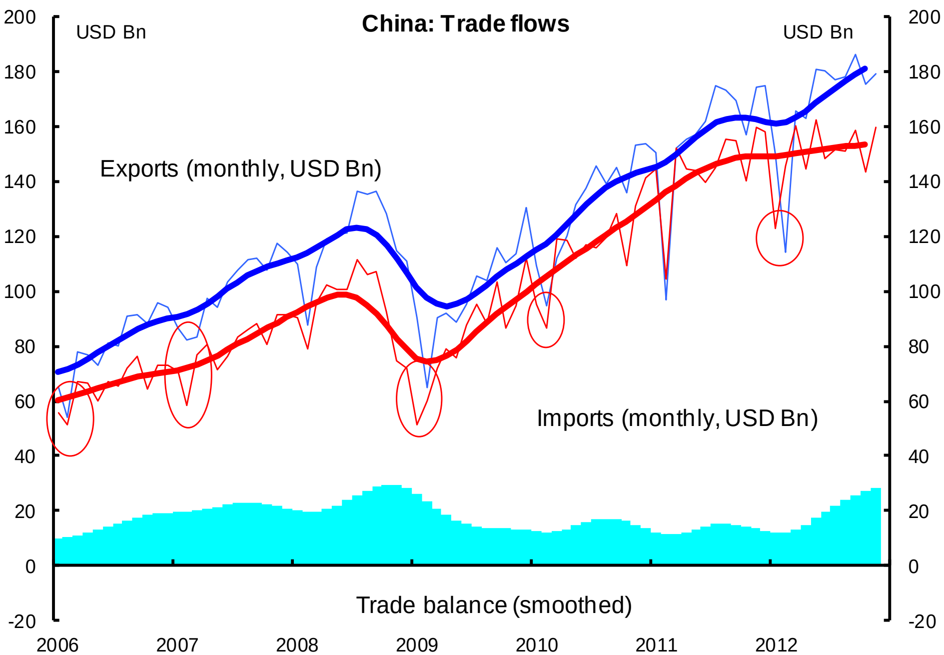
Car sales: no ‘boomerang’ effect, eventually ⟶

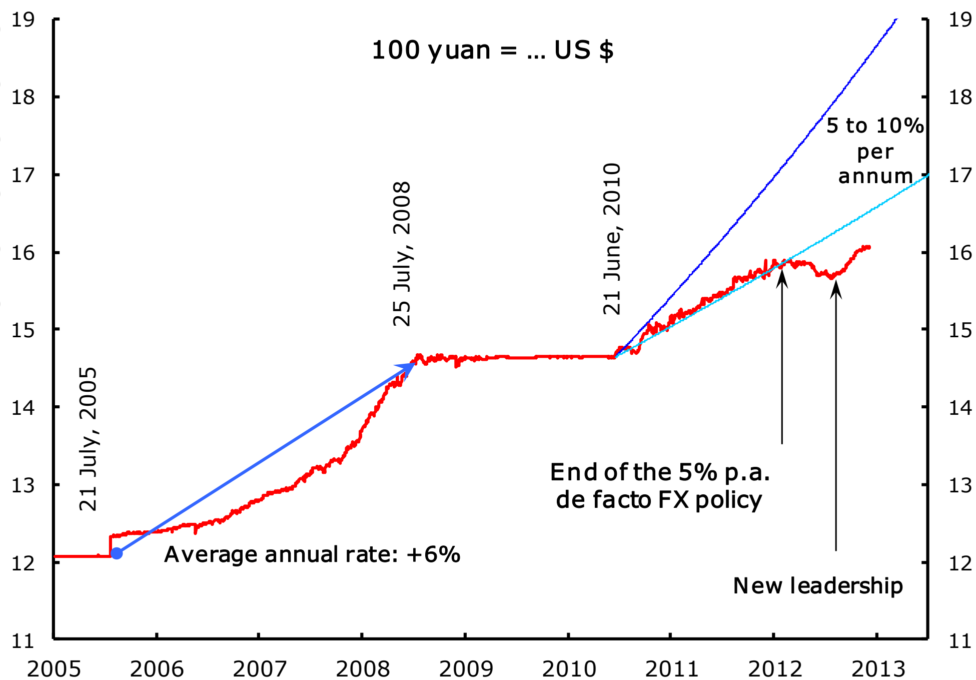
Source: NBS, Datastream, AXA IM Research

What real economic indicators say

China: exports recovering, CNY on the rise

- The picture that is currently emerging is a slight re-acceleration of exports (in USD), with imports stabilizing. The trade surplus is, again, widening. Exports are growing robustly(smoothed trend: 14% annualized) while imports are weak (smoothed trend: 4%)
- Meanwhile the appreciation of the remninbi vs. US$ is slowing, perhaps reflecting a lack of conviction about global growth within the Chinese leadership



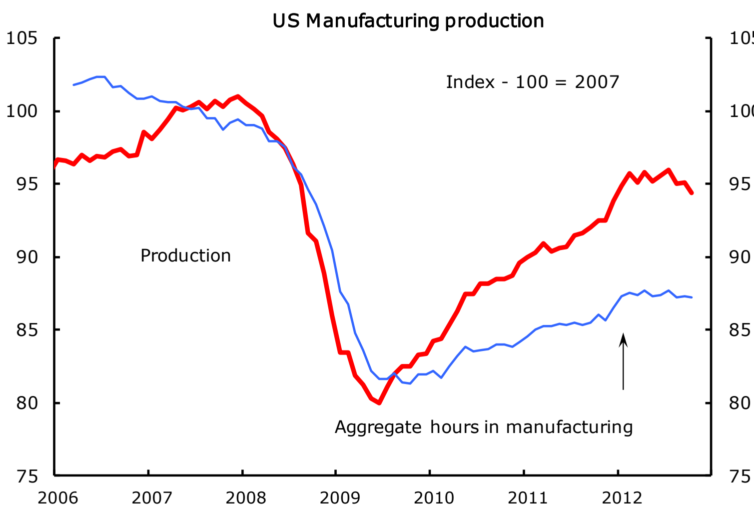


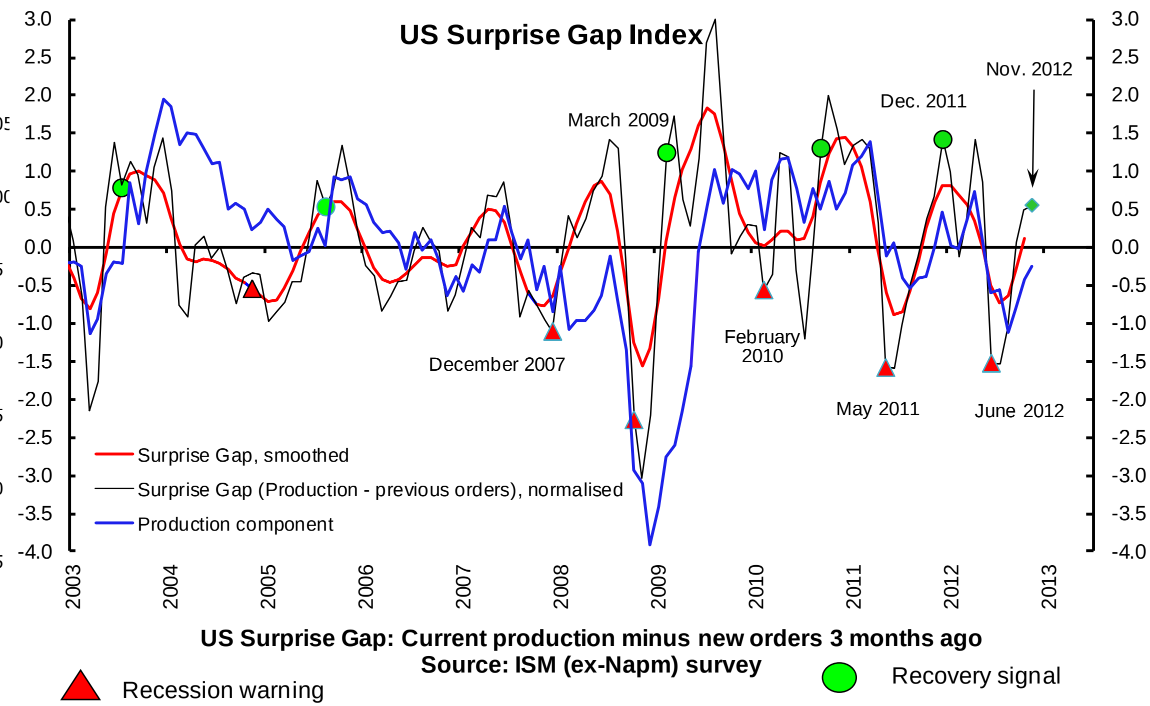
Source: NBS, Datastream, AXA IM Research

What real economic indicators say

US manufacturing: re-acceleration in the pipeline

- The ISM index (speed component) fell below 50 in November, probably hit by fiscal uncertainties. Yet, the ISM-based Surprise Gap (acceleration component) remained in positive territory.
- Depending on the negotiations on the fiscal cliff, companies may have to adjust their plans to a changing fiscal outlook. Until the fiscal outlook is clarified, corporate America will refrain from spending. Then, capex should rebound significantly.



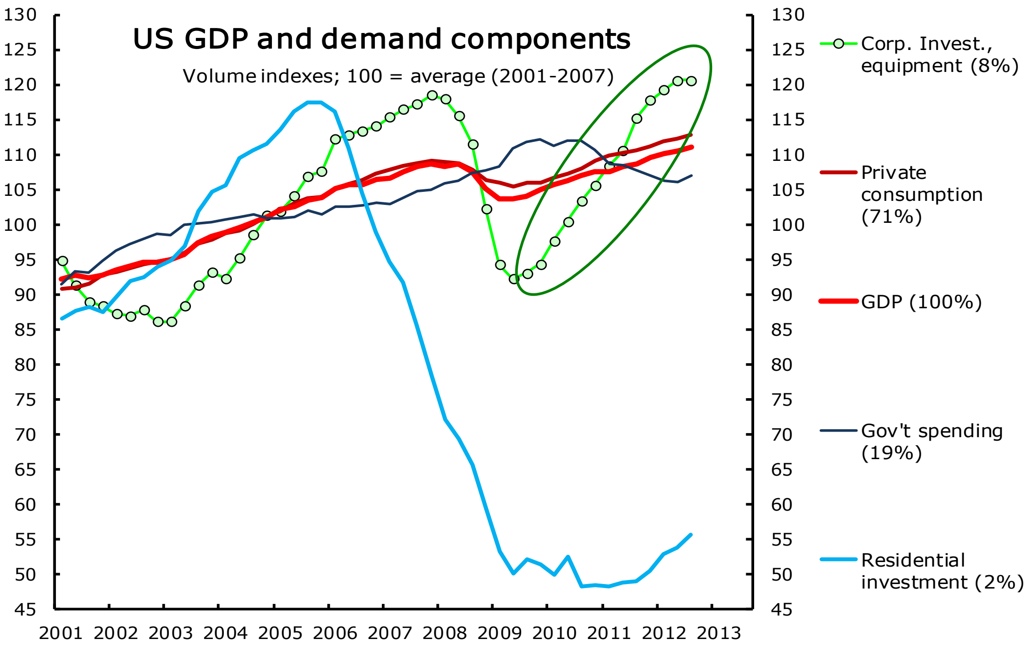


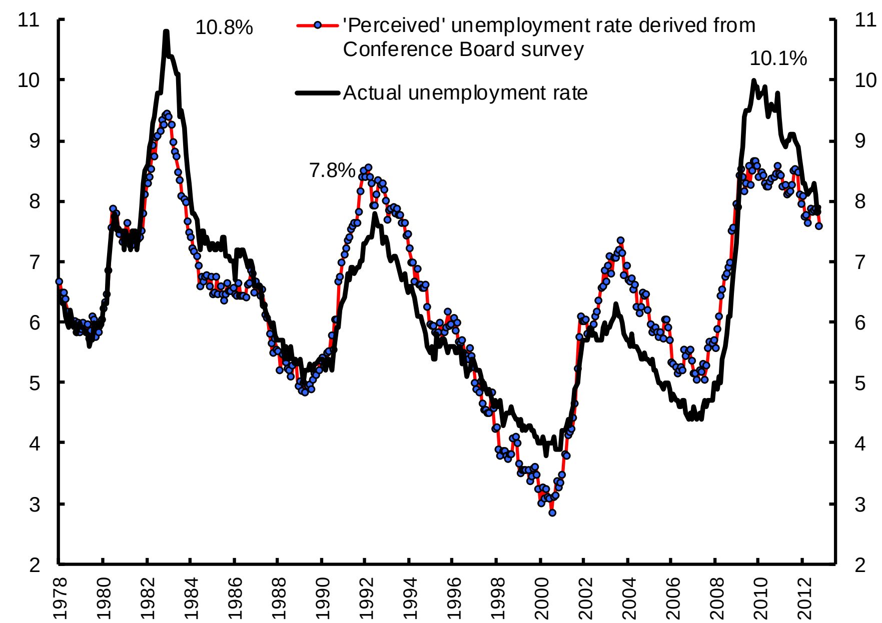
Source: ISM, AXA IM Research

What real economic indicators say

US: Recovery not robust enough for the Fed

- GDP growth has averaged 2.1% (quarterly data) since 1Q 2010. As long as deleveraging takes place (consumers, then federal government), significantly higher growth rates are unlikely.
- The main domestic driver, corporate investment, is now weakening. GDP growth is likely to hover between around 2% in the next few quarters. This is too weak to close the output gap. Unemployment marginally below 8% (7.9% in October) does not mean that the Fed is going to change gears. Sluggish growth next year is likely to keep unemployment above 7%.
- Residential investment is picking up. This won't fuel growth much, but it's good news and could foster sales of durable goods.





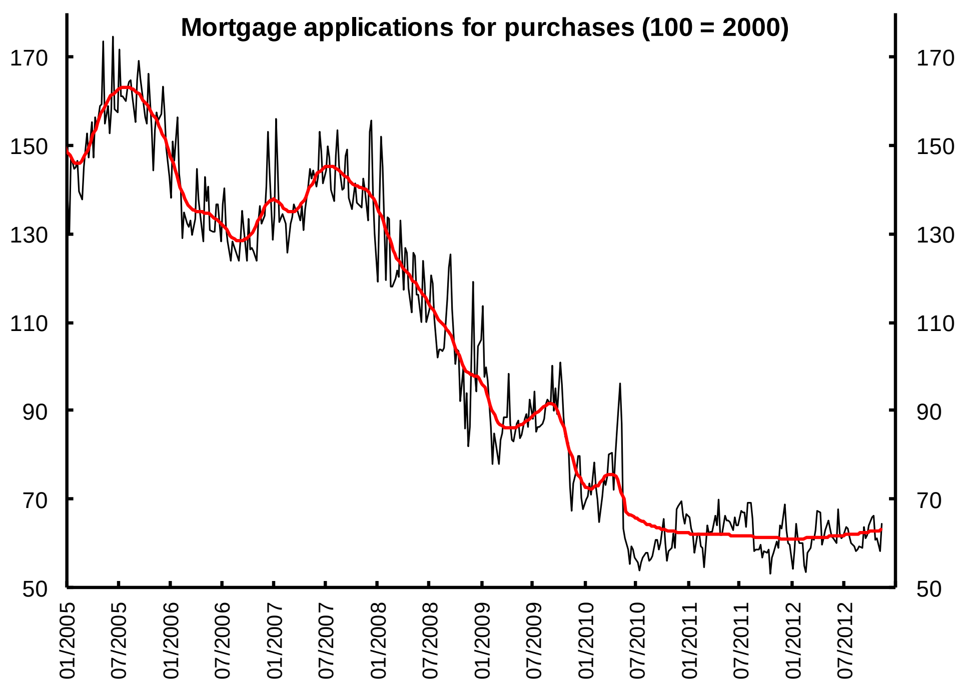
Subjective unemployment = 5.8+ 0.06*(bal of opinion on current jobs)
OLS, 1978-2010, $R2=0.8$

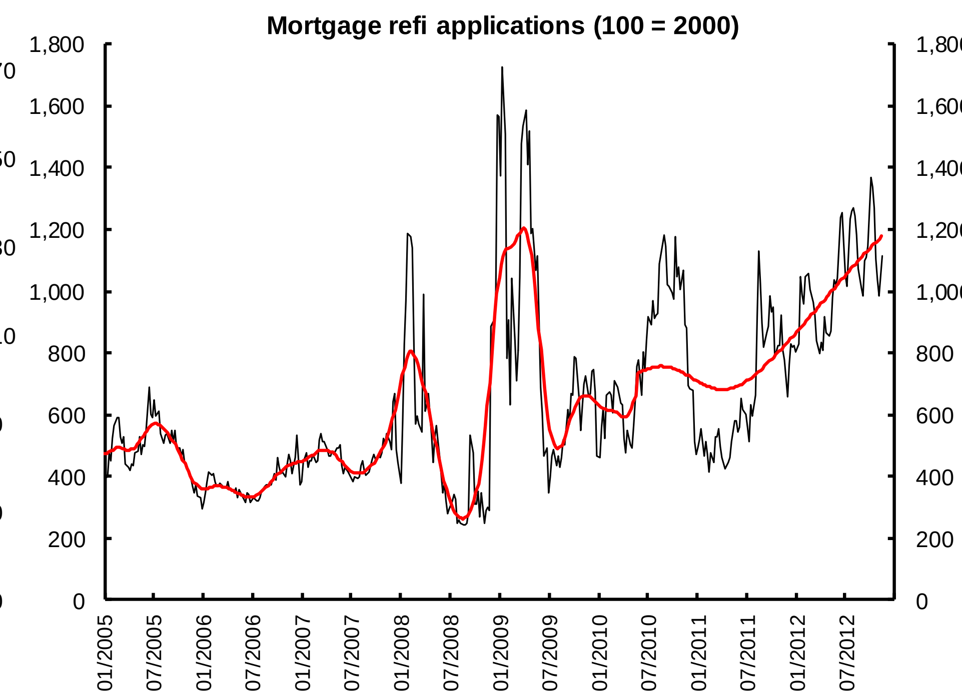
Source: BEA, , Department of Commerce, Conference Board, AXA IM Research

What real economic indicators say

US: Mortgage: only refi application react to stimulus

- Mortgage refinancing applications are boosted by QE3. Their current level is 12x higher than in 2000.
- On the other hand, applications for purchases have not taken off. They are 40% lower than in 2000
- This seems to indicate that the Fed's strategy is more likely to shorten the deleveraging phase than to kick start the economy in the short term



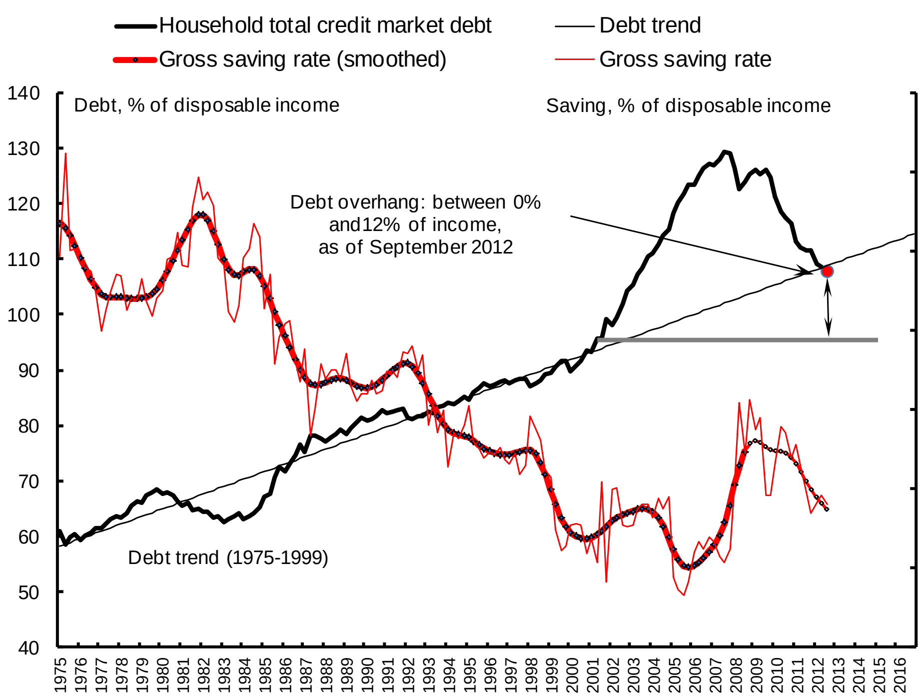


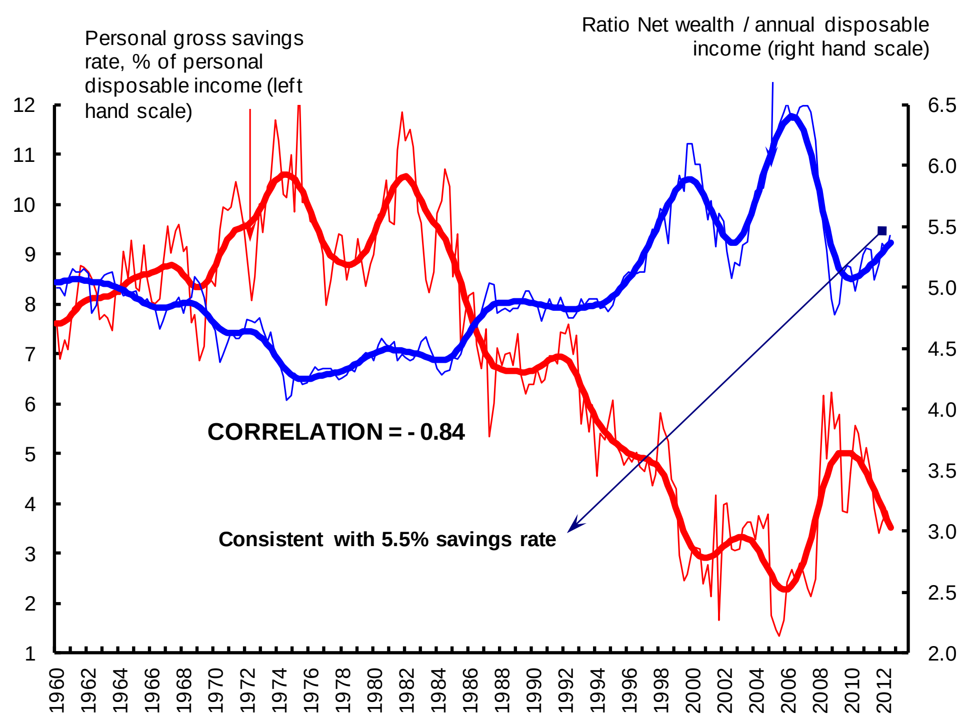
Source: BEA, , Department of Commerce, Conference Board, AXA IM Research

What real economic indicators say

US: Deleveraging is making good progress

- As long as the personal saving rate rises, consumer spending cannot but disappoint. This is what happened until 3Q 2010. Going forward, the personal saving rate is likely to stabilize.
- This means that the consumption outlook is driven by jobs, wages and inflation, <u>NOT by confidence</u>
- <u>The good news is</u>: the process is going faster than expected: assuming that savings (3.6% of disposable, 3Q 2012) go to debt reduction, the debt ratio would fall back to 2001 level by end-2014.

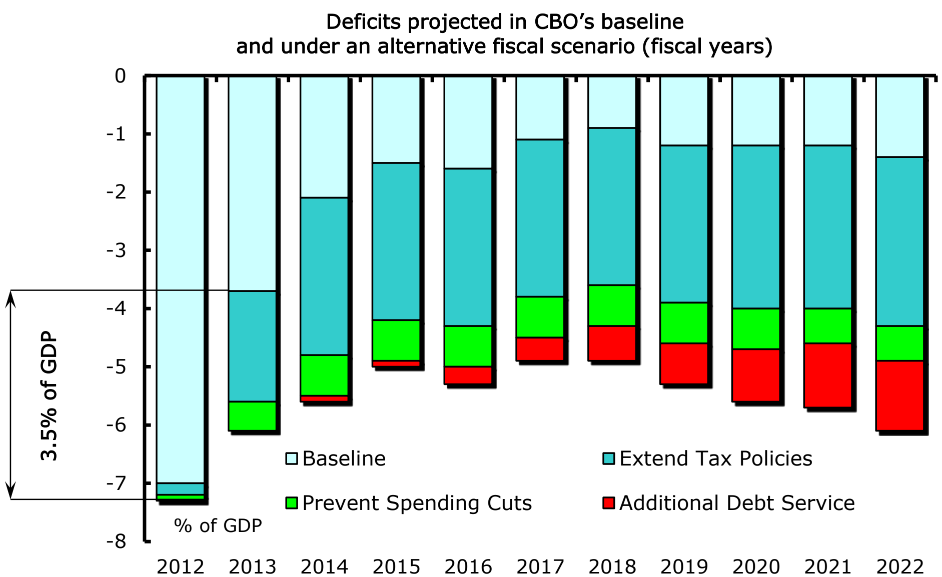




Source: BEA, AXA IM Research. Latest data: 3Q 2012

US risk assessment
Political standoff and 'fiscal cliff'

- According to the US Congressional Budget Office (CBO), under the current law, the federal deficit would be automatically cut by 3.5% of GDP in FY 2013 and by 5% in CY 2013. Even assuming a 'neutral' fiscal multiplier (=1), this would be more than enough to trigger the much feared global double dip.
- This is unlikely: the new administration and the Congress are likely to spread the pain over years.
- Yet, another standoff between the administration and the House and the possibility of a another debt ceiling crisis (the federal debt should cross the current ceiling by February 2013) cannot be excluded.

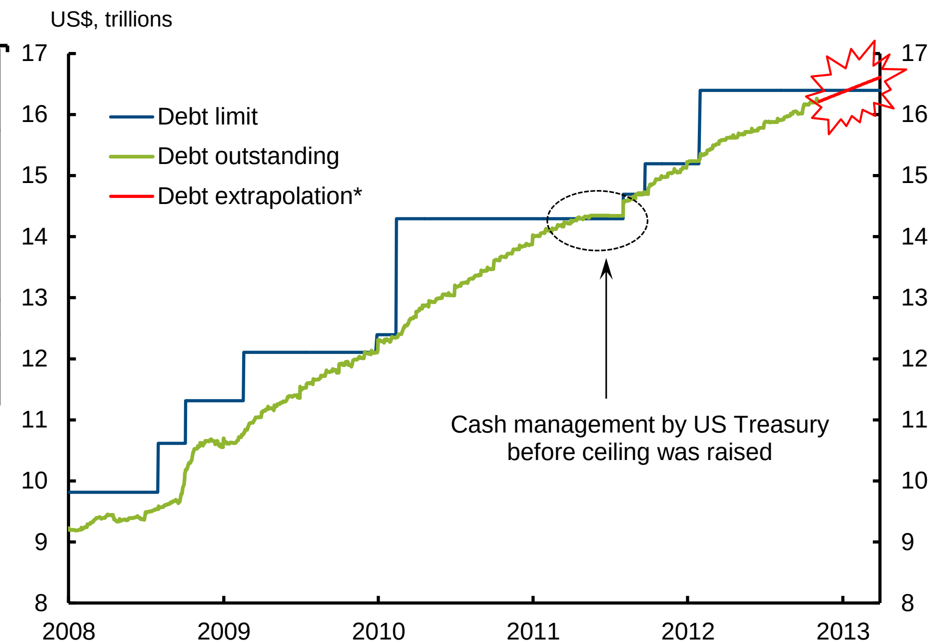


Source: CBO, Budget and Economic Outlook, FY 2012 to 2022

'Baseline' = under current law

'**Extend tax policy**' = extension of otherwise expiring tax provisions

'**Prevent spending cuts**' = holding Medicare's payment rates for physicians' services and preventing the automatic spending cuts of the 2011 Budget Control Act



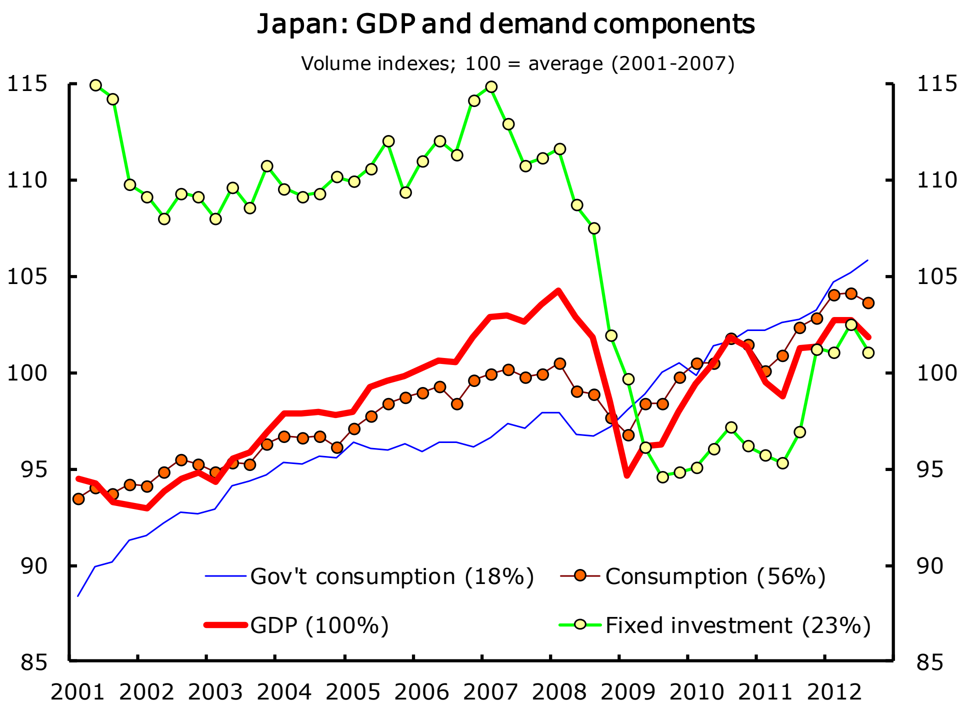
*: using the average daily increment of debt over the last six months

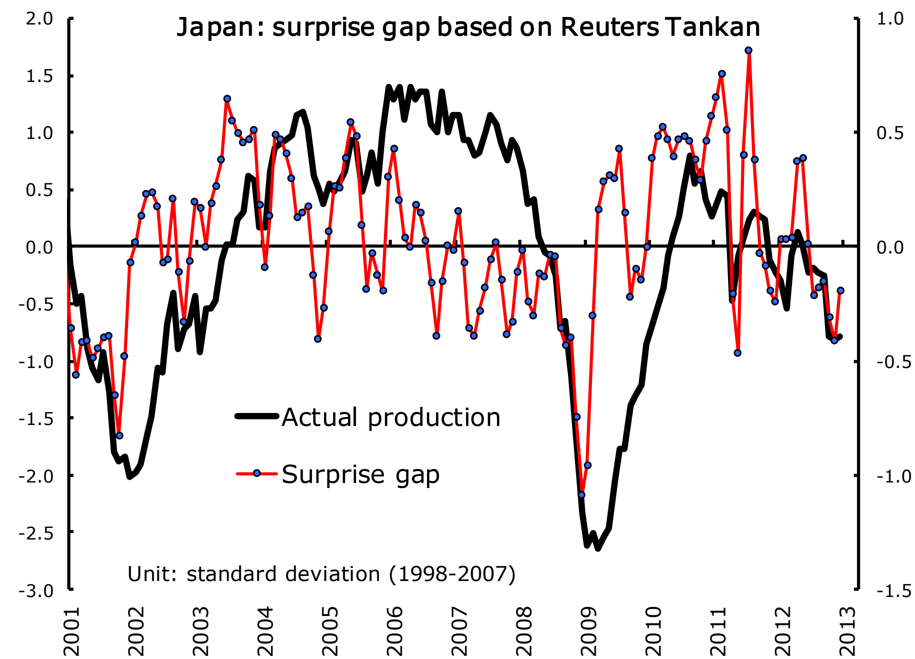
Source: Federal Reserve Board, AXA IM Research

What real economic indicators say

Japan: Severe accident caused by exports

- Japan's growth nose-dived in 3Q, after a strong 2012 start. Exports fell from a cliff (-19% SAAR), partially because of political tensions with China, causing a capex correction. Only government spending kept growing. Yet, Japan is likely to outperform its G7 peers in 2012, with GDP growth circa 2.2%.
- Corporate investment (capex) was the main casualty of the 2009 collapse of global trade. Capex will have to catch up with its pre-crisis level and become the main engine of the Japanese recovery. This prospect is on the back burner, at this stage.
- The BoJ decisions to raise the envelop of its asset purchases program by JPY 11 Tn (€100bn) *and* to 'stimulate' bank lending (Japan style LTRO) are positive. The next government may put more pressure on the BoJ ease further.



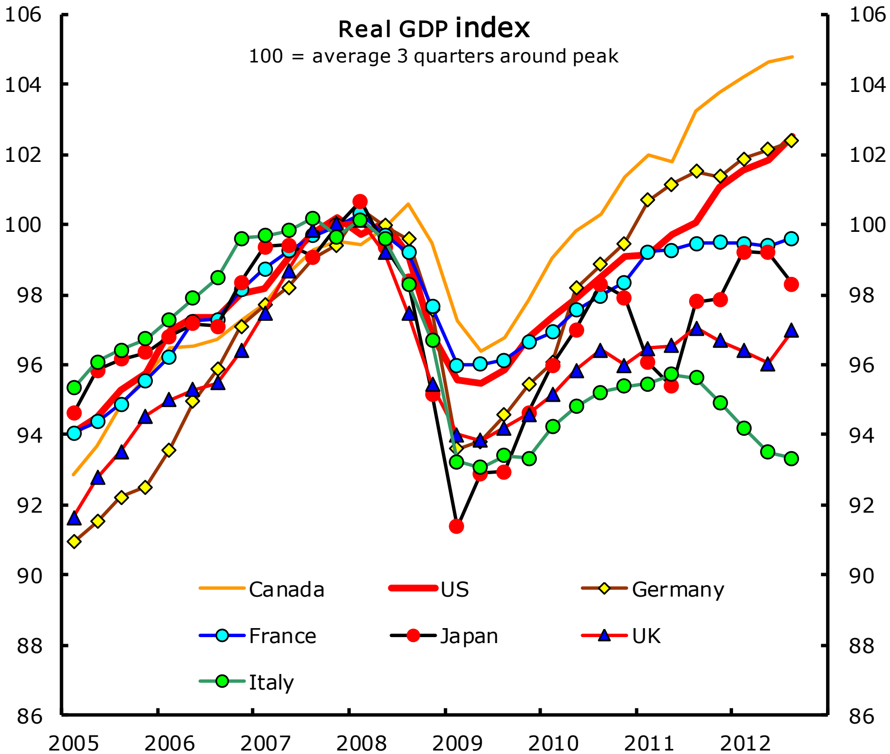


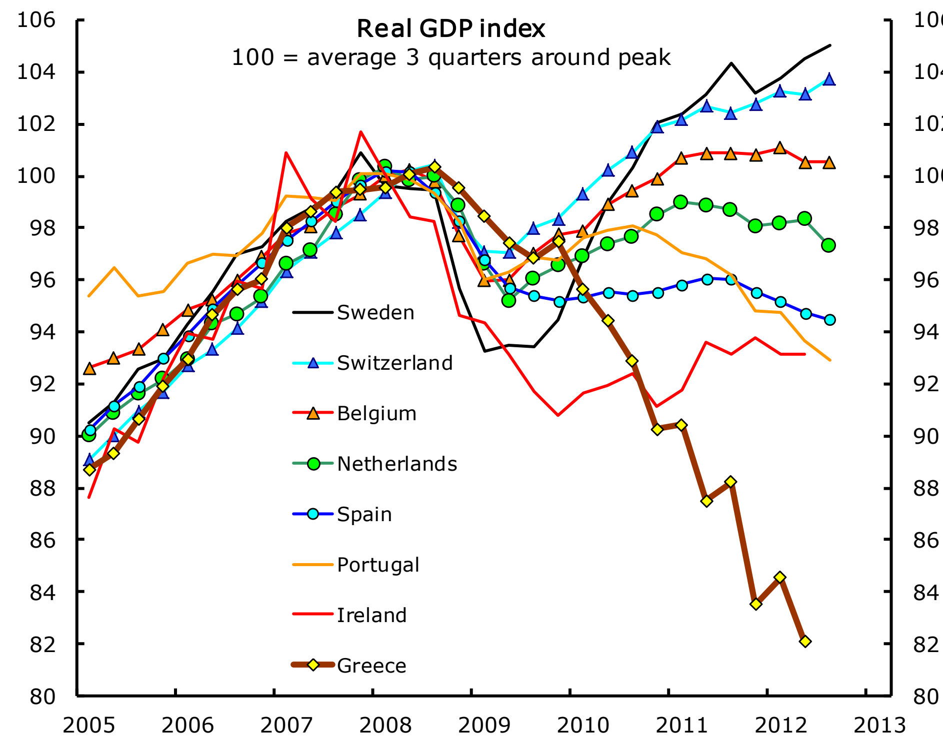
Source: MoF, AXA IM Research

What real economic indicators say

Divergences widening in developed economies

- Since the bottom of the 2009 recession (2Q 2009), recoveries in the developed world have been weak and heterogeneous. While Germany and the US have had, so far, lackluster but steady recoveries, most other G7 economies and most European ones have followed patchy patterns.
- In Europe, Switzerland and Sweden are doing well, while hosts of large credit bubbles in the previous cycle (Spain, UK) or those hampered by high public debts (Greece, Portugal, Italy) are struggling.





Source: National Accounts, AXA IM Research

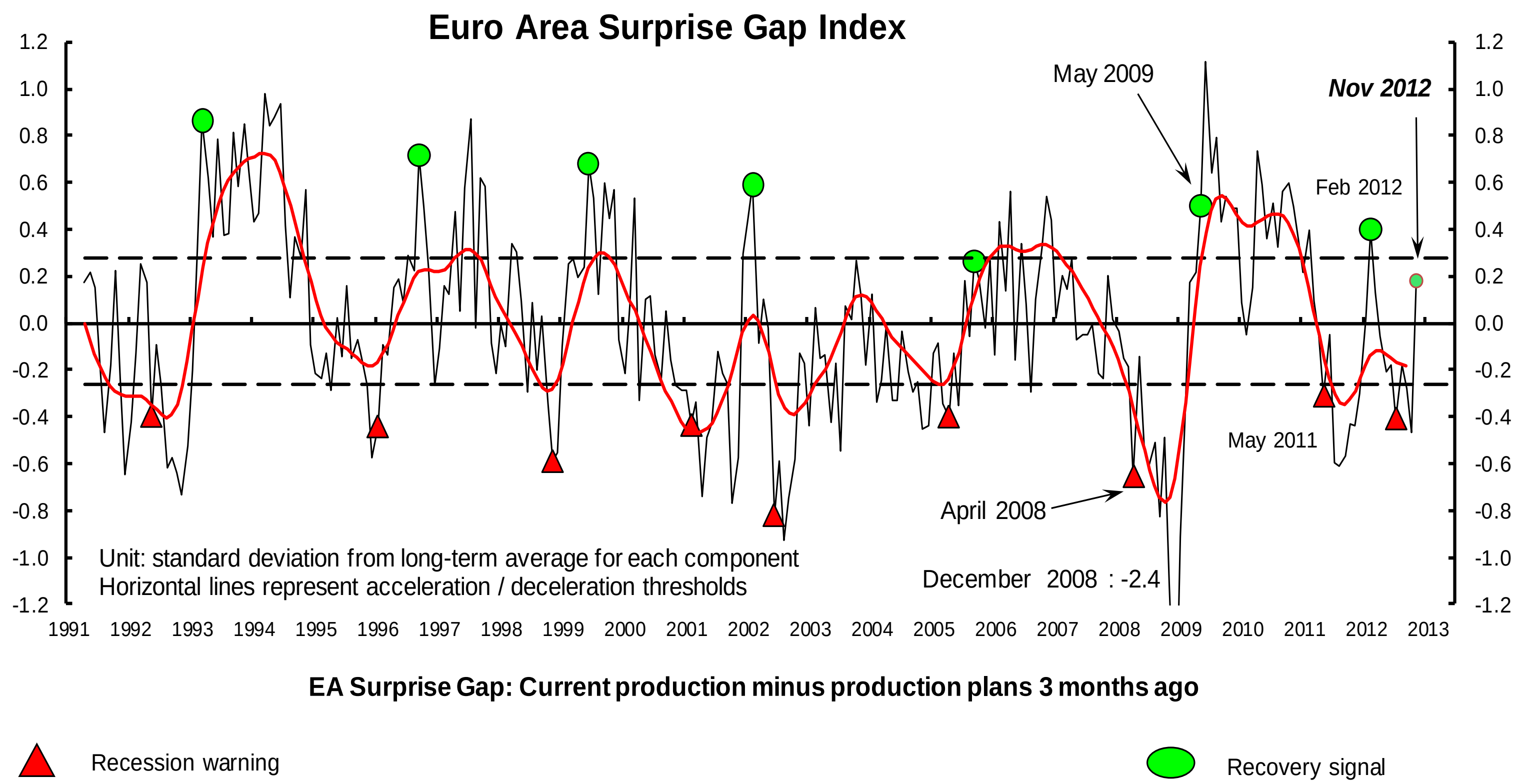
 Eric Chaney, Chief Economist AXA Group, Head of Research, AXA IM

What real economic indicators say

€-area manufacturing: a tiny ray of hope

- For the first time since March 2012, the €-area Surprise Gap has turned positive, led by an unexpected rebound in Germany.
- Although still negative on business conditions, companies have not cut production as much as they had previously planned to do.
- This signal is not strong enough to call a recovery; but at least, the recession is not deepening anymore.

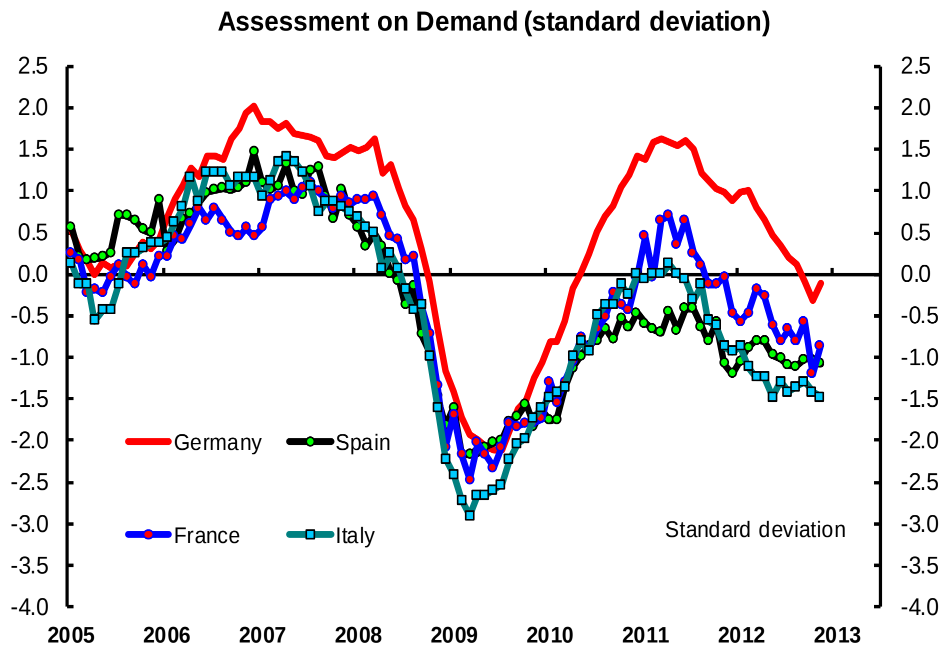
Source: Ifo, Insee, Istat, INE, CBS, BNB, AXA IM Research



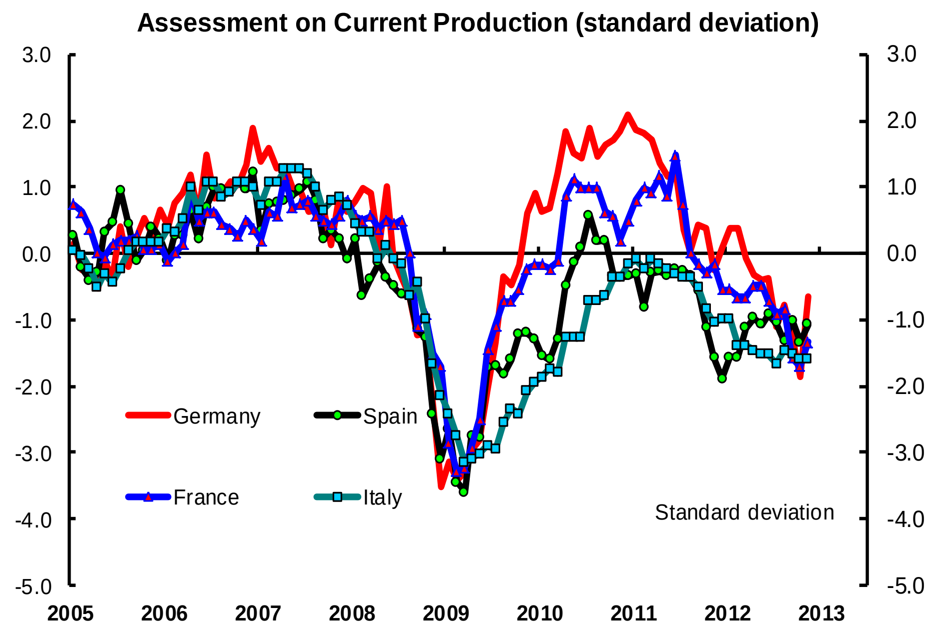
What real economic indicators say
€-area: signs of rebound in Germany

- Demand: softer across the board. Now below trend for German producers
- Production slump partially corrected in Germany
- No further deterioration in Spain and Italy

Assessment on demand / orders



Assessment on current production



Latest data: November 2012

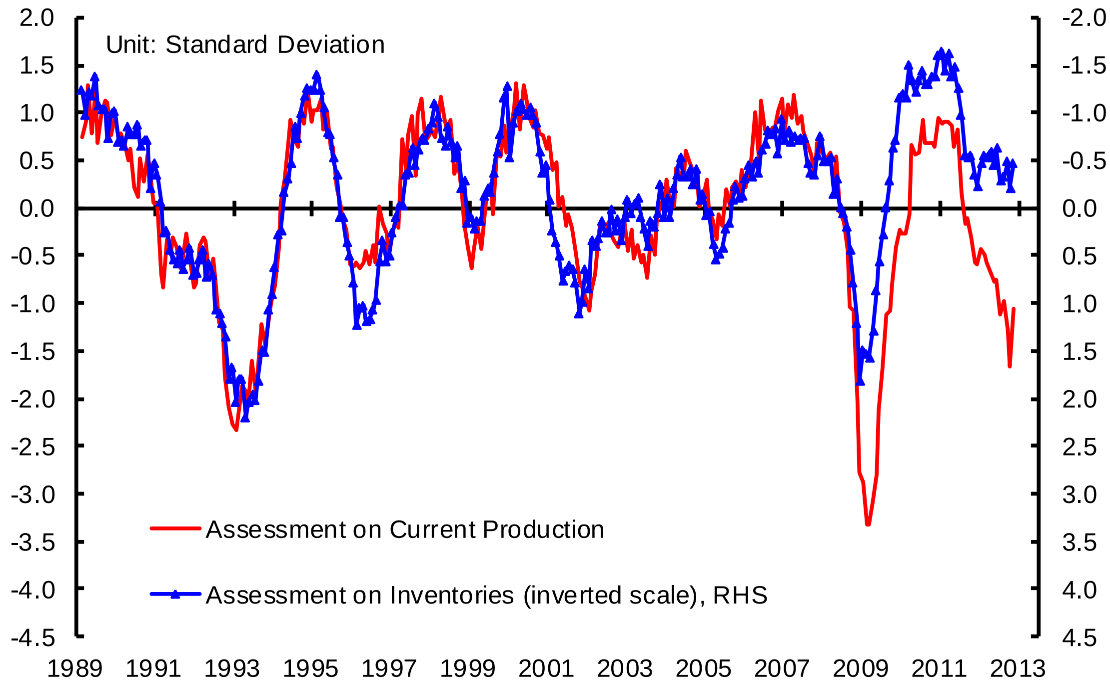
Source: Ifo, Insee, Isae, CBS, BNB, AXA IM Research

What real economic indicators say

Inventory puzzle: financial stress *and* upside risk

- €-area-wide, manufacturers continue to complain about 'insufficient inventories'
- Yet, they have scaled down production plans sharply
- This unprecedented discrepancy between inventories and production is the highest in Southern economies. It is probably explained by liquidity starvation, which creates a strong corporate preference for liquidity, which translates into abnormally low inventories
- This discrepancy is also signaling an cyclical upside risk: if financial conditions become more even, production could pick up faster than expected, as companies rush to replenish depleted inventories.

€-area: production and inventories



Source: Ifo, Insee, Istat, CBS, BNB, AXA IM Research

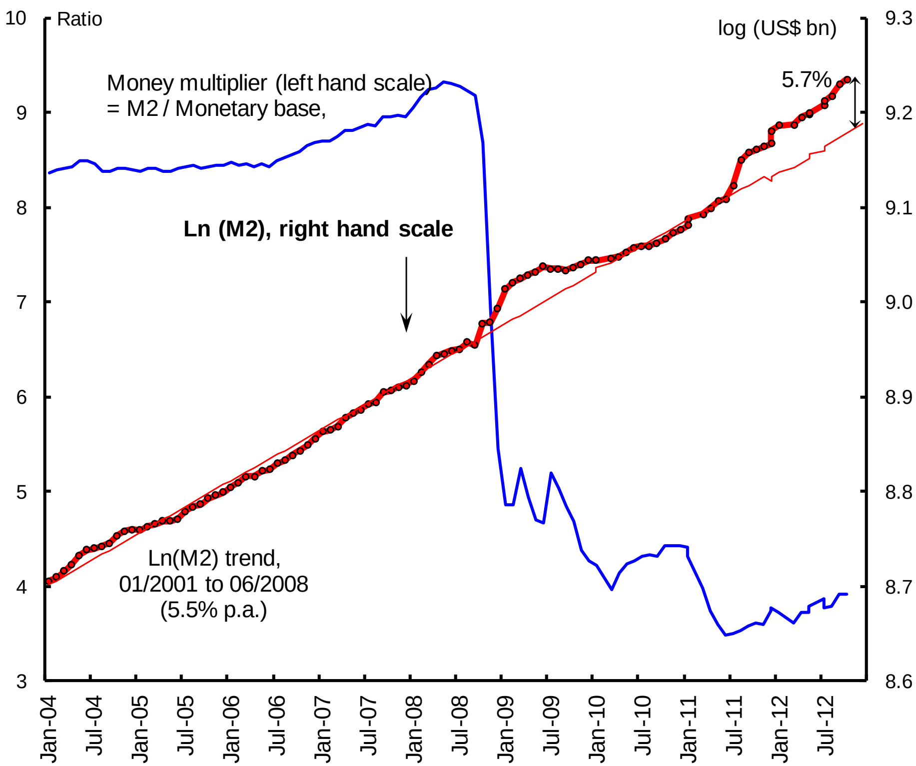
Latest data: November 2012

What monetary indicators say

Fed: money gap rising; ECB: €1.1Tn negative gap

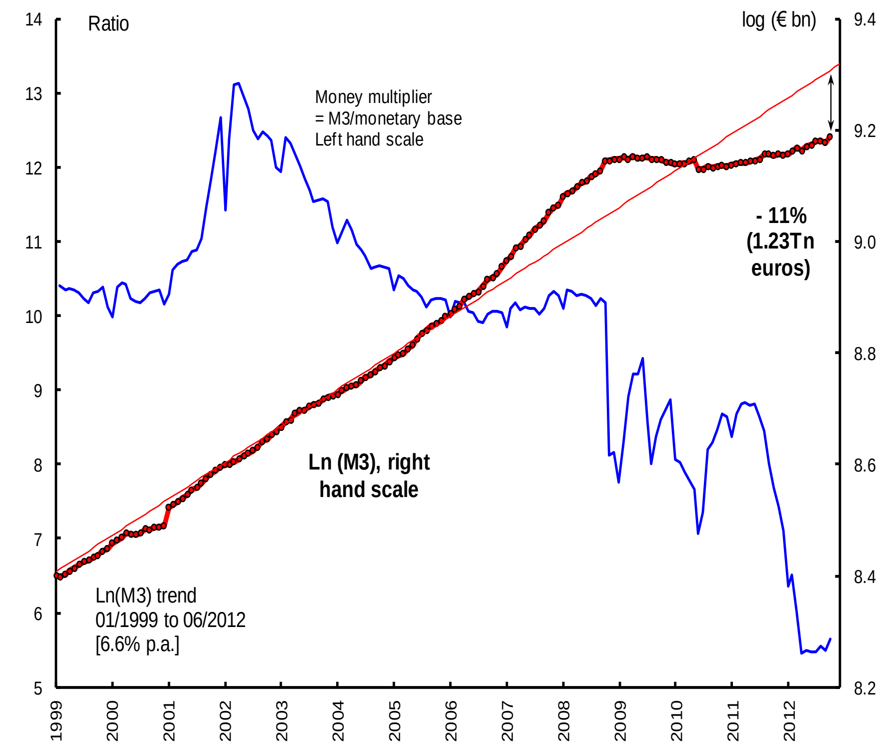
- **Is the Fed more 'monetarist' than the ECB?**
  - US money supply, close to trend mid-2011 has re-accelerated (M2 growth = 8.8% 3M/3M an. in November)
  - QE3 is likely to boost broad money supply further
  - In €-area, M3 is now accelerating (3.2% 3M/3M ann. in October) but still running 11% below trend (a €1.2Tn gap)
  - **The option taken by Mario Draghi (conditional intervention in weak bond markets) is excluding 'pure' QE**

US: M2 and multiplier (M2/monetary base)



Source: Federal Reserve Board

€ area: M3 and multiplier (M3/monetary base)



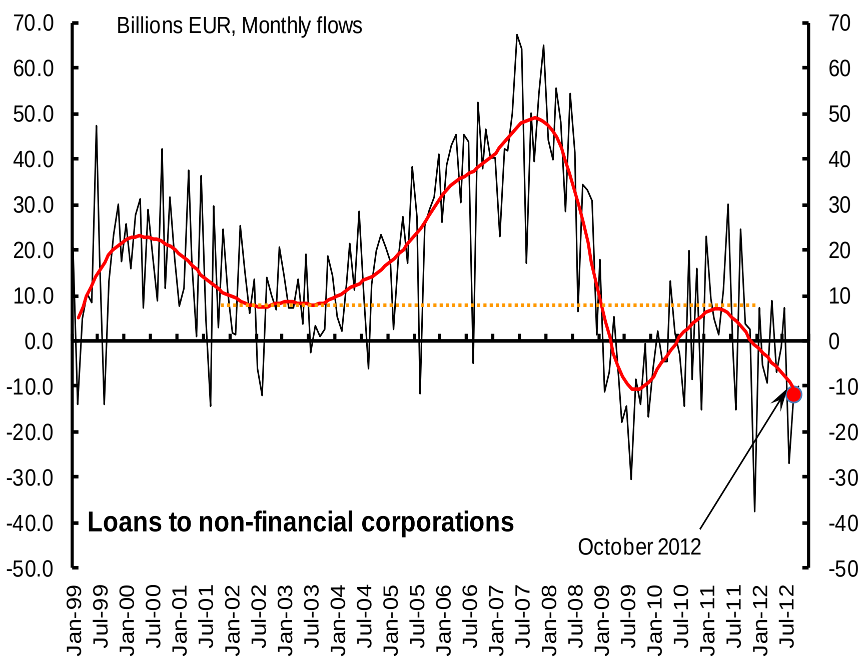
Source: ECB monthly bulletin

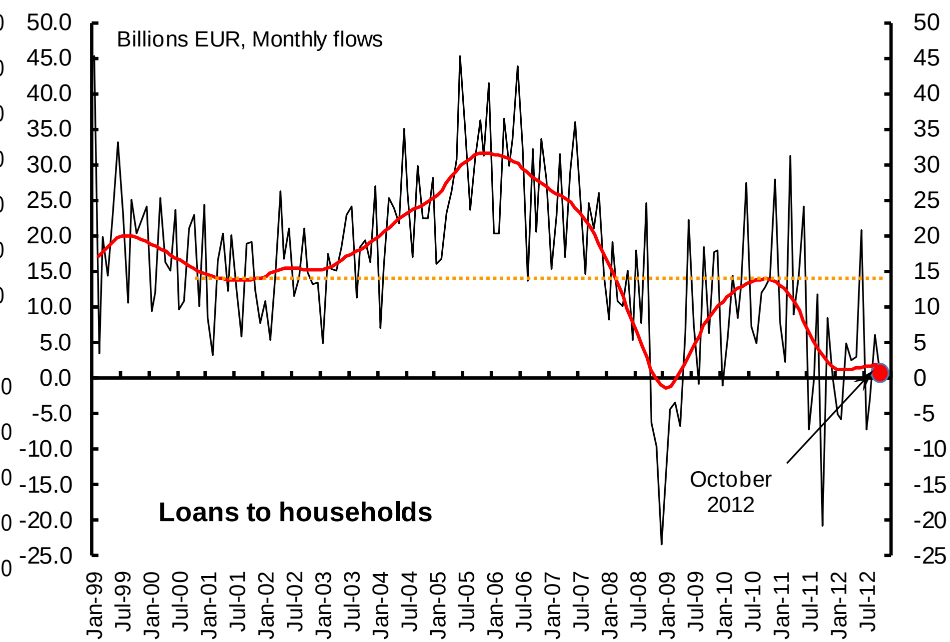
Eric Chaney, Chief Economist AXA Group, Head of Research, AXA IM

What monetary indicators say

ECB: creating money is not that easy

- With the refi rate at 0.75% and the deposit rate at 0.0%, short term interest rates close to the zero bound (Eonia is attracted toward the deposit rate), monetary policy has moved from interest rate setting to balance sheet action (including extension of collateral)
- The large 3Y refinancing operations (LTROs) have avoided a full blown credit crunch.
- With 10Y average government bond yielding 2.6%, vs. nominal GDP running at 0.7%Y (3Q 2012), 'pure' quantitative easing would make sense, but is unlikely. Instead, the ECB is counting on the threat of OMTs to bring down interest rates.





Sources: ECB, AXA IM Research

Fed: open-ended easing – ECB: € guaranteed

- FOMC communiqué, 12 December, 2012
  “ The Committee expects that a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the asset purchase program ends and the economic recovery strengthens. In particular, the Committee decided to keep the target range for the federal funds rate at 0 to 0.25% and currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6.5%, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee’s 2% longer-run goal,

- President Mario Draghi at the Global Investment Conference in London, 26 July 2012
  “Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. ***And believe me, it will be enough.”***

- President Mario Draghi to the Federation of German Industries (BDI), 25 September, 2012
  “The ECB’s Governing Council therefore faced a choice: (...) to allow the singleness of its monetary policy to be undermined; or to take actions within its mandate to restore the normal transmission of monetary policy across all parts of the euro area. We decided in favour of the latter.
  Our actions aim to repair monetary policy transmission through providing a credible backstop in government bond markets that removes unfounded fears and tail risks from the euro area. Insofar as this supports investor confidence, it will help stabilise conditions in other markets, such as those for corporate and bank bonds.”

Sources: Board of Governors, ECB

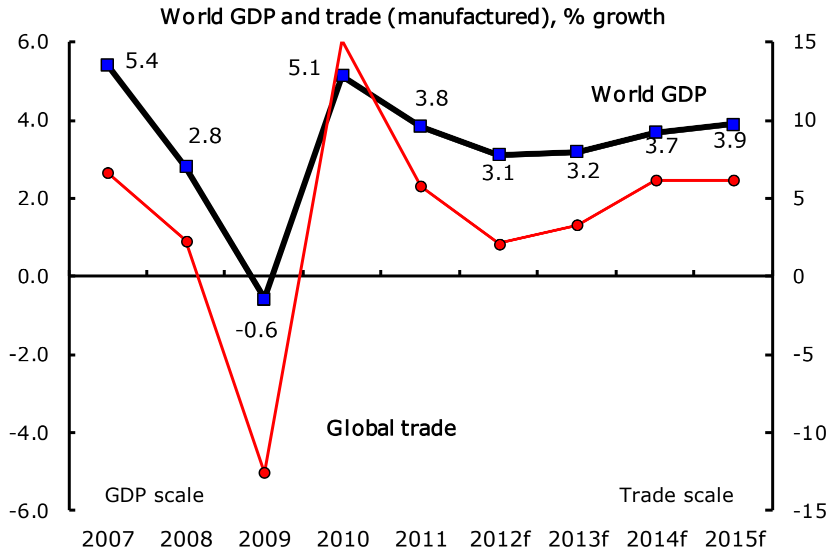
Baseline 2012-15: quantitative scenario (1)

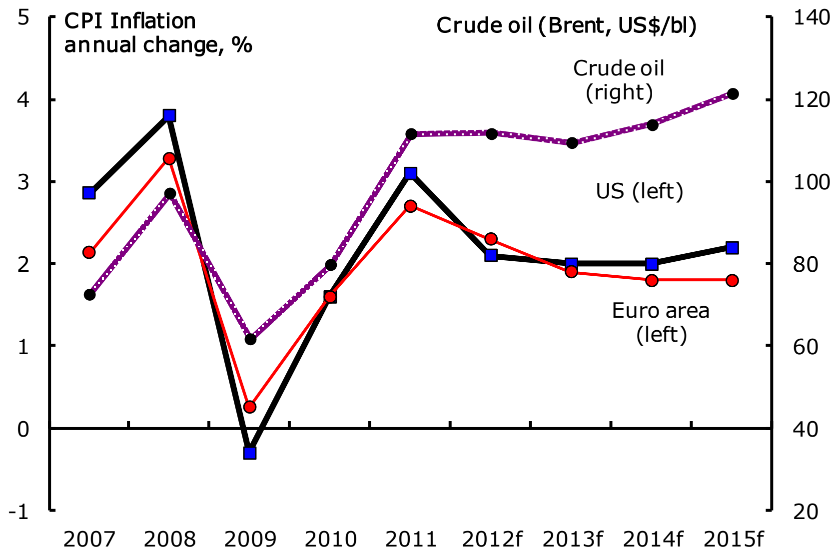
As of: 12-Dec-2012

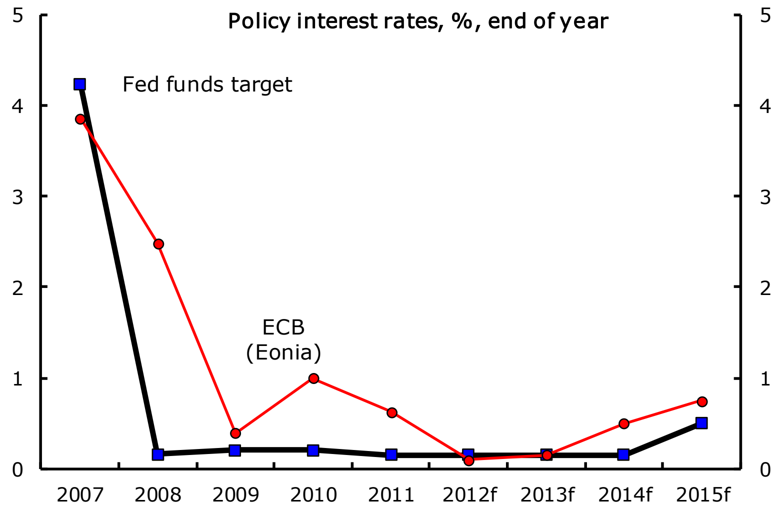
	2007	2008	2009	2010	2011	2012f	2013f	2014f	2015f
World GDP (PPP)	**5.4**	**2.8**	**-0.6**	**5.1**	**3.8**	**3.1**	**3.2**	**3.7**	**3.9**
World GDP (market FX rate)	4.0	1.5	-2.2	4.1	3.4	2.8	2.8	3.4	3.6
USA	1.9	-0.3	-3.1	2.4	1.8	2.2	2.1	2.5	2.6
Euro area	3.0	0.4	-4.4	2.0	1.4	-0.4	-0.4	1.0	1.5
Japan	2.2	-1.0	-5.5	4.7	-0.5	2.1	0.3	1.5	1.5
Asia x-Japan	11.4	7.9	7.0	9.5	7.8	6.8	7.2	7.3	7.5
RoW	5.5	3.3	-1.0	5.6	4.5	3.2	3.5	3.8	4.0
Global trade (manuf. goods)	6.6	2.3	-12.6	15.1	5.8	2.1	3.3	6.2	6.1
Inflation									
US	2.9	3.8	-0.3	1.6	3.1	2.1	2.0	2.0	2.2
Euro area	2.1	3.3	0.3	1.6	2.7	2.3	1.9	1.8	1.8
Japan	0.0	1.4	-1.1	-0.7	-0.4	-0.5	-0.1	0.2	1.3
Crude oil (Brent), US$/bbl	72.6	97.3	61.7	79.9	111.6	112	110	114	121
% change	10.6	33.9	-36.6	29.5	39.7	0.3	-2	4	6.5
Interest rates, FX (end of period)									
US									
Fed funds (actual / target)	4.24	0.16	0.20	0.20	0.15	0.15	0.15	0.15	0.50
10Y Treasuries yield	4.03	2.25	3.84	3.31	1.88	1.7	2.0	2.5	3.2
Euro area									
EONIA	3.86	2.49	0.39	1.0	0.63	0.10	0.15	0.50	0.75
10Y Bund yield	4.33	2.94	3.38	2.89	1.83	1.4	1.7	2.1	2.6
€1 = …US$	1.46	1.35	1.46	1.34	1.33	1.30	1.30	1.30	1.30
Japan									
Overnight call rate	0.47	0.46	0.11	0.0	0.10	0.10	0.10	0.10	0.30
10Y JGB	1.50	1.17	1.28	1.12	0.99	0.7	0.9	1.1	1.3
US$1 = … JPY	110	95	87	85	78	82	83	85	87
€1= … JPY	161	128	127	114	104	107	108	111	113
UK									
BoE base rate	5.5	2.0	0.5	0.5	0.50	0.50	0.50	0.50	1.00
10Y gilt	4.50	3.09	4.11	3.51	1.98	1.7	2.2	2.7	3.5
€1= … GBP	0.73	0.95	0.89	0.85	0.86	0.81	0.82	0.83	0.83

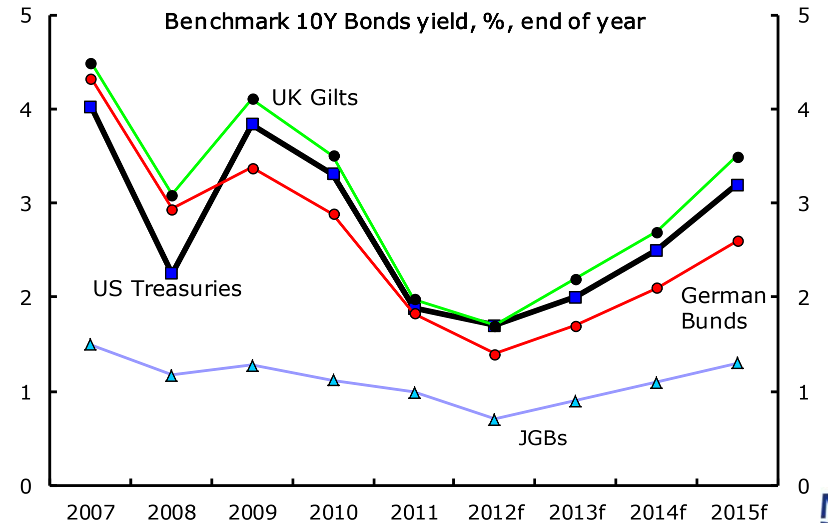
Source: IMF, Datastream, AXA IM Research

Baseline 2012-15: quantitative scenario (2)









Source: IMF, Datastream, AXA IM Research

redefining / investment solutions

Interest rate risk assessment
What could drive 'safe haven' bond yields higher?

- **1. A positive perception by the markets of the management of the euro crisis**

Assuming that several political hurdles (Spain requesting financial help, elections in Italy, French budget) are crossed without serious damage, the attractiveness of bonds issued by Germany, the US or the UK should diminish, as investors rebalance their portfolios from low-yielding safe havens to higher yielding Italian and Spanish bonds .
→ By raising the term premia (currently negative) toward more normal levels, this could add 50-75bps to current 10Y rates.

- **2. QE3 turning into "QE∞"** (*)

The Fed has restarted its assets purchase program (MBS, 40bn per month) until the unemployment rate falls, say, below 7%. This means the new program is not bounded ex-ante. If for any reason the US unemployment rate proves sticky, markets may worry about the long term inflationary consequences of the Fed policy.
→ In that case, the inflation premium would rise and, possibly, the term premium as well, since the outcome of the US monetary policy would be seen as more uncertain. This could add another 25bp to 50bp to 10Y Treasury yields but would probably not influence European government bonds.

- **3. Unexpected good news from real economies**

Bold monetary policy actions in Europe, the US and China could have a quicker and stronger than expected impact on global demand. By opening up credit channels, the ECB could spark an unexpected recovery in Spain and Italy; by lowering mortgage rates, the Fed could push US consumers to take more credit (even if their balance sheets are still impaired); in China, the new leadership might over-react to recent weak data and kick start a strong domestic recovery.

- Each of these factors would raise either real interest rates or the inflation premium or both in benchmark government bonds
This is what happened in late 2010, when UST and Bund 10Y yields rose to 3.4%.

(*): courtesy of Stephen Li Jen, SLJ Macro Partners

A political view on the euro crisis

- Back in 1990, a debate was raging: should monetary union ‘coronate’ the political union, or should it be seen as sowing the seeds of a future political union. Partly because of the collapse of the Soviet empire, the second option prevailed. After two years of euro existential crisis, it appears that the first option was the right one.

- From the financial markets vantage point, it is all about relinquishing sovereignty. Which areas of sovereignty could be relinquished in the foreseeable future?
- **1. Budgetary sovereignty?** According to the fiscal compact, it’s already in the hands of the European Court of Justice, as far as the budget balance is concerned.
- **2. Tax sovereignty?** It is the privilege of Parliaments, guaranteed by Constitutions. Relinquishing tax sovereignty (i.e. building a *fiscal union*) would actually require a joint democratic representation of all euro area countries, responsible for the use of any pooled resources. This may or may not happen, but is very unlikely in the short term.
- **3. Banking sovereignty?** That was the political weak link, especially after the Bankia fiasco. Yet, the banking union cannot include a joint liability guaranteeing deposits (previous point)

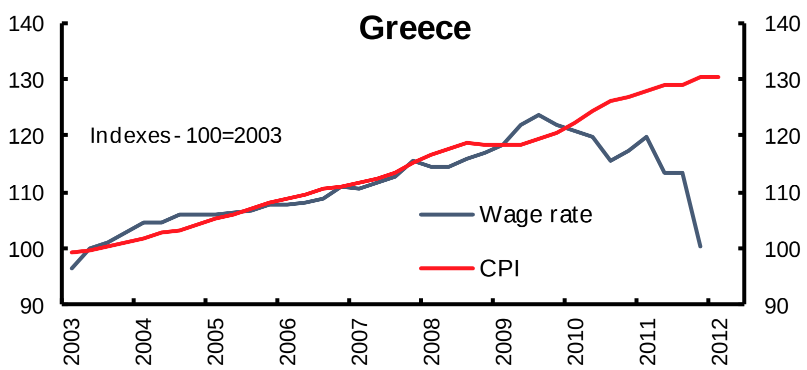
- On the heels of the fiscal compact, a coherent banking union would send a strong signal to the markets, because it would provide hard evidence that euro area countries are building the first blocks of an idiosyncratic political union, itself result of a very idiosyncratic history.

Why a genuine banking union is important

- Markets had lost confidence in the ability of the euro area to force and help Spain restructure its insolvent banks. The 29 June decisions to move toward a banking union and thus to allow the EFSF, then the ESM to provide financial assistance directly to Spanish banks being restructured has avoided a downgrade of Spain.
- This is a double-edged sword: if a genuine banking union emerges from the Spanish mess, the euro will be strengthened; if the project is watered down, its demise will accelerate
- Three decisions must be taken before year-end:
  * Who exactly will be the euro area supervisor? To which extent the ECB may do the job?
  * Which banks will be supervised by this independent authority?
  * Who will be in charge of resolution (restructuring)?
- **Our main case**: Supervision and resolution powers given to an independent authority linked to the ECB and the ESM. No federal insurance scheme
- **The worst case**: National interests prevail and resolution powers go back to national authorities. This would emasculate the banking union and have a devastating impact on the markets, which would conclude that a significant degree of political union is impossible.
- The December EU Summit has extended the agenda (SSM starting in 2014) and has not decided on resolution. This is disappointing.

Greece: no imminent default

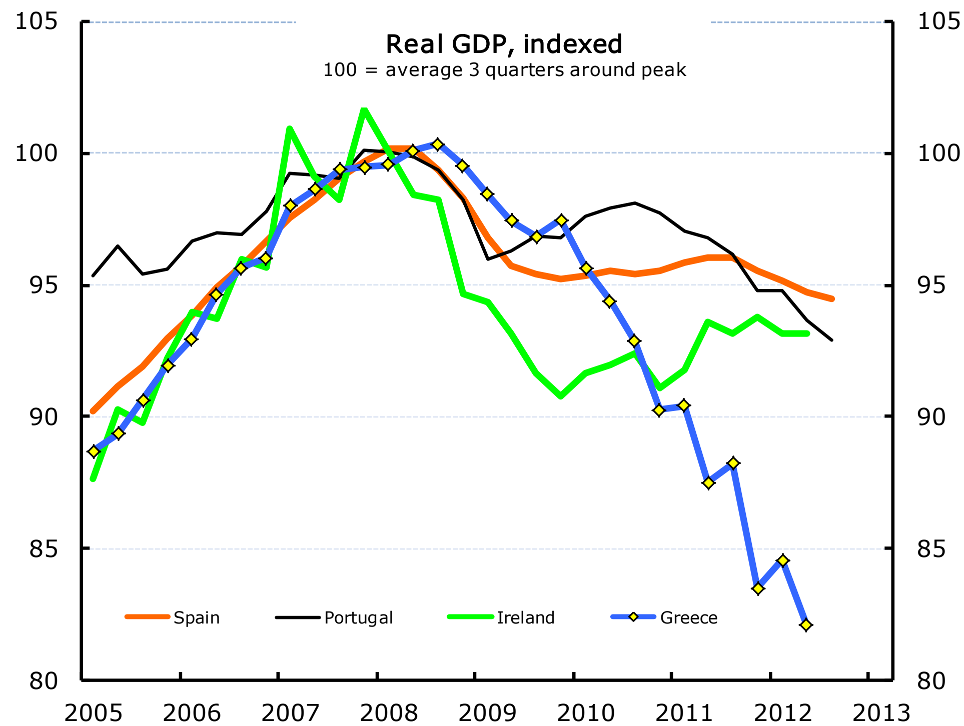
- Despite laudable progress in budget execution, Greece remains fundamentally insolvent
- Internal devaluation (wage cuts) will not succeed if structural reforms (deregulation) lag behind
- Wage cuts and sticky prices, a social bomb, is an inefficient transfer of income from labor to capital. This largely explains the protest vote of the Greek people



- At this stage, an external devaluation seems to have more pros than cons, since it would cut prices, wages and asset prices by the same amount, initially at least
- Yet, costs for euro area tax payers and threats to the coherence of the monetary union are so high that this option is out of the table, for now.

GDP forecasts - Greece
2012: -6.8% --- **2013: -6.5%**

Ireland and Portugal may have bottomed out
Not Greece

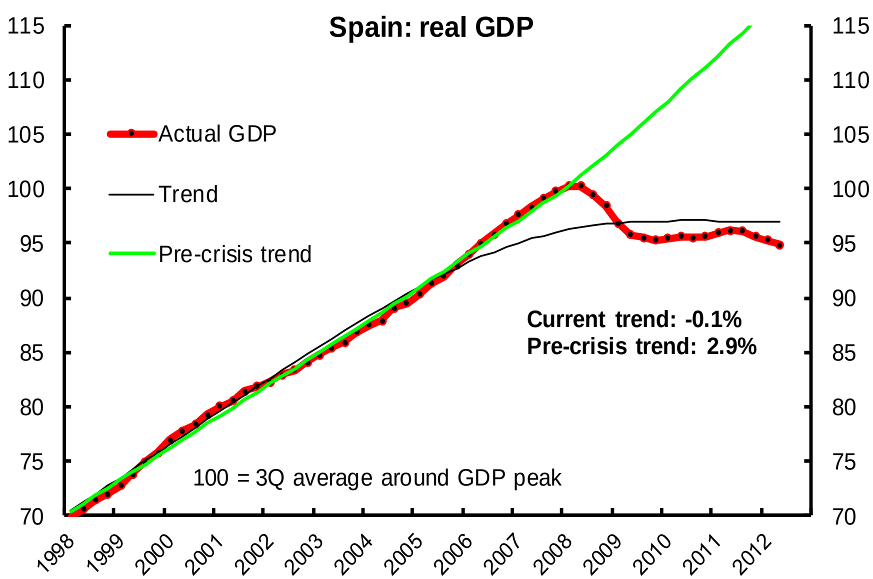


Spain: restructuring takes time

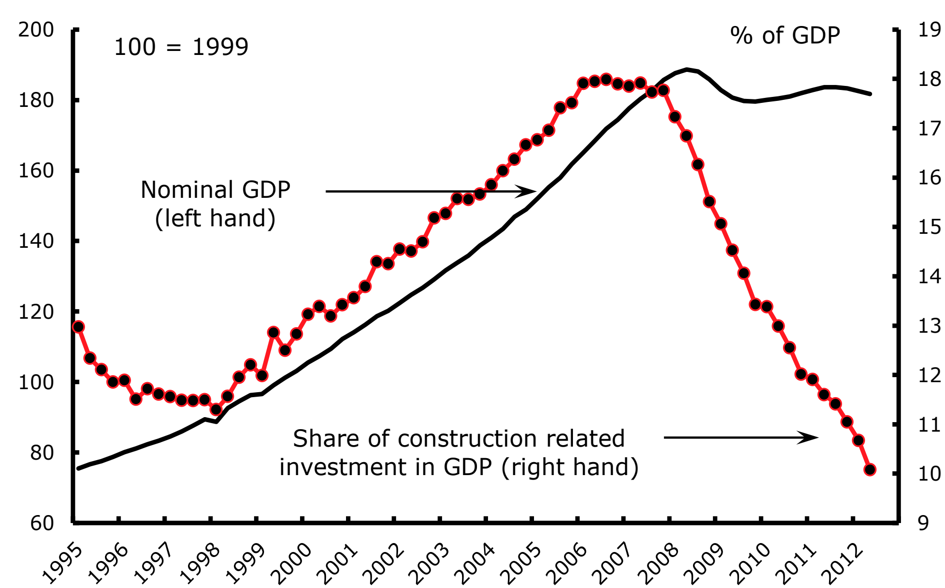
- Spain has made big steps toward the resolution of its imbalances:
  - Investment in construction has fallen below pre-crisis level.
  - The C/A deficit has dropped from 10.6% of GDP in 2008 to 2.9% (2Q 2012)
- It may take 7 to 10 years to absorb the legacy of past excesses (high unemployment, ghost cities, NPLs, zombie banks).
- Spanish politicians were unable to restructure ailing banks. The job should be monitored from Frankfurt.
- The sooner Spain formally requests financial assistance, the better. A condition for help should be a renegotiation of Spain's internal fiscal pact.

Spain
GDP forecasts
2012: -1.3%
2013: -1.1%

Restructuring + fiscal retrenchment = deep recession



The construction bubble is now fully corrected



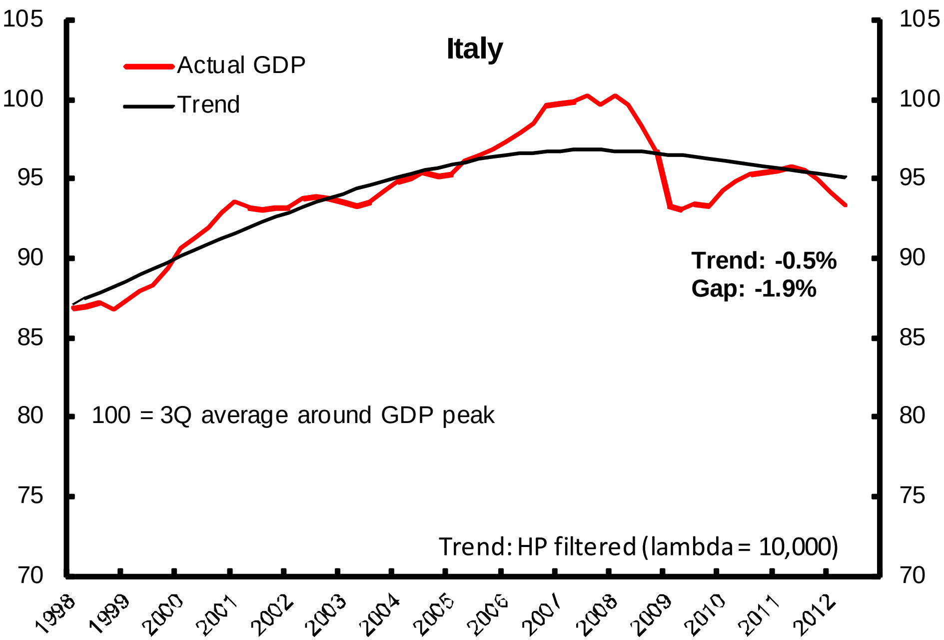
Source: INE, AXA IM Research
Latest data: 2Q 2012

The importance of Italy

- Italy's households and companies are lowly leveraged (gross debt = 128% of GDP vs. 126% for Germany and 204% for the UK). Yet, the private sector is reluctant to pay higher taxes, as they result into a North-South tax transfer.
- Italy's potential growth has dangerously weakened since 2008 (close to zero)
- The long term solvency of the government is improving
- Italian marketable debt (€1,400bn) is too big for EFSF+ESM+IMF

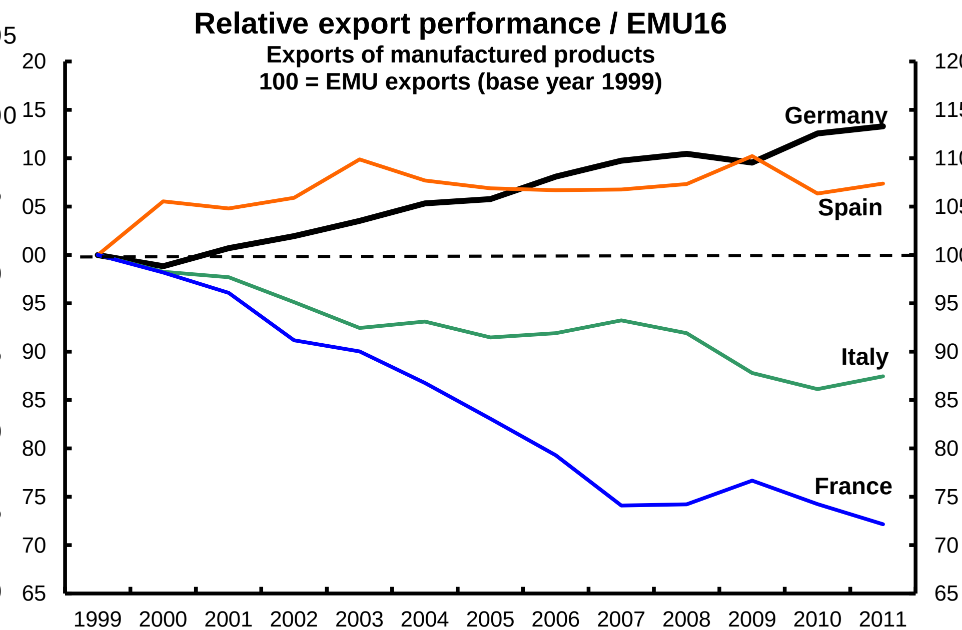
Italy
GDP forecasts
2012: -2.1%
2013: -0.8%

Italy: very weak trend growth



Source: Istat, AXA IM Research, HP filter, λ = 10,000 Latest data: 2Q 2012

Italian exporters have lost ground

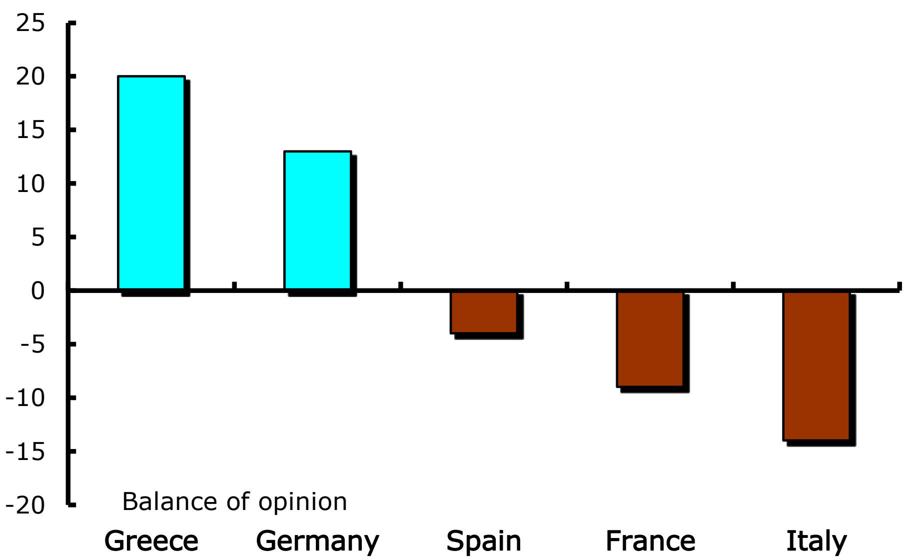


Source: Eurostat, AXA IM Research

Italy is on the right path; Yet, Italians are sceptic

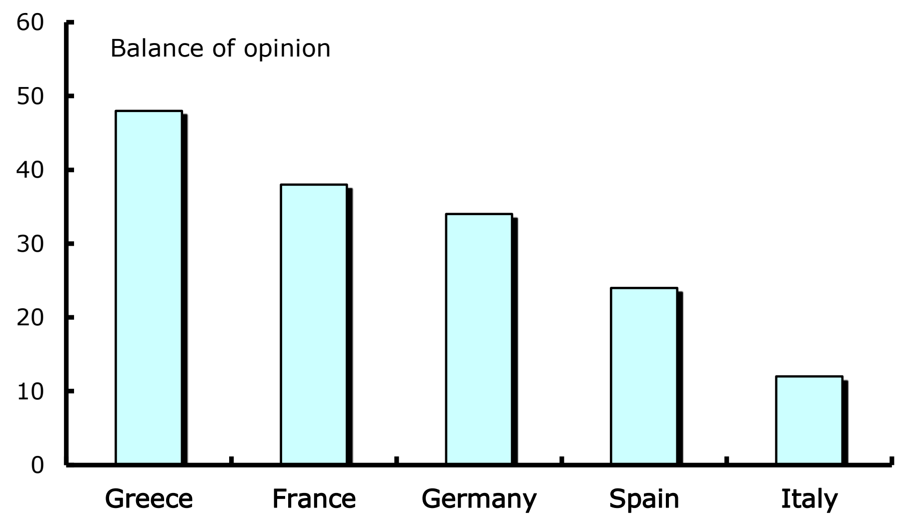
- August 2011 was a shocker for the Italian public: Berlusconi's rating fell from 35% to 20% before he resigned
- PM Mario Monti started his tenure with unrivalled popularity (84%) still at 43% (September) after another pension reform, a 2.5pp rise of the VAT rate, a (soft) reform of labour market laws (art. 18) and a more far reaching reform of the wage settlement system. Yet, his political capital was depleted and general elections will be advanced.
- The electoral battle will take place against a background of rising euro-scepticism (see Pew survey)
- **If facing the choice between debt restructuring and euro exit, Italy would choose the latter. A currency re-domination would not be a credit event in the case of Italy, a G7 country (Isda rules).**

Having the Euro is a good (vs. bad) thing



Source: Pew Research Center, March-April 2012

Worth keep the euro vs. return to national currency



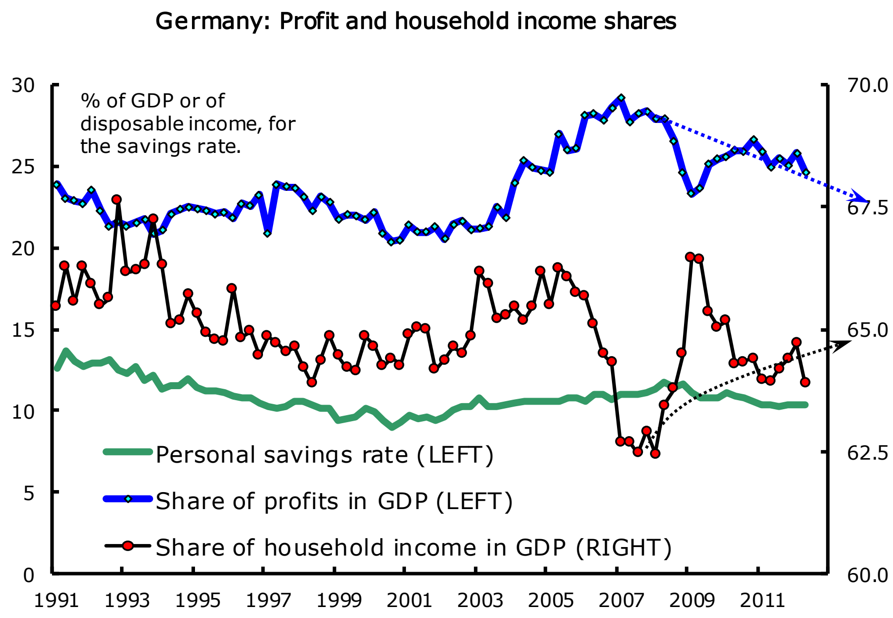
Source: Pew Research Center, March-April 2012

The euro crisis in depth
Germany: now exporting growth?

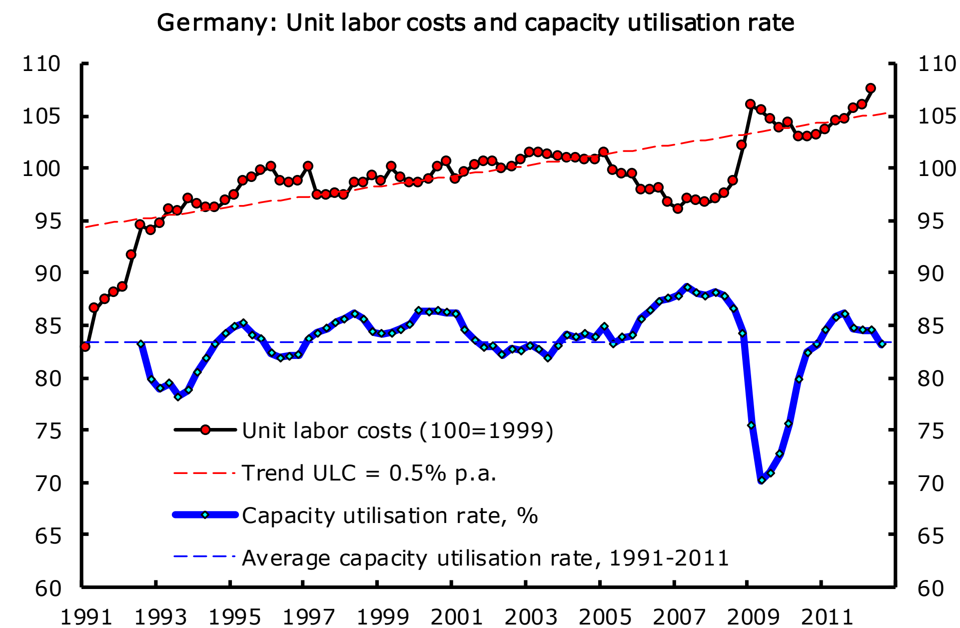
- In early 2012, Germany was operating at full capacity with unemployment at 5.5% and capacity utilization above LA.
- Strong global demand for German goods (cars/ equipment goods) and negative real rates will keep the economy running, despite the current slowdown
- The macro fallout: wage inflation, rising property prices, robust domestic demand, shrinking C/A surplus. After having imported growth from its neighbors, Germany will export it to its partners.

Germany
GDP forecasts
2012: 1.0%
2013: 0.3%

Watch the profit share falling…



… and unit labour costs rising



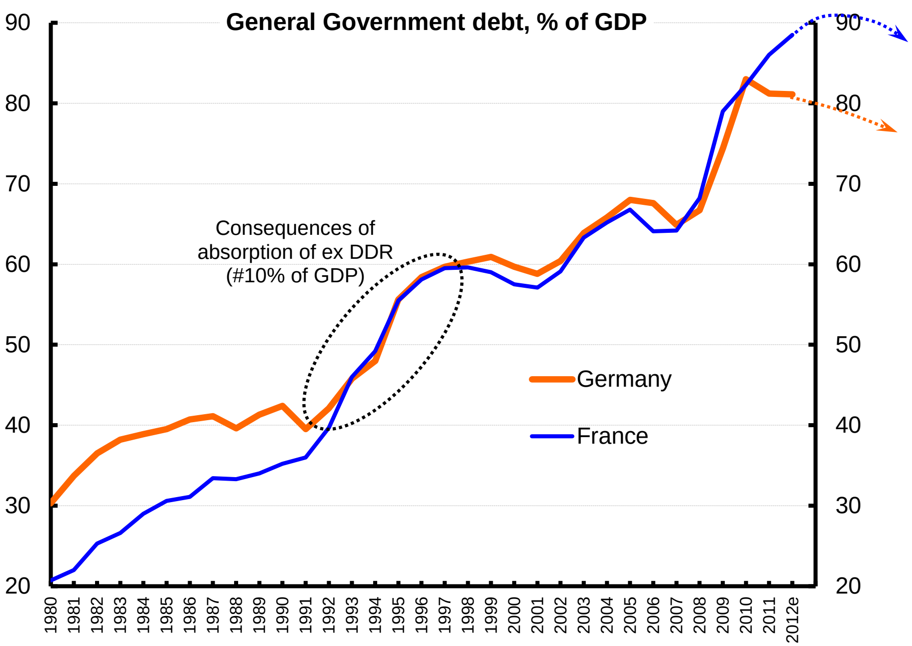
Latest data: 3Q 2012

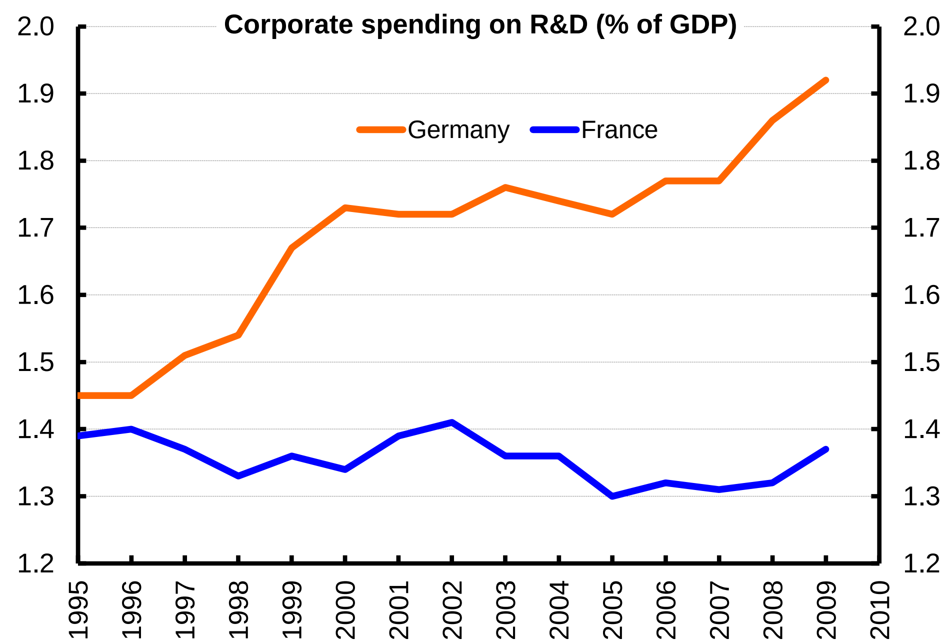
France: no more reforms on the agenda

- The new French leadership has wisely renounced to Keynesian-type demand policies. Yet, the platform of the new President is not conducive to structural reforms.
- The 2013 budget is mostly based on tax increases, and does not curb overall public spending, supposed to increase by 2.5% in 2013.
- This strategy will backfire: tax hikes are concentrated on corporations, dividends and executives. Labour costs will be marginally alleviated in 2014. Too little, too late.

France
GDP forecasts
2012: 0.1%
2013: 0.0%

France and Germany are diverging

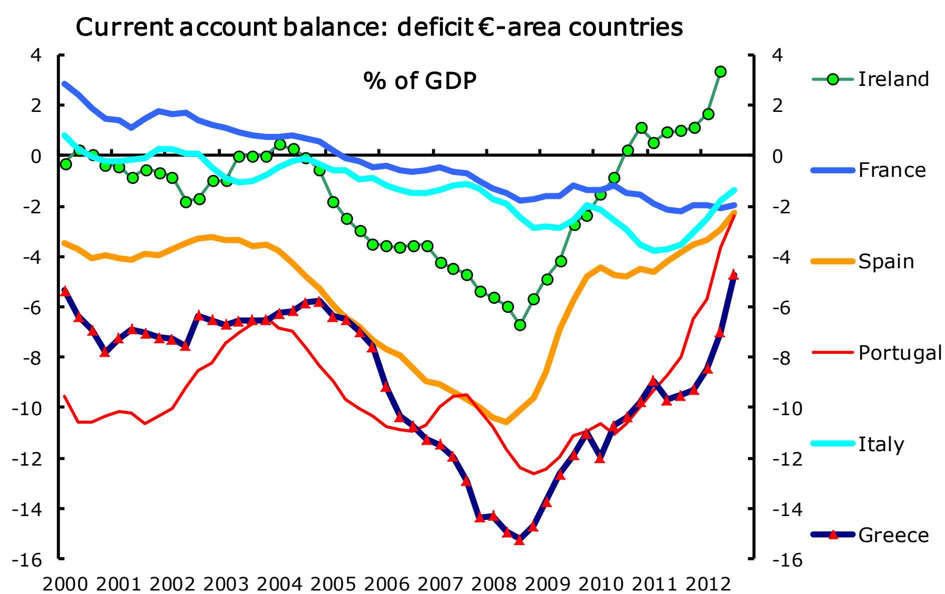


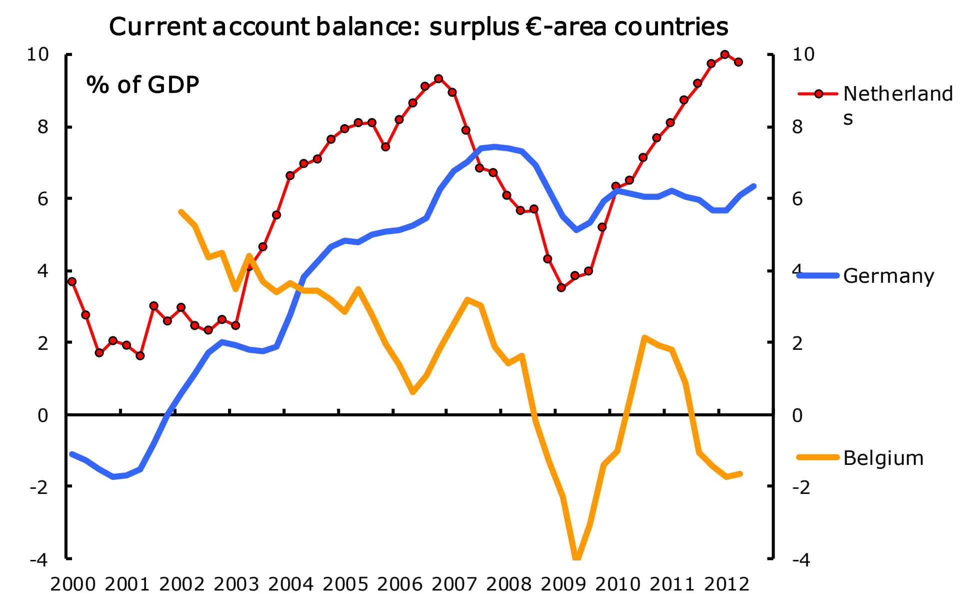


Source: INSEE, Destatis, Eurostat, AXA IM Research

Imbalances are diminishing

- Growing current account imbalances within the euro area (German surplus vs. Spanish deficit) cannot be corrected through the nominal exchange rate (so long as countries remain in the euro)
- The correction has to come from asset prices (stocks, properties and bonds), wages and domestic prices. This is a relative story: higher wage inflation in Germany makes the adjustment easier
- In the case of Ireland and Spain, where excesses came from the private sector, the macro adjustment is well underway. Portugal is catching up, Greece has started to, with a contraction of domestic demand deeper than in any other €-area country under financial assistance.





Source: datastream, AXA IM Research
Latest data: 2Q 2012

The euro crisis in depth

A parallel between 2011 and 1931

- 1931: Gold standard was the international monetary system
- A large Austrian bank, Creditanstalt, came close to failure
- Austria needed gold to bailout Creditanstalt
- France refused to lend gold (because of the gold standard)
- Creditanstalt went belly up, triggering runs on banks throughout Europe and the US

- The Great Depression had started

- A fearsome parallel:
  - Greece 2011 = Creditanstalt 1931
  - Germany 2011 = France 1931
  - Gold standard = sovereign ratings

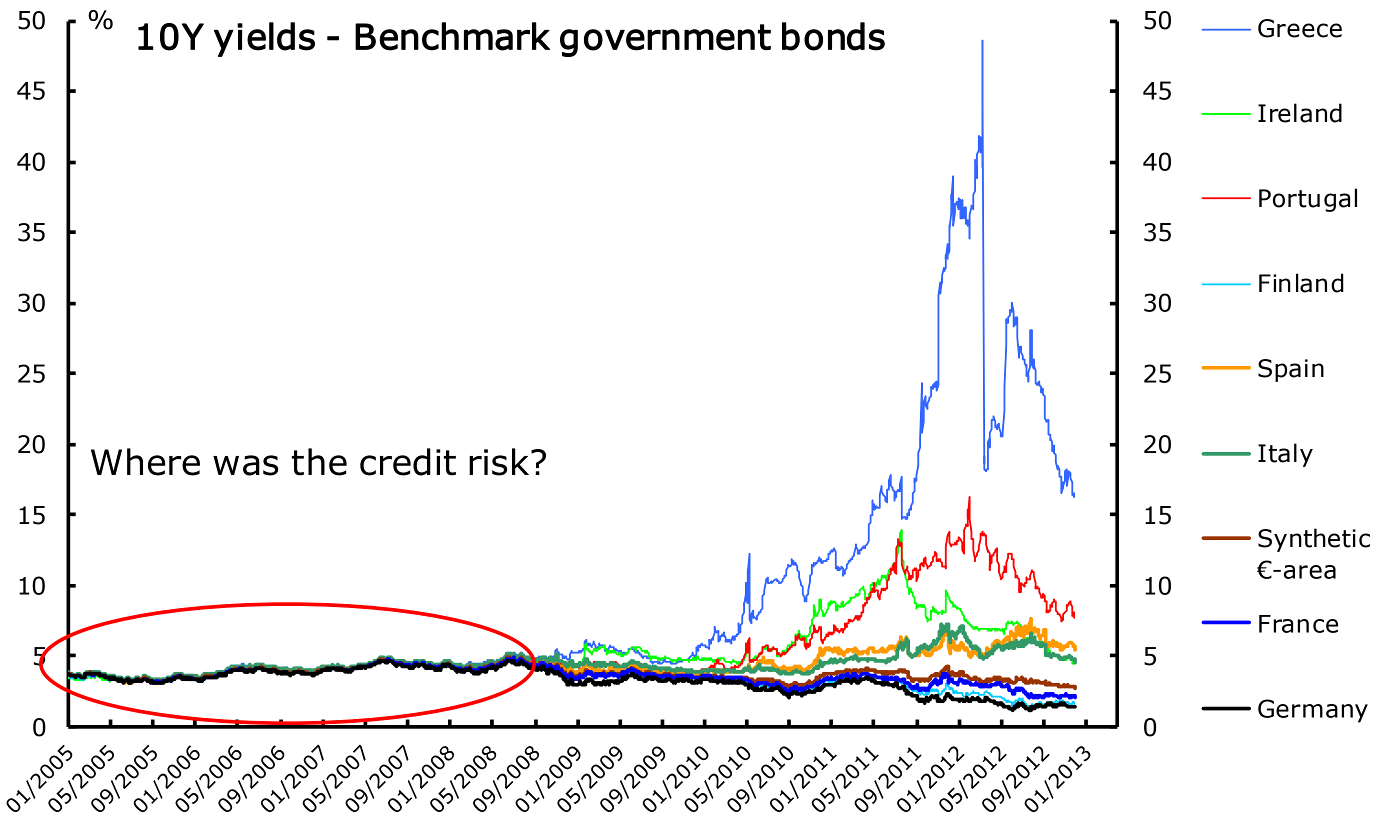
What went wrong? Back to the original plan

- The euro was an alien currency from the beginning
- French ‘monetarist vision’ vs. German ‘political vision’
- Mikhail Gorbatchev unwillingly helped the French.
- A currency without a state necessitates 1 of 3 conditions:
  * Possibility of monetization by ECB (rejected by Germany)
  * Framework for possible transfers (rejected by everyone)
  * A fiscal rule-based system (Stability and Growth Pact)
- Reality test: Governments breach rules when their electorate so wish, if sanctions are not credible
- Germany came to the conclusion that proper fiscal behavior must be guaranteed by the European Court of Justice
- The political compromise is all about the extent of the loss of sovereignty

The euro crisis in depth

A market failure at the root of the €-crisis

- **Were the markets blind? Sure, but why?**



Source: Datastream, AXA IM Research

ECB collateral rules suppressed market discipline

- **Until well into 2008, markets were unwilling to price in sovereign credit / secession (country leaving €) risks**
- **The reason: ECB was accepting Greek and German government bonds on the same terms. Buiter and Sibert wrote in 2005:** "those implementing the open market operations of the Eurosystem send (…) signals (…) that cause the market prices of the repo-eligible debt instruments issued by Eurozone central governments to incorporate negligible and excessively small credit risk differentials" (*)
- **Today: for category I assets (government debt >= BBB-), maximum haircut on 10Y maturity is < 10%**
  <u>The market failure has not been fixed</u>

(*) Willem Buiter and Anne Siebert: "How the Eurosystem's treatment of collateral in its open market operations weakens fiscal discipline in the eurozone (and what to do about it)" – Mimeo, 10 May 2005

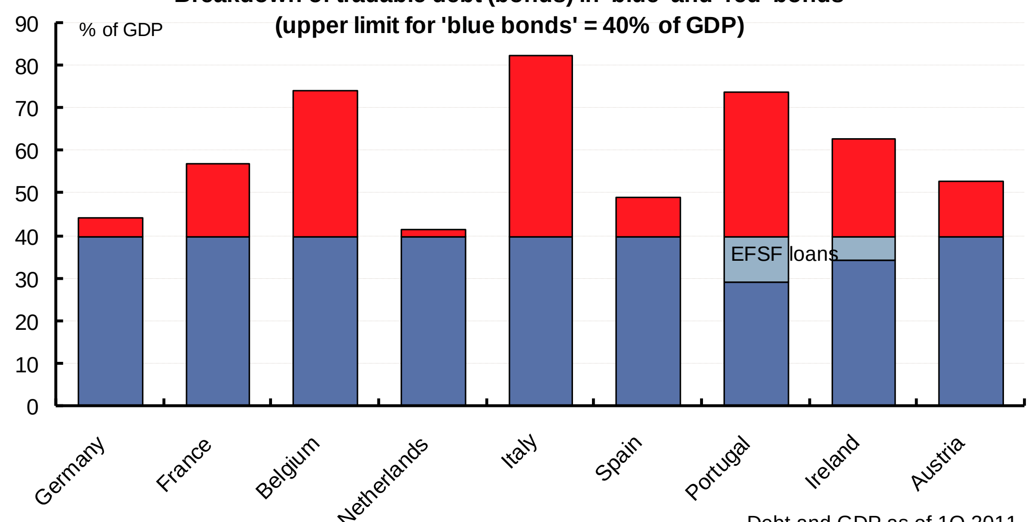
More on €-bonds

- Times are not ripe for joint issuance of €-bonds. German CDU is opposed to the concept
- Conditions for joint and several liability "€-premium" bonds to work:
  - joining €-premium club conditional to strict respect of national fiscal rules
  - €-premiums senior to national sovereign debt
  - issuance limited to x% of GDP (40%)
  - participants pledge to cover their share of interest payments via a share of VAT income
  - Parliaments associated to issuance and allocation decisions
- **End of market failure:** junior national debts treated as credit products
- **Does not imply fiscal transfers but further loss of fiscal sovereignty**

Why it would work:

- Strong demand from Central Banks and Sovereign Wealth Funds, more hungry than ever for reserve assets, make €-premium bonds globally popular diversification instruments
- Euro premium bonds and ECB seen as buyer of last resort makes euro widely perceived as sustainable; fiscal discipline seen as endogenous; ECB more powerful than ever
- Market discipline accelerates structural reforms

Breakdown of tradable debt (bonds) in 'blue' and 'red' bonds (upper limit for 'blue bonds' = 40% of GDP)

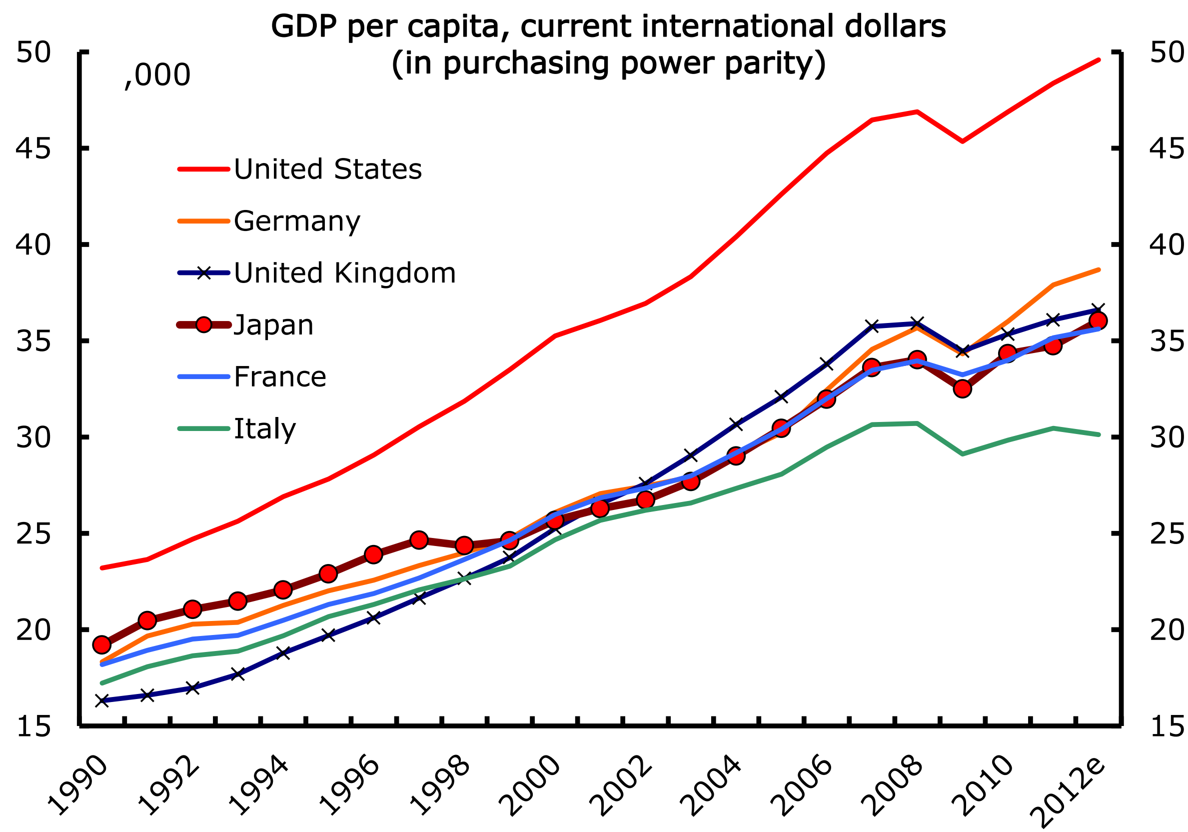


Debt and GDP as of 1Q 2011

Sources: Eurostat for nominal GDPs; National Central Banks and Treasuries for the outstanding amount of tradable debt with maturity >1Y issued by central and local governments – Calculations AXA IM Research

Japan: Where is this 'lost decade'?

- Talks about a 'lost decade' are grossly exaggerated. Japan's GDP/ capita has steadily increased since 1990, in line with most mature economies, although not with the US.
- Japan' s science and innovation potential is strong and remains its growth engine #1
- Japan's main challenge is the indebtedness of its government. Yet, unlike France or the US, Japan has a large positive net investment position. Until Japan runs a structural C/A deficit, its fiscal position is sustainable.
- A steady rise of the consumption tax, spread over several years, would make debt sustainable. This wouldn't wreak havoc on the economy, since the current overall tax pressure is very low, around 35% of GDP vs. 45% for Oecd average.



Source: IMF, AXA IM Research

Long-term, structural themes

Clips from China’s 12th five-year plan

How the China Daily sees the fight against inflation:

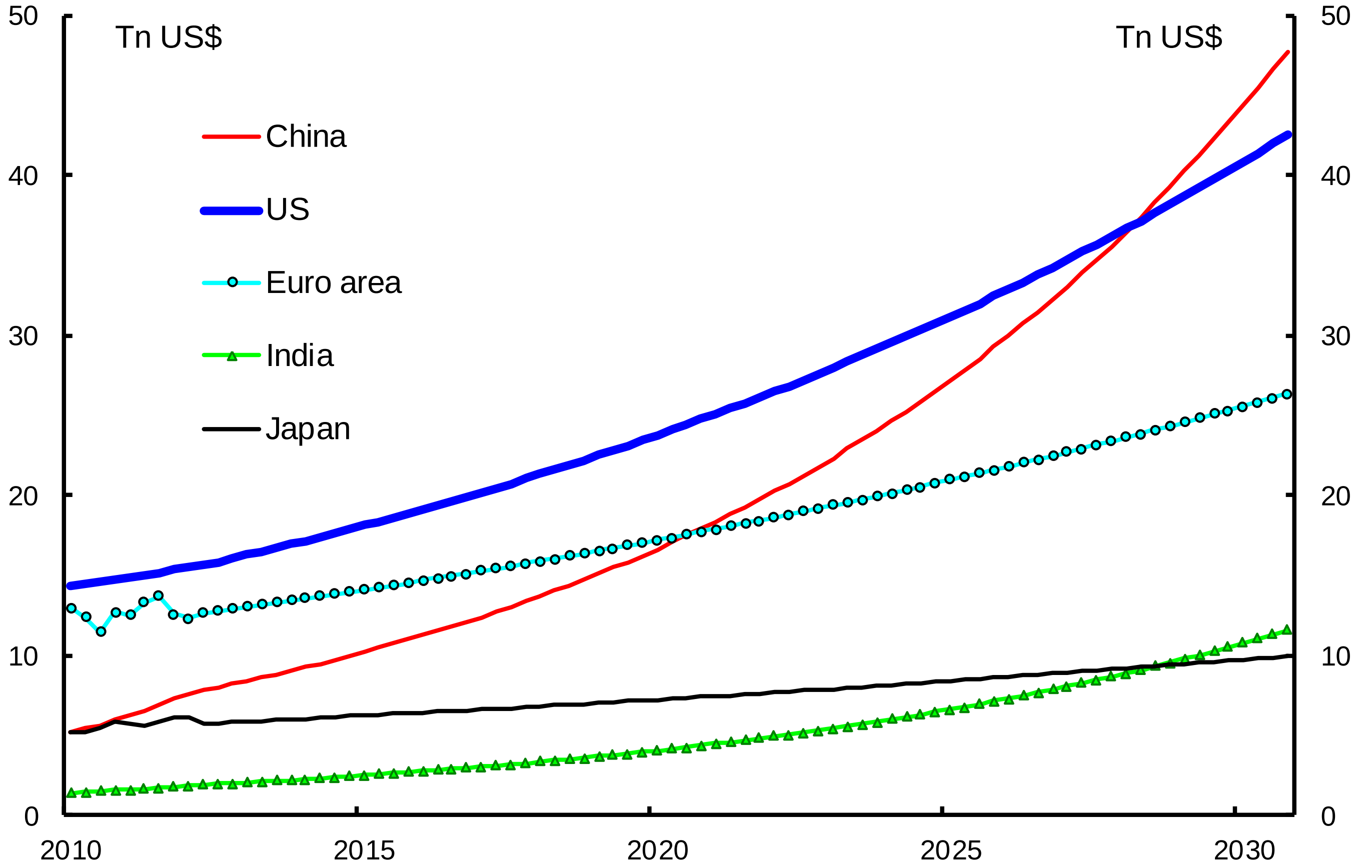
- “In the 12th Five-Year Plan period (2011-2015), China aims to increase the disposable income of urban and rural residents by at least seven percent a year, the same rate as the GDP growth target.” (Xinhuanews)
- "Rising labor costs could push for the transformation of the economic development pattern" (Yin Weimin)
- “After decades of economic boom on the back of cheap labor and intensive energy use, China wants to make the economy more technology-depended and vowed to make more ordinary people share the benefits of the growth.”
- “The minimum wage should increase by at least 13 percent a year over the next five years”
- “China will spend two thirds of central budget on improving the people's livelihood in 2011” (Finance Minister Xie Xuren)
- “China's currency, or yuan, will see major progress in its full convertibility in the next five years, but no timetable has been set to achieve this goal” (Hu Xiaolian, PBoC)

(from the China Daily)

Long-term, structural themes

By 2030, China will be 10% bigger than the US

- … twice as big as the €-area
- … 4 times as big as India (as today)
- … 5 times as big as Japan



Nominal GDP in US$, trend growth assumptions, % p.a.:

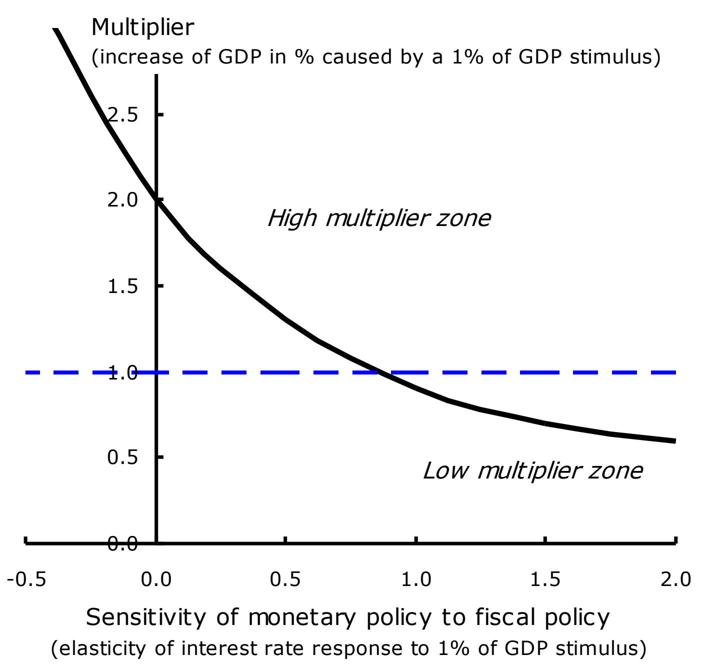
- China: 10.3%
- India: 10.3%
- US: 5.6%
- €-area: 4.1%
- Japan: 3.0%

[Implicit real GDP growth assumptions:
- China: 5%
- India: 5%
- US: 2.5%
- €-area: 1.5%
- Japan: 1.0%]

Watch the global fiscal multiplier

- **Arguably, the global fiscal multiplier is significantly > 1**
  - Consensus estimate of the US fiscal multiplier is less than 1
  - Without import substitution, the global multiplier is higher
  - If monetary policy cannot react to the fiscal stimulus, the multiplier is even higher

- **Warning: this works both ways: a global fiscal contraction with interest rates at the zero bound may cause a larger GDP contraction than in 'normal times'**



This chart is a a free illustration of the findings of Christiano and alii (NBER 15394)

"(…) We argue that the government-spending multiplier can be much larger than one when the nominal interest rate does not respond to an increase in government spending. (…) Suppose that government spending goes up for eight quarters and the nominal interest rate remains constant. In this case the impact multiplier is roughly 2."

'When is government spending multiplier large?' Christiano, Eichenbaum and Rebelo, NBER WP 15394

"Multipliers are higher—perhaps around 1 .7—when thenominal interest rate is at its lower bound of zero, as it was during 2009."

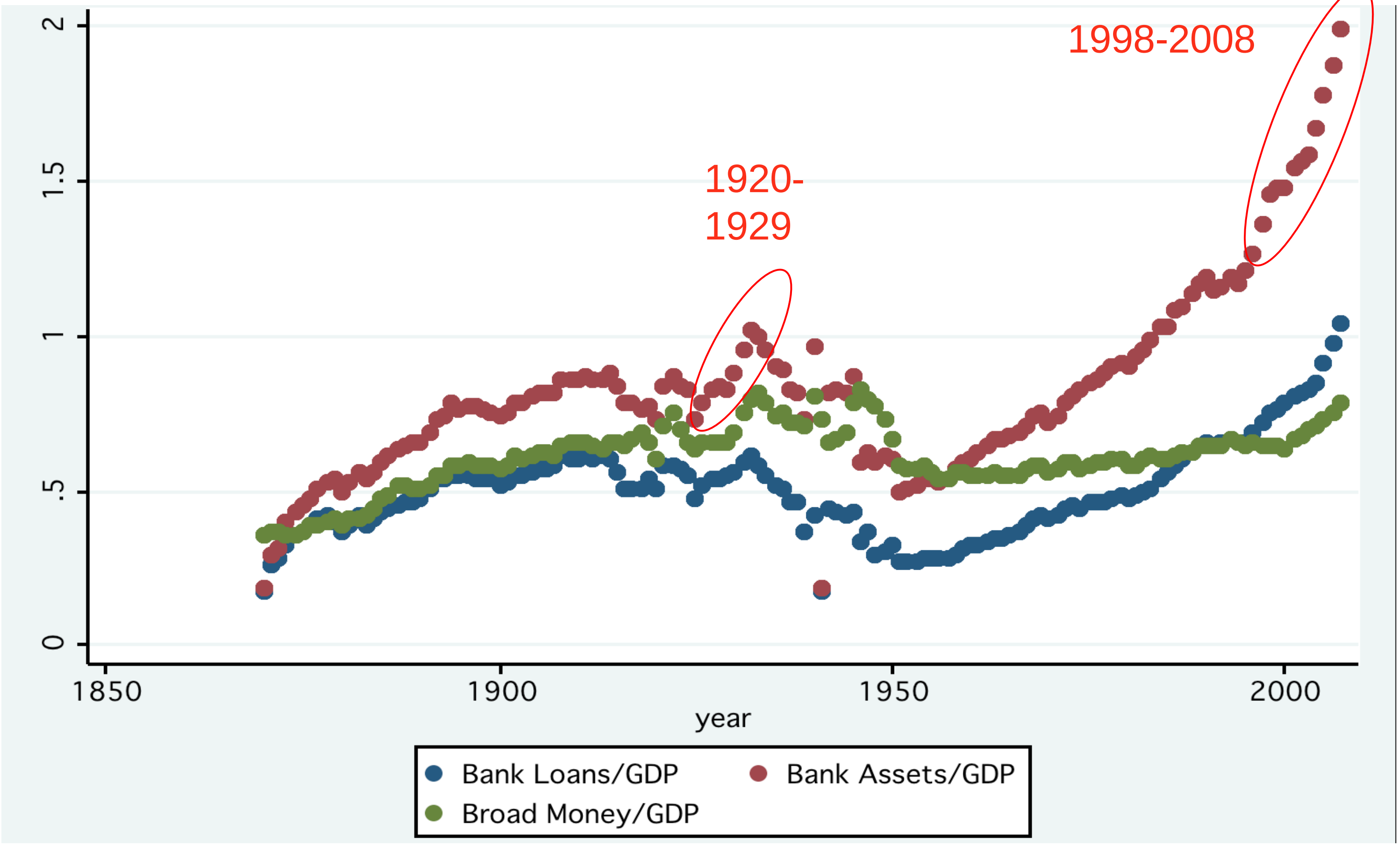
"By How Much Does GDP Rise if the Government Buys More Output?", Robert E. Hall, NBER WP 15496

Source: AXA IM Research

Long-term, structural themes

Unbridled credit supply = Recipe for financial crisis

- 12 countries, data reconstructed over 140 years, one conclusion: watch credit supply



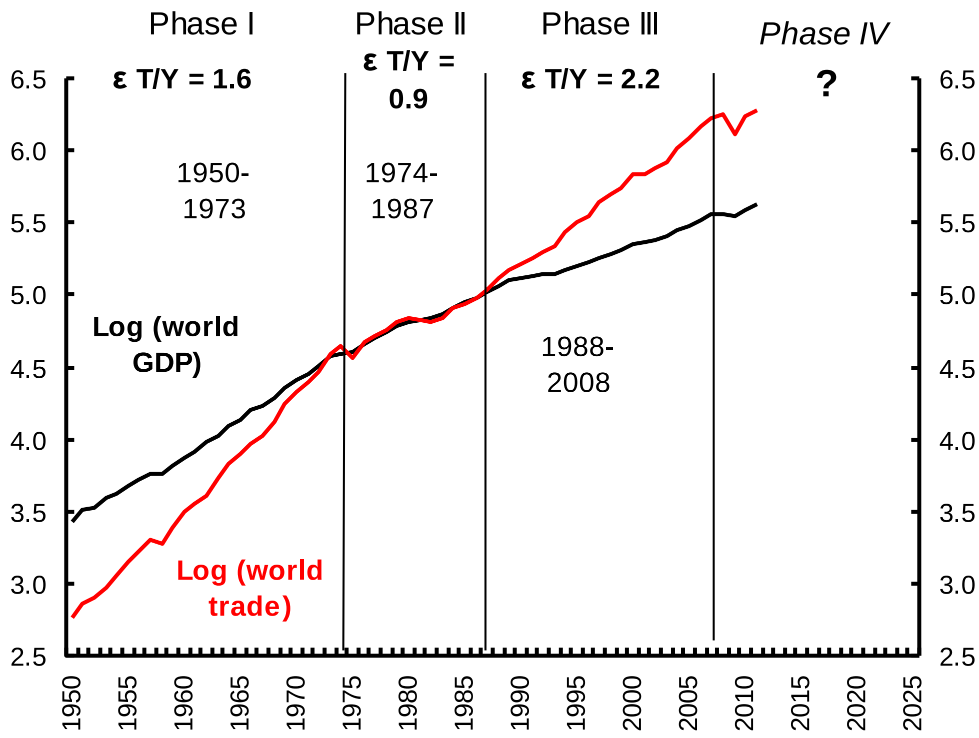
Source: Schularick-Taylor NBER WP 15512- http://www.nber.org/papers/w15512. Aggregate data for 12 countries: Canada, Australia, Denmark, Germany, Italy, the Netherlands, Norway, Spain, Sweden, US and UK.

Eric Chaney, Chief Economist AXA Group, eric.chaney@axa-im.com

The roots of the current global crisis

The 3 stages of post-WWII globalisation

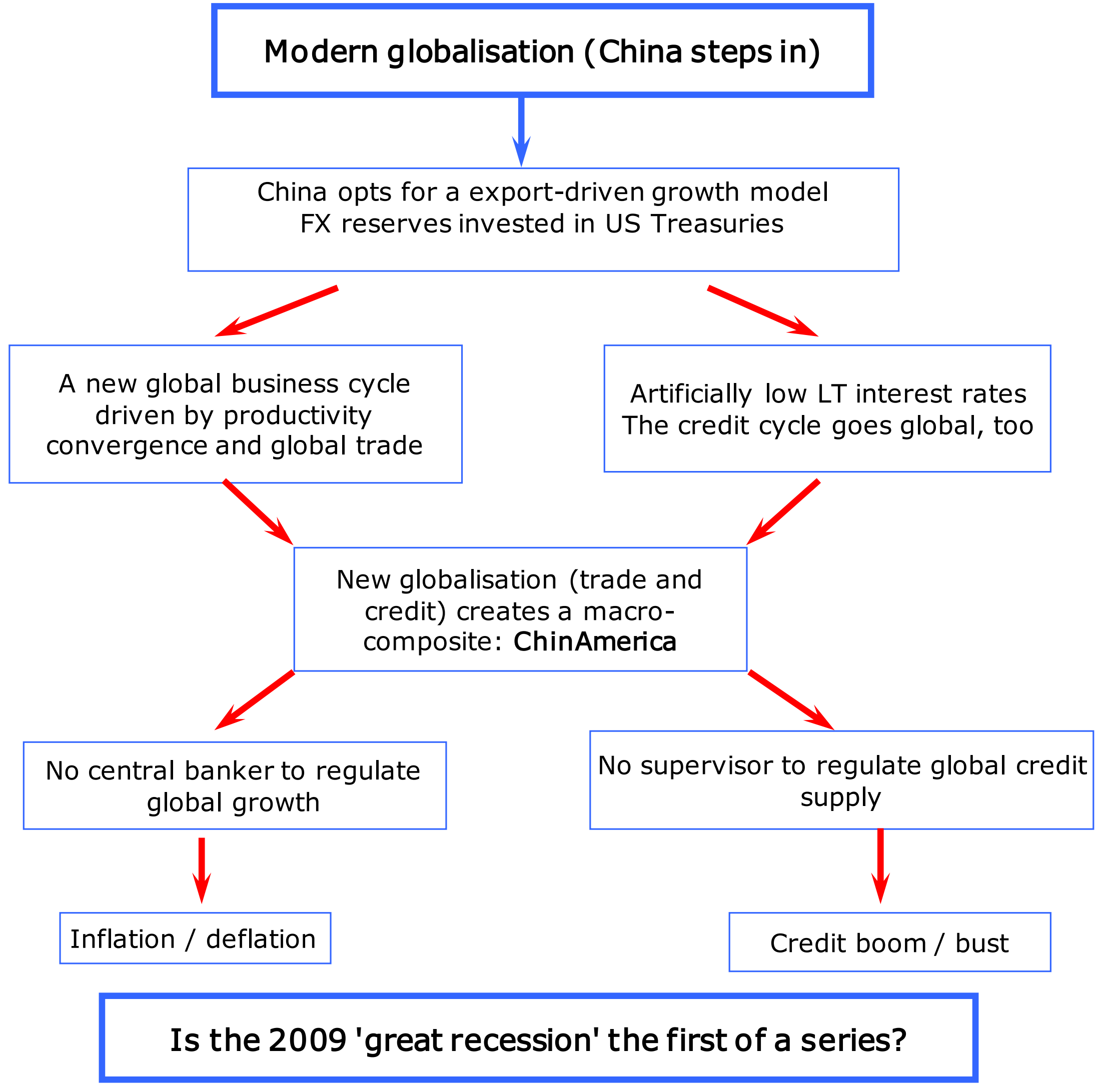
- **1950-1973: Allegro (ε = 1.6)**
  - US FDI in Europe and Japan
  - Productivity catch-up
  - Stable monetary system (until 1971)
- **1974-1987: Andante (ε = 0.9)**
  - Stagflation, oil price volatility
  - Beggar-thy-neighbour FX policies
- **1988-2008: Vivace (ε = 2.2)**
  - Globalisation turns global
  - Trade barriers fall
  - China enters the game
- **2008-?: Cacophonia?**



Source: WTO 2010 report – AXA IM Research

The roots of the current global crisis

Globalisation III: birth of ChinAmerica



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The pitfalls of globalisation stage IV

- The *de facto* US$ zone ($Z) encompasses 2/3rd of the global economy
  (Stephen Li Jen, SLJ Macro Partners)

- Why?
  Because the US Treasury is the sole issuer of safe and liquid assets
  (Caballero-Gourinchas-Farhi)

- The Fed is –unwillingly- exporting its lose monetary policy to the $Z

- Emerging economies do not have the policy tools to fight inflation
  (Jan Tinbergen)

- Inflation (or deflation) is transmitted through commodity prices

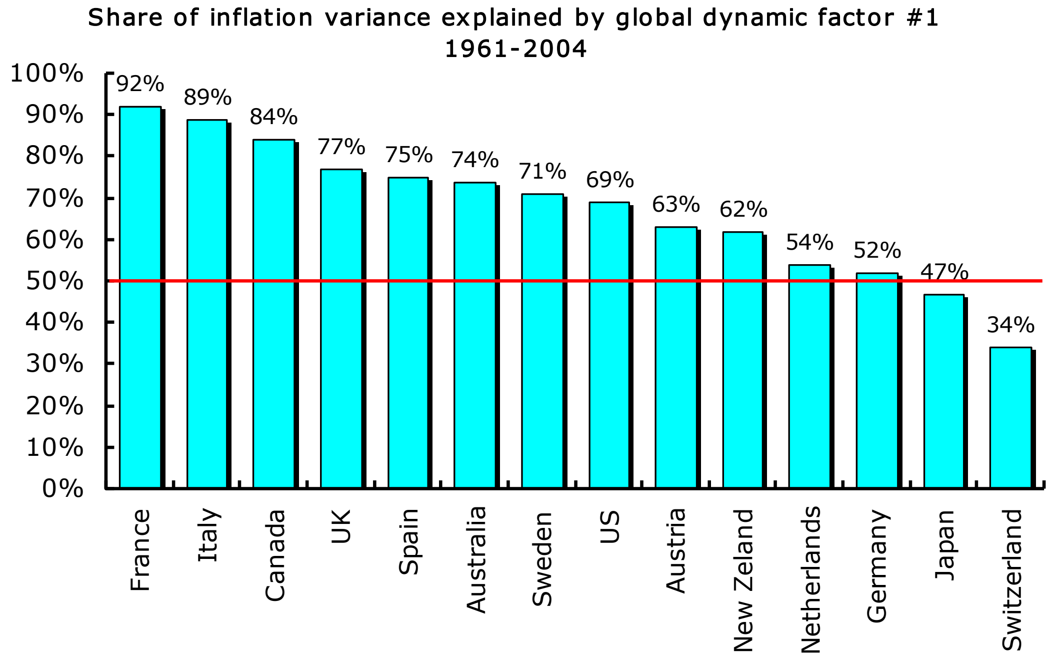
- Such global monetary setup typically generates an unstable boom-bust growth model

Action calls reaction

- There are powerful economic forces that should eventually unravel ChinAmerica
- Central banks have common foes: global inflation and global deflation
- Issuing safe and liquid assets is not a natural monopoly. China and the €-area have good reasons to break it
- Yet, reaction may take a long time before prevailing, especially when obstacles are within institutions

Globalization calls for monetary coordination
Central banks hate the idea…

- Inflation is global* (Ciccarelli-Mojon 2010)
- Central banks have local mandates
- United against deflation, they disband when inflation is back
- Outcome: higher inflation volatility



GLOBAL INFLATION by Matteo Ciccarelli and Benoît Mojon ECB WP 537 Oct 2005

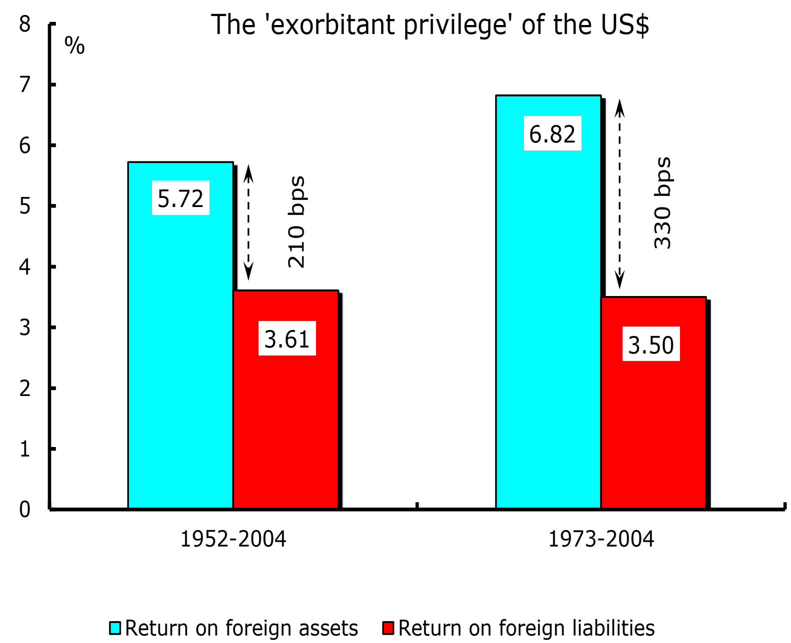
How to kill two birds with one stone

- Before the €-crisis: fragmented sovereign (‘risk free’) bond markets. Now: risk free assets have vanished, but in Germany. A recipe to tear down financial systems
- Issuing €-bonds would:
  1/ Restore financial stability in the €-area,
  2/ Offer to central banks and sovereign funds alternative to US Treasuries

- As the Chinese economy becomes ever more complex and driven by private agents decisions, policy makers (PBoC) need the full set of monetary policy tools to stabilize their economy (interest rate setting by open market ops)
- To get there, China needs to open its capital account and open its debt markets to foreign investors, who would buy Chinese Government Bonds (CGBs)
- Doing so, China would:
  1/ Manage more efficiently the Chinese economy,
  2/ Offer to central banks and sovereign funds alternative to US Treasuries …

Cost of rebalancing for the US: Less seignoriage

- Because the US is the sole issuers of safe and liquid assets, its foreign investments benefit from an excess return over its liabilities
- A more diverse supply of such assets would, over time, significantly reduce this 'exorbitant privilege (*)'
- Yet, the US would eventually benefit from a more stable world. The subprime crisis could have been avoided…

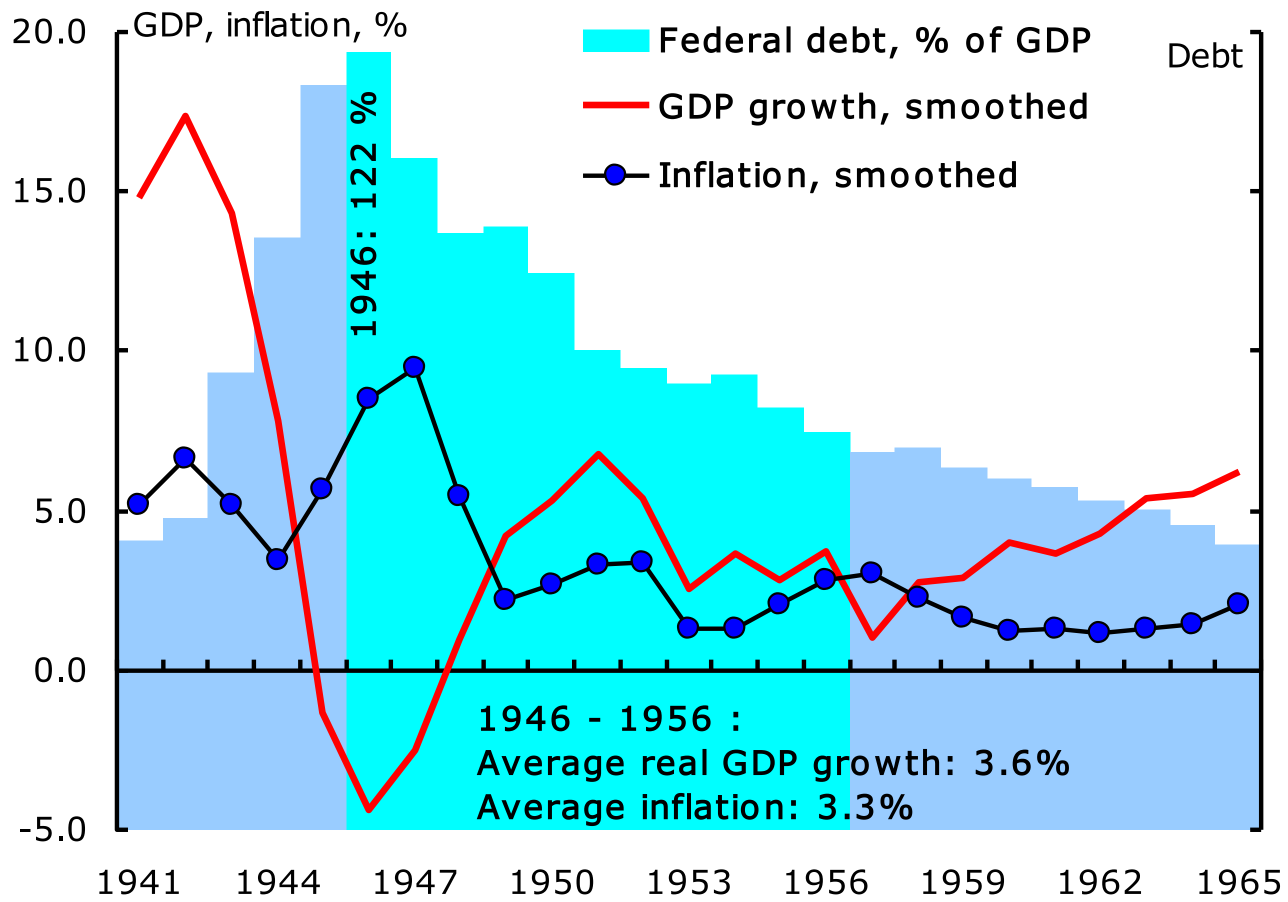


(*): See 'From Wold Banker to World Venture Capitalist' by Pierre-Olivier Gourinchas and Hélène Rey in NBER Book: G7 Current Account Imbalances: Sustainability and Adjustment, edited by Richard H. Clarida, University of Chicago Press

How to prevent Global Cacophonia?

- First, acknowledge the asymmetry of the global monetary system as a permanent source of risk.
- Second, force the most influential central banks of the world to cooperate by evaluating global inflation/deflation risks before they actually came to life.
- Third, rebalance the global monetary system by raising competition in the global safe and liquid assets markets (€-bonds, CGBs)
- Times are not ripe for item #3
- **A goal for 2020?**
- **In the mean time, brace yourself for higher global volatility of output, employment and inflation**

Debt: The post WWII US example



Source: BEA, OMB, AXA IM Research – Inflation is measured by the GDP deflator

1946-1956

Debt/GDP reduction: -60 pts

Contribution of real growth: -18 pts

Contribution of inflation: -17 pts

Contribution of primary budget balance: -13 pts

Source: AXA IM estimates, based on the first order approximation of the dynamic equation of the debt.

US: The inflation temptation

The optimal exit path: productivity (and labor force growth)

This is how US and Europe deflated the legacy debt burden post WWII (US : innovation; Europe/Japan: catch-up)

1. Obama's administration highly focused on innovation
2. Innovation: high return in developed economies, low return in developing economies
3. Productivity and moderate inflation: best compromise

Simplistic arithmetic but food for thought:

7.0% nominal GDP growth

= 3.3% (inflation) + 3.6% (growth) [actual US mix post WWII]

= 4.0% (inflation) + 2.9% (growth) [possible post Great Recession path]

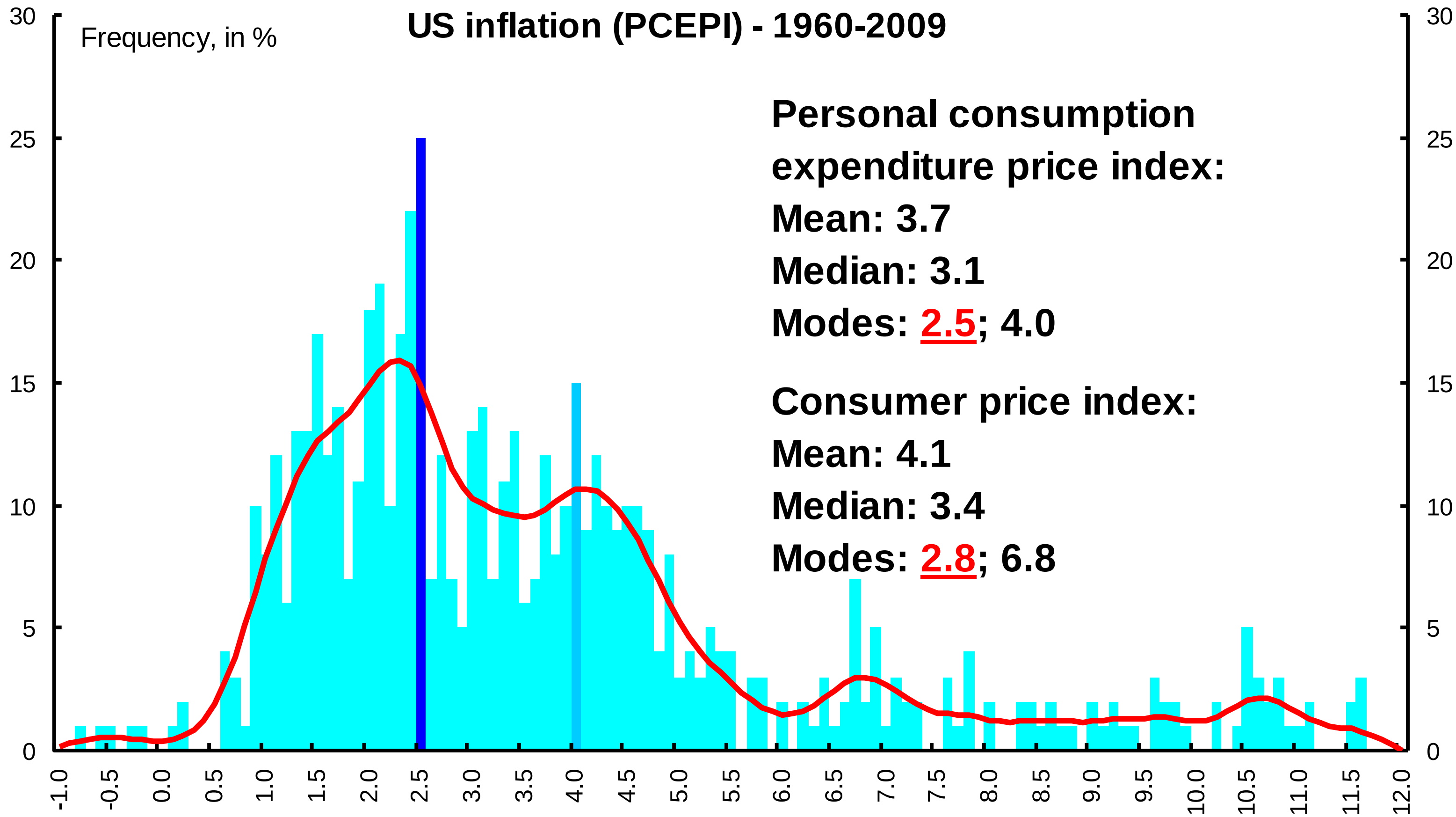
In both cases, initial debt burden halved in 10 years

Could 1970s stagflation come back?

- Over 1971-1982, US CPI inflation averaged 8% and high inflation turned out to be unemployment-proof. The same happened in Europe, with two notable exceptions: Germany and Switzerland.
- With the benefit of hindsight, three main factors explained stagflation:
  #1. Vietnam war and end of 'dollar standard' (15 August 1971). Enters 'fiat money', good bye gold.
  #2. Misguided monetary policies (stripping CPI from 'transitory components', illusion of jobs/inflation trade-off)
  #3. Real wage rigidities (indexation to prices, c.o.l.a. and other *scala mobile*, please note: no German word for indexation)
- Factors #2 and #3 have all but vanished. Hopefully, Fed will be less focused on 'core inflation' (reminiscence of Arthur Burns' stripping habit).
- Factor #1 remains: Iraq, Afghanistan vs. Vietnam. Fiat money is here to stay.

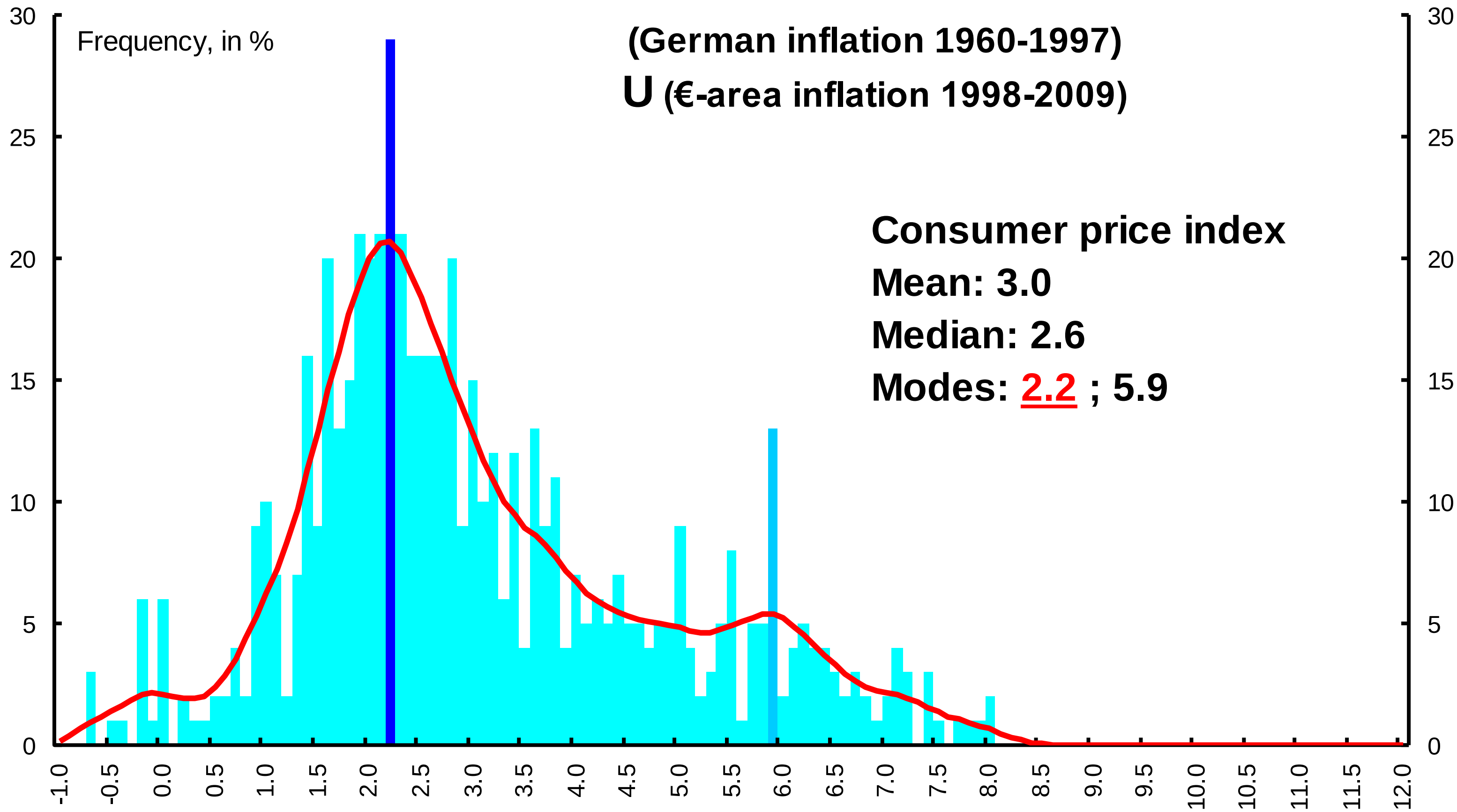
My personal view: stagflation is a red herring

Long term, Fed may tolerate mild inflation



Source: US Department of Commerce, Federal Reserve, AXA IM Research, latest data December 2009

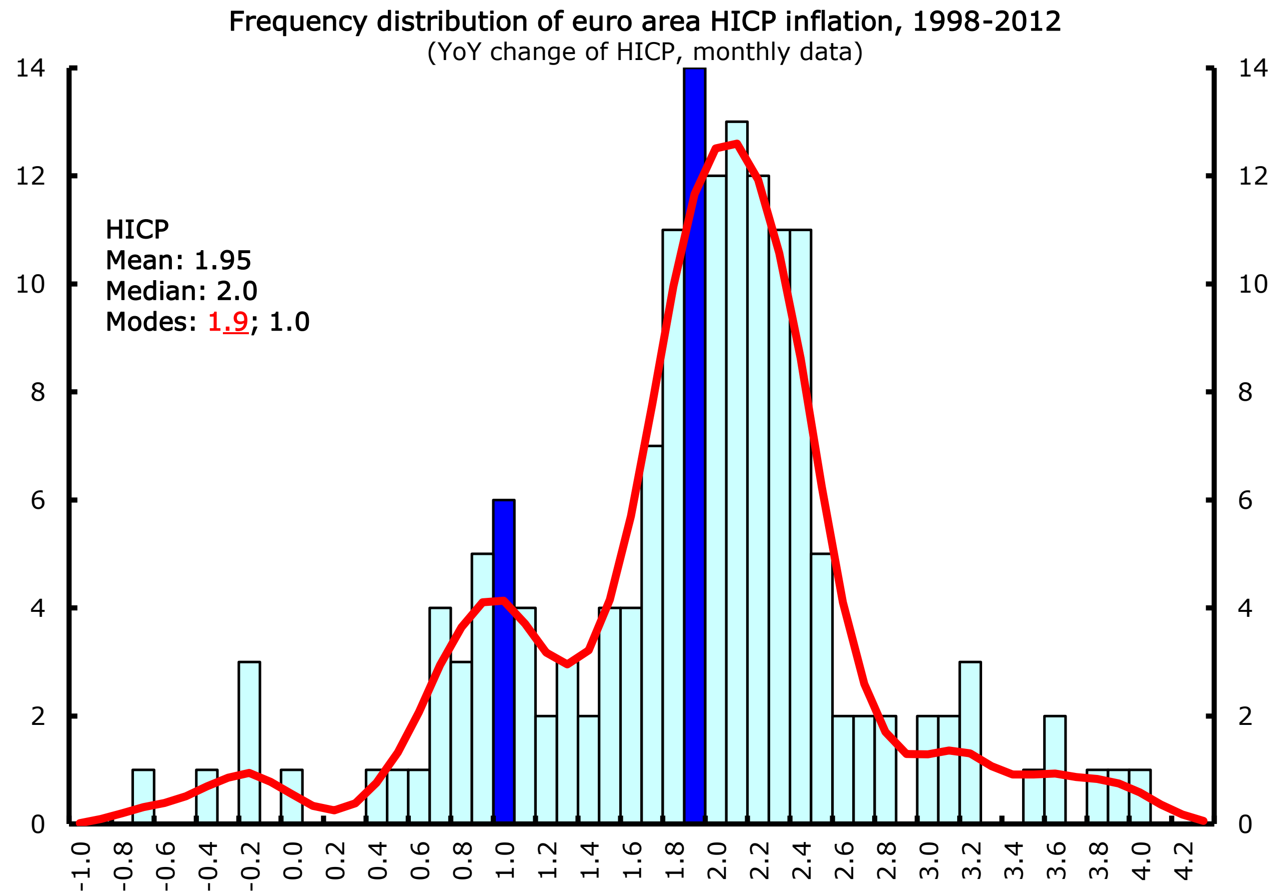
Buba- ECB won't tolerate inflation



Source: Destatis - Eurostat, AXA IM Research, latest data December 2009

Long-term, structural themes

ECB not really scared by deflation



Source: Eurostat, AXA IM Research, latest data October 2012

What about hyperinflation?

What is hyperinflation?
Phillip Cagan defines hyperinflation as CPI increasing more than 50% per month. In theory, hyperinflation is associated with the value of money converging toward zero (debasement of currency). At the limit, money does not buy any tangible good, i.e. real money balances decrease to zero. Practically, hyperinflation may start when the relevant period to measure inflation is a month, not a year.

What are the roots of hyperinflation?
Hyperinflation is associated with governments deliberately increasing money supply in order to finance unsustainable spending. Because several central banks are deliberately increasing their monetary base by monetizing various assets (including, possibly, government debt), hyperinflation is evoked as a possible outcome. However, increasing money supply is neither a sufficient condition (think of the US in WWII) nor even a necessary condition for hyperinflation. The latter may happen if the utility of money rises slower than real money balances decrease, in other terms if confidence in money evaporates. I find reasonable to assume that hyperinflation is generally the result of both deliberate fast money supply expansion AND a loss of confidence in institutions such as the central bank or the Treasury.

Germany: Weimar Republic, 1923

Hyperinflation is a possible outcome in seriously destabilised emerging economies
In the current circumstances, and even if the Fed and the ECB monetize government debts (as the BoJ did to fend off deflation), hyperinflation is in my view excluded, at least as long as these central banks are in charge. Yet, emerging economies severely destabilized by BoP crisis leading to large scale defaults may well fall into hyperinflation, which, in our world, turns rapidly into dollar- or euro-ization.

Eric Chaney’s biography

Eric Chaney
Chief Economist AXA Group
Head of Research, AXA Investment Managers

Eric Chaney is chief economist for the AXA Group since 2008. His mission is to provide a vision on the most likely global macroeconomic scenarios in the medium to long term, as well as an assessment of the main macroeconomic risks, for the group at large and its main entities.

Eric has his office at AXA Investment Managers, where he is Head of Research. Eric has launched the AXA IM Economic Symposium (Paris 2010, London 2011 and 2012), which featured prominent speakers such as Stephen Roach, Francesco Giavazzi, Jacques de Larosière, Charles Goodhart, Sushil Wadhwani, P.O. Gourinchas, Stephen Li Jen, Thomas Huertas

From 2000 to 2008, Eric Chaney was Chief economist for Europe at Morgan Stanley, which he had joined in 1995. Previously, he headed the economic forecasting unit of the French statistical office (INSEE). Before that, he was responsible for global forecasts and analysis at the French Treasury.

He has been associate professor at the French School of Administration (ENA). Since 1997, Eric has been a member of the French Economic Council of the Nation, which advises the Minister of finances. He is also an independent member of the French Tax Council and sits on the executive committee of the French Economic Association.

A former professor of Mathematics and editor of a mathematical journal of the University of Strasbourg, Eric also holds a Master’s Degree in economics and econometrics from the Paris Graduate School of Economics, Statistics and Finance (ENSAE ParisTech).

Eric lives in Paris, is married and has five children.

Recent research from AXA IM

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- Solvency II has and will make corporate bonds more expensive, 28 November 2012

  Going forward, Solvency II will still be a significant driver of asset price and, combined with other factors, it is contributing to a structural tilt in the market toward debt securities.

- High yield: the party continues – at least for now! 22 November 2012

  The US and European high yield markets have enjoyed exceptional returns in 2012. While we maintain a positive outlook for the sector, continued investment requires an understanding of the elements which continue to drive and distort it, combined with an appreciation that all good things come to an end.

- Energy Report: unlocking investment opportunities, 12 November 2012

  Energy is one of these few mega-themes that matter for practically all categories of investors, from short sellers to long only, from buyers of hedging strategies to endowments or sovereign wealth funds. Yet, energy is a treacherous field because it is highly multidimensional (economics, politics, technology, business models, regulation) and littered with conventional ideas.

- Can Germany "grow it alone"? (Part 2), 7 November 2012

  In the second part of his analysis on German economic prospects, Maxime Alimi shows that private consumption and construction could provide tailwinds to economic growth in the next few years, although these are likely to be small. A key medium-term challenge will be to lift potential growth.

- Food prices and monetary policy in emerging markets, 30 October 2012

  Summer droughts in the US and Russia and poor rainfalls in Asia fuelled a rally in global food prices. Manolis Davradakis argues that higher food prices impact inflation similarly across emerging markets , while a spike in energy prices results in higher inflation particularly in Latin America. He anticipates that this time the impact of higher food prices to inflation will be limited, due to weak global demand.

- Reverse engineering China's monetary policy, 24 October 2012

  The PBOC has opted for an unusual monetary policy lever – open market operations via direct liquidity injections. Qi Sun investigates the rationale behind this move and concludes that pro-growth monetary policy tweaking is in the making. Toward that goal, active liquidity management and support to non-bank financing seem more appealing than rate cuts.

- France: the fiscal hammer, 16 October 2012

  The Finance Bill 2013 provides € 30 billion of additional measures to meet the target of 3% deficit, 10 billion € of savings. As always, the devil is in the details: all administrations combined, € 30 bn more are to be spent and € 60 bn € will be punctured.

- US swap spreads and fundamentals, 29 August 2012

  US swap spreads are extremely low from an historical perspective. The effectiveness of Fed actions in reducing the stress in the interbank market, and the supply of government debt, explain current levels. Moreover the strong demand of interest rate swaps from US pension funds for funding gap reasons may have compressed swap spreads further. Ombretta Signori thinks that given the current environment, only a moderate widening seems likely in the foreseeable future.

- Market sentiment indicators: less is more, 24 May 2012

  Equity markets witnessed a substantial increase in the number of risk perception indicators used. In this week's Essentials, Mathieu L'Hoir revisits some of the most popular used by practitioners. He carries out a large scale data crunching and demonstrates that only a few of these indicators are truly effective at timing equity markets. Building on these results, he presents a new proprietary market sentiment indicator that will be used in our investment strategy going forward.

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