2012: Bifurcation year

85%

15%

Business (almost) as usual

"Eurogeddon"

February 2012

(updated 20 February)

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The global macro outlook

- The ‘bifurcation’ framework remains valid. Yet, the probability of the worst case (‘€-geddon’) has decreased since the end of 2011

  We see it at 15%, vs. 25% in December 2011

- Global cyclical indicators have surprised on the upside
  - **In the US, the Surprise Gap is, again, in acceleration mode**
  - **In Germany, manufacturers are turning more positive**
  - **Global trade is probably re-accelerating**
- Emerging markets are benefiting from resilient growth in China and global monetary easing
- In the euro area, funding tensions for banks and Southern sovereigns have eased considerably, thanks to bold ECB action and a quick agreement on the ‘fiscal compact’
- Don’t fight the ECB, but keep in mind that the risk of contagion from Greece to Italy has not disappeared;
- Don’t fight the Fed either: a 2 to 3% recovery pace and unemployment at 8% are still valid reasons for the Fed to nail down long term interest rates. 10Y yields will hover around 2% for longer than expected;
- Overall, adding some risk in investment strategies (with proper hedges) makes sense.

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The 2012 bifurcation

- Main case scenario (85%): The euro eventually thrives (p.21)
- With hindsight, the 9 December EU summit was the watershed event. Markets oscillate then take a positive view on the euro.
- Global slowdown, mild recession in €-area, US recovery goes on, soft landing in China, equities rally, inflation fears come back.

- Alternative scenario (15%): Euro break-up - Global depression (p.31)
- New Treaty negotiations stall, Italy throws the towel, followed by Spain then France. Germany terminates the euro.
- The European financial system partially melts down, contagion reaches the US. The global recession turns into a global depression

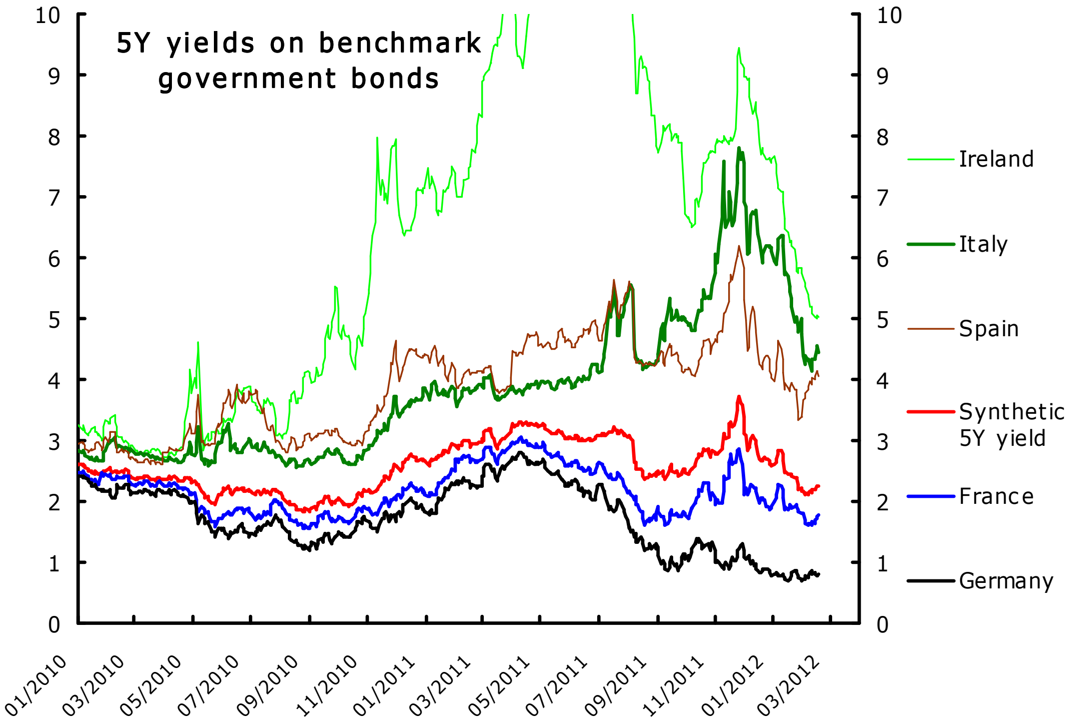
Subjective probabilities are … subjective

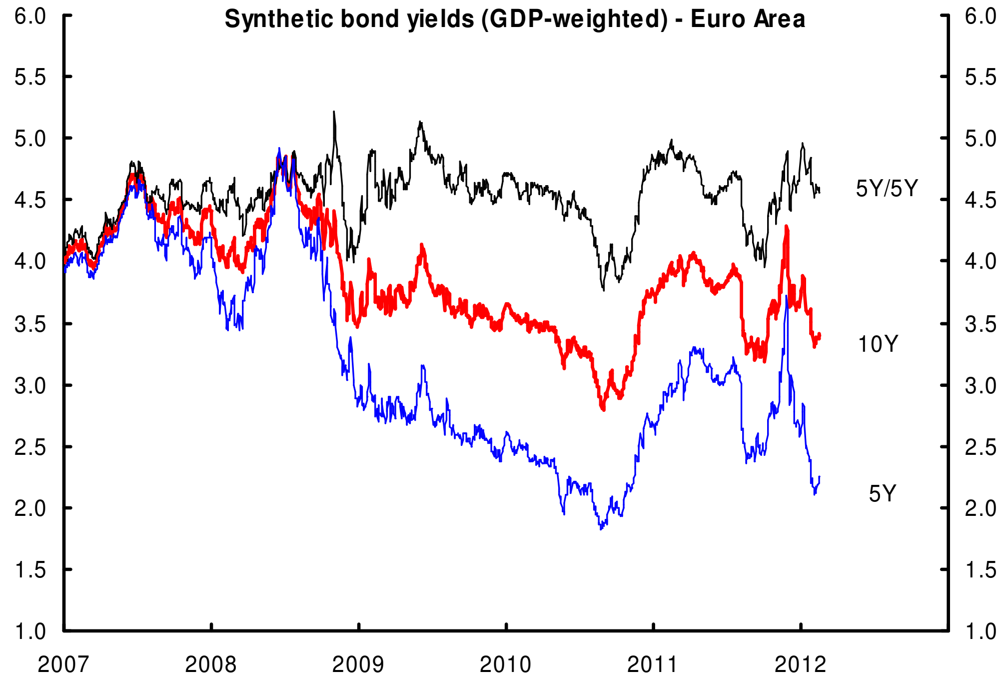
The important point is that there is not much room for a 3rd scenario

What the markets say

Dramatic decline in €-periphery yields

- Since the beginning of the year, auctions by the Italian and Spanish Treasuries have been welcome by the markets, driving a significant decline in yields, concentrated in the 0-5Y segment
- EU banks are putting a part of the money borrowed at 1% from the ECB at work, but only in short medium term maturities, thereby inviting issuers to reduce debt maturity
- Asian CBs and SWFs seem to be cautiously re-investing in Italian and Spanish markets





Source: Bloomberg, Datastream, AXA IM research

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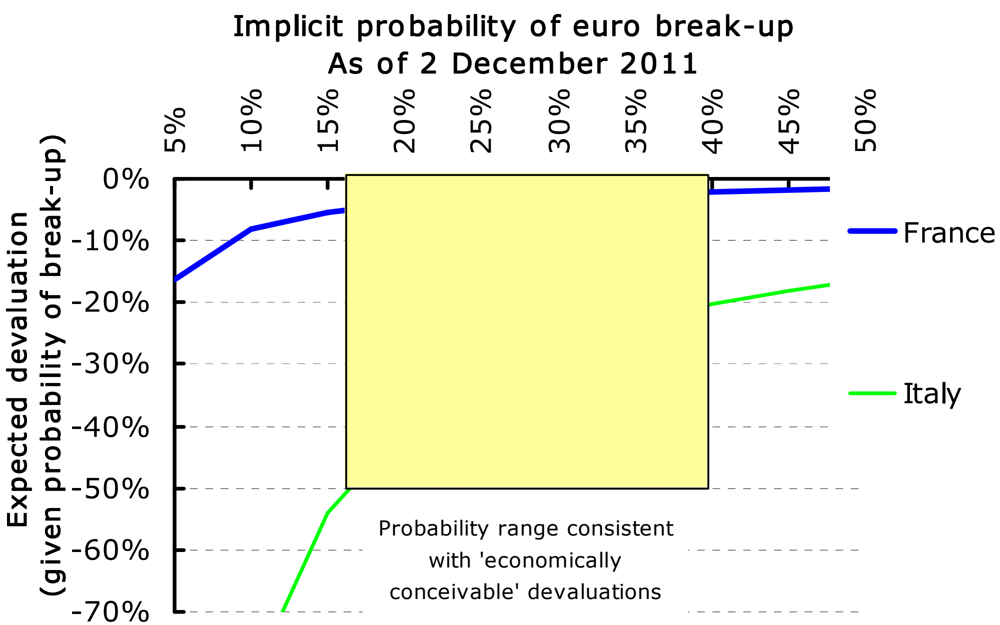
What the markets say
Bonds-CDS: probability of €-break-up has fallen

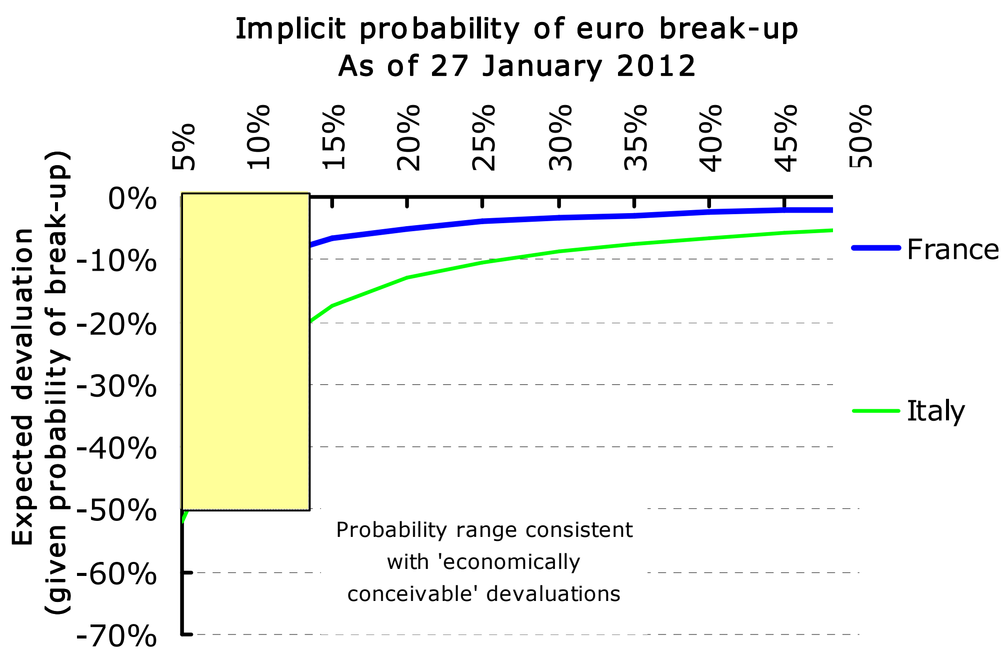
- **As of 27 January, price differentials between 5Y German Bunds and other G7 sovereign debt were mostly explained by default risks, in sharp contrast with the end of 2011**
  [CDS-adjusted price gap = E(currency change | no restructuring) = %Devaluation*P(break-up)]

Before the Dec. 9th EU Summit …



Calculations based on of 5Y benchmark bond prices and 5Y implicit probability of default priced by CDS (r=40%)

… 2 months and 1 LTRO later



Calculations based on of 5Y benchmark bond prices and 5Y implicit probability of default priced by CDS (r=40%)

Source: Bloomberg, Datastream, AXA IM research

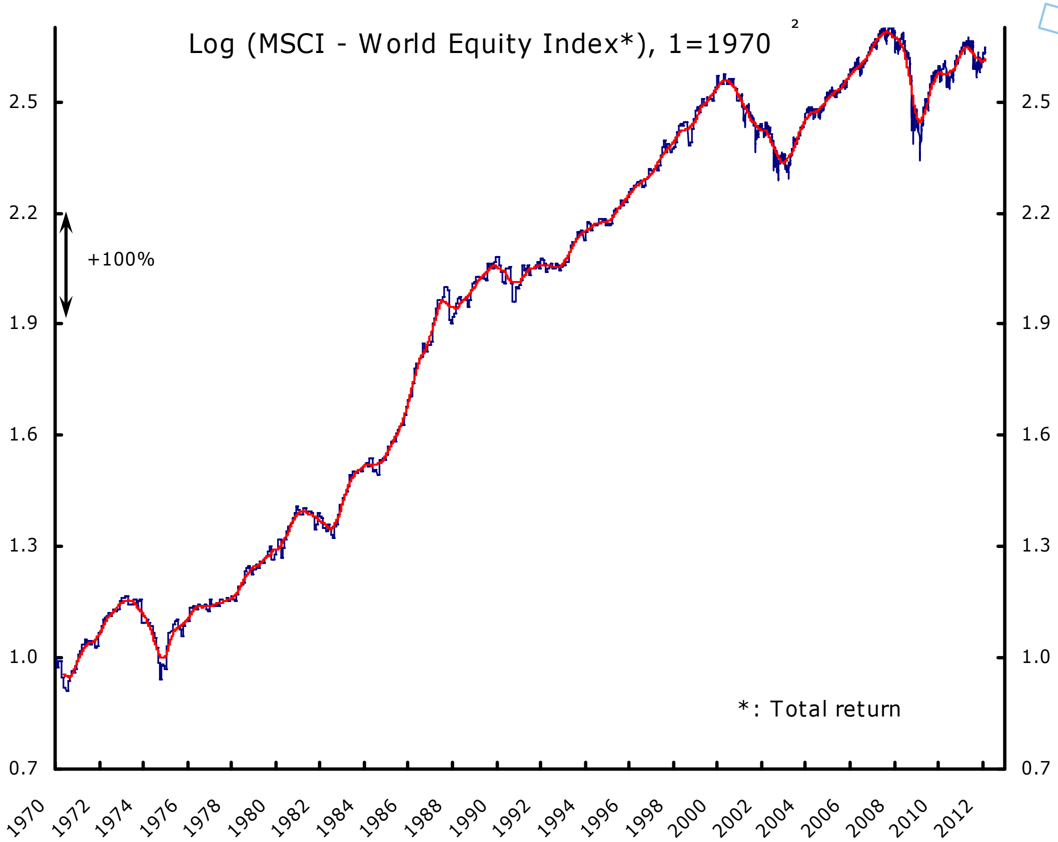
What the markets say
Global equities: « risk on »

As of: 17 February 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**
8.9%	**8.9%**	**7.9%**	**9.0%**	**16.1%**	**Since 02 Jan 2012**
4.4%	**3.9%**	**4.6%**	**6.0%**	**6.9%**	**Last four weeks**

MSCI total return indexes (source MSCI)

- Global equity markets are shrugging off the "eurogeddon" scenario



Source: MSCI, AXA IM Research

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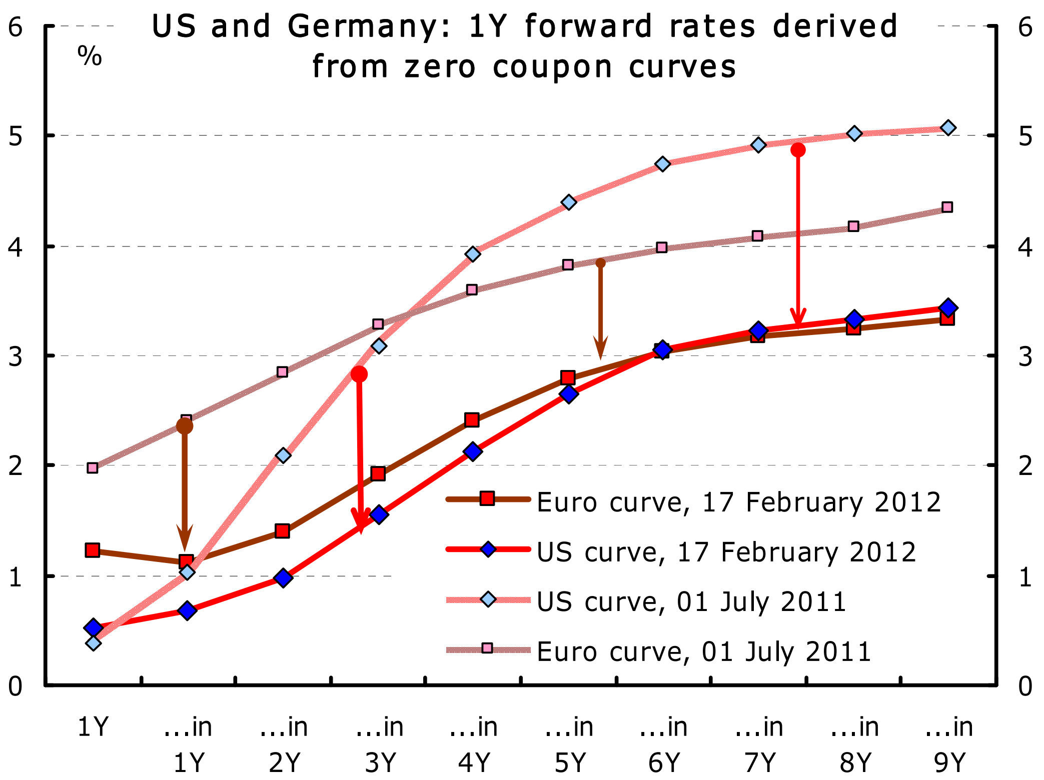
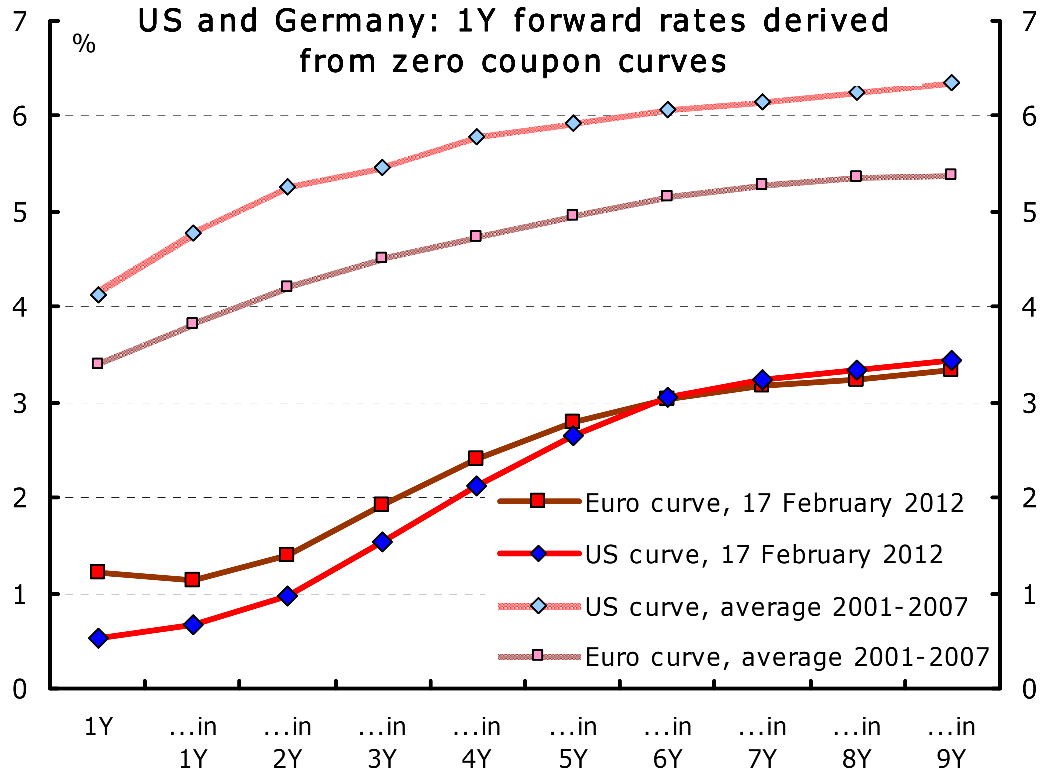
Bonds: Yield curves anchored to the sea floor

- UST curve: Fed decision to stick to ZIRP through 2014, new Riksbank-like communication policy and high probability for QE3 have nailed down LT US yields
- German Bund curve: hammered out by rush to safe haven and €-area recession. German 5Y in 5Y have never been so low. The steepening potential is significant

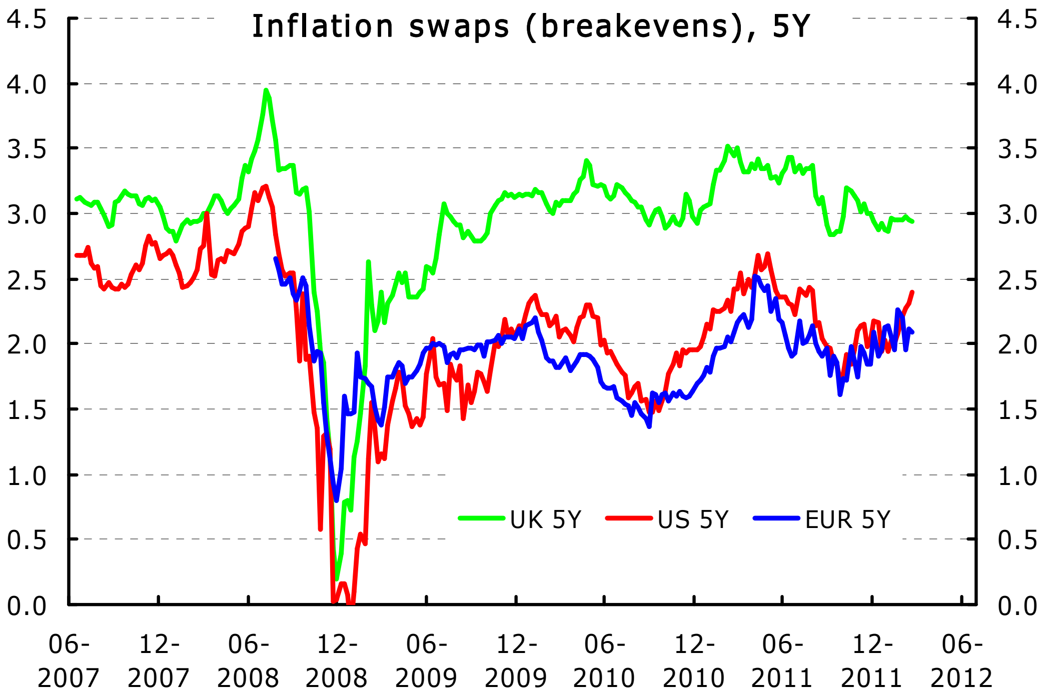


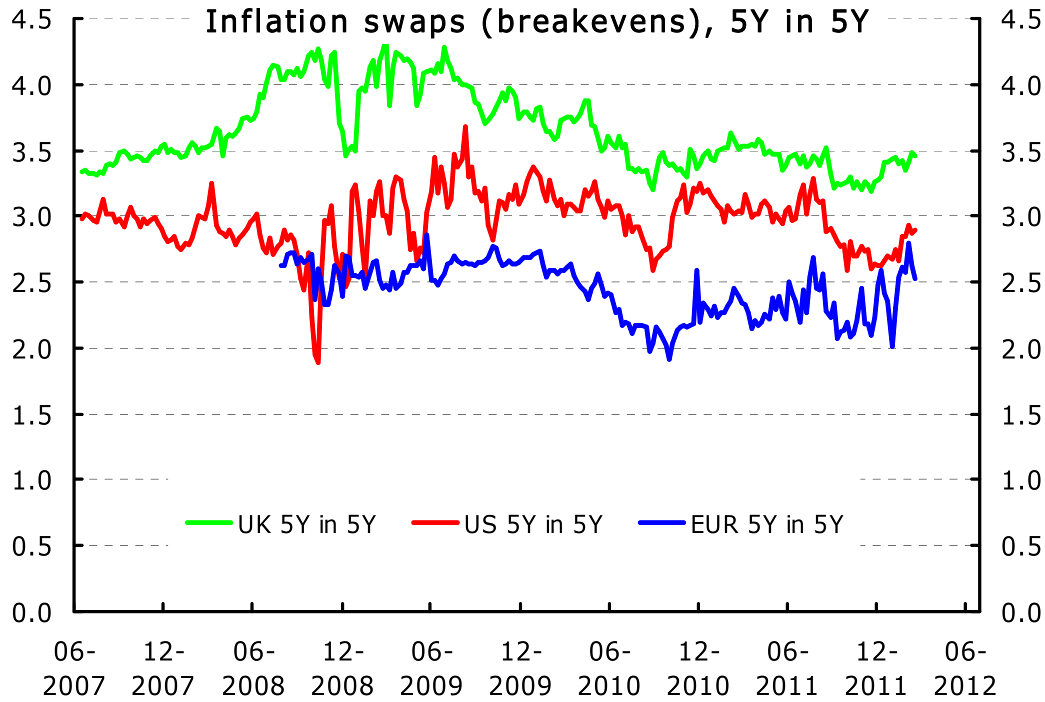


Source: Datastream, AXA IM Research

Inflation futures: deflation scare is over

- Medium term (5Y) inflation expectations are rising
- Longer term (5Y in 5Y) expectations are volatile but trendless
- Inflation markets are probably pricing a higher probability for an oil price spike, due to tensions in the ME
- They are not (yet) pricing higher long term inflation due to expansionary monetary policies





Source: Datastream, AXA IM Research

Latest data 20/02/2012

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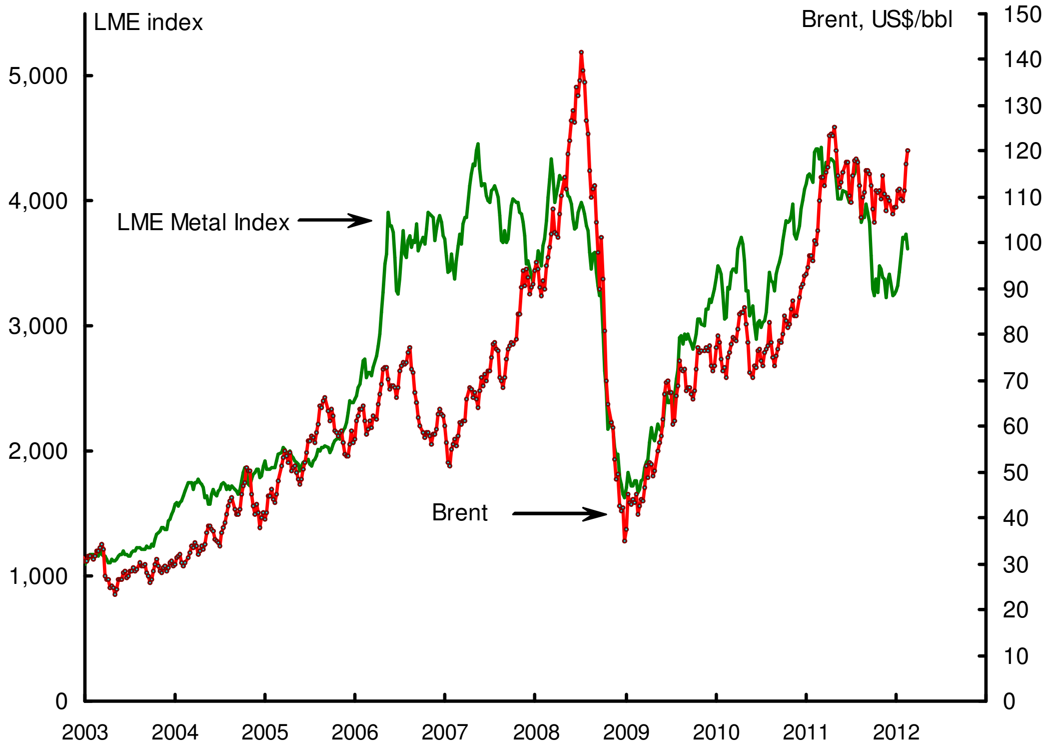
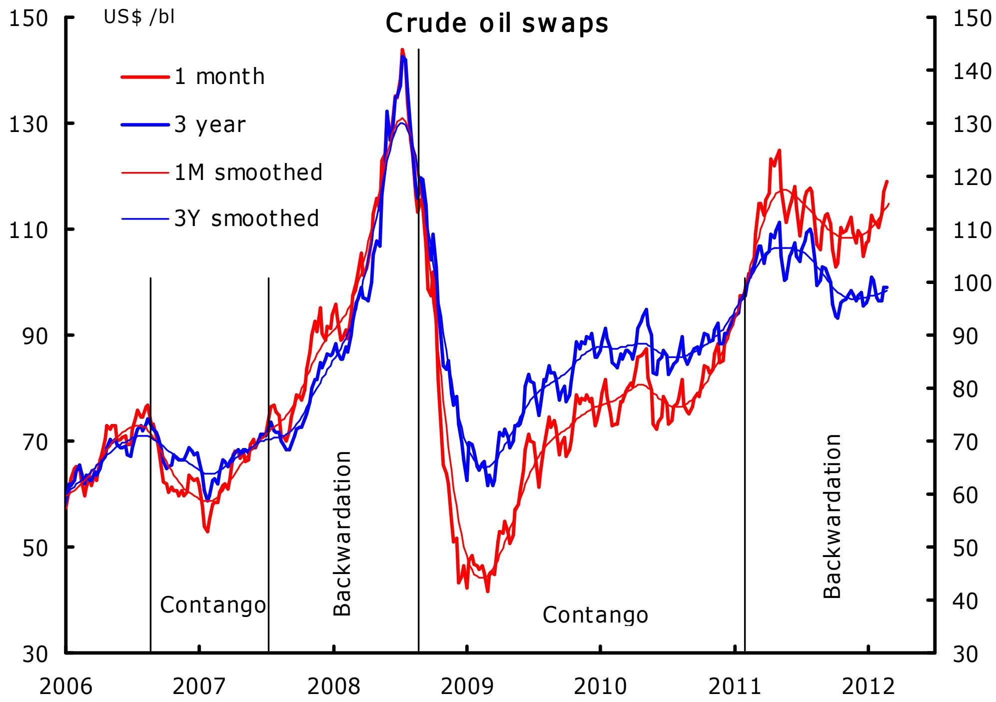
What the markets say

Commodities: metal and short oil rising!

- **Crude oil and metals rising sharply**
  - At odds with the global slowdown, commodity prices end upbeat signal
  - Short dated crude oil is sensitive to tensions between Iran and the West+GCC+Saudi Arabia
  - Overblown fears of a hard landing in China may have left a sour taste in the markets
  - Note that the price of long dated oil is no more declining





Latest data point: 17/02/2012

Source: Datastream AXA IM Research

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What real economic indicators say

Global industrial production <0 in 4Q11

- At the end of 2011, global industrial production contracted significantly for the first time since 1Q 2009
- It was the result of temporary (floods in Thailand) and cyclical factors (recession in Southern Europe)
- Early indicators (Surprise gaps) in the US and Germany are pointing to a rebound in 1Q 2012
- Note that Africa and Middle East were booming

Global industrial production

Boom: 3M % change > mean + 1* SD

Bust: 3M % change < mean – 1*SD

Industrial production	10 2010	11 2010	12 2010	01 2011	02 2011	03 2011	04 2011	05 2011	06 2011	06 2011	08 2011	09 2011	10 2011	11 2011
World	---	**Boom**	**Boom**	**Boom**	---	**Boom**	---	---	---	---	---	---	---	**Bust**
Advanced Economies	---	---	**Boom**	**Boom**	---	---	---	---	---	**Boom**	**Boom**	---	---	**Bust**
United States	---	---	---	Boom	---	---	---	---	---	---	---	---	---	---
Japan	---	---	---	Boom	Boom	Bust	Bust	Bust	Boom	Boom	Boom	---	---	---
Euro Area	---	Boom	Boom	---	---	---	---	---	---	---	---	---	---	Bust
Emerging economies	---	**Boom**	---	**Boom**	---	**Boom**	---	---	---	---	---	---	---	**Bust**
Asia	---	Boom	---	Boom	---	Boom	---	---	Bust	---	---	---	---	Bust
C. and E. Europe	Boom	---	---	Boom	---	---	---	---	---	---	---	---	---	---
Latin America	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Africa and Middle East	---	---	---	---	---	---	Bust	---	---	---	---	---	Boom	Boom

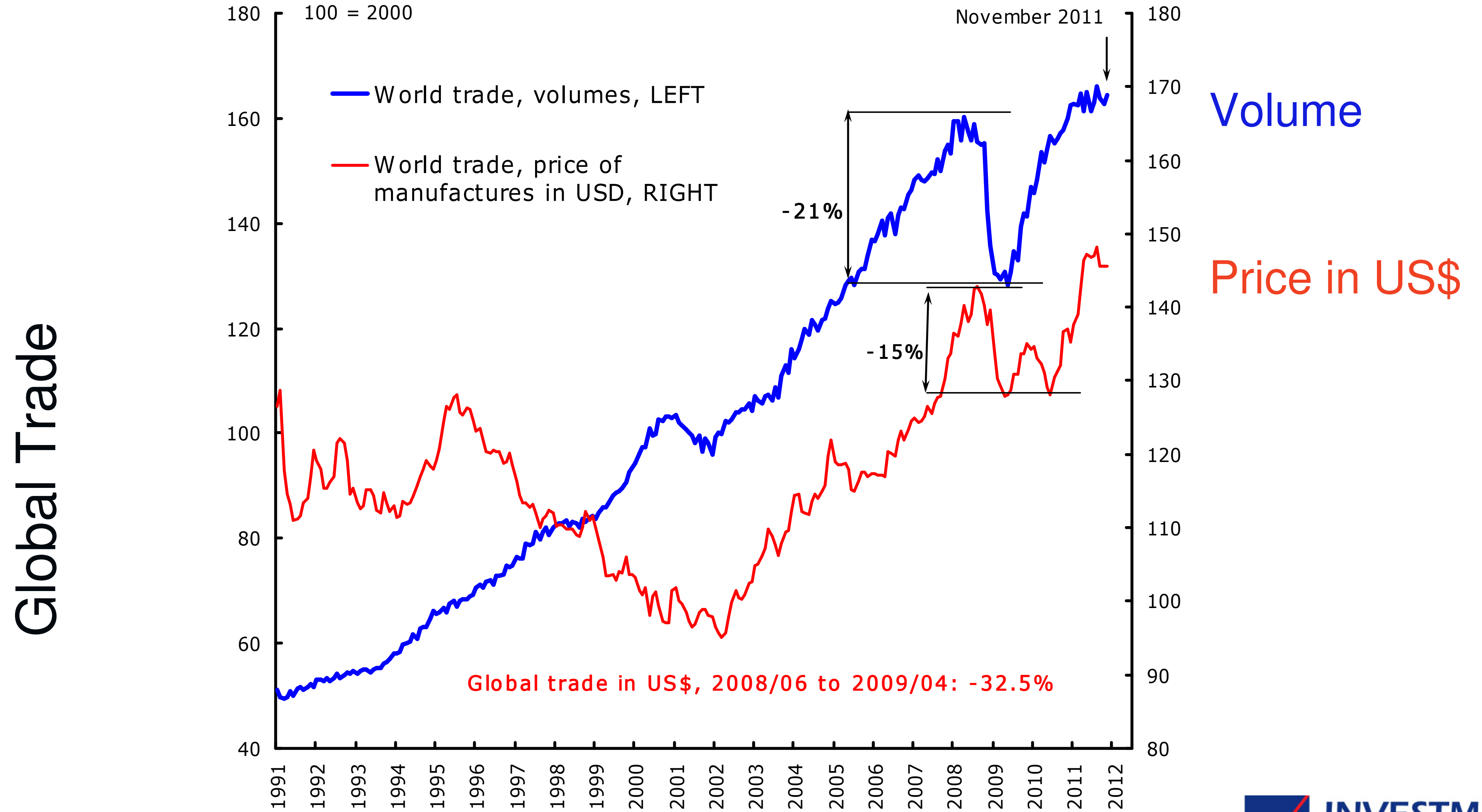
Industrial production	08 2009	09 2009	10 2009	11 2009	12 2009	01 2010	02 2010	03 2010	04 2010	05 2010	06 2010	07 2010	08 2010	09 2010
World	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	---	---	---	---
Advanced Economies	**Boom**	**Boom**	**Boom**	**Boom**	---	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	---	---
United States	---	Boom	Boom	---	---	Boom	Boom	Boom	---	Boom	Boom	Boom	---	---
Japan	Boom	Boom	Boom	Boom	Boom	Boom	Boom	Boom	---	---	---	---	---	---
Euro Area	Boom	Boom	Boom	---	---	Boom	---	Boom	Boom	Boom	Boom	Boom	---	---
Emerging economies	**Boom**	**Boom**	---	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	**Boom**	---	---	**Bust**	---
Asia	Boom	Boom	---	---	Boom	Boom	Boom	Boom	Boom	Boom	---	Bust	Bust	---
C. and E. Europe	---	---	---	Boom	---	---	---	Boom	---	Boom	---	---	---	---
Latin America	Boom	Boom	---	Boom	Boom	---	Boom	Boom	Boom	---	---	---	---	---
Africa and Middle East	---	---	---	---	---	---	---	---	---	---	---	---	---	Bust

Source: CPB, AXA IM Research

What real economic indicators say

Global trade: recovery suspended

- Since the Japanese earthquake, global trade has been seesawing and volatility has increased. Flows have *probably* accelerated in early 2012.



Source: CPB, AXA IM Research

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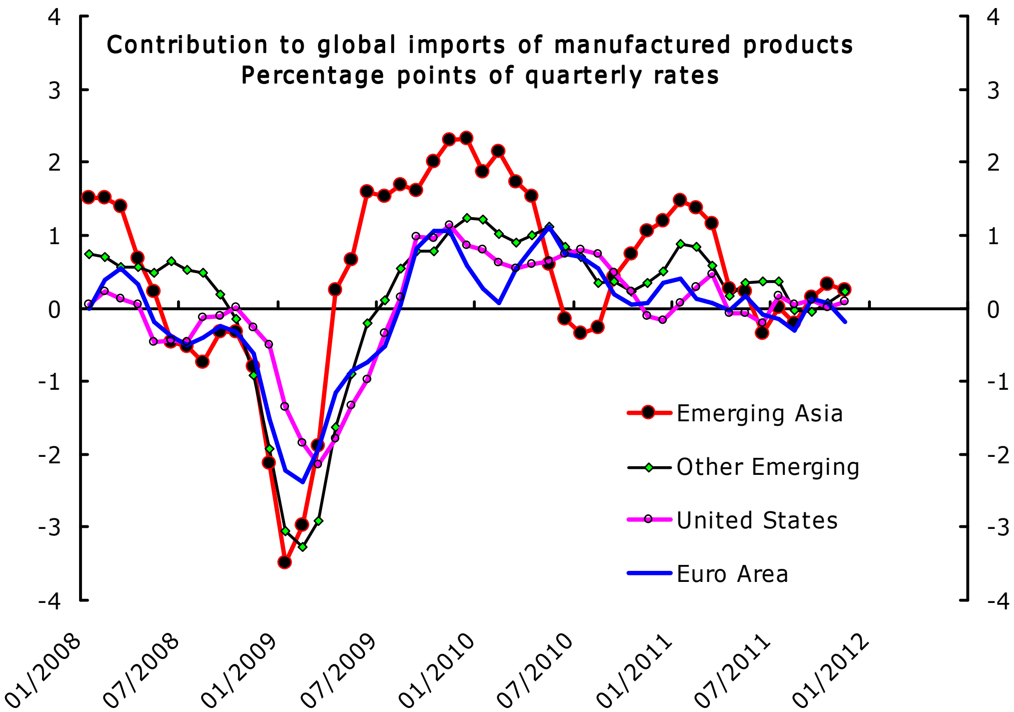
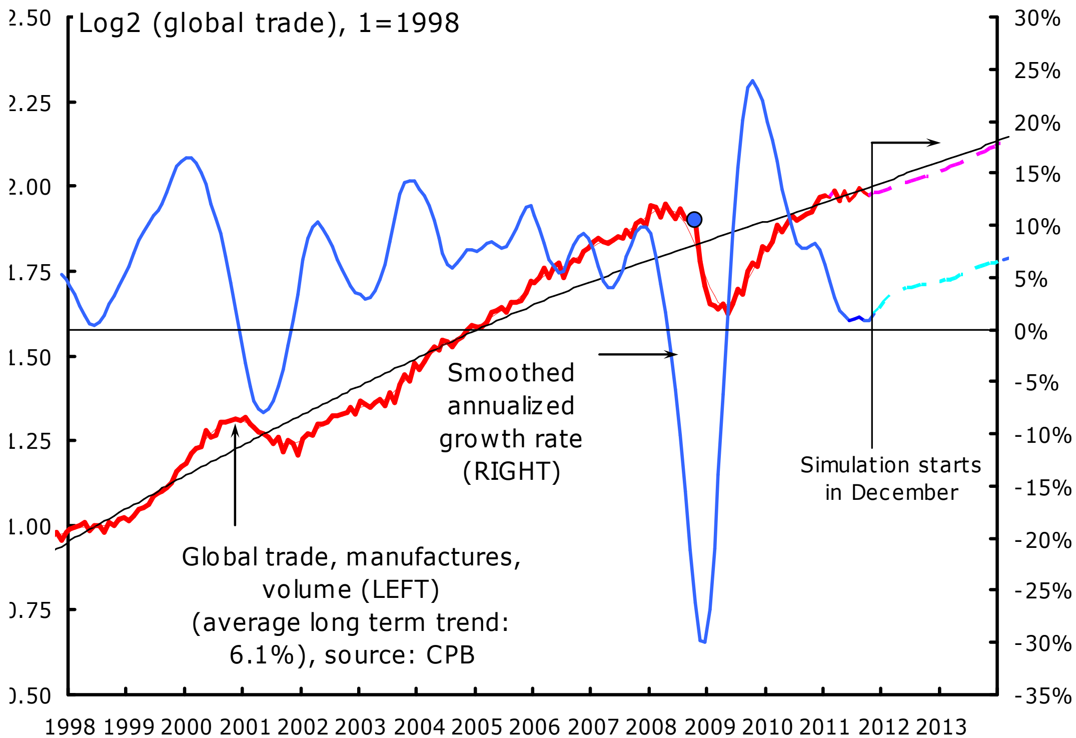
Weak imports across regions and continents

- Asian (i.e. Chinese) imports posted a small rebound in October-November.
- US and €-area imports were flat in 3Q 2011
- Going forward, EU imports are likely to decline, while Asian and US imports should support global trade





Source: CPB, AXA IM Research, latest data: November 2011

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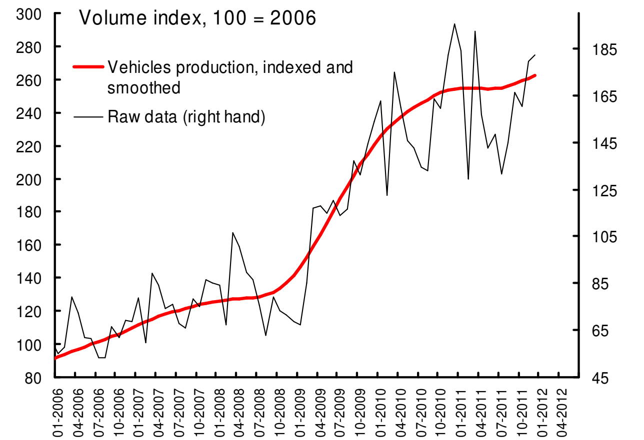
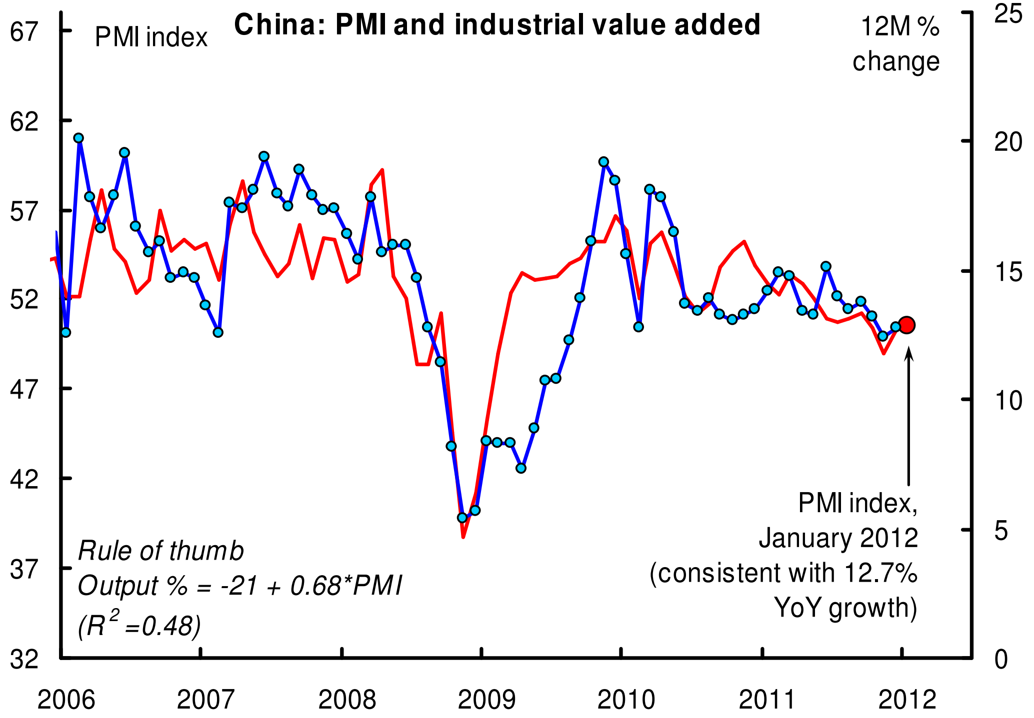
What real economic indicators say

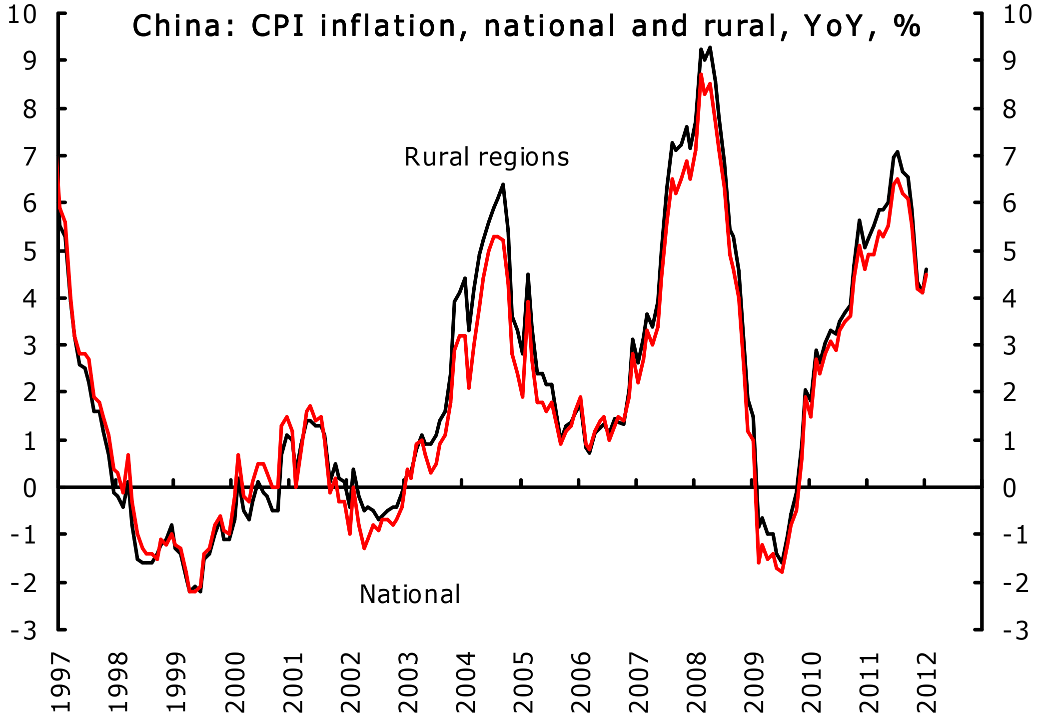
China: perfect soft landing

- CPI inflation ended 2011 at 4.1% in December –target hit. The slight rebound in January is probably due to temporary factors.
- Fears of a hard landing were overblown (PMI breakeven = 32)
- Domestic demand will be the main macro driver in 2012
- GDP growth heading toward 8.5% to 9% in 2012

Car sales: 'boomerang' effect contained →

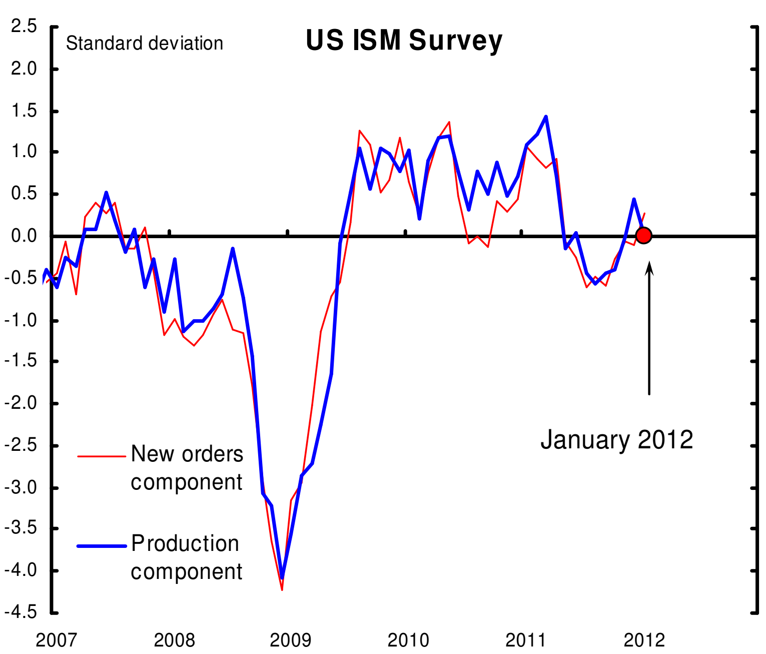


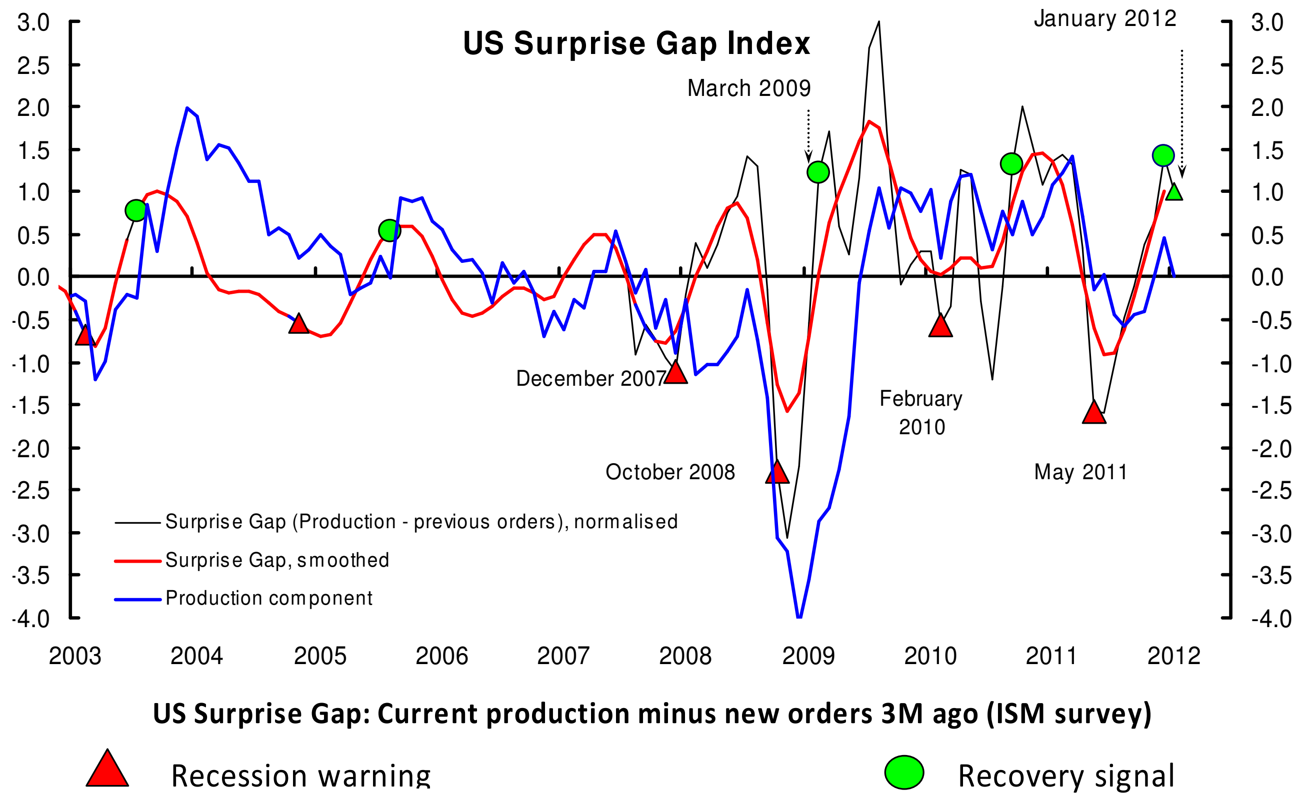




US manufacturing: re-acceleration

- ISM-based Surprise Gap in acceleration mode for the second month in a row
- Corporate America is highly profitable, US exporters are gaining market shares, real disposable income accelerating
- Yet, non recurrent factors may have played a role (post-Thailand flows, end of generous depreciation rules boosting capex, fall in personal savings rate)





US Surprise Gap: Current production minus new orders 3M ago (ISM survey)

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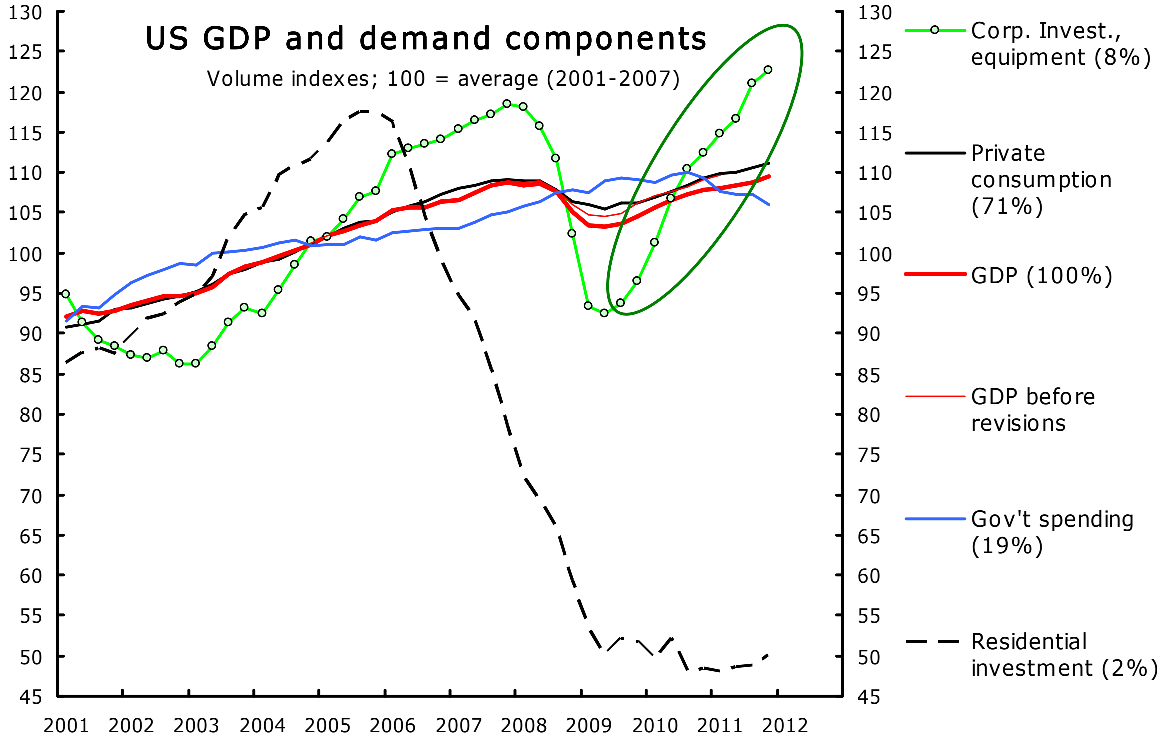
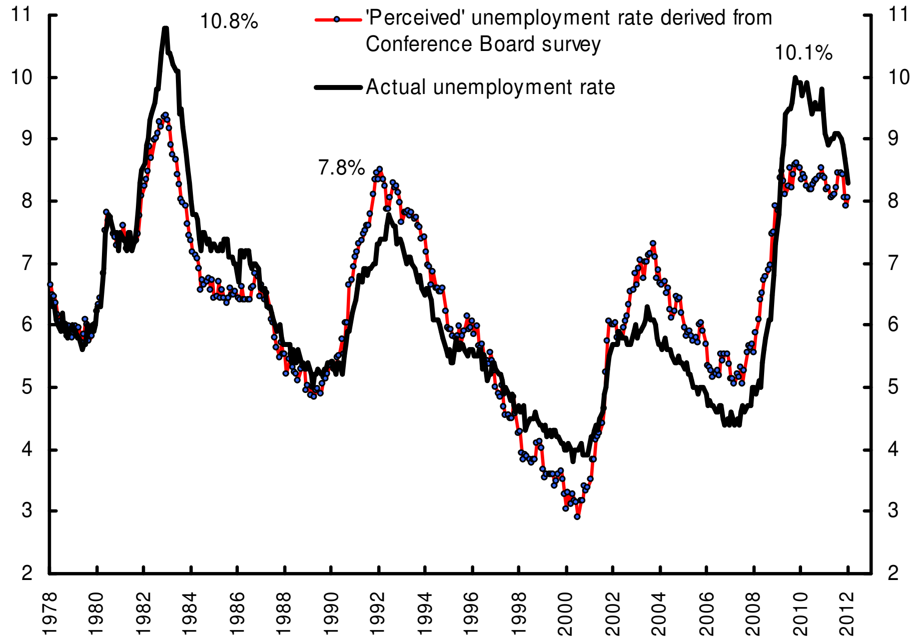
Source: ISM, AXA IM Research

What real economic indicators say

US: Recovery not robust enough for the Fed

- GDP growth averaged 0.8% in 2011 H1 and accelerated to 2.3% in H2, as the impact on manufacturing of the Japanese catastrophe faded. The most robust component of demand –capital spending by non financial companies-- will be tested in the coming months. Bet on 2.0% - 2.5% GDP growth in 2012 H1.
- Ben Bernanke won't take a chance with the recovery. QE3 is an option and the hurdle rate seems low. With unemployment still north of 8%, the Fed's dual mandate is calling for action.



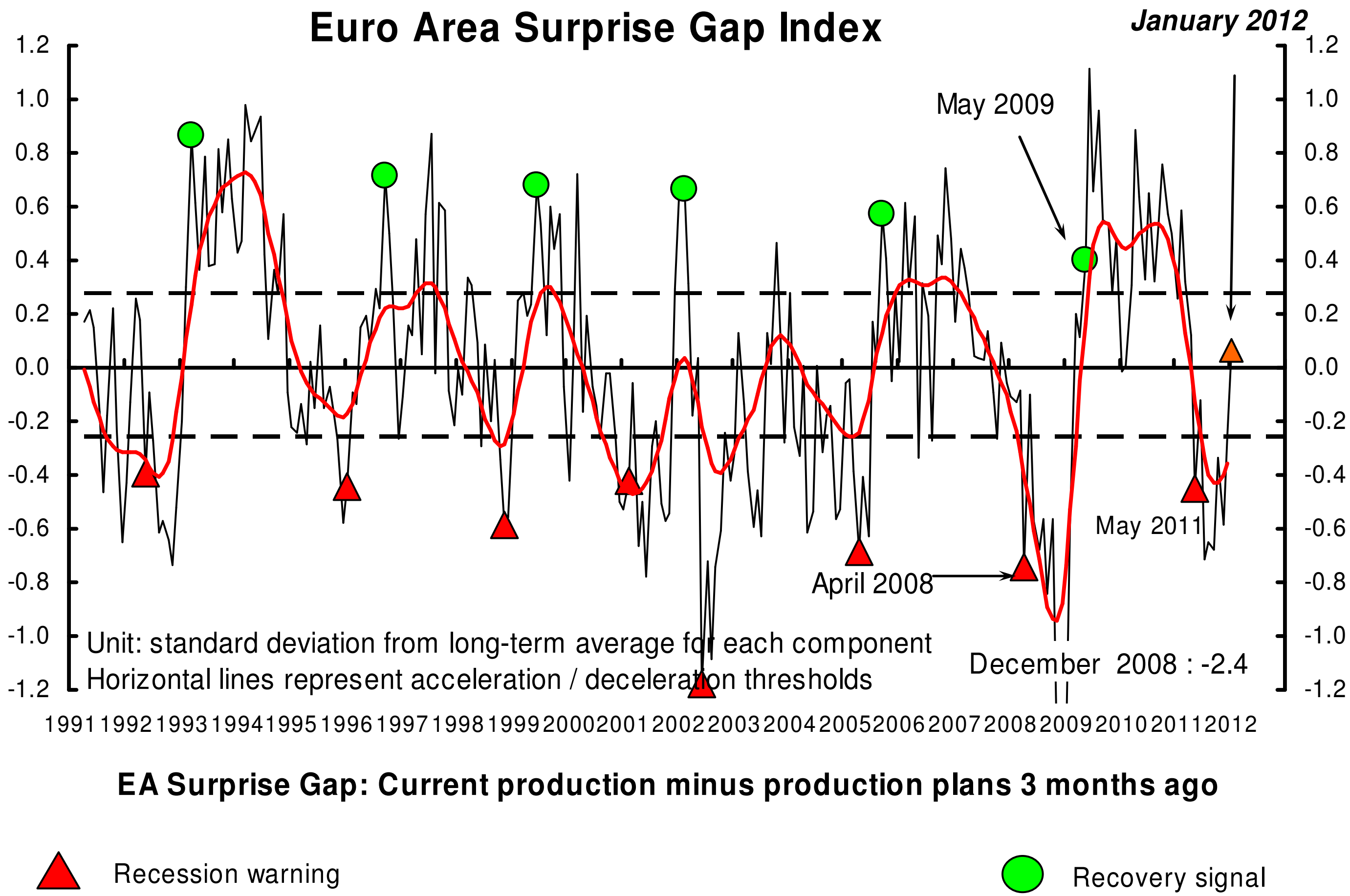


Subjective unemployment = 5.8+ 0.06*(bal of opinion on current jobs)
OLS, 1978-2010, R2=0.8

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

€-area manufacturing: recession easing

- The January surprise gap was up to neutral/positive for the first time since April 2011. The risk of a deep recession is clearly fading.
- Yet, growing divergences (Germany re-accelerating, Italy and Spain contracting, France stagnating) are resulting in a mixed picture for the zone as a whole.



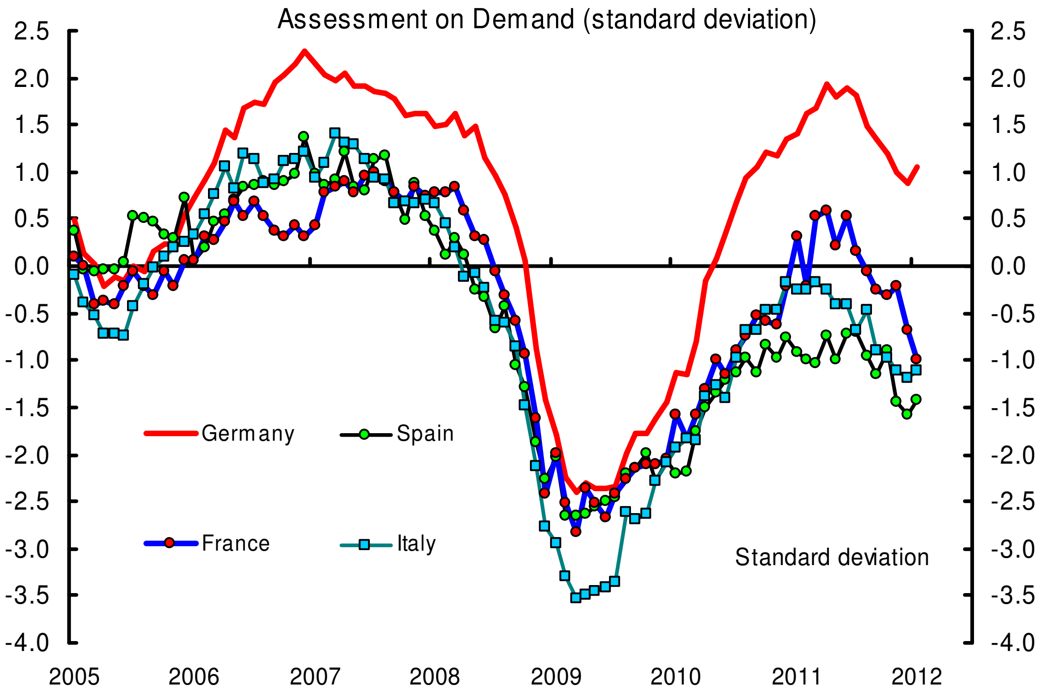
Source: Ifo, Insee, Isae, INE, CBS, BNB, AXA IM Research

What real economic indicators say

€-area manufacturing: Divergences widening

- Small demand uptick reported in Germany, Spain and Italy
- Divergences between Germany and other €-area countries are widening -again

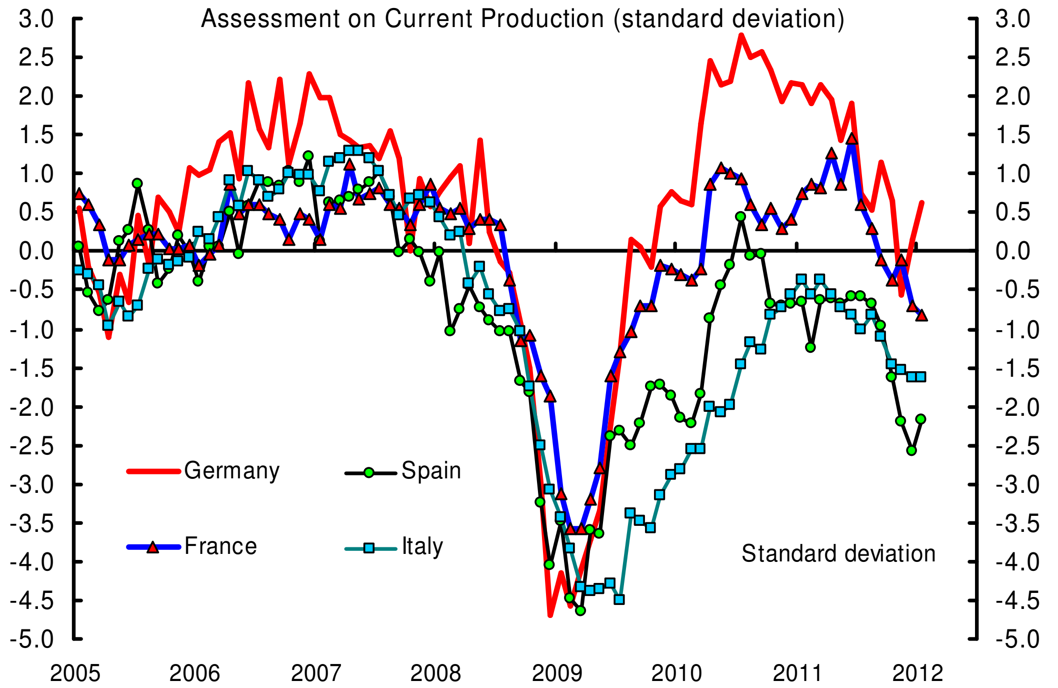
Assessment on demand / orders



Source: Ifo, AXA IM Research

Latest data: January 2012

Assessment on current production



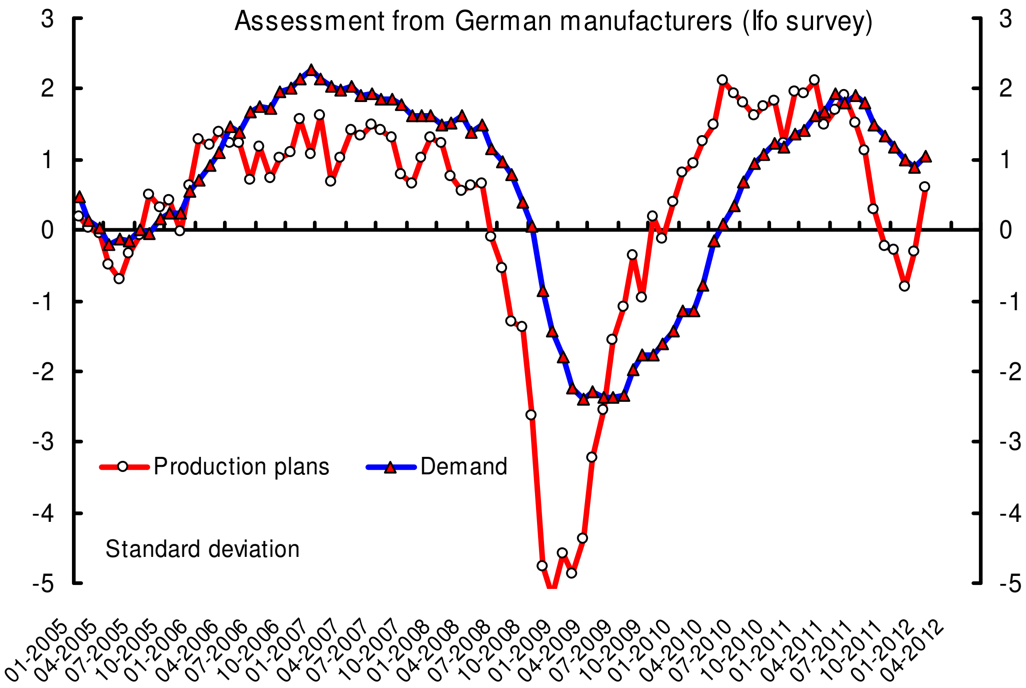
Source: Ifo, Insee, Isae, CBS, BNB, AXA IM Research

What real economic indicators say

Low inventories limit the downside

- German manufacturers are revising their production plans sharply
- €-area-wide, inventories are said slightly ‘more insufficient’ than in December

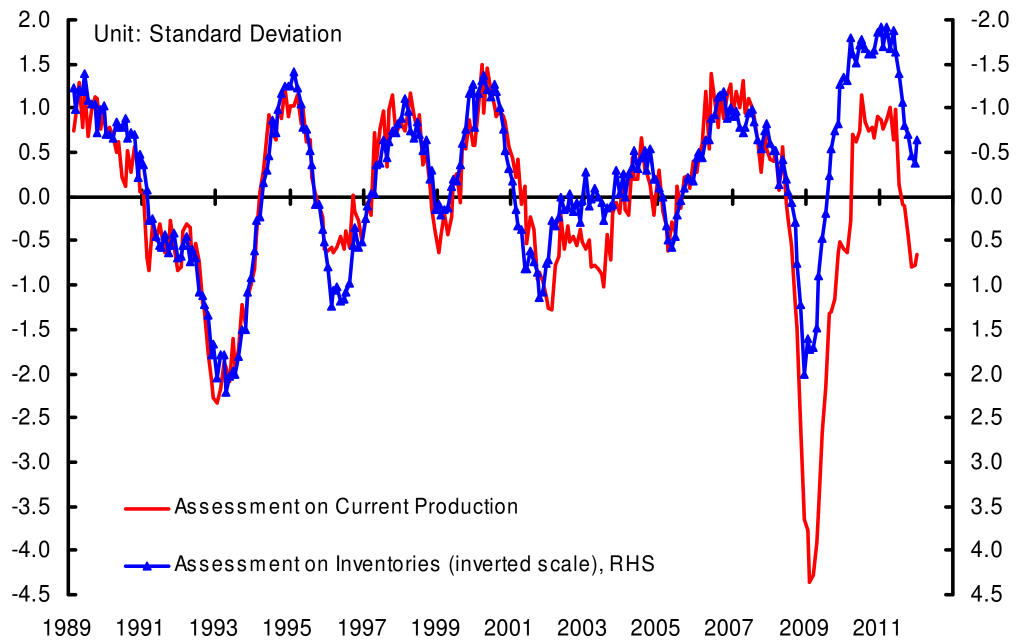
Germany: output plans and demand



Source: Ifo, AXA IM Research

Latest data: January 2012

€-area: production and inventories



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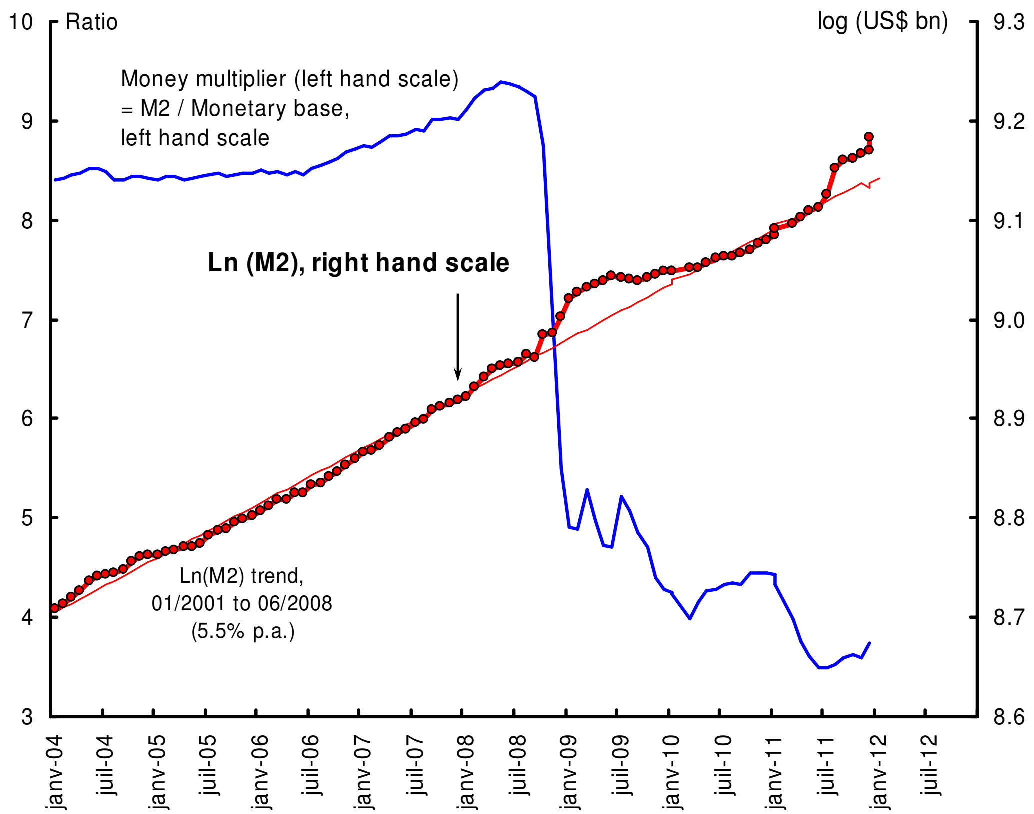
ECB: rationale for QE

1. €-area money supply signals risk of deflation

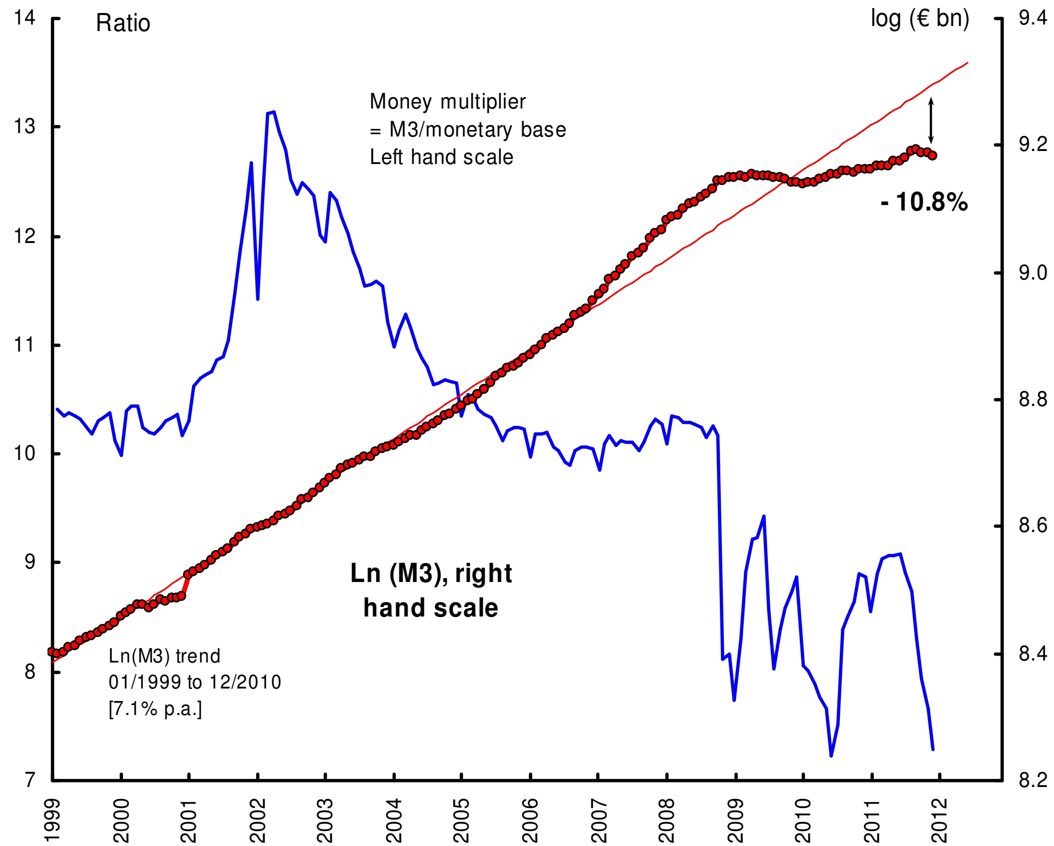
- **Is the Fed more 'monetarist' than the ECB?**
  - US money supply, close to trend until recently has re-accelerated (M2 growth = 6.1% 3M/3M an. in December)
  - In €-area, M3 is contracting (-0.7% 3M/3M ann. in December) and standing 11% below trend
  - **The debate about 'money' should normally rage within the ECB Governing Council**

US: M2 and multiplier (M2/monetary base)



Source: Federal reserve board

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



Source: ECB monthly bulletin

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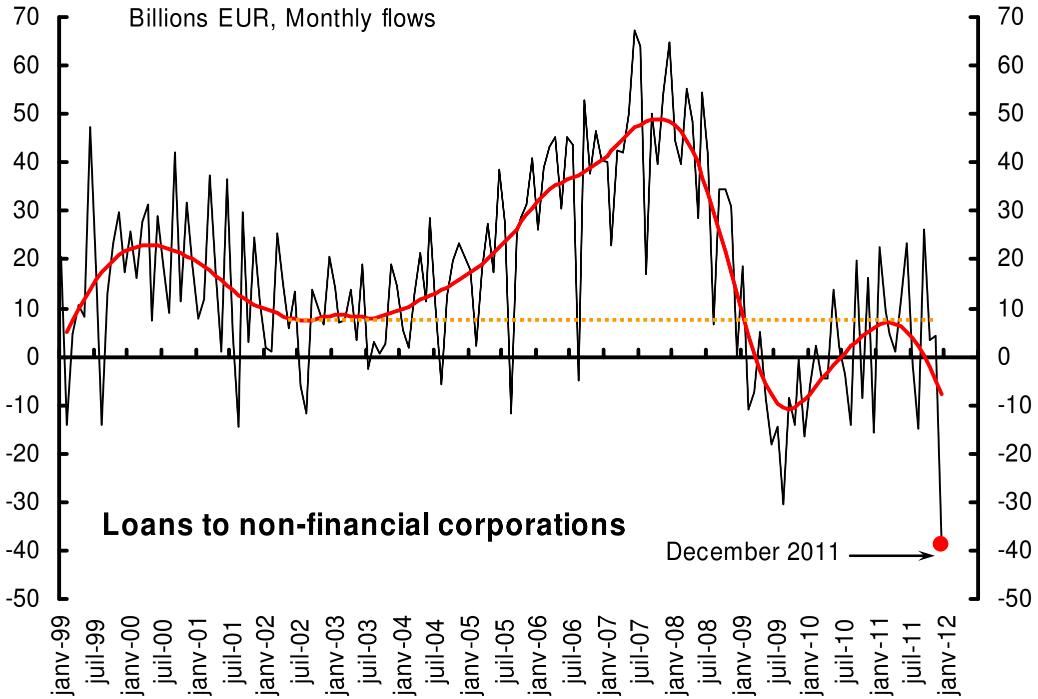
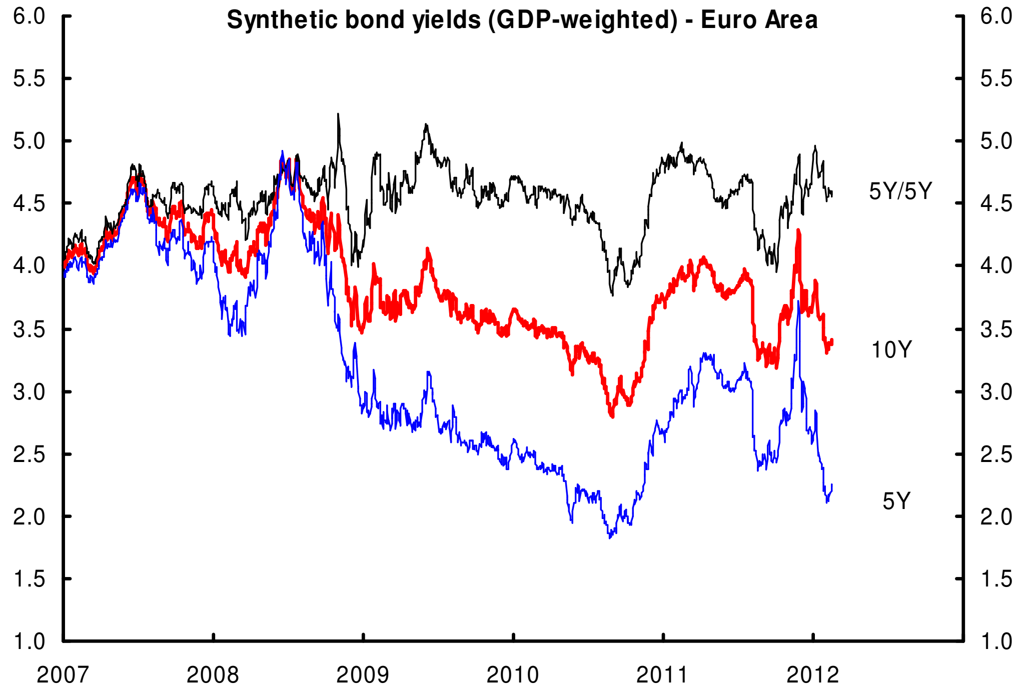
ECB: rationale for QE

2. At the 'zero bound', few options are left

- With short term interest rates close to the zero bound (Eonia at 0.38%), monetary policy action moves from interest rate setting to balance sheet policies
- If liquidity injections (repeated very large scale LTROs) do not suffice to kick start money supply and loans to companies, the ECB will have to revive the SMP ('Securities Market Program' = purchases of covered, then sovereign bonds by the ECB) for pure monetary purposes
- With 10Y average government bond yields still standing 3.4%, vs. 2.5%Y (est. for 4Q 2011) nominal GDP growth, 'pure' QE would make sense





Sources: ECB, AXA IM Research

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Baseline scenario: € thrives

- Markets have embraced our December "€-thrives" scenario much faster than expected, too fast maybe
- Positive surprises:
  * Negotiations on fiscal compact went smoothly and rapidly
  * The ECB strategy (stuffing banks with liquidity) is very effective
  * PM Monti has stuck to his reform agenda without significant opposition
- Yet, there are still many risks factors:
  * A possible disorderly default by Greece, followed by an exit from EMU
  * Opposition to growth-enhancing reforms in Italy may rise
  * The French elections cast doubt on the "fiscal compact"
  * Reforms in France may prove more controversial than in Italy
- And many unsolved problems:
  * Coordination of pro-growth reforms (beyond fiscal policies)
  * Euro-area wide regulation of banks
  * Lack of sovereign 'risk-free' financial asset, without eurobonds

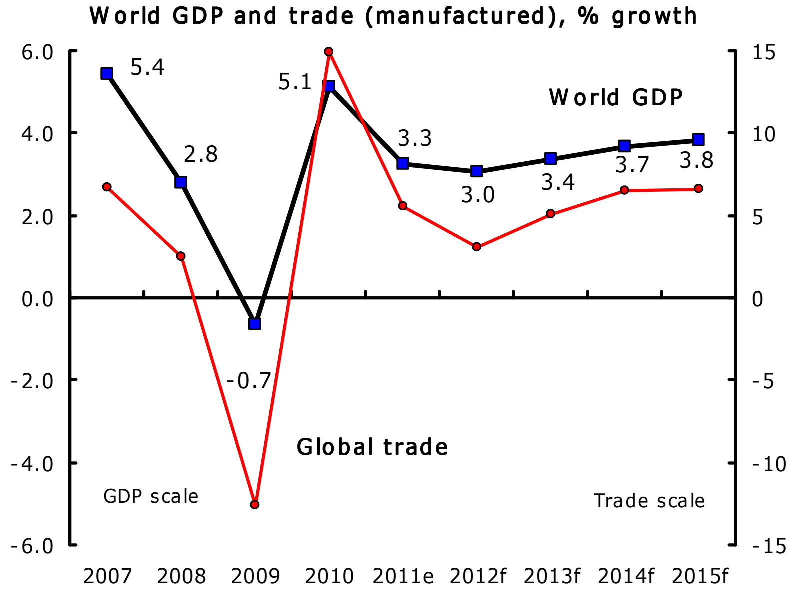
Baseline 2012-15: quantitative scenario (1)

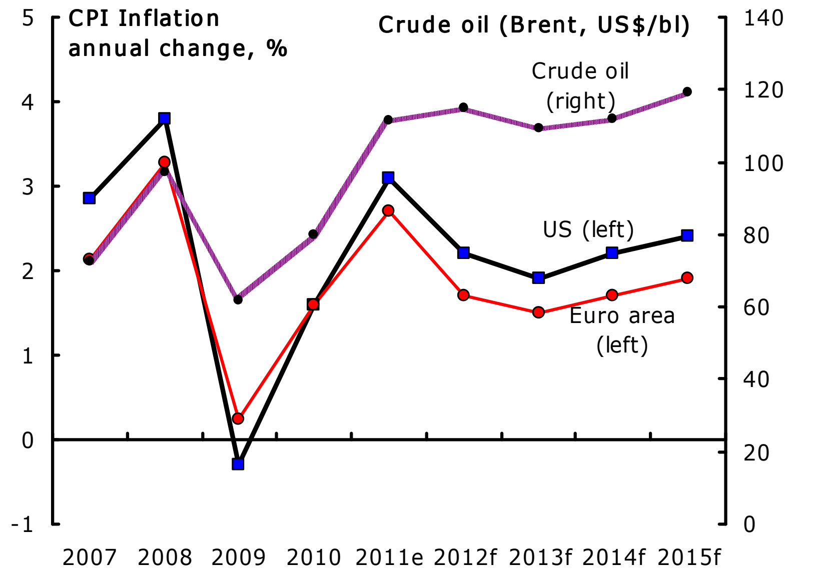
As of: 9-Feb-12

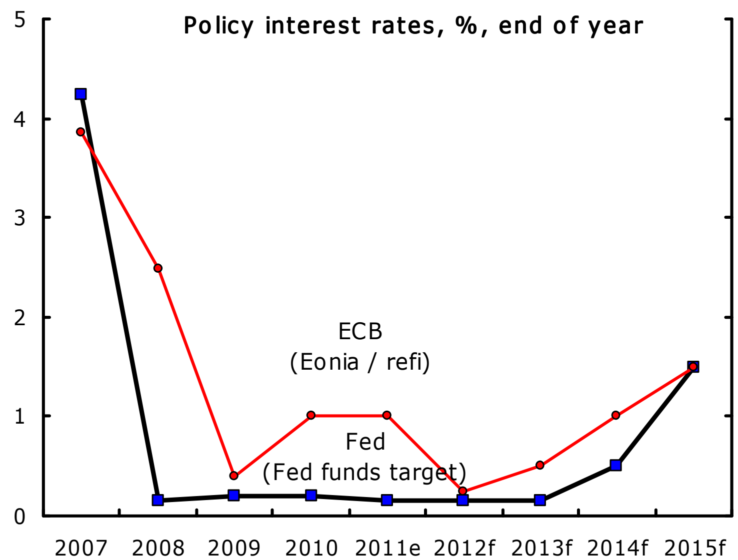
	2007	2008	2009	2010	2011e	2012f	2013f	2014f	2015f
World GDP (PPP)	**5.4**	**2.8**	**-0.7**	**5.1**	**3.3**	**3.0**	**3.4**	**3.7**	**3.8**
World GDP (market FX rate)	4.0	1.5	-2.3	4.0	3.0	2.8	3.1	3.4	3.6
USA	1.9	-0.3	-3.5	3.0	2.0	2.3	2.2	2.6	2.6
Euro area	3.0	0.4	-4.3	1.8	1.5	-0.4	0.8	1.5	1.8
Japan	2.4	-1.2	-6.3	4.0	-0.3	1.9	1.4	1.5	1.5
Asia x-Japan	11.5	7.7	7.2	9.5	6.8	6.4	6.8	7.0	7.5
RoW	5.5	3.4	-1.1	5.4	3.3	3.2	3.5	3.7	3.7
Global trade (manuf. goods)	6.7	2.5	-12.6	14.9	5.6	3.1	5.1	6.5	6.6
Inflation									
US	2.9	3.8	-0.3	1.6	3.1	2.2	1.9	2.2	2.4
Euro area	2.1	3.3	0.3	1.6	2.7	1.7	1.5	1.7	1.9
Japan	0.0	1.4	-1.1	-0.7	-0.4	-0.6	-0.1	0.3	0.3
Crude oil (Brent), US$ / bbl	72.6	97.3	61.7	79.9	112	115	109	112	119
% change (0.5*$ + 0.5*€)	9	39	-39	35	40	6	-5.7	1.3	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	0.50	1.25	2.50
10Y Treasuries yield	4.1	2.1	3.8	3.3	1.9	2.3	2.8	4.0	4.6
Euro area									
EONIA / refi	3.86	2.49	0.40	1.0	1.00	0.25	0.75	1.50	2.25
10Y Bund yield	4.3	3.0	3.3	2.9	1.8	2.1	2.4	3.0	3.8
€1 = ...US$	1.46	1.35	1.46	1.34	1.33	1.25	1.27	1.30	1.30
Japan									
Overnight call rate	0.47	0.46	0.11	0.0	0.10	0.10	0.10	0.10	0.40
10Y JGB	1.55	1.21	1.34	1.0	1.0	1.2	1.4	1.5	1.8
US$1 = ... JPY	110	95	87	85	78	85	85	85	90
€1= ... JPY	161	128	127	114	104	106	108	111	117
UK									
BoE base rate	5.5	2.0	0.5	0.5	0.50	0.75	1.75	2.50	2.90
10Y gilt	4.7	4.6	3.1	3.0	2.1	2.6	3.2	4.0	4.2
€1= ... GBP	0.73	0.95	0.89	0.85	0.86	0.86	0.87	0.90	0.90

Source: IMF, Datastream, AXA IM Research

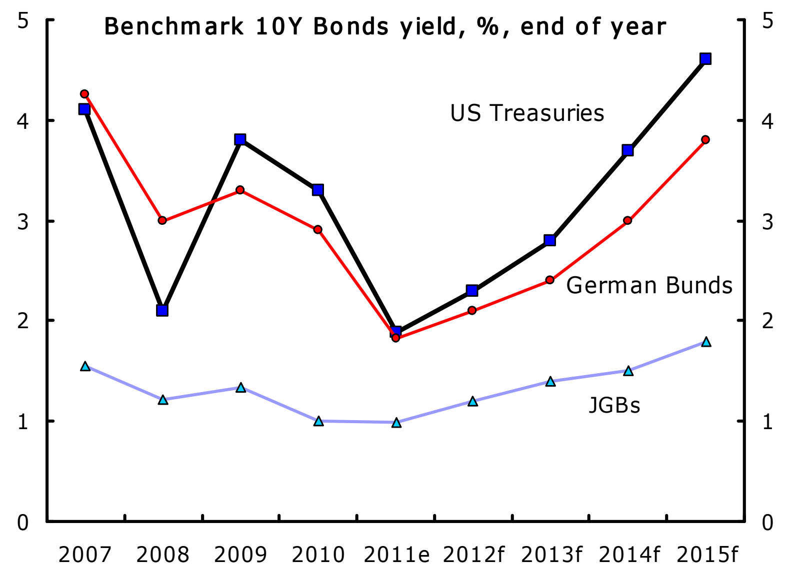
Baseline 2012-15: quantitative scenario (2)





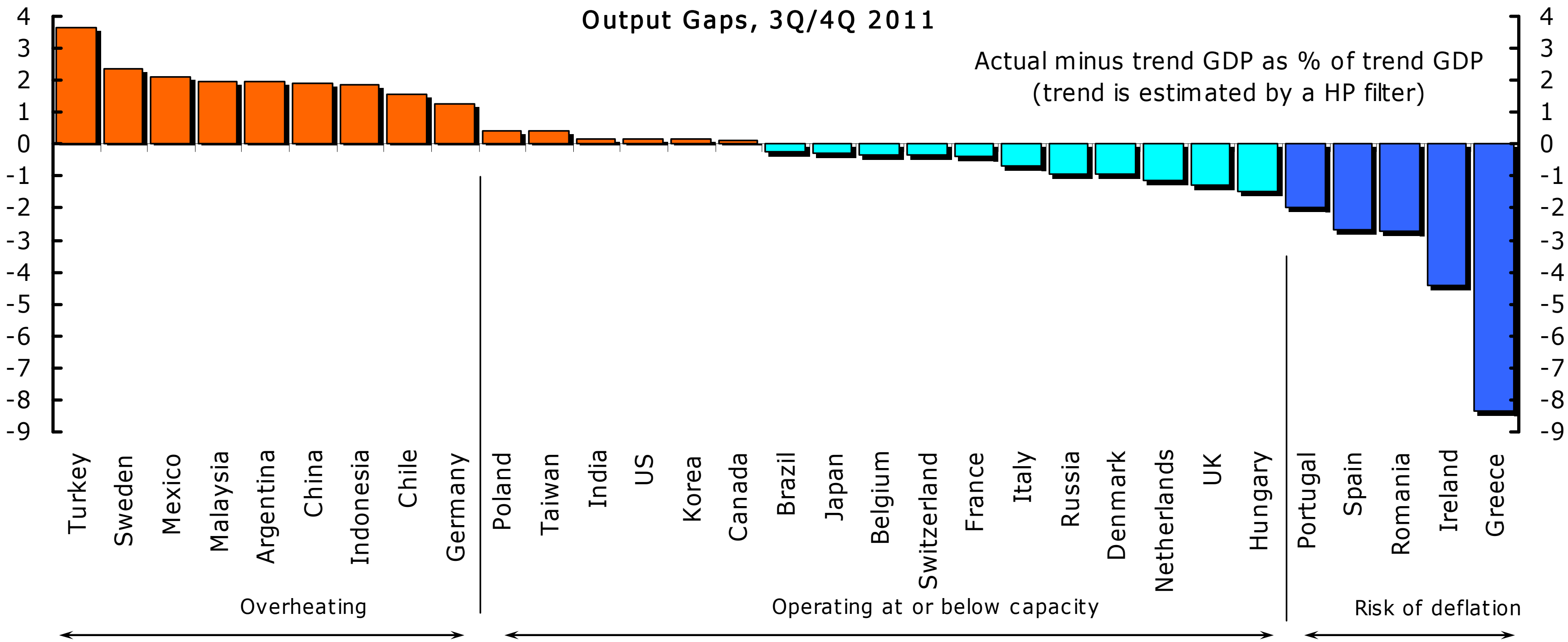


Source: IMF, Datastream, AXA IM Research



Inflation worries will come back

- In 3Q/4Q 2011, most emerging economies were operating above trend (output gaps >0)
- Sweden and Germany were also overheating
- Since emerging economies are importing monetary policy from the US and are reluctant to fight inflation, global inflation is a structural risk
- 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

Main case scenario

Currencies: JPY weakened by BoJ action

- In nominal terms (highly watched but <u>misleading</u>):
- Currencies trading <u>above</u> 99-09

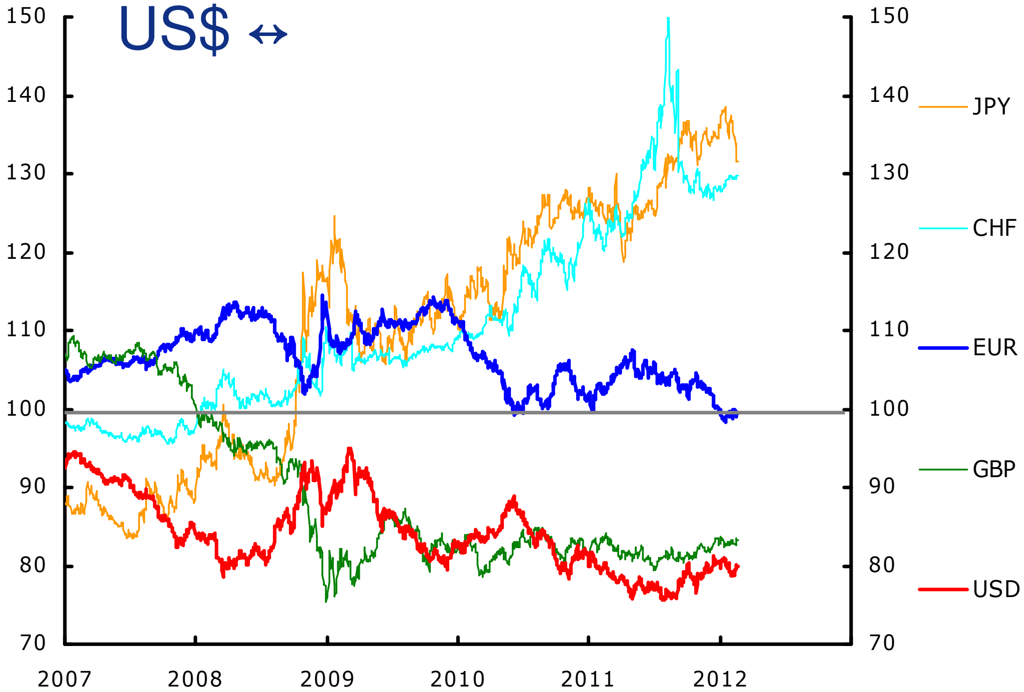
Nominal TW rate: Deviation from average(1999-2009)					
As of:	UK £	Euro	JP Yen	Swiss franc	US $
17/02/2012	**-16.8%**	**-0.5%**	**31.6%**	**29.7%**	**-20.2%**

- Still widely below average: GBP ↔, US$ ↔

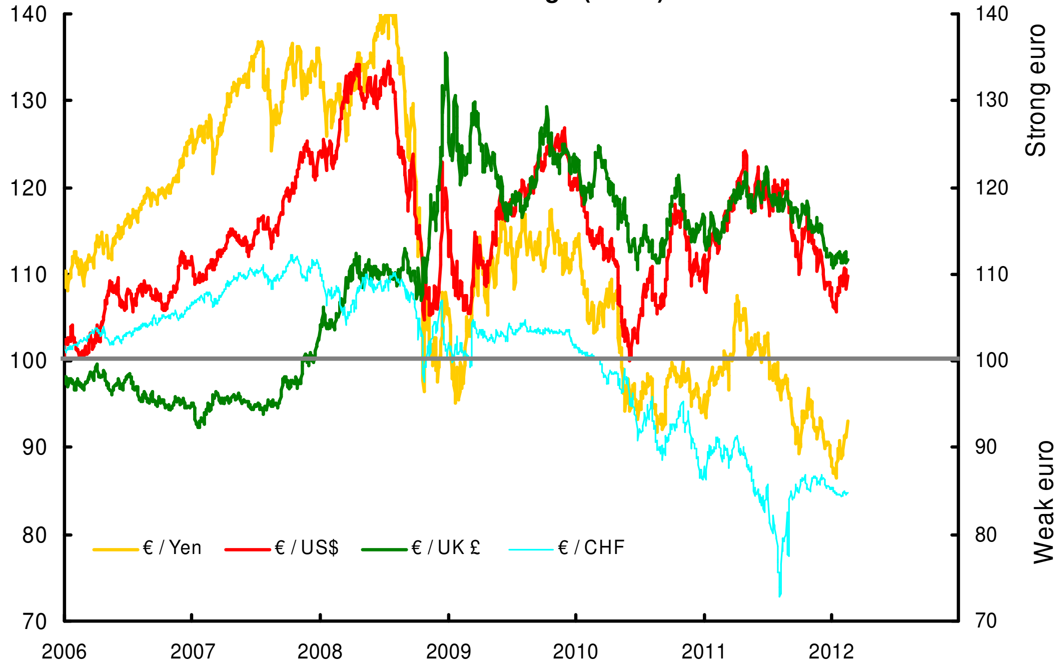
- In real terms, US$ still undervalued but rising,
- US$ 18% undervalued /JPY and still 9% /€
- € 11% undervalued /JPY, 12% overvalued /GBP
- EUR/CHF now frozen by threat of BNS action

Real bilateral rate: Deviation from average(1999-2009)				
As of:	€ / Yen	€ / US$	€ / UK £	€ / CHF
03/02/2012	***-10.7%***	***9.7%***	***11.8%***	***-15.5%***

Nominal trade-weighted exchange rate, 100 = average (99-09)



Euro bilateral exchange rate, adjusted for inflation trends
100 = average (99-09)



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

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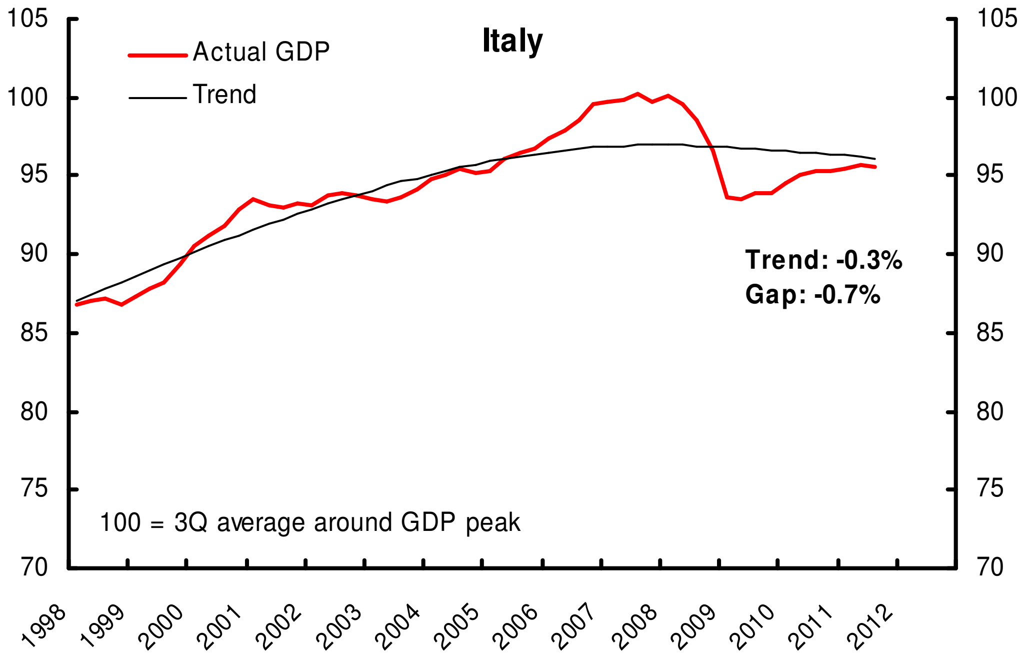
The euro crisis in depth

Italy is now the epicenter of the crisis

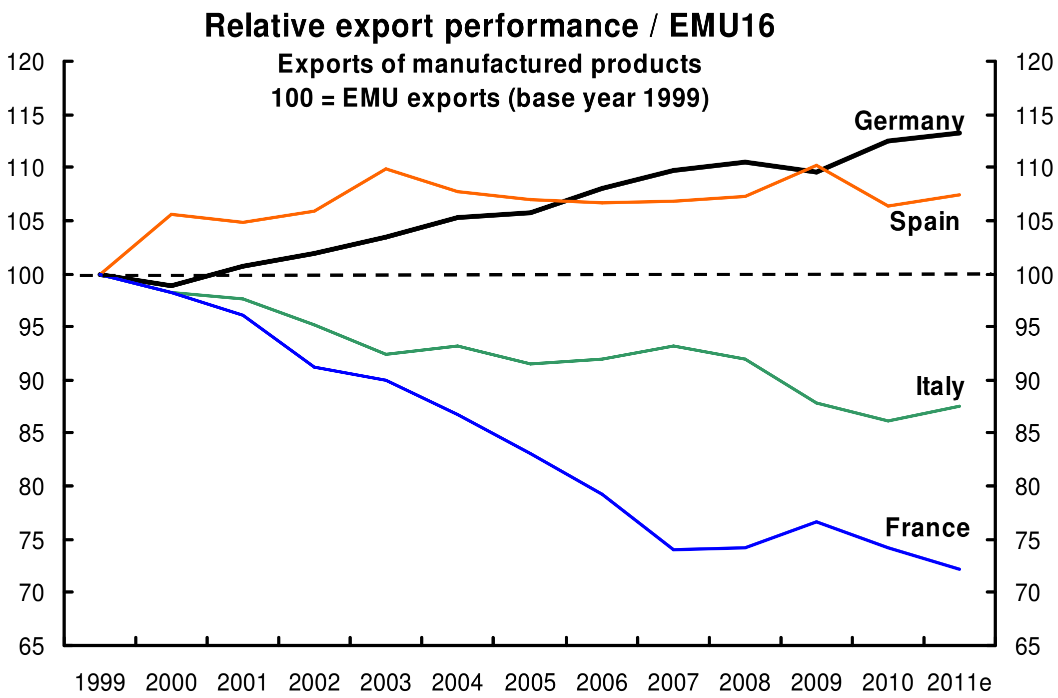
- Italy's households and companies are lowly leveraged (gross debt = 128% of GDP vs. 126% for Germany and 204% for the UK). Yet, the private sector is reluctant to pay higher taxes, as they result into a North-South tax transfer.
- Italy's potential growth has dangerously weakened since 2008 (close to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

Italy: potential growth close to zero



Source: Istat, AXA IM Research, HP filter, λ = 10,000 Latest data: 3Q 2011

Italian exporters have lost ground



Source: Eurostat, AXA IM Research

Italy: why it can make it, why it matters

- August 2011 caused an electroshock in the Italian public opinion: Berlusconi rating fell from 35% in June to 20% before he resigned
- PM Mario Monti started his tenure with unrivalled popularity (84%) still at 60% after another pension reform and a new layer of fiscal austerity
- Monti knows that his country's woes are not mostly current fiscal policies, but rigidities choking off economic growth
- Rigidity #1: labour market (two-tier, article 18 of labor law)
- Rigidity #2: closed shop professions
- Rigidities = incentive for illegal economy

- PM Monti has to spend his political capital on reforms. If he burns it too quickly without being rewarded by lower funding costs, the political pendulum will switch against reforms and, eventually, against the euro.
- **If facing the choice between debt restructuring and euro exit, Italy will choose the latter. A currency re-domination would not be a credit event in the case of Italy, a G7 country.**

€-area imbalances: twin deficits watch (1)

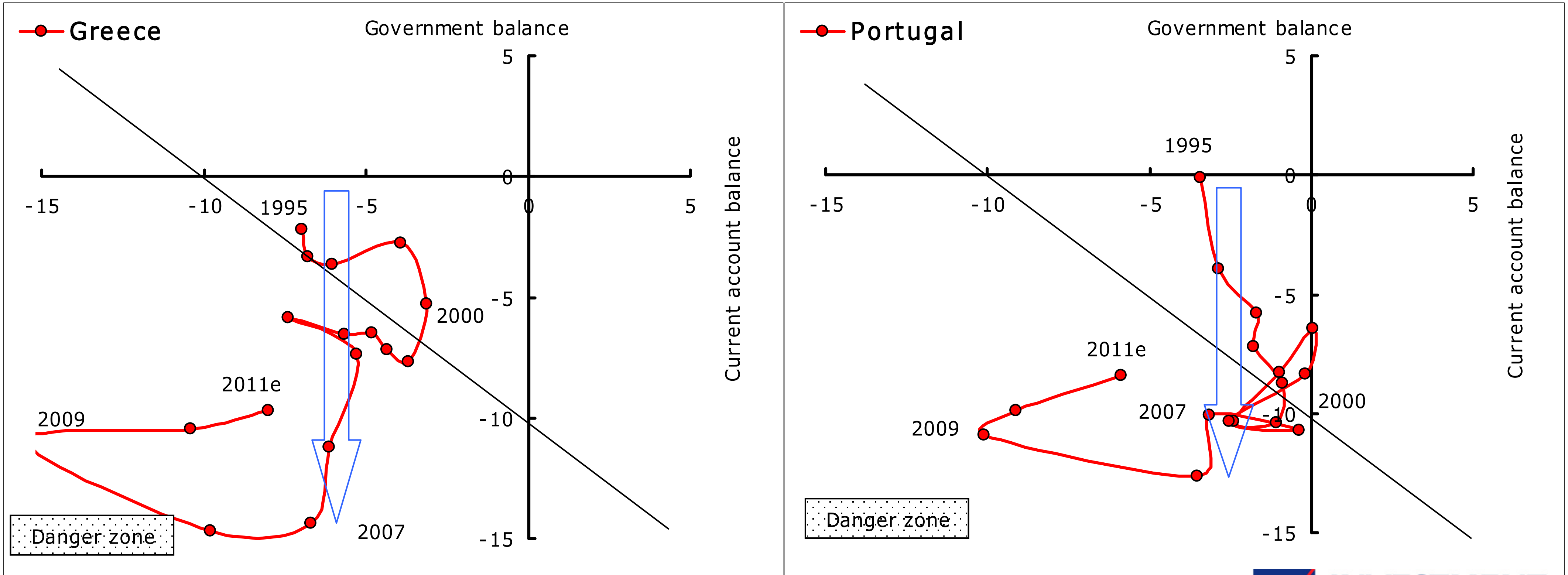
Greece & Portugal: excess of government spending

- Twin deficits dynamics are revealing the root of a country's macro-imbalance
- Because of the rules of the monetary union, government + C/A deficits >> 10% of GDP is risky

C/A deficit caused by excessive public spending financed by gov't debt

- Both countries are still deep in the danger zone

C/A deficit caused by excessive private spending financed by credit bubble



Source: IMF, AXA IM Research

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

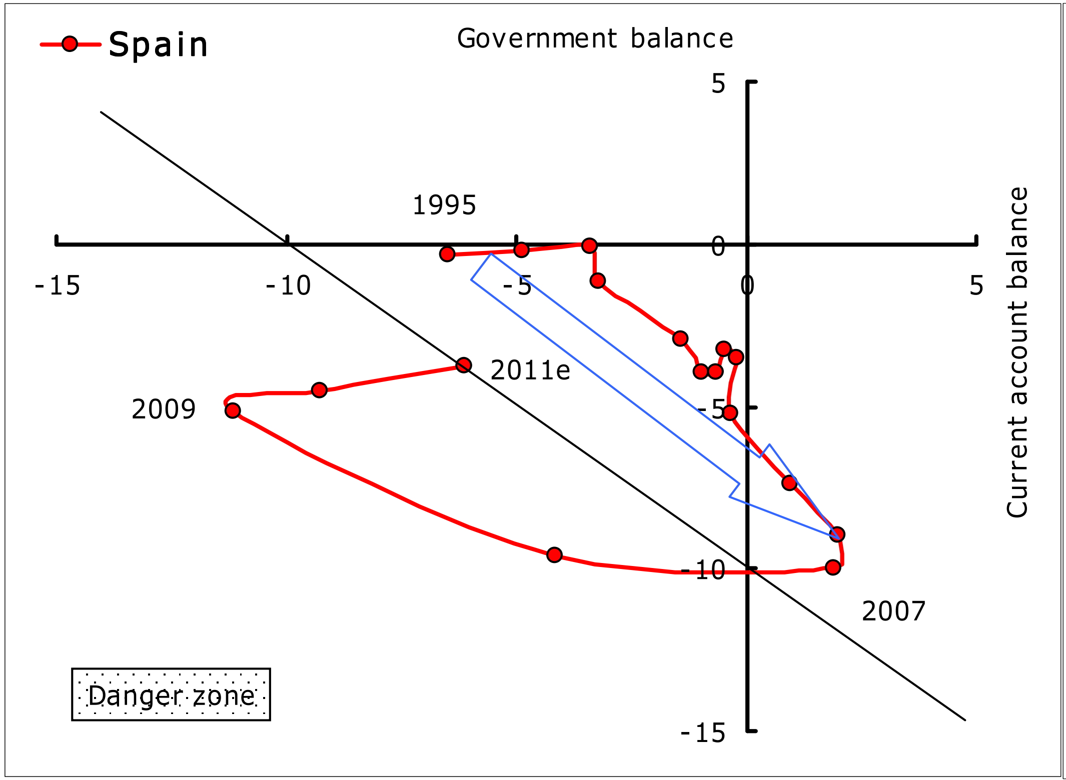
€-area imbalances: twin deficits watch (2)

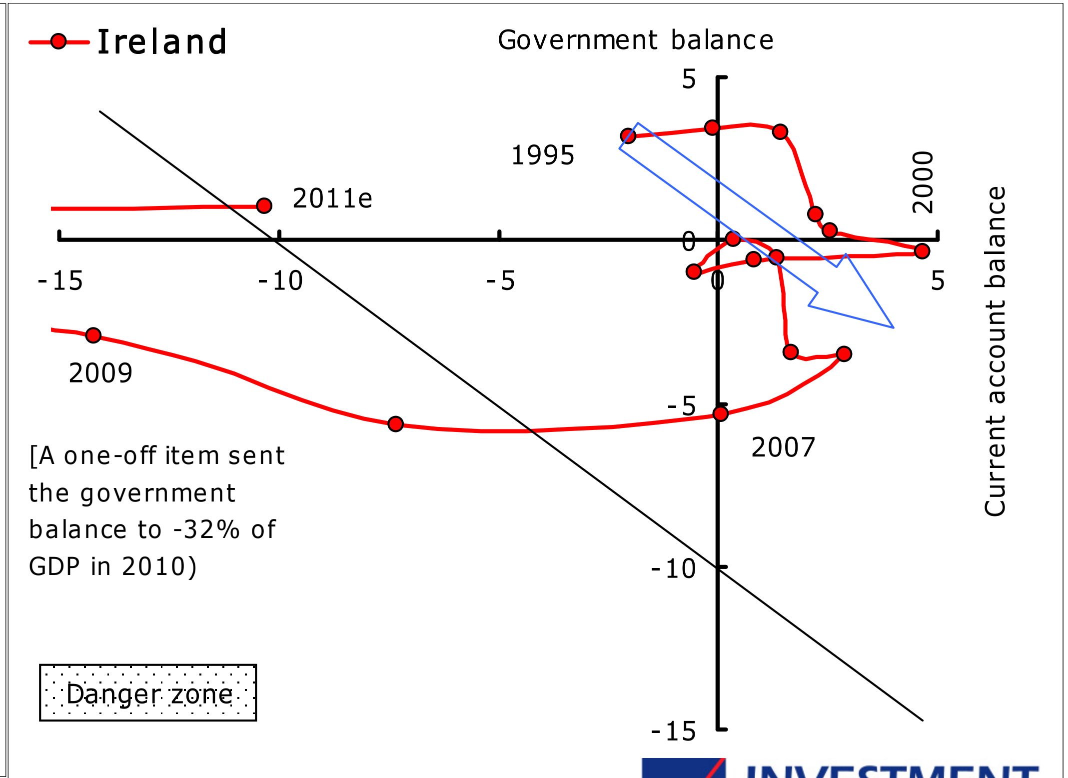
Spain & Ireland: excess of private spending

- Twin deficits dynamics are revealing the root of a country's macro-imbalance
- Because of the rules of the monetary union, government + C/A deficits >> 10% of GDP is risky

C/A deficit caused by excessive public spending financed by gov't debt

C/A deficit caused by excessive private spending financed by credit bubble





Source: IMF, AXA IM Research

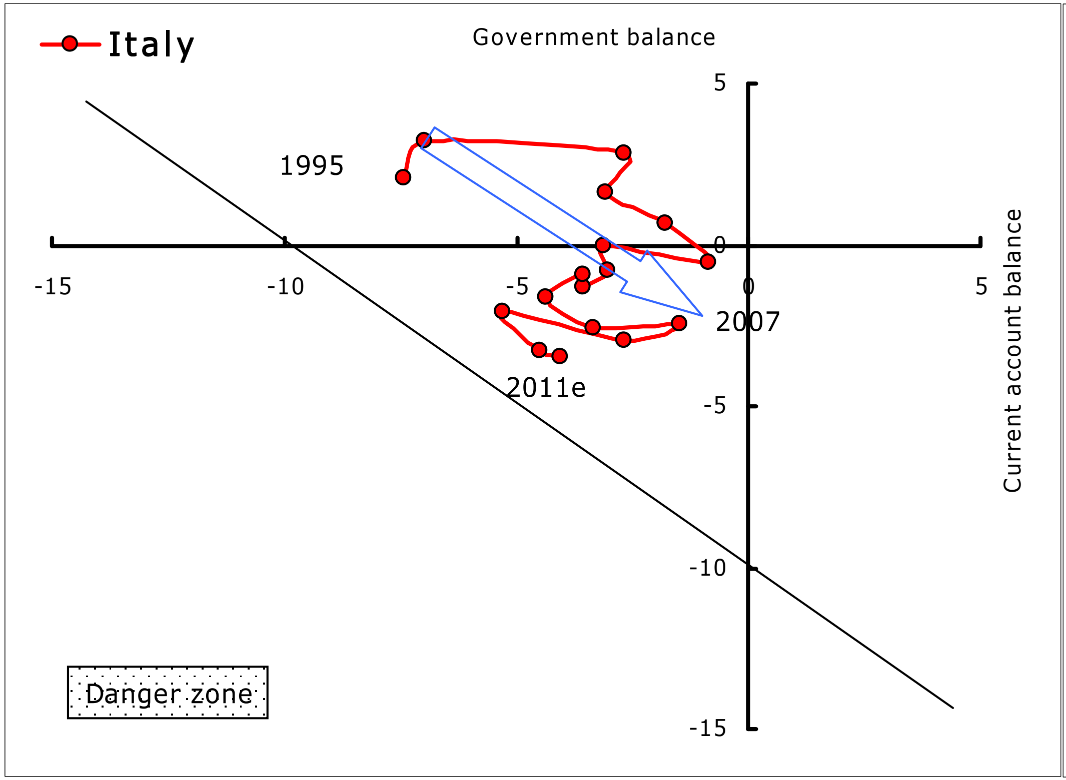
€-area imbalances: twin deficits watch (3)

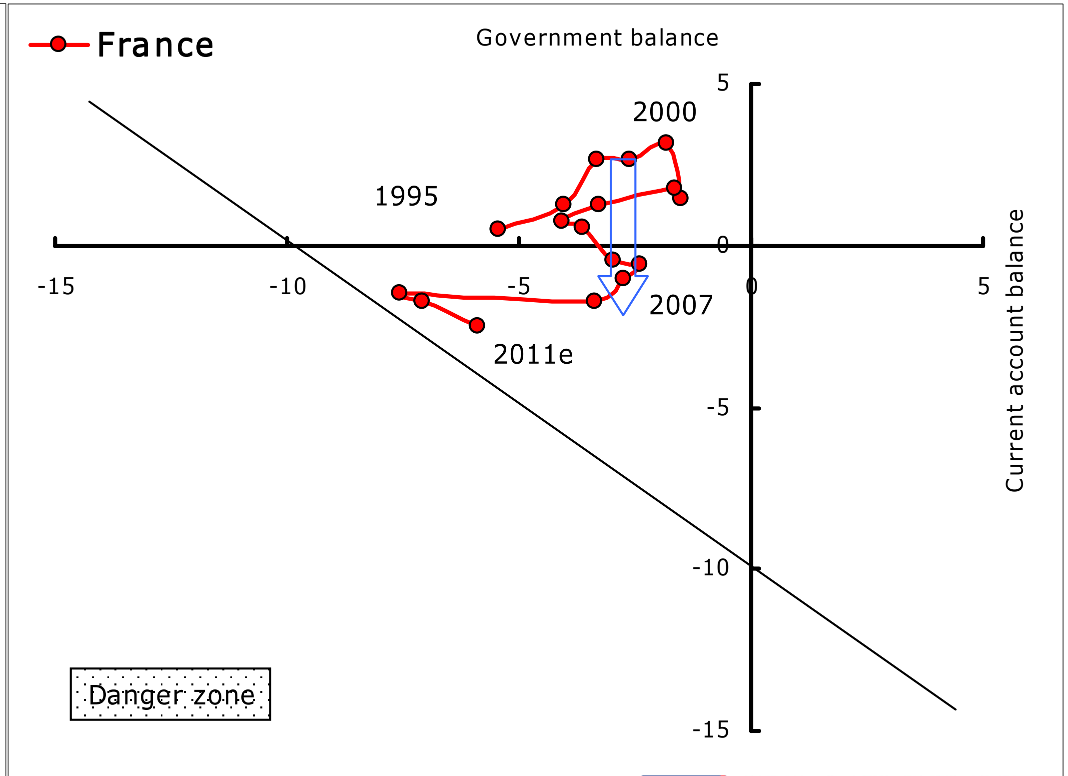
Italy and France: imbalances manageable, so far

- Twin deficits dynamics are revealing the root of a country's macro-imbalance
- Because of the rules of the monetary union, government + C/A deficits >> 10% of GDP is risky

C/A deficit caused by excessive public spending

C/A deficit caused by excessive private spending





Source: IMF, AXA IM Research

Alternative scenario: "Eurogeddon"

- Stage 1: PM Monti burns his political capital without being rewarded. A new cabinet re-issues the Lira and impose capital controls
- Stage 2: Contagion immediately hits Spain, which does not get enough support and follows Italy. This is a credit event.
- Stage 3: Doubting that France is competitive enough after 3 devaluations at its borders (UK, Italy and Spain), markets shun its sovereign debt. Resistance is futile because political union with Germany is not feasible
- Stage 4: Germany considers that a micro-euro does not make sense and re-issues the DM, terminating the euro.

The EU banking system partially melts down. A deep recession follows (-8% for EU GDP), transmitted to the US via financial links (-5% for US GDP). This turn into a global depression. Commodity prices plummet (crude oil @ $25/bl), Asia recovers before other regions, but globalization does not survive. Deeply deflationist initially, the "eurogeddon" scenario would quickly turn stagflationist.

► This scenario sounds apocalyptic, 1931-type. Yet and even if policy makers in the EU and US are aware of it, this is not a sufficient condition to prevent it, as Barbara Tuchman illustrated in her classical 'The March of Folly'

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 behaviour must be guaranteed by the European Court of Justice
- The political compromise is all about the extent of the loss of fiscal sovereignty

- The good news is: there is a real willingness to find a compromise, as exemplified by the 9th December agreement.

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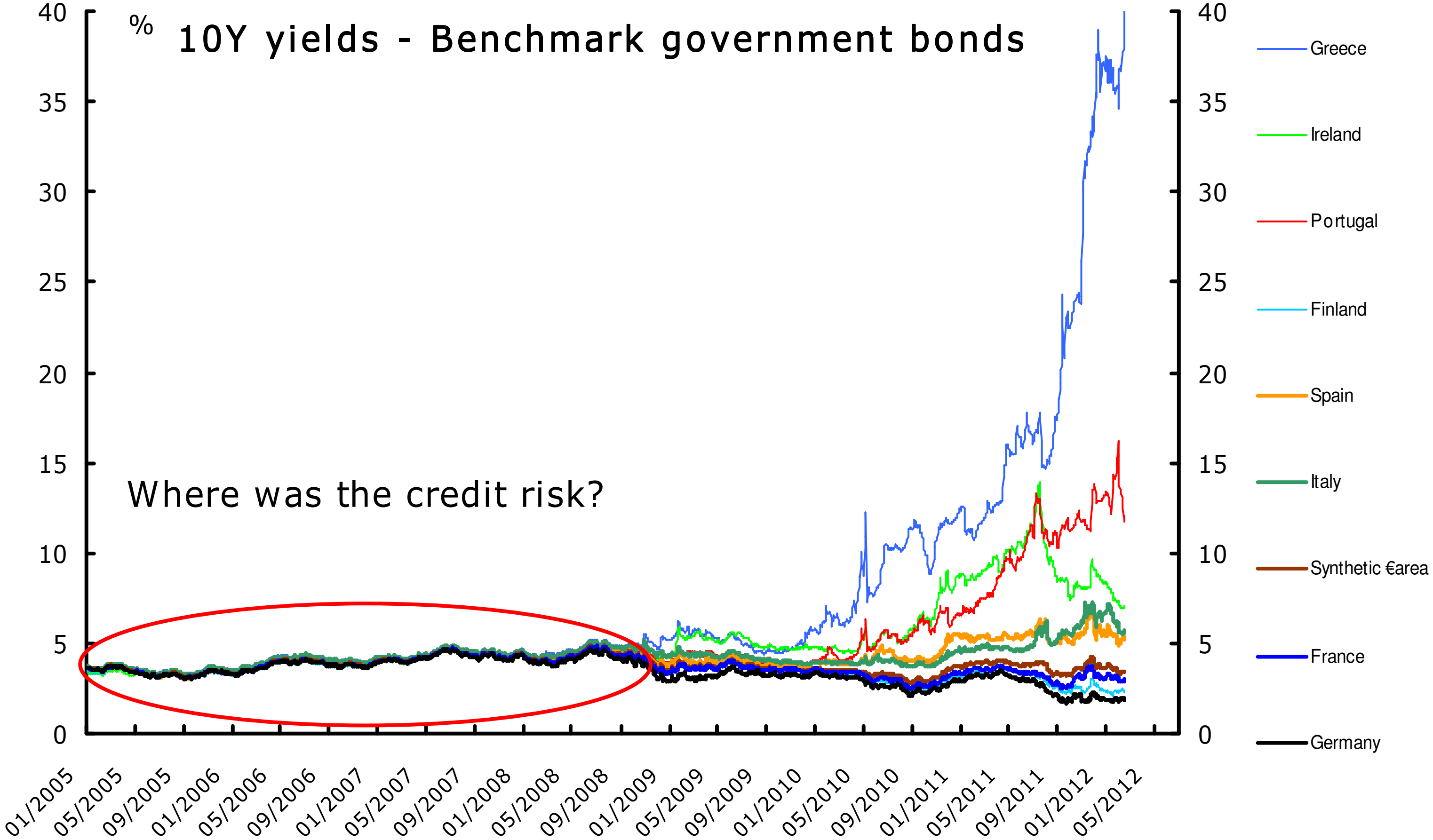
A market failure at the root of the €-crisis

- **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%**
  The market failure has not been fixed

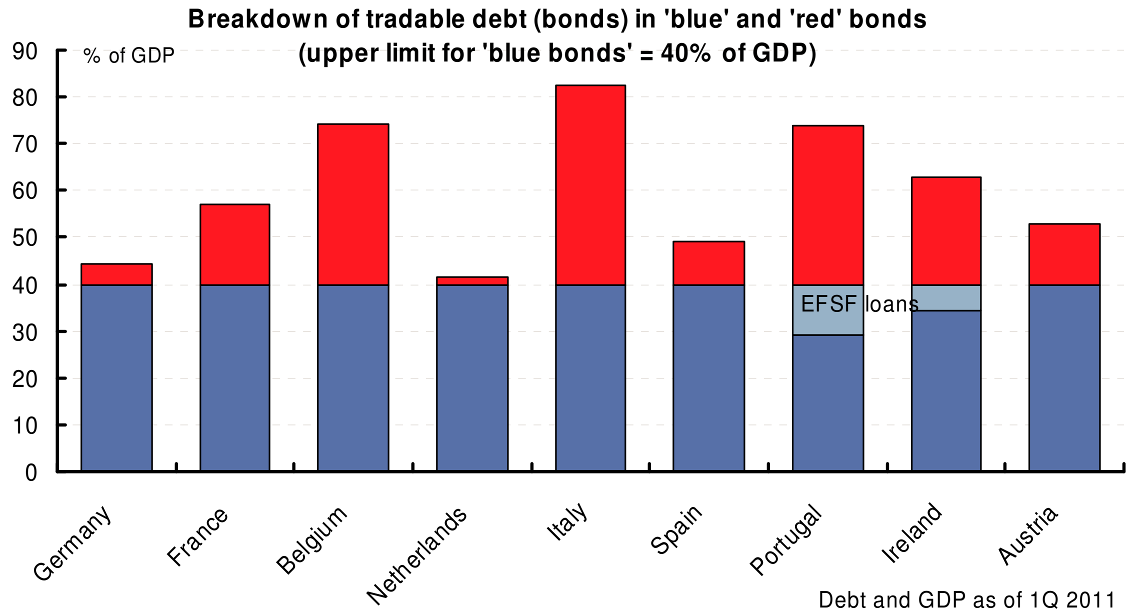
(*) Willem Buiter and Anne Siebert: "How the Eurosystem's treatment of collateral in its open market operations weakens fiscal discipline in the eurozone (and what to do about it)" – Mimeo, 10 May 2005

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

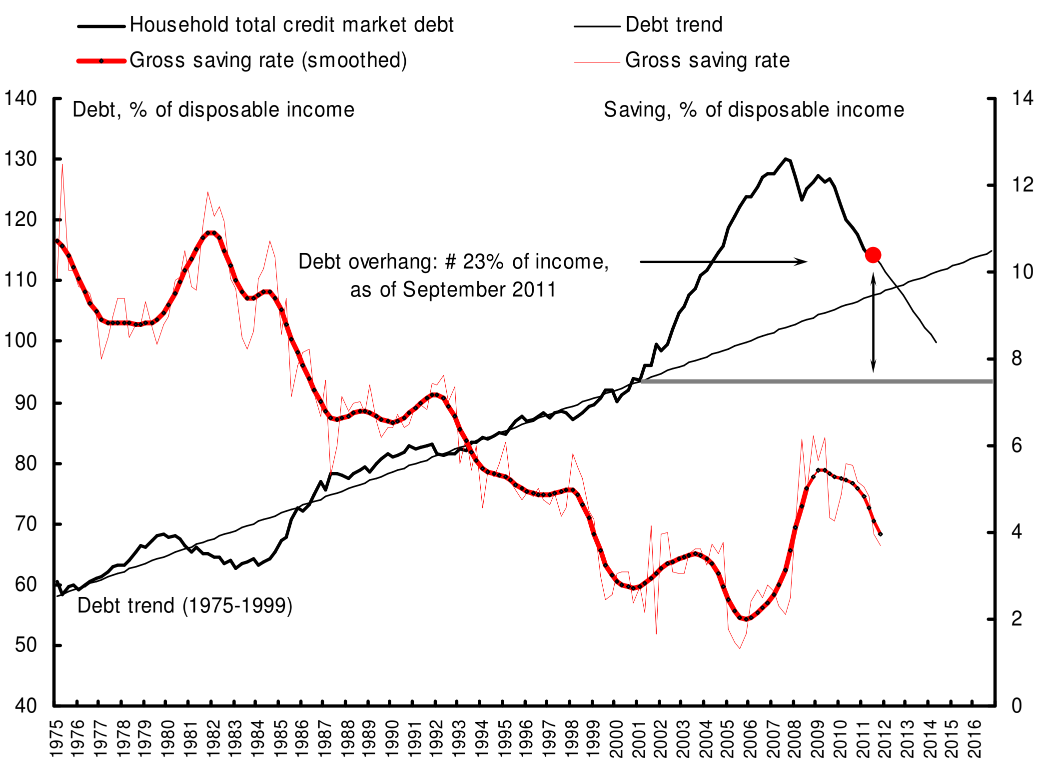


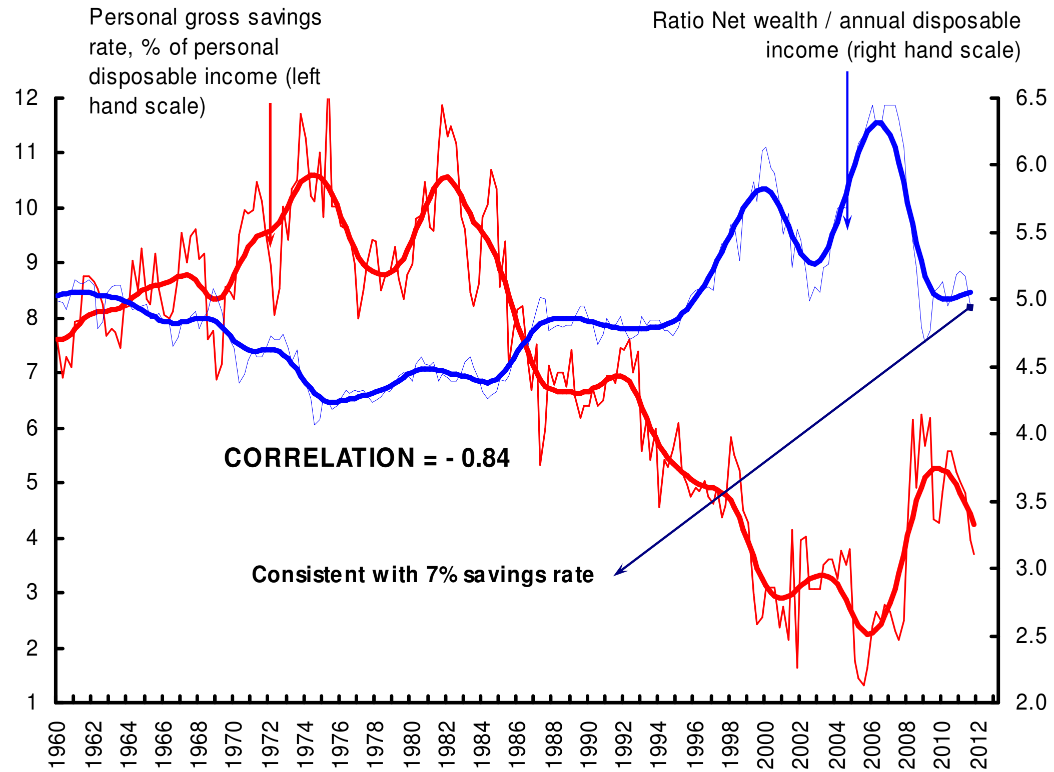
Sources: Eurostat for nominal GDPs; National Central Banks and Treasuries for the outstanding amount of tradable debt with maturity >1Y issued by central and local governments – Calculations AXA IM Research

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

US: Deleveraging takes time

- 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, NOT by confidence
- The good news is: the process is going faster than expected: assuming that savings (6.0% of disposable income in 2010) go to debt reduction, the debt ratio would fall back to 2001 level by 2014.





Source: BEA, AXA IM Research. Latest data: 4Q 2011

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)

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]

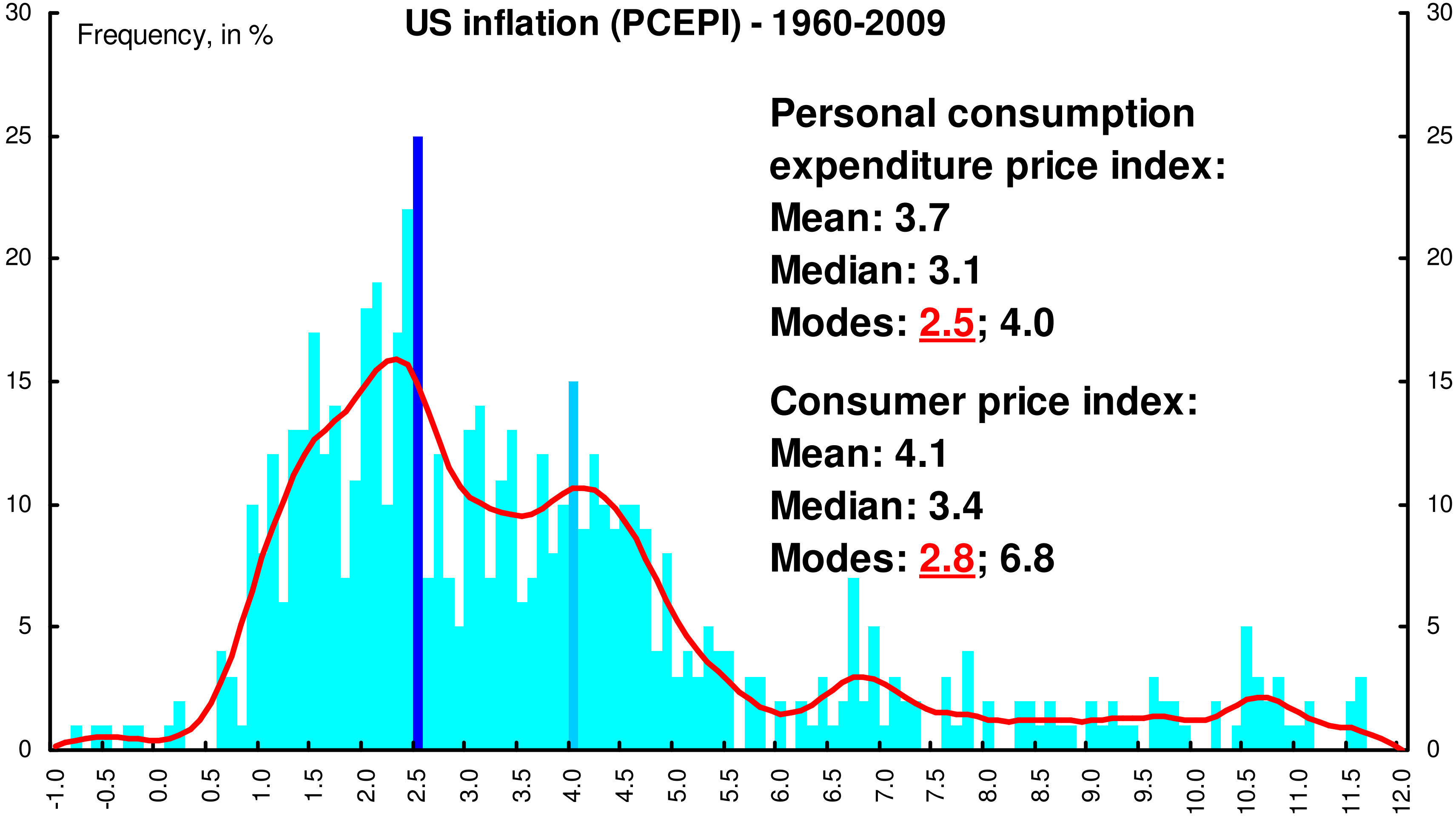
In both cases, initial debt burden halved in 10 years

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

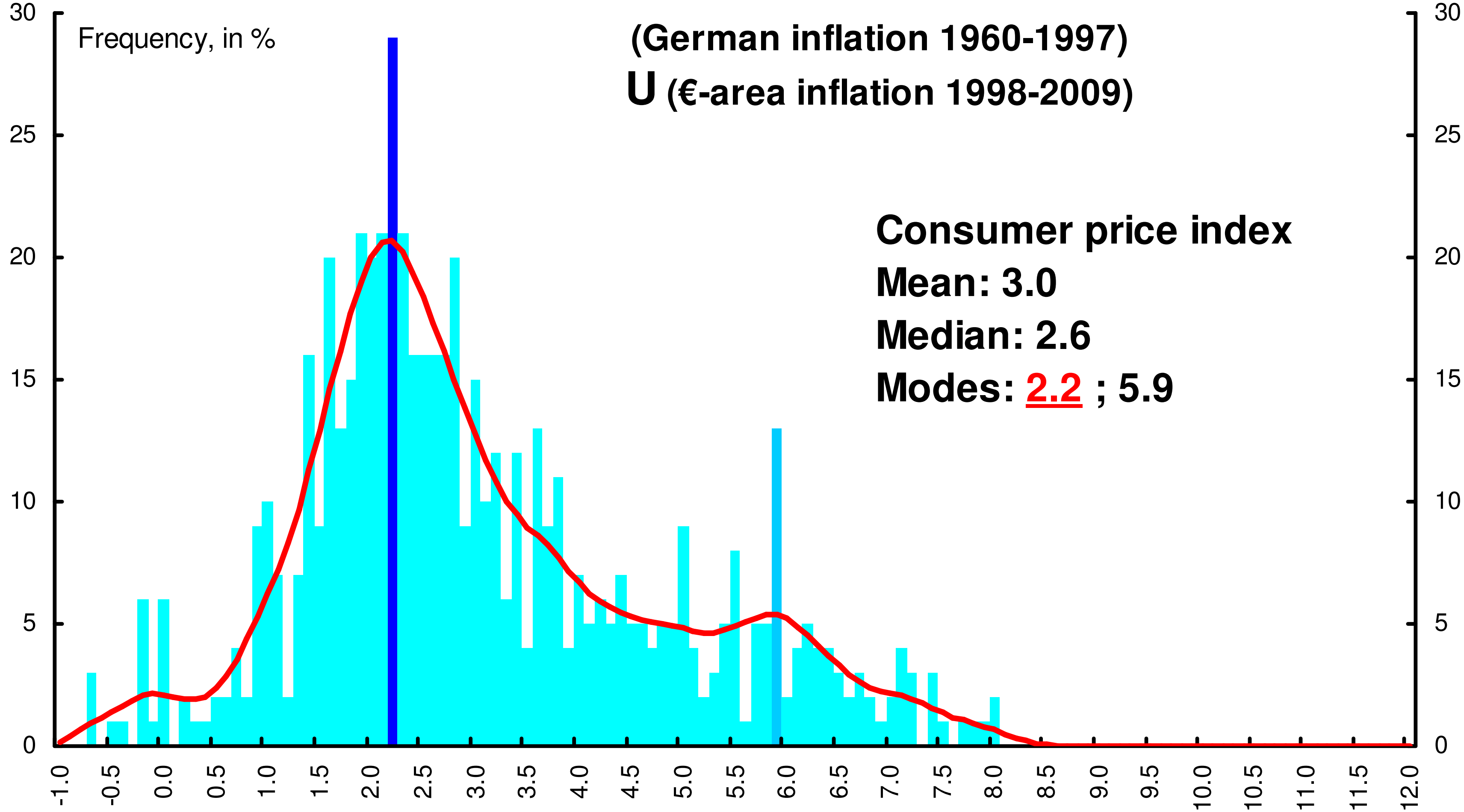
Long term, Fed may tolerate mild inflation



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

Long-term, structural themes

Buba- ECB won't tolerate inflation



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

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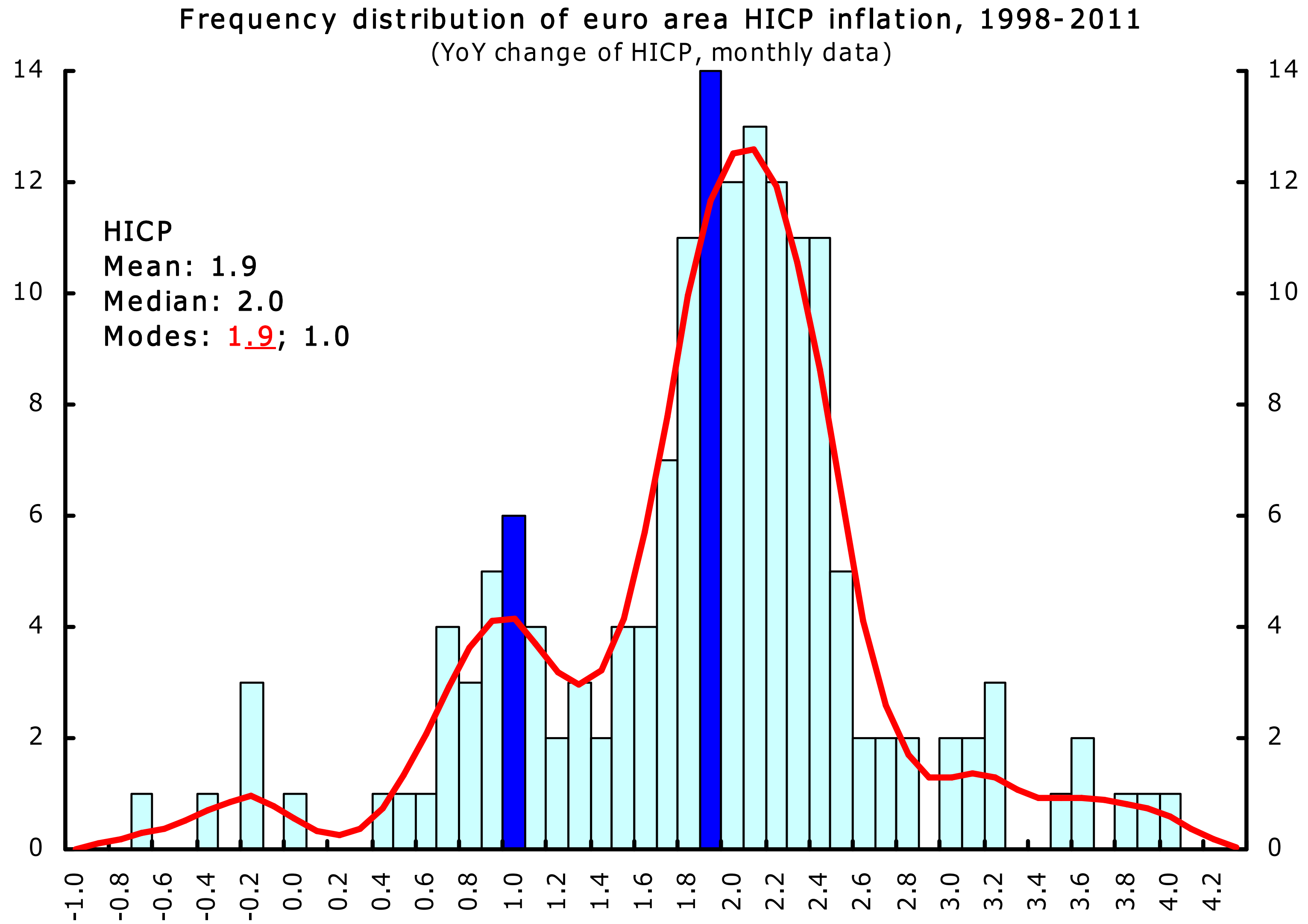
ECB not really scared by deflation



Source: Eurostat, AXA IM Research, latest data April 2011

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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), which featured prominent speakers such as Stephen Roach, Francesco Giavazzi, Jacques de Larosière, Sushil Wadhwani, P.O. Gourinchas or Stephen Li Jen.

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 economic 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 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.

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