

Working Paper

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Impact of US real estate crisis and financial market turbulence on the economy

What are we currently seeing in the global economy – merely a US real estate crisis, perhaps a global credit crisis or even the start of a worldwide insolvency crisis? The answer naturally determines the consequences for the economy, as well as the need to correct economic forecasts.

It is important to remember that our existing forecast already factored in a certain impact due to the US real estate crisis – an estimated 1 percentage point off growth this year and 0.5 percentage points in 2008. The only question is, will the turbulent events experienced since the end of June 2007 create an additional need to adjust the growth outlook for the US, Europe and the global economy as a whole?

The following questions are relevant for the **US economy** :

- Will the extremely high number of unsold houses and apartments prompt a continued and prolonged decline in residential construction?
- Will we see a drastic slide in lending to households
 - firstly because falling house prices will limit borrowing opportunities,
 - and secondly because banks are tightening their lending standards in general?
- Will demand for consumer goods plummet as a result of declining consumer and real estate lending?
- Will we see a negative impact on corporate financing and, as a result, investment opportunities in the corporate sector because

- higher risk premiums will make debt financing more expensive,
- banks are tightening their lending standards in general,
- and the capital-market based financing opportunities open to companies are limited due to the crisis of confidence in the financial sector?

There has already been a considerable slide in **residential construction in the US** in reaction to the large number of unsold houses. In the second quarter of 2007, residential construction investment accounted for just 4.8 % of GDP. After peaking at over 6 % at the end of 2005, the investment ratio is now close to its long-term average. Despite the correction, there has not been any significant reduction in the number of unsold new houses so far. The figure is approximately 200,000 units above the normal level.

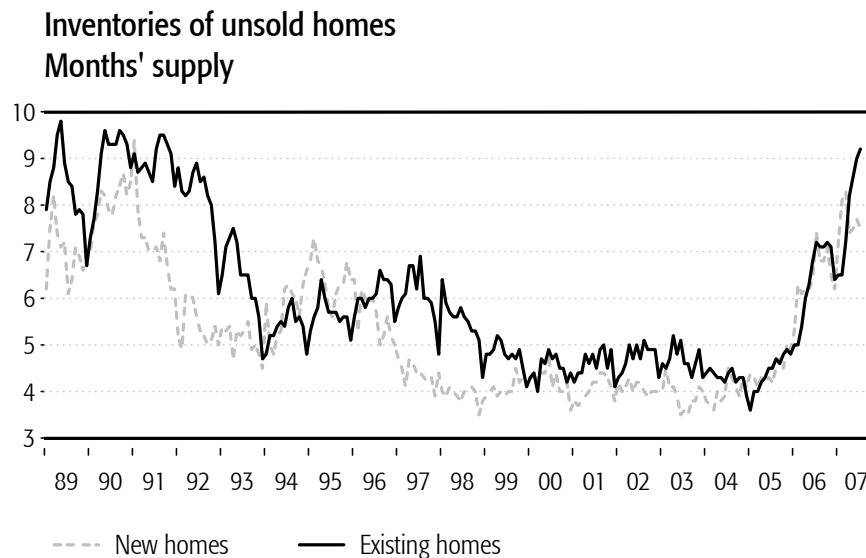


Recently, the overall environment was actually tending towards the sort of conditions that would suggest a decline in this backlog of unsold new homes. Sales of new houses currently number 850,000, while housing starts stand at approximately 1 million single-family dwellings (annualized), around 75 – 80 % of which will come onto the market.

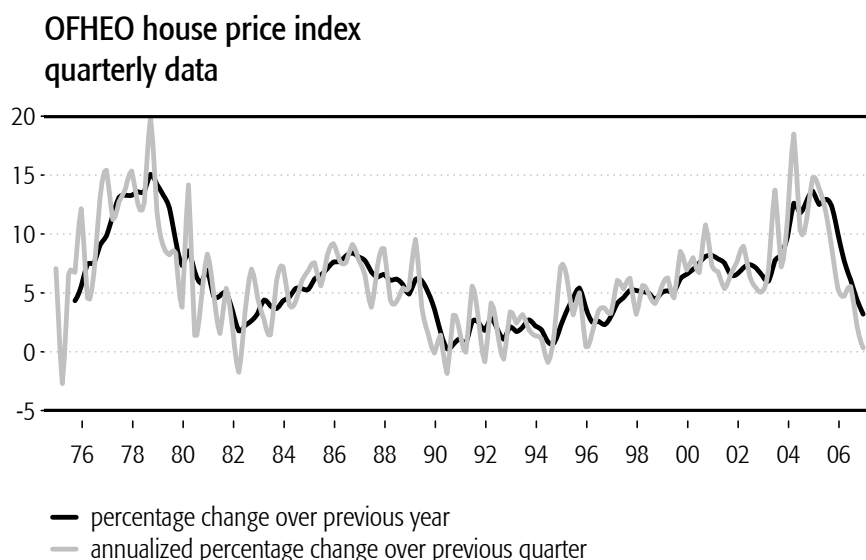
In view of rising delinquency rates for real estate loans, we can expect banks to tighten their **lending standards** in general. The latest "Senior Loan Officer Opinion Survey on Bank Lending Practices" certainly indicates that this will be the case. There is no doubt that banks will be attaching higher risk margins to new loans.

If the increase in interest rates for conventional mortgage loans and the renewed jump of late in the risk top-up for jumbo mortgages prove to be long-term trends – which looks increasingly likely with regard to risk premiums – a further drop in residential housing de-

mand is inevitable. The number of construction starts is therefore likely to shrink over the next few quarters from a current annual volume of approximately 1.4 million units to 1.0 million units (including around 700,000 single-family dwellings). Consequently, we can expect to see a further reduction in residential construction investment of around 10 % next year, following an estimated 15 % or so this year. In comparison with our previous forecast for 2008, residential construction will knock an additional ¼ percentage point off economic growth next year.



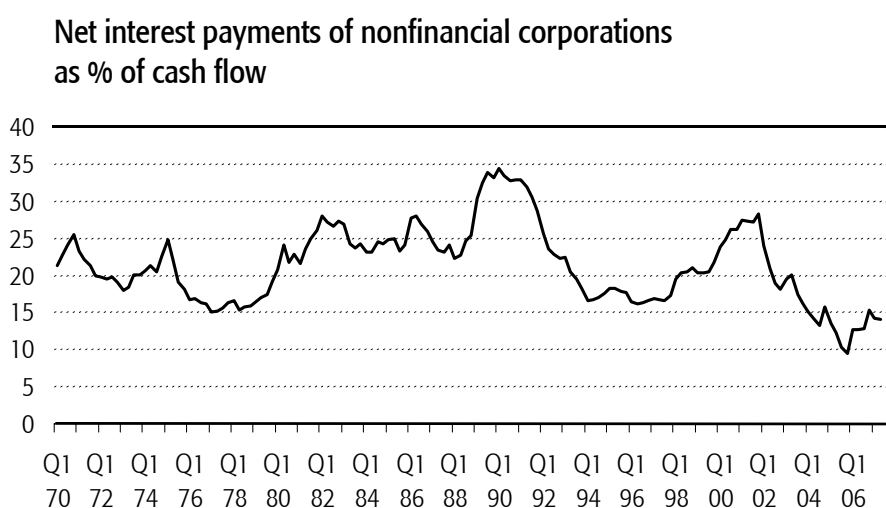
The sustained decline in demand for residential real estate means that a **drop in house prices** is a real possibility now, too. In the past, we had assumed that a longer period of stagnation in house prices would gradually reduce the overvaluation. This theory was supported, in particular, by the experience of downward rigidity in house prices since the 1970s. Now, however, we expect house prices, based on the OFHEO price index, to fall by an annual average of almost 5 % in 2008, following a 1.6 % increase this year. Sliding house prices are likely to have a negative impact on consumption due to their wealth effect. A 5 % decline in real estate assets is likely to dampen consumption by ¼ percentage point.



How will US monetary policy react in this environment? We had already reckoned with a 50 basis point interest rate cut by the Fed this year. Increased adjustment pressure in the household sector means that growth is set to come in well below potential in 2008, too, which in turn suggests a stronger monetary reaction. In view of the increased risk premiums, current monetary policy is on the restrictive side. Now that the rise in risk premiums of recent months could prove to be long-term in the main, a loosening of the monetary reins could help to curb the rise in interest rates for businesses and households.

Given the expected monetary easing and the drop in long-term interest rates, we do not expect any significant burden on financing conditions for the majority of companies despite higher risk premiums. Unlike private households, the interest burden on US companies remains low, meaning that we do not expect any major impact on investment activity either.

All in all, we are taking a somewhat more restrained view of the **economic prospects for the US** than was previously the case. We do not expect growth to clamber to anywhere significantly above 2 % for several quarters to come. With annual average growth of 2.2 % for 2008, US economic expansion is likely to be around ½ a percentage point lower than previously expected. The resulting loss in terms of global economic growth, taking transmission effects into account, is likely to come in at ¼ percentage point, with somewhere in the region of ½ of a percentage point expected to be shaved off world trade.



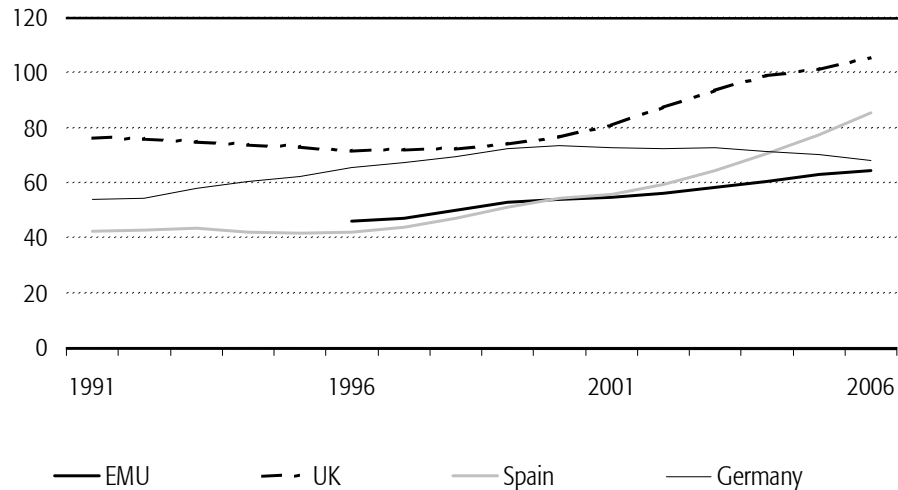
Turning to **Europe**, the main question is whether the turbulence on the financial markets could stifle the current upturn, which has already lost momentum in some countries such as France. Negative economic effects could surface in Europe as a result of

- lower exports to the US and more restrained growth in world trade overall,
- an end to the real estate boom in some European countries,
- lower consumer demand due to asset losses on the financial markets,
- higher risk premiums, making corporate financing more expensive on both the credit and capital markets,
- a considerable tightening of lending standards across the board, affecting all non-financial companies (credit crunch).

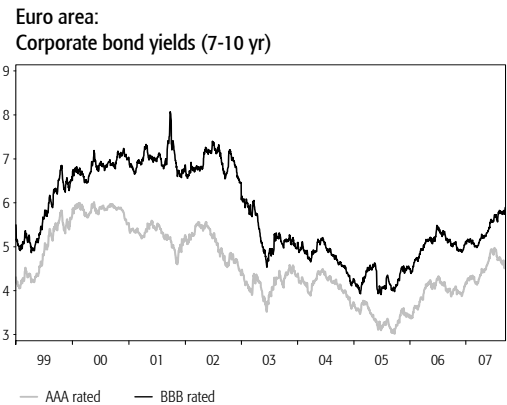
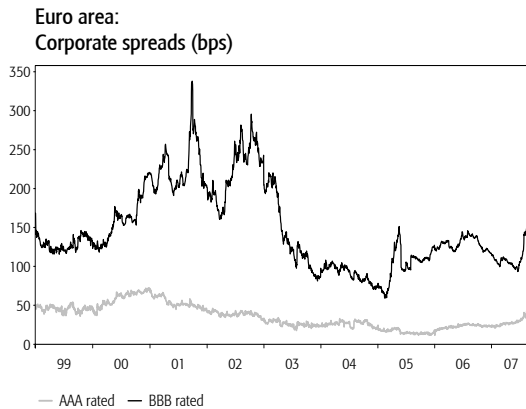
The ½ percentage point drop in US growth is only expected to deliver a slight knock to **German and other European exports**. The ½-percentage point drop in world trade means that we can expect European exports to drop by just a few tenths of a percentage point, because the main impact of the US economic slowdown will be on the close trade links between the US and Asia, as well as on trade flows within Asia. The consequences for European GDP growth will amount to 0.1 percentage points at most. Only a marked drop in the value of the US dollar against the euro would prompt a more drastic scenario. This, however, is highly unlikely as long as US monetary policy remains cautious in loosening its grip, as we expect.

Moreover, the real estate crisis in the US could have **an impact on those European real estate markets** which have been home to major price increases, such as Spain, France and Ireland in recent years. Nevertheless, direct transmission effects from the US are of only limited significance. The European and US real estate markets can, however, be expected to move in sync given the increased key interest rates in the euro area and the rise in risk premiums on both sides of the Atlantic. The rise in real estate prices has already come to a standstill this year - particularly in Spain. We have accounted for a slowdown on the European real estate markets in our economic forecasts for some time now. The question, however, is whether or not the escalation of the situation in the US will mean tighter lending standards for European mortgages, too. This may be the case for Spain, in particular. A large number of households have taken out real estate loans, predominantly with variable interest rates. The high level of household debt is likely to see banks take a more cautious approach to consumer lending. As a result, the slowdown in consumption and residential construction in Spain, and some other European countries, is likely to be more pronounced than expected. Our forecast for Spanish economic growth in 2008 has dropped to 2 ½ %, down by 0.5 percentage points. Countries with weak real estate economies and relatively low household debt, such as Germany, are highly unlikely to be affected much by this burden.

Private household gross debt as percentage of GDP



The equity market correction will reduce household assets and could therefore dampen consumer demand in Europe. However, given a correction on the European markets of only around 10 % compared with the highs already posted, and with European indices still higher than at the beginning of the year, households are not likely to perceive this as a blow to their financial situation, which means scant reduction in consumer demand. We do not see any problem for the European economy in this regard so far.

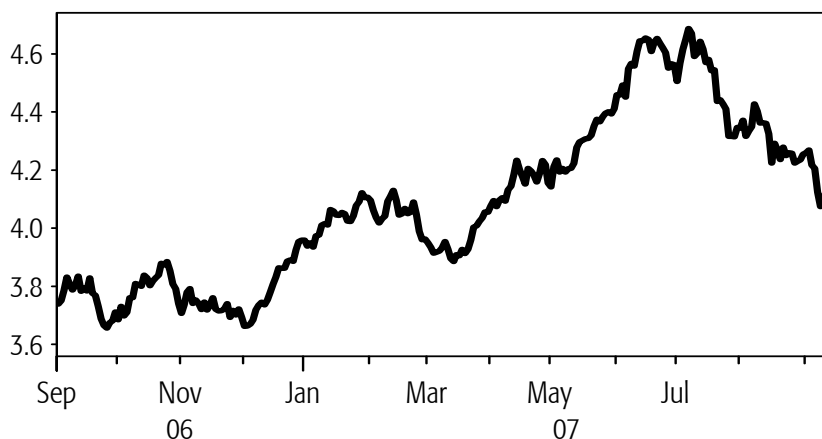


Since June of this year, **risk premiums have been undergoing revaluation** on the capital market, and in particular on the securitization market. It goes without saying that loans to SMEs were also securitized. Although the fundamental data of these SMEs has not deteriorated thanks to the healthy economy, indirect capital market financing is likely to become more expensive for SMEs. If banks shift the risks resulting from SME loans off their balance sheets (a trend that looks set to continue), but shifting these risks becomes more expensive, this is also likely to be reflected in a higher lending rate for SMEs.

It is still difficult to estimate the extent to which the cost of lending will increase. Fortunately, counter effects are at work, too. The drop in long-term yields - 10-year government

bonds - by almost $\frac{1}{2}$ a percentage point since June is cushioning the blow of the rise in corporate financing costs caused by higher risk spreads. Some companies with good credit ratings may not have experienced any increase in their credit costs at all. All in all, the economic impact of the increase in credit costs (which is expected to be only slight) is likely to be limited - especially since many companies are currently in a much better financial situation than they were a few years ago anyway.

Euro area: 10-year government bond yield



In our opinion, the risk that the crisis of confidence on the financial markets will spark a general **credit crunch** for European companies is low - at least as things stand. Nevertheless, banks are likely to subject their lending decisions to closer scrutiny - in particular for high-risk exposures. This is likely to hit primarily those European markets that have seen a large-scale expansion in corporate credit in recent years. This is, however, unlikely to have any long-term effect on companies' investing power in macroeconomic terms.

All in all, while the European economy is unlikely to escape the turbulence on the financial markets totally unscathed, the impact will probably be limited mainly to those countries whose economic and debt picture most resembles that of the US, i.e. Spain, and to a lesser extent, the UK. We now expect economic growth of 2.1 % for the euro area in 2008 (previous forecast 2.2 %). We are sticking by our economic forecast for Germany of + 2.5 % in 2008.

Economic growth

- Real GDP, percentage change over previous year -

	2002	2003	2004	2005	2006	2007 ¹⁾	2008 ¹⁾
Germany	0.0	-0.2	1.2	0.8	2.9	2.5	2.5
Spain	2.7	3.0	3.2	3.5	3.9	3.8	2.5
Euro area	0.9	0.8	1.9	1.4	2.8	2.7	2.1
UK	2.1	2.8	3.3	1.8	2.8	2.8	2.3
European Union	1.1	1.1	2.5	1.7	3.1	2.9	2.4
USA	1.6	2.5	3.6	3.1	2.9	2.0	2.2
Japan	0.3	1.5	2.7	1.9	2.2	2.0	2.0

1) forecast.