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A triple shock to the global economy

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SUMMARY CONCLUSIONS

1) Triple shock to deal with: Commodity prices, Housing adjustments and Deleveraging in the global financial system are the main factors accelerating the adjustment pace.

2) Commodity shock is a reaction to three forces: tight oil market, financial investment and long term prospects. Even if short-term fundamentals do not fully justify current prices it will take long to see a correction. Increasing the monetary policy dilemma and interest rate tensions.

3) Housing adjustments are ongoing but have not started fully in several countries. The size of previous expansion and the experience of previous cycles suggests protracted and sizeable effects. Fundamentals offer some support, but risks are clearly very high.

4) Deleveraging will remain the key force in the global economy going forward. We have just passed the first phase of adjustment, a second and more significant phase is still forward as loans in banks' balance sheets suffer. The impact of deleveraging will be felt even more clearly going forward. It is highly likely that we see a protracted period of supply-constrained credit, which will drag down growth.

A triple shock to the global economy

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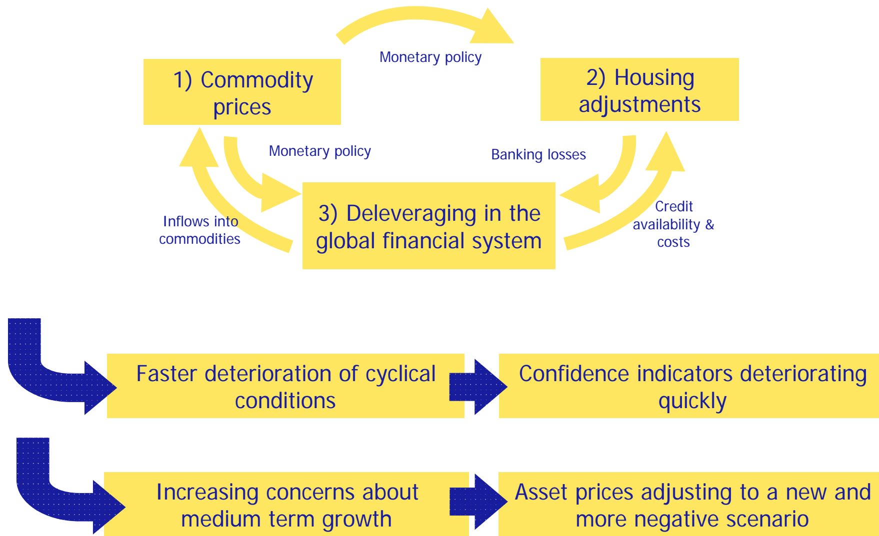

…but not three independent shocks

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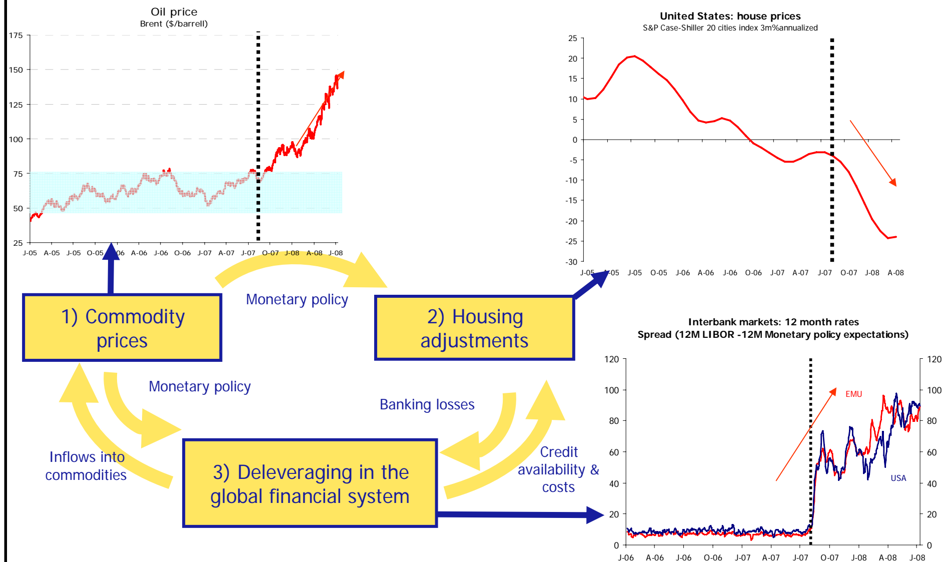

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1) Commodity prices

2) Housing cycles

3) Deleveraging and financial shock

Commodity prices: why and how long?

Fundamentals do not fully justify current prices, but they could well last longer than previous spikes

1) Oil prices have increased as much as they did in previous oil shocks…

2) …but demand and supply conditions are not similar

3) Two likely explanations:

- Financial investment into commodity assets
- Long term expectations regarding supply

4) Both forces could last for long before we see a meaningful correction

5) Food prices are linked with oil prices

6) Second round effects are limited, but monetary policy expectations and inflation are creating undesirably high and volatile interest rates

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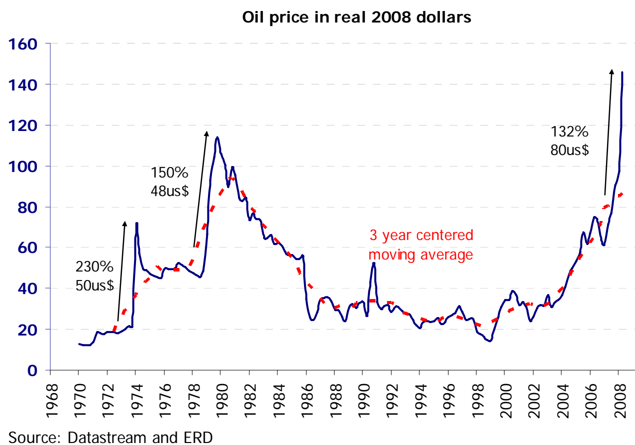
1) Oil prices have increased as much as they did in previous oil shocks…



Source: Datastream and ERD

Oil reaches fresh highs: the current shock is similar in size and speed to the previous two

Recent movements do not fit into the previous trend of "strong demand driving higher prices", but they could probe persistent nevertheless..

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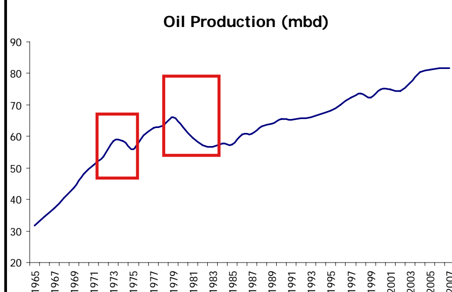
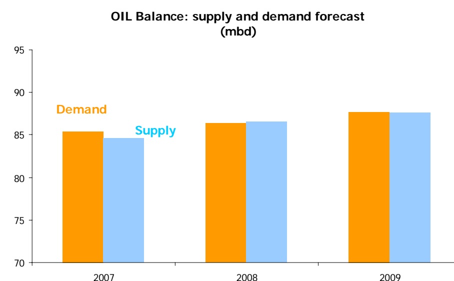
2) ...but demand and supply conditions are not the same



While the previous shocks were initiated by restrictions in supply, the increase in prices in the last years was motivated by strong demand

Supply is expected to keep growing in the next years, with no effective rationing, but market will remain very tight



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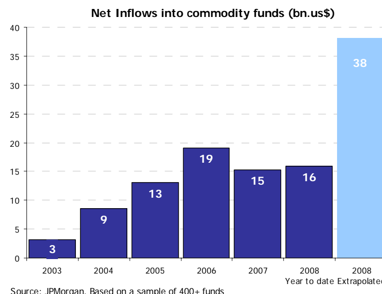
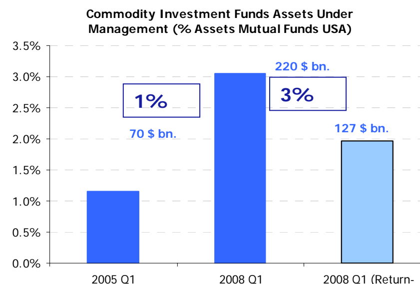
3) Two likely explanations: financial investment into commodities



Source: JPMorgan. Based on a sample of 400+ funds

Inflows into commodity funds in the first three months of 2008 were as large as the total in 2007

Moreover, most of the activity in commodity funds occurs in the OTC market and is not captured by public information



Source: Barclays & FoFs. *Assets under management deflated by the relative return of the GSCI index vs S&P500

Commodities are gaining acceptance among traditional investors because of their hedging properties, which are partially self-fullfiling!

Small increases in their portfolio allocations could lead to huge movements in prices

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3) Two likely explanations: prospects about long term prices

On a longer horizon, supply risks are skewed to higher prices:

a) Non-OECD supply could fail to grow as expected

The main reason for Non-OECD disappointments has been rapid exhaustment of existing fields in the US, UK, Norway and Mexico. This is difficult to reverse. Other marginal producers (Brazil, etc.) are expected to cover this up, but this is not a certainty

b) OPEC supply is the wild card

Recent statements by OPEC officials send confusing signals. Some OPEC members have become greedy and are happier with a higher floor.

Saudi Arabia is failing to soothe the markets, despite strong pressures: doubts about its ability to increase production

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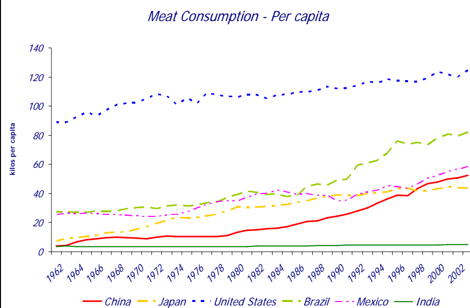
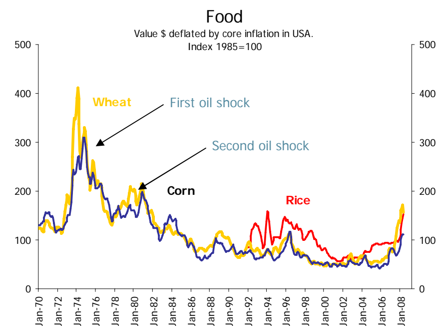
5) Food prices are linked with oil prices





Demand pressures are clear: development of poor nations will add major structural pressure on food sources. However, some arguments are not relevant right now (China, for instance, is not a net importer of food)

Food and oil prices are related: increase in fertilizants costs, transport costs, substitution (ethanol), etc.

Spike in food prices could prove long-lasting too

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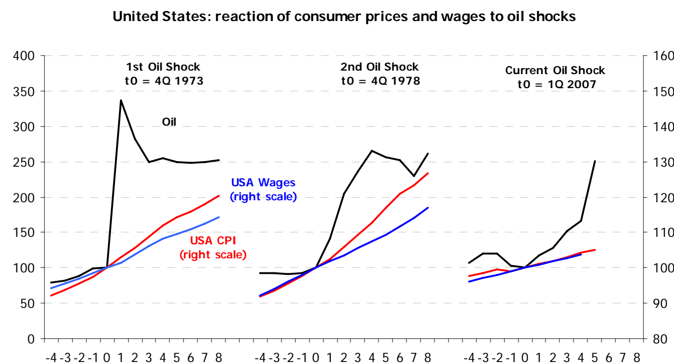
6) Limited second round effects but undesirable impact on interest rates



The behaviour of inflation and wages has been different this time around

In previous oil shocks, inflation and wage growth were stronger initially

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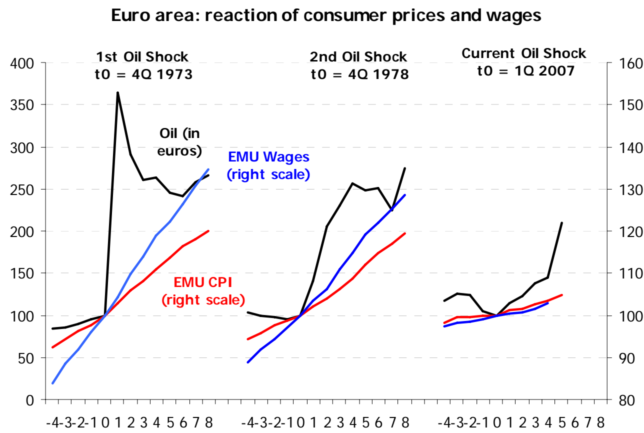
6) Limited second round effects but undesirable impact on interest rates



Same applies to the Euro area

Historically, more rigid labor markets meant faster wage growth in the face of the oil shock, which lead to sharper increases in unemployment

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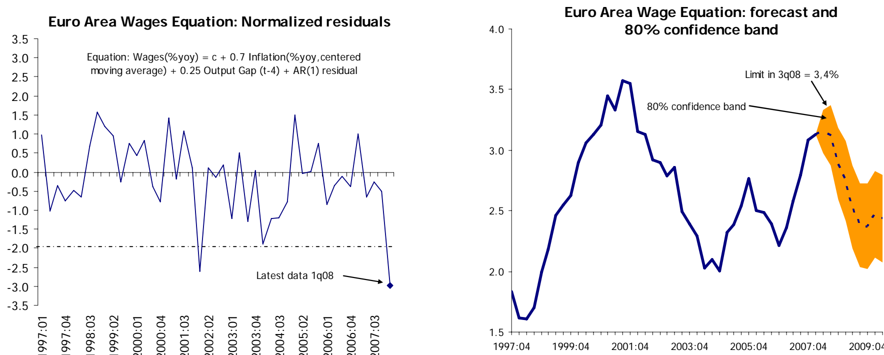
6) Limited second round effects but undesirable impact on interest rates



Wages are accelerating, but not to rates that suggest second round effects

Given the acceleration of inflation expectations and relatively resillient economic activity so far, we would expect even higher wages at this stage. In our scenario, wages remain stable initially and would decelerate in 3Q08. Wage increases over 3,4% in that period could be indicative of risks to wage formation

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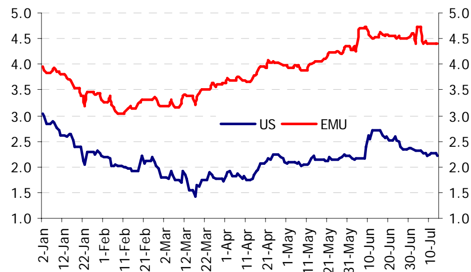
6) Limited second round effects but undesirable impact on interest rates

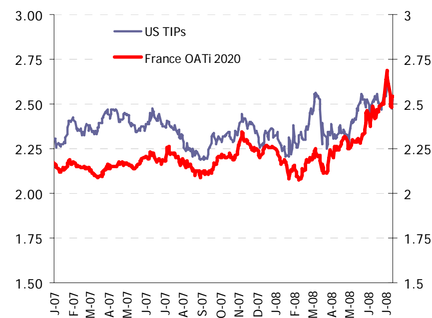
Implicit rates in EONIA and Fed Funds futures
(for December 2008)



Source: Bloomberg

Market sentiment about monetary policy has moved very abruptly: from rate cuts to expected hikes

10yr. Implicit inflation in indexed bonds



Source: Bloomberg

While inflationary premia in bonds has also risen substantially, both in the US and Europe

At a time when financial conditions would call for low and stable interest rates (and positive slope), financial institutions are facing unstable and too high rates

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1) Commodity prices

2) Housing cycles

3) Deleveraging and financial shock

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Housing adjustments: how far?

Housing adjustments in several countries are starting or underway, and risks are large given the size of booms. However, fundamentals could limit the extent of the downfall

1) Housing markets are falling or decelerating

2) Financial risks are large in some countries

3) Fundamentals explain part of the boom and would limit the downfall partially

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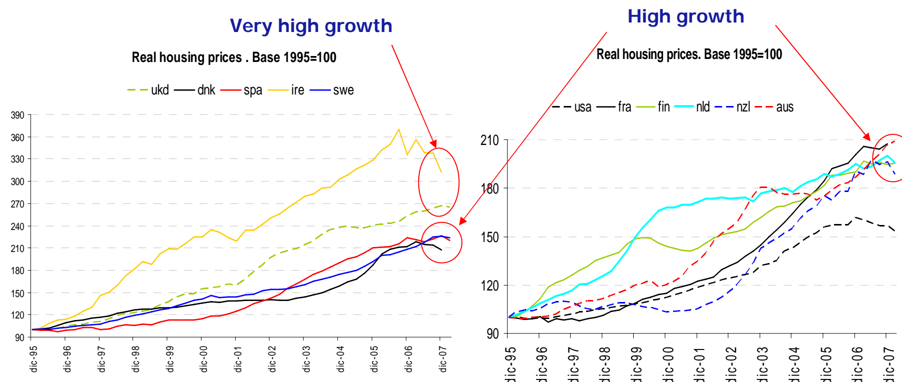
1) Housing markets are falling or decelerating

- Since 1995, real housing prices have grown strongly in several advanced countries, especially Ireland and the UK (above 150%). In many other countries they have grown between 100-120% in real terms, more than in the US (60%).
- In the United States, Ireland, Denmark and New Zealand prices have started to fall very clearly. In all the others they are already decelerating.



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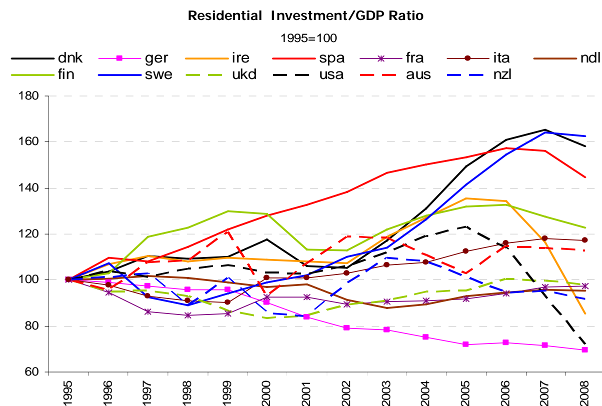
1) Housing markets are falling or decelerating



- The largest growth in housing investment as a share of GDP has been registered in Denmark, Sweden and Spain.
- In the United States and Ireland the adjustment has been large and the ratio is below that of 1995. In other countries, the adjustment has been gradual, probably as a result of different construction lags.

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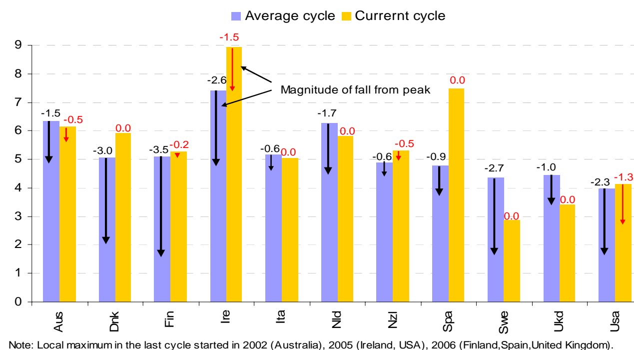
1) Housing markets are falling or decelerating



Adjustment in quantities has been limited so far (save for Ireland and the US), compared with the average cycle. In some countries (notably, Spain) the sector has grown very far beyond previous cycles…creating scope for larger adjustment

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2) Adjustment will be protracted and sizeable

Downward housing cycles

	Real price falls				Associated housing investment changes		
	No. Cycles	Avg. Real price fall	Avg. No. Quarters	Avg. Price Fall per Quarter	Avg. Cycle Duration (years)	Avg. Cummulated Fall in Housing Investment/GDP	Avg. Real Investment fall per year
Australia	6	-9.1%	9.2	-1.0%	2.2	-1.5%	-0.4%
Denmark	4	-24.2%	12.0	-2.0%	4.0	-3.0%	-0.9%
Finland	2	-40.3%	22.0	-1.8%	9.5	-3.5%	-0.4%
France	2	-10.3%	13.5	-0.8%			
Ireland	3	-11.2%	12.3	-0.9%	4.0	-2.6%	-0.8%
Italy	4	-35.5%	15.8	-2.3%	4.0	-0.6%	-0.2%
Netherlands	3	-19.0%	12.0	-1.6%	5.0	-1.7%	-0.4%
New Zealand	5	-12.8%	11.6	-1.1%	2.3	-0.6%	-0.3%
Spain	4	-18.7%	15.5	-1.2%	3.8	-0.7%	-0.2%
Sweden	3	-22.9%	16.0	-1.4%	5.0	-2.7%	-0.5%
United Kingdom	3	-24.9%	16.3	-1.5%	4.8	-1.0%	-0.3%
United States	3	-10.3%	16.3	-0.6%	4.0	-2.3%	-0.6%
Unweighted average	**3.5**	**-19.9%**	**14.4**	**-1.4%**	**4.4**	**-1.8%**	**-0.4%**

Previous housing adjustment were very heterogenous (this will probably the case this time around, too). But they lasted around 2,5 years on average and required around 20% real falls in prices and 2 points of GDP reductions in investment

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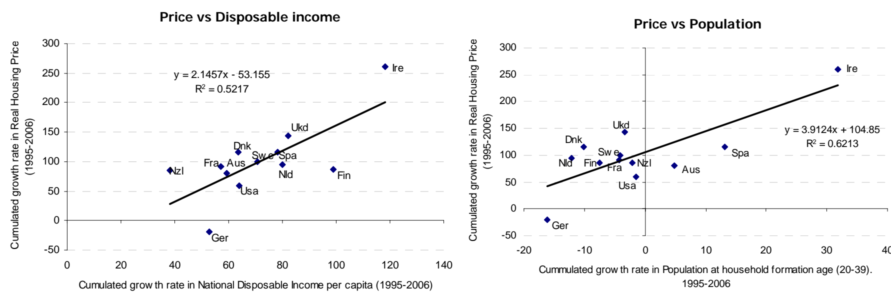
3) Fundamentals offer some support



Demographic trends have been a support for houses' prices in almost every country. It is evident that countries with faster house appreciation are those with larger population growth

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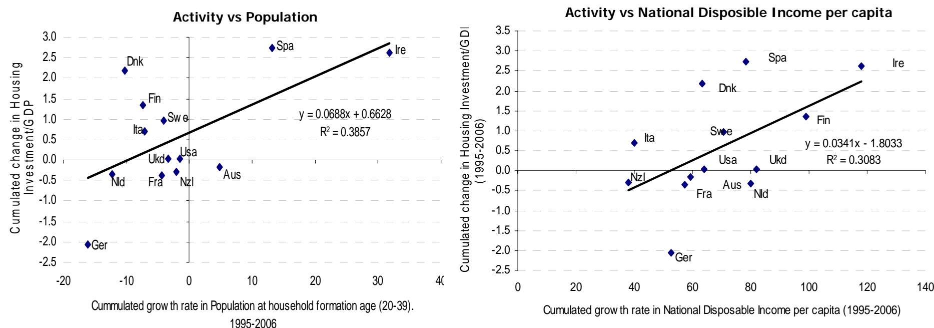
3) Fundamentals offer some support



However, population growth has not been a support for activity.

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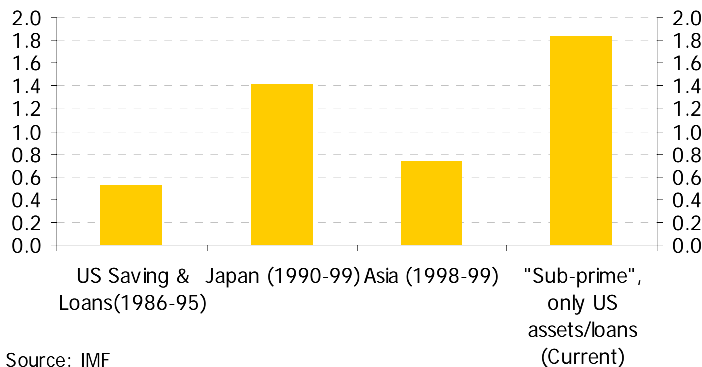
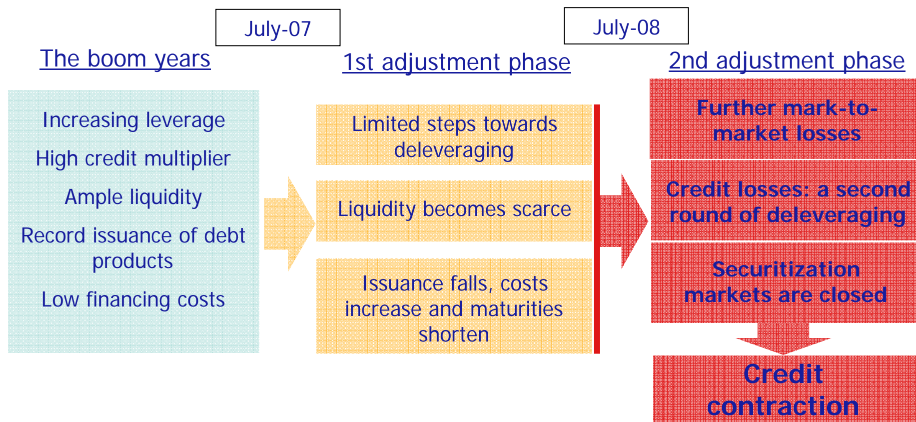
We are faced with the largest financial crisis of the last 30 years

Estimated cost of the bank crisis
(% of World GDP)



Source: IMF

..which will require a protracted adjustment in the global financial system



Financial tensions will continue and the bulk of their impact on economic activity is in front of us, not behind

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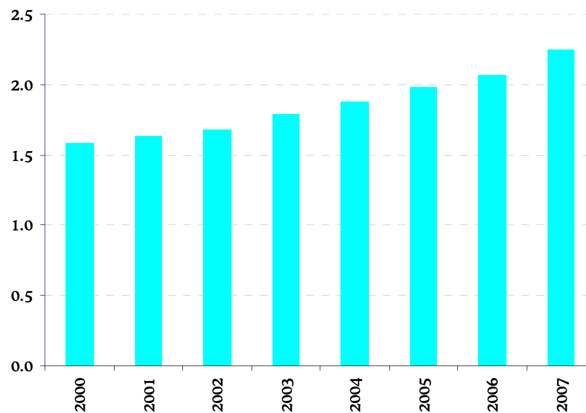
Boom years

The boom years led to an unsustainable increase in leverage: deleveraging is the only way forward

Banks' assets and Asset-Backed Securities over GDP: US & Euro Area aggregate



Source: FoF, BCE and Datastream

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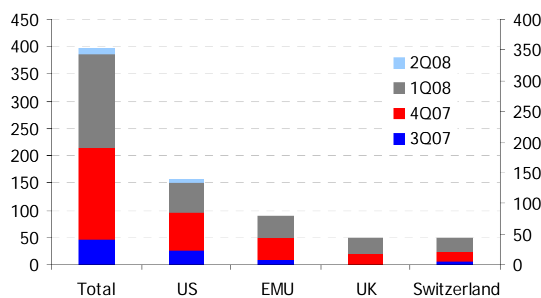
1st phase

Limited steps towards deleveraging

Losses so far are mostly related to recognizing write-downs in asset values

Banks: write-downs ($bn)



Source: Bloomberg

Total write-downs for banks amount to almost bn.400us$ until now

Differences in accounting practices are playing a role in the delayed recognition of losses in some areas (notably, the Euro area)

Loss estimates suggest we could reach 1trillion.us$ (including all financial institutions)

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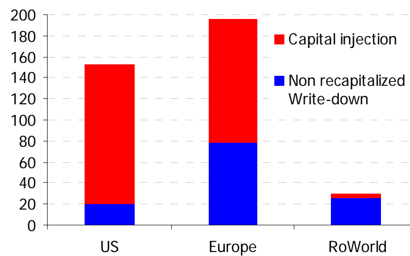
1st phase

Limited steps towards deleveraging

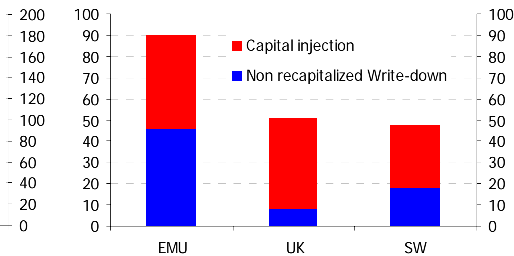
Capitalisation has not been enough to compensate these losses

Write-downs and capital injections ($ bn)



Source: Bloomberg

Write-downs and capital injections ($ bn)



Source: Bloomberg

Capital injections during the first phase have been large but they offset only 70% of write-downs in the US. Moreover, in Europe (UK,especially) and the rest of the world the percentage is lower.

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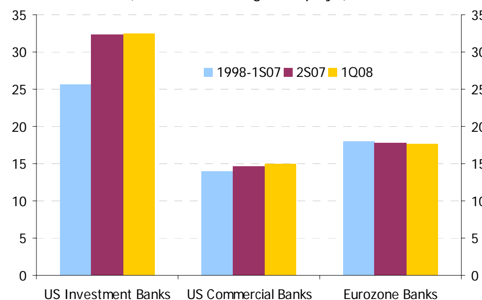
1st phase

Limited steps towards deleveraging

As a result, the correction in leverage has not even started

Banks: Leverage ratio
(Total assets/Tangible Equity*)



Source: Bloomberg, Fed, ECB and SEE.
* Except for Eurozone banks where "Capital and Reserves" is used instead of tangible equity.

Absorption of SIVs and reintermediation, plus write-downs impact on capital, mean that no significant advance has occurred in reducing leverage, neither in the US nor in Europe

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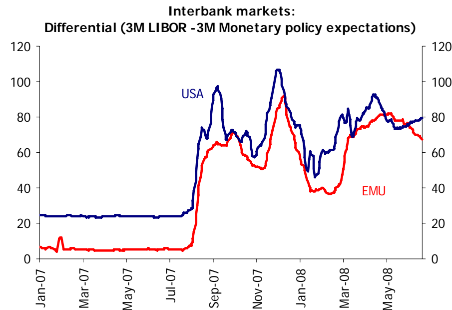
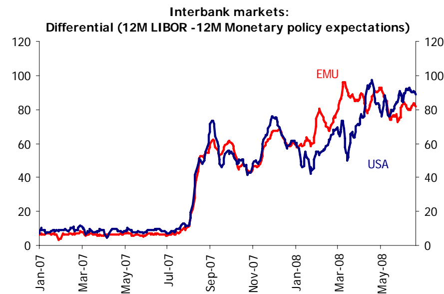
1st phase | **Limited steps towards deleveraging** | **Liquidity becomes scarce**





Banks are reluctant to commit funds beyond very short maturities, fearing the resources may be neccesary to fund strategic activities: liquidity will remain scarce

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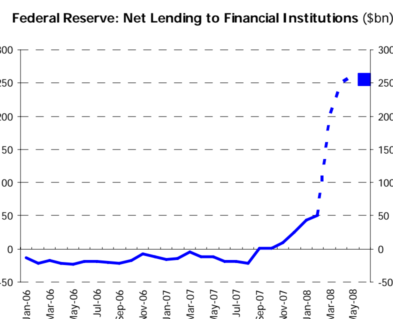
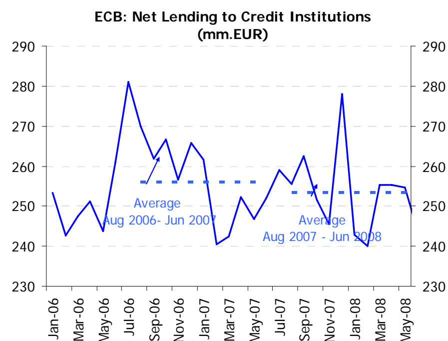
1st phase | **Limited steps towards deleveraging** | **Liquidity becomes scarce**



* Securities Repurchase Agreements + Loans to Depository Institutions + Term Auction Facility minus Reserves. Medias mensuales

Source: Fed and SEE



Source: ECB

Central banks have adopted different strategies (Fed increases liquidity, ECB increases maturity not liquidity) but results have been null...why?

1st phase | **Limited steps towards deleveraging** | **Liquidity becomes scarce**

...because liquidity demand is exceptionally high

Thus, although the liquidity offer has increased ...

- Fed increases lending
- The ECB has increased lending maturities

... liquidity demand remains very high

- Alternative ways of funding are dissapearing: Commercial Paper, structured products,...
- Important agents have retreated from the market: money market funds
- Precautionary reasons
- It is cheaper to fund liquidity necessities in the interbank market than issuing bonds

1st phase | **Limited steps towards deleveraging** | **Liquidity becomes scarce** | **Issuance falls, costs increase and maturities shorten**

The recent reopening of bank debt primary markets is not enough to compensate for the drought in securitized products which started in Aug-07

Moreover, markets have re-closed again in July 2008

Funding for bank assets is exceptionally scarce

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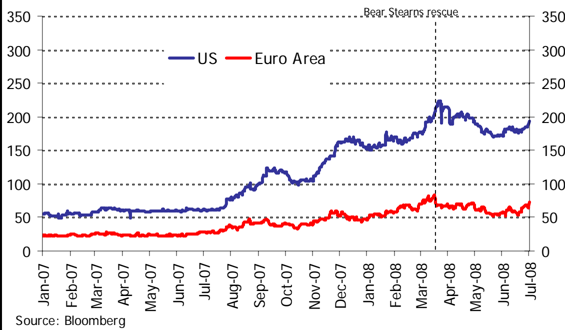
1st phase	Limited steps towards deleveraging	Liquidity becomes scarce	Issuance falls, costs increase and maturities shorten



Source: Bloomberg

Spreads on funded asset classes (ie. bonds vs. CDS) remain extraordinarily high, despite the rescue of Bear Stearns

Asset funding is the key problem, not counterparty risk

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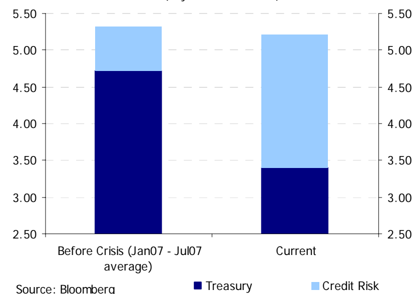
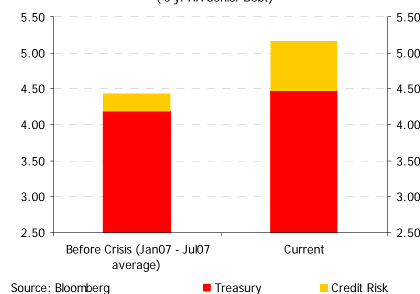
1st phase	Limited steps towards deleveraging	Liquidity becomes scarce	Issuance falls, costs increase and maturities shorten

Credit is being repriced. In the US, Fed cuts have compensated higher spreads, while Eurozone banks are now forced to pay higher yields due to both higher Treasury rates and spreads



Source: Bloomberg



Source: Bloomberg

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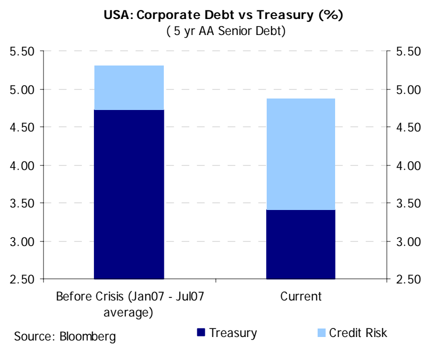
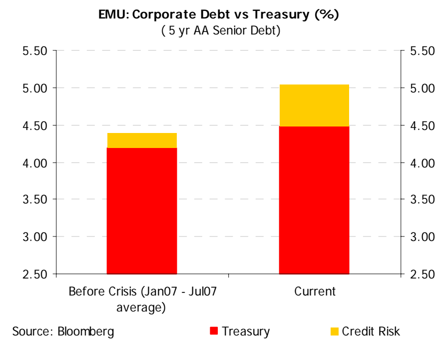
1st phase | Limited steps towards deleveraging | Liquidity becomes scarce | Issuance falls, costs increase and maturities shorten

Credit is being repriced not only for banks but also for corporates





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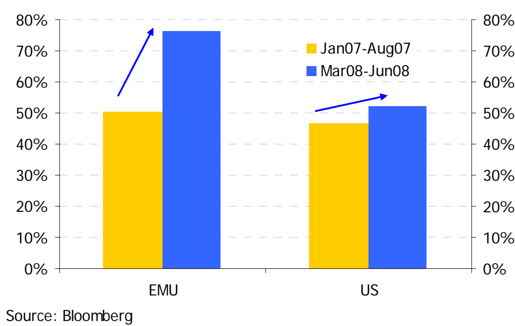
1st phase | Limited steps towards deleveraging | Liquidity becomes scarce | Issuance falls, costs increase and maturities shorten



Banks are increasingly relying on short-term funding

1) Debt issuance at shorter maturities

2) Increasing dependence on central bank funding

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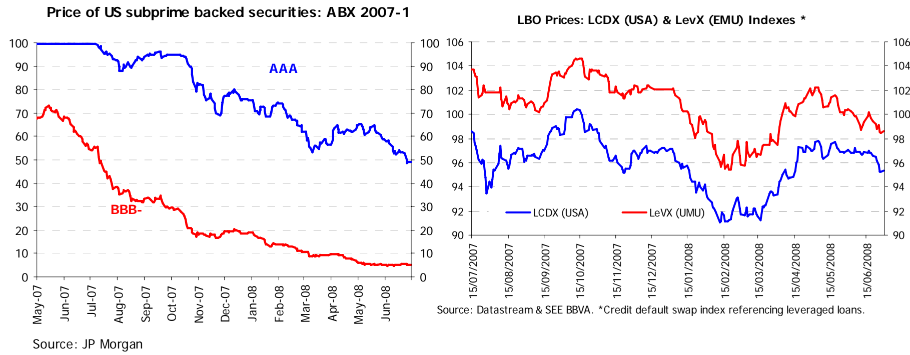
2nd phase

Further mark-to-market losses

Recent trends in securitized products suggest further losses behind those in 1Q08…



The value of securitized assets keeps falling…

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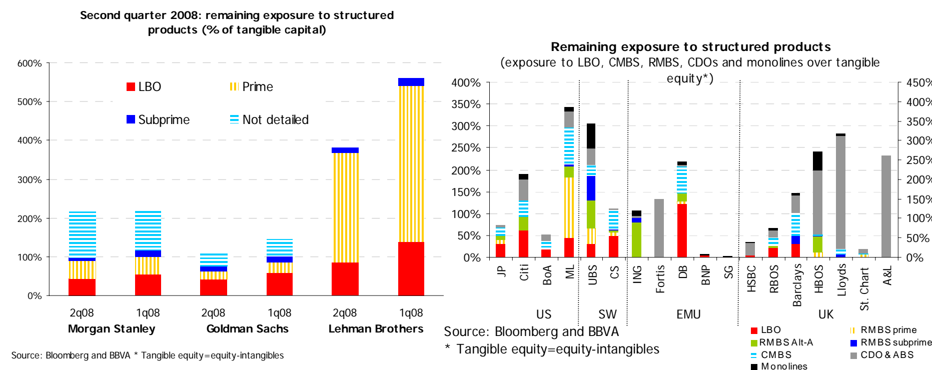
2nd phase

Further mark-to-market losses

Recent trends in securitized products suggest further losses behind those in 1Q08…



… and the reduction in exposures to toxic assets has been marginal

2nd phase

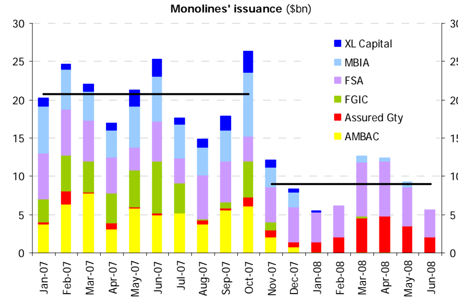
Further mark-to-market losses

Monoline down rating adds risks of further losses

Monolines: Rating and Outlook

Monoline	S&P	Fitch	Moody's
FSA	AAA (stable)	AAA (stable)	AAA (stable)
Assured Guaranty	AAA (stable)	AAA (stable)	AAA (stable)
MBIA	AA (negative)	AA (negative)	Aa2 (negative)
Ambac	AA (negative)	AA (negative)	Aa3 (negative)
CIFG	A- (negative)	CCC	Ba2
XLCA	BBB - (negative)	BB (negative)	A3 (under revision)
FGIC	BB (negative)	BBB (negative)	Baa3 (under revision)
BHAC *	AAA (stable)	------	AAA (stable)

Source: Merrill Lynch
* Berkshire Hathaway Assurance Corp.



Source: Merrill Lynch based on Thomson One

Moody's Investors Service stripped MBIA and Ambac of their Aaa, following Fitch and S&P, ending the bond insurers' run of at least two decades at the top of the ratings scale.

The business model of affected firms is broken: their activity has come to a halt. Only those companies with limited exposure to structured finance insurance remain in the game

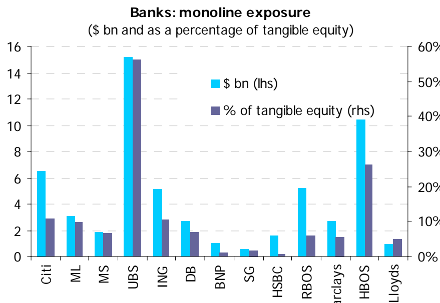
2nd phase

Further mark-to-market losses

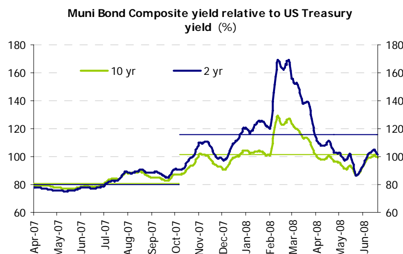
Monoline down rating adds risks of further losses

Further downgrades may cause Citigroup, Merrill Lynch and UBS to write down the value of insured-debt holdings by at least $10 billion. Total exposure to monolines surpasses $50 bn.

Growing concerns about the viability of the monoline business have added pressure to Municipal Bond yields again, even though not so far as in the Bear episode



Source: Earning releases and SEE



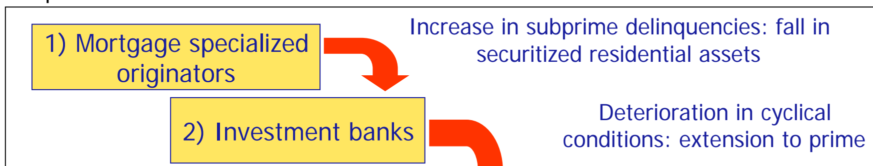
Source: Bloomberg. (Series are 5 days moving averages)

1 2 3 **Financial Shock** BBVA

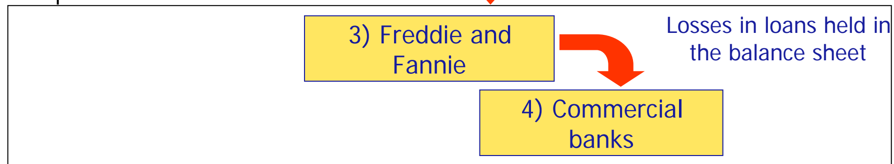
2nd phase — **Further mark-to-market losses** — **Credit losses: a second round of deleveraging**

The US banking system follows the predicted path of sequential failure...

1st phase

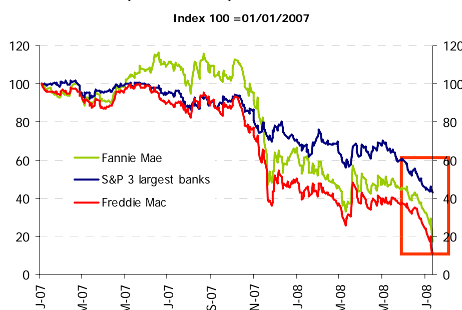


2nd phase

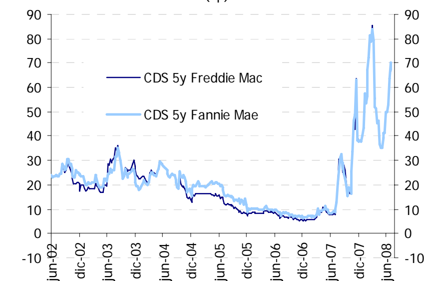


1 2 3 **Financial Shock** BBVA

2nd phase — **Further mark-to-market losses** — **Credit losses: a second round of deleveraging**



The stock value of agencies has fallen by 80% since the start of the crisis



Their credit risks premia have widened, as investors doubted the implicit guarantee by the US Treasury.

Freddie and Fannie will not contribute to the solution of problems, in fact they will add to them

1 2 3 **Financial Shock** BBVA

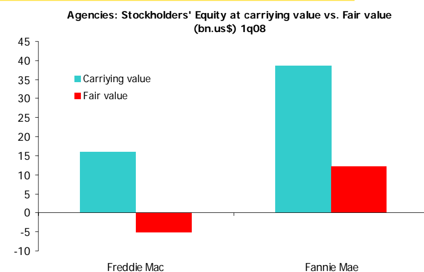
2nd phase | **Further mark-to-market losses** | **Credit losses: a second round of deleveraging**

1) FASB possible change in rules governing the consolidation of off-balance sheet assets

- Full asimilation of off-balance sheet unlikely
- Capital forbearance likely in any event
- A medium term possibility (not only for the GSEs)

2) Mark-to-market value of equity is negative (remarks by Poole)

- True, but this was known since May
- No obligation to account at fair value
- Supervisor (OFHEO) satisfied with current regulatory capital levels (pending 5,5bn.us$ recap by Freddie)

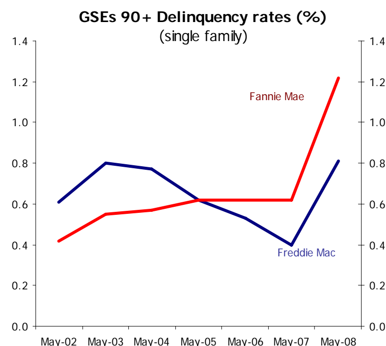


1 2 3 **Financial Shock** BBVA

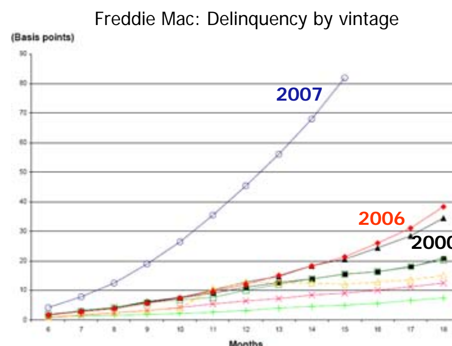
2nd phase | **Further mark-to-market losses** | **Credit losses: a second round of deleveraging**

3) Credit deterioration

Quickly deteriorating delinquency in Agencies' assets is the key reason to be concerned



Freddie Mac: Delinquency by vintage



Delinquencies have doubled in the last year

So far, this deterioration is mostly related to weak housing markets and lax standards, not cyclical deterioration

2nd phase | Further mark-to-market losses | Credit losses: a second round of deleveraging

Government plan to rescue the GSEs

❑ Confirms agencies are too big to fail. They hold or guarantee around 42% of all residential mortgages

❑Moreover, the government (current or future) needs Freddie and Fannie to stabilize the housing markets: they are currently securitizing 80% of all new mortgages since the crisis.

Paulson's plan

- Open Fed liquidity support
- Increase Treasury credit lines
- Inject public capital if necessary

2nd phase | Further mark-to-market losses | Credit losses: a second round of deleveraging

Open Fed liquidity support + Increase Treasury lines

❑ It will reassure bondholders and have a positive impact, but the problem of the agencies is not liquidity (they have been issuing debt all along). Borrowing costs will fall, increasing NIM and alleviating credit losses.

❑ Treasury will lend up to 300 bn.us$ (according to some reports). Fed lending collateralized and at discount rate. Amounts seem large enough, if confirmed. Could cause disruption if smaller.

Injecting public money if necessary

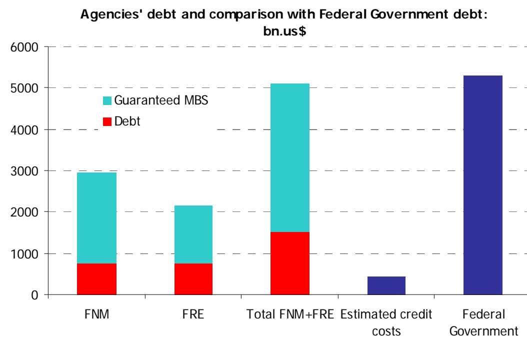
❑ Given the scale of losses and their leverage, it is likely to prove necessary

❑ Estimated amount is uncertain. To return leverage "on balance" to 15 (the average for commercial banks) one would need around 30bn.us$. To put leverage back to 15 including all guaranteed debt, one would need 260bn.us$

1 2 3 Financial Shock BBVA

2nd phase | Further mark-to-market losses | Credit losses: a second round of deleveraging

Will full nationalization of debt be necessary?



Total credit exposure of the Agencies (debt+issued MBS) equals the size of outstaning Federal debt held by the public

But this comparison is not satisfactory: government would also be absorbing the assets of the Agencies. What is relevant is the amount of credit losses on their portfolio and the gap the government would have to cover.

Current estimates are around 500 bn.us$ = 10% of public debt

The burden of nationalizing the GSEs is sizeable, but not unmanageable. However, this situation could create important risks to the perceived creditworthiness of the US and the value of the dollar

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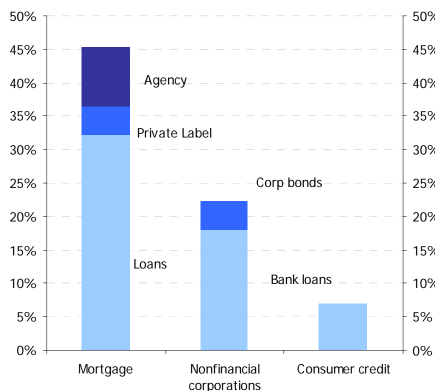
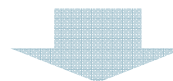
1 2 3 Financial Shock BBVA

2nd phase | Further mark-to-market losses | Credit losses: a second round of deleveraging



Holdings of Private label MBS (where the bulk of mark-to-market losses has already been recognized) amount to only 4% of commercial banks' assets

This is comparatively small compared to loans. Mortgages (mostly prime) amount to 32%, while consumer credit is 8% of assets



A difficult cyclical situation combined with lax credit standards in the past will have a large impact on prime delinquencies with huge effect on banks' balance sheet

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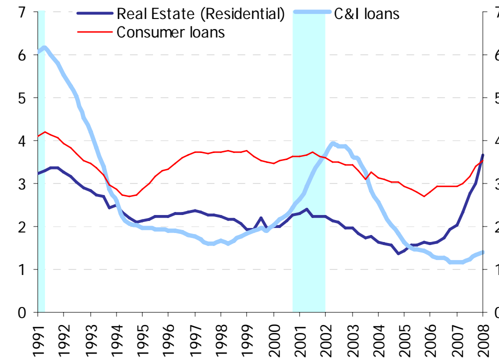
1 2 3 **Financial Shock** BBVA

2nd phase | **Further mark-to-market losses** | **Credit losses: a second round of deleveraging**

US: Delinquency Rates



Source: Fed

Delinquency rates in consumer and residential loans in 1Q08 are close to their 1991-1992 peak…

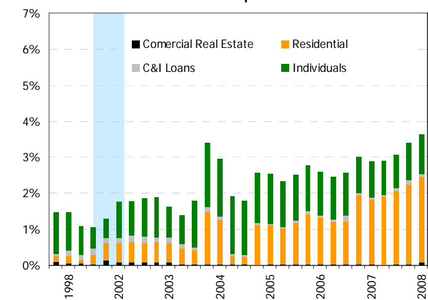
… despite the fact that the labor market held up fairly well until the second quarter of 2008

Additional pressure on delinquency rates will come from cyclical deterioration and a more difficult refinancing environment

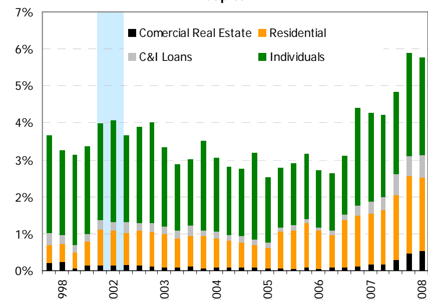
1 2 3 **Financial Shock** BBVA

2nd phase | **Further mark-to-market losses** | **Credit losses: a second round of deleveraging**

US Large banks : 90+ Delinquent Loans to Core Capital



US Medium banks: 90+ Delinquent Loans to Core Capital

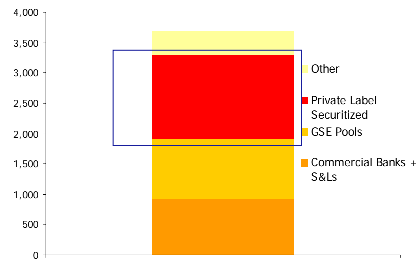


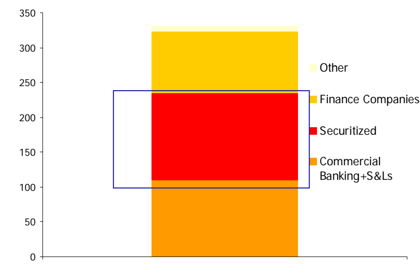
Source: FDIC. Shaded area = Recession

Middle sized banks are most exposed to further deterioration in cyclical sectors…and they could represent a big problem if any of them failed

1 2 3 **Financial Shock** BBVA

2nd phase | Further mark-to-market losses | Credit losses: a second round of deleveraging | **Securitization markets remain closed**

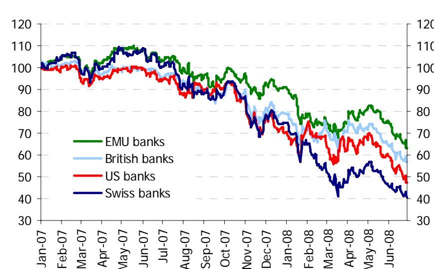


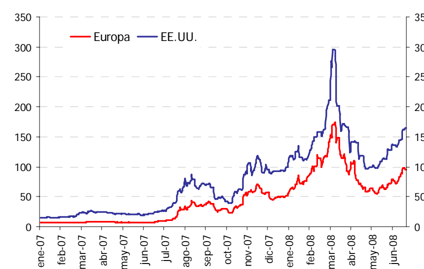


Securitization accounted for around 40% of credit growth in 2004-2007, both for mortgages and consumers. The closure of securitization markets will continue, putting additional pressure on credit standards and credit growth

1 2 3 **Credit Contraction** BBVA

What next? Markets are increasingly pricing a very negative (but likely) scenario



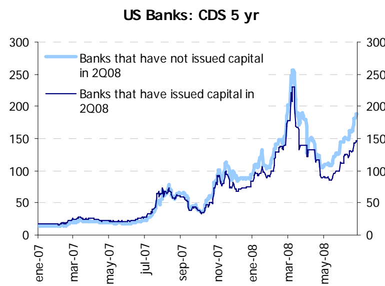


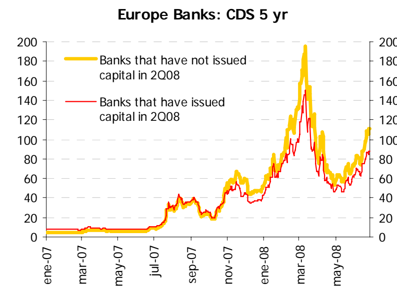
Valuation of banks reflects increasing concerns about their solvency and future viability

...and credit risks premia indicate systemic risks are rampant

1 2 3 **Credit Contraction** BBVA

So far, capital issuance is not a viable alternative to reducing assets

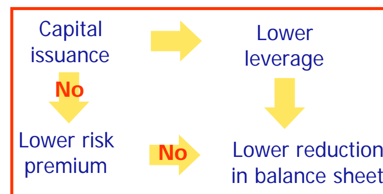




Capital issuance has not been effective in reducing financing spreads, not even in mitigating their widening

Negative signaling is the dominant effect: an important channel to reducing asset adjustment and macro impact is lost

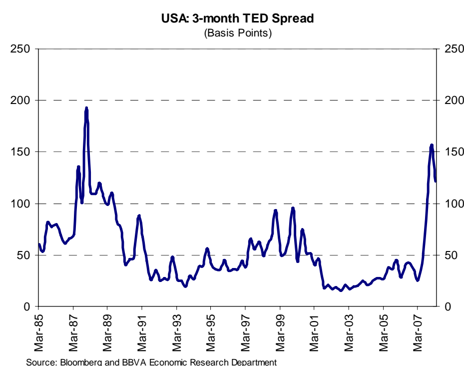
CREDIT CONTRACTION BECOMES UNAVOIDABLE

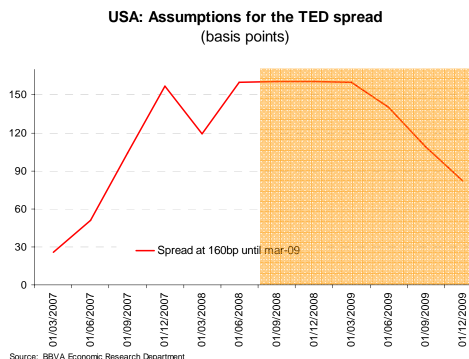


1 2 3 **Credit Contraction** BBVA

Credit contraction: US

Our models confirm the adjustment in credit will be sizeable, with large and protracted impact on growth



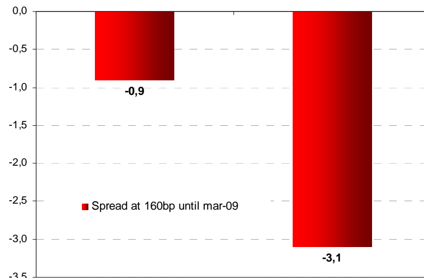


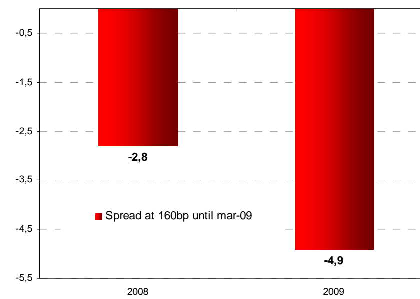
The lenght of the current episode is similar to the previous credit crunch in the US (91). Liquidity tensions are used as a proxy of the overall shock. We factor in a protracted shock to the TED spread

1 2 3 Credit Contraction BBVA

Credit contraction: US

Results for the United States



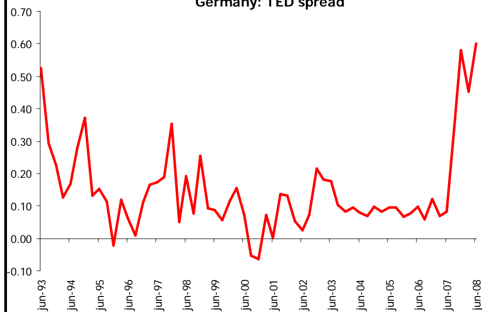


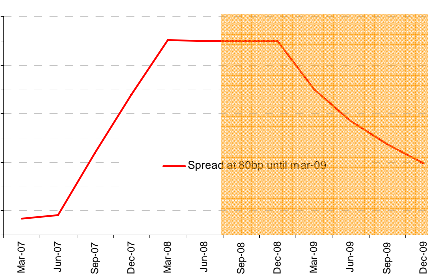
Credit will grow substantially below baseline, while growth will be hampered during 2008-2009. An quick recovery is completely ruled out

1 2 3 Credit Contraction BBVA

Credit contraction: EMU

Similar results apply to the Euro area: decoupling is unlikely in the face of identical shocks

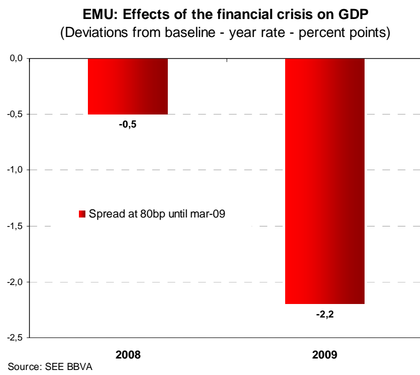


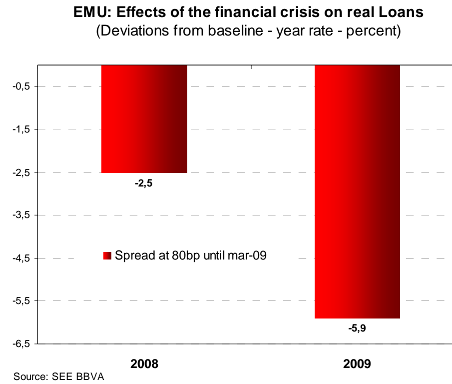


1 2 3 Credit Contraction BBVA

Credit contraction: EMU

Results for the European Union





Larger impact on bank credit but similar effect on growth...consistent with the structure of the financial system in the Euro area

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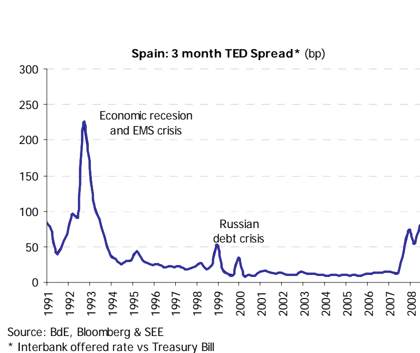
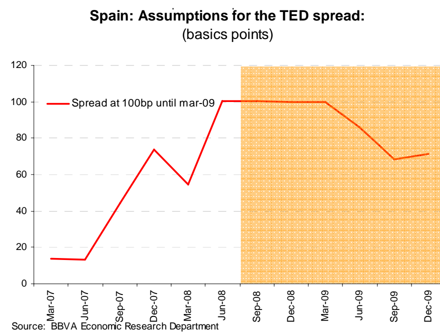
1 2 3 Credit Contraction BBVA

Credit contraction: Spain

Spain is especially afffected





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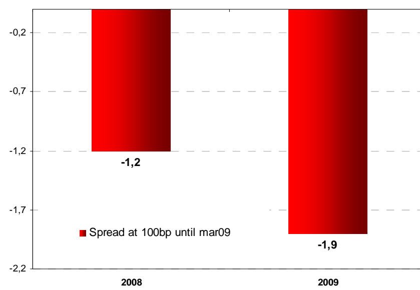
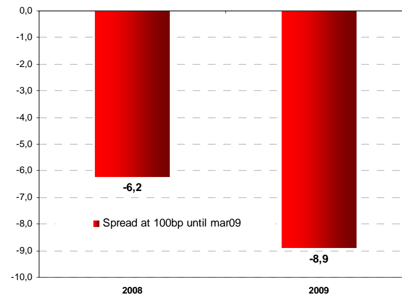
1 2 3 Credit Contraction BBVA

Credit contraction: Spain

Results for Spain





The impact is even larger in Spain, given larger financing needs and faster speeds before the crisis

BBVA

A triple shock to the global economy

Jose L. Escrivá
Chief Economist

UIMP Santander