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The Burst of the Real Estate Bubble – More Than a Trigger for the Financial Market Crisis

Over a period of 15 years, a price bubble developed on the US real estate market whose burst could have been foreseen. The collapse of house prices was a key element of the financial market crisis as real estate is the most important collateral for bank loans. Historical experience shows that there is a close connection between a slump in real estate values and a financial market crisis. Because of the massive adverse consequences of the latter for the real economy, policy is called upon to prevent the emergence of price bubbles on real estate markets at an early stage. In the Anglo-Saxon countries and in Spain it has failed to do so.

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The "subprime" crisis in the USA is considered as having triggered the financial market crisis. Yet, the subprime segment only claims a rather small share of the US credit market (Hellwig, 2008). How such a relatively small element could have thus far-reaching consequences can be explained mainly by two factors:

- the burst of the real estate bubble caused by the subprime crisis (and the increase in interest rates)
- systemic risks, i.e., the over-leveraging by banks and hedge funds, the outsourcing of high-risk operations to special purpose vehicles exempt from government control, de-regulation, an overly expansionary monetary policy in the USA and the diversification of risk world-wide via securitisation¹.

The combination of these factors was crucial for the breaking of the crisis. This article investigates into the often underestimated influence of the real estate markets. The Director of CEPR, Dean Baker, claims: "The central element in the current financial crisis is the housing bubble" (Baker, 2008). However, this interpretation appears only partial: in the absence of de-regulation and the systemic risks in the financial system (Löhn, 2004), the crisis would never have grown to such dimension. Moreover, without the massive accumulation of financial assets worldwide ("savings glut"), banks and investors would not have taken such high risk (Tichy, 2009).

As shown by the investigation into earlier financial market crises (Reinhart – Rogoff, 2009), there is a close connection between real estate and financial market crises. Typical examples are the "Great Depression" of the 1930s, the financial crises of the 1990s in Japan and Scandinavia as well as the financial market and currency crises of the 1990s in Southeast Asia and Latin America. As a rule, a financial market crisis is preceded one year ahead by a slump in real estate values.

¹ See on these items also Url, T., "Financial Market Crisis: Origin, Short-Term Reaction and Long-Term Adjustment Requirements", Austrian Economic Quarterly, 2010, 15(1), http://www.wifo.at/www/jsp/index.jsp?fid=23923&typeid=8&id=39071&display_mode=2, and Hahn, F.R., "Financial Market Regulation", Austrian Economic Quarterly, 2010, 15(1), http://www.wifo.at/www/jsp/index.jsp?fid=23923&typeid=8&id=39075&display_mode=2.

**Causes and catalysts
of the financial
market crisis**

**Close relation be-
tween real estate and
financial market crises**

Slightly exaggerated one may say: no financial market crisis without real estate or currency crisis. In the advanced industrial economies, a financial market crisis is typically associated with a slump in house prices after a speculative boom. In the emerging markets, a financial market crisis is normally accompanied by a currency crisis, when foreign capital is abruptly withdrawn by investors at early signs of a crisis, putting strong downward pressure on the national currency.

The financial sector can usually accommodate a steep fall in share values – e.g., the "dotcom" crisis" of 2001 – without a fundamental threat to its viability. With share prices showing a similar pattern in the current crisis as during the 2001/02 recession, their moves themselves would have hardly caused a collapse on financial markets. More dangerous is a stock market slump when it is accompanied by a tumbling of real estate prices, because

- real estate is the most important collateral of bank loans – housing market speculation has been much more widespread among the population than stock market speculation and liability of mortgage borrowers in the USA is confined to their real estate assets, and
- real estate prices have a substantial influence on construction activity and private consumption.

Since lien on real estate is the key collateral for bank credits, banks get into difficulty if prices of land and buildings fall massively ("bad loans"), particularly if possible losses in real estate value have been under-estimated². Shares, motor cars and machinery, being of less stable value, lend themselves much less for credit collateral.

In the USA, a price bubble developed on real estate markets over a period of 15 years, whose burst could be foreseen (*Marterbauer – Walterskirchen, 2005, p. 772*). Yet, many economists and policymakers interpreted this speculative bubble as genuine market price formation driven by booming demand on premium locations – in a similar way as before the Great Depression of 1929 (*Galbraith, 1955*)³.

The inflation of the real estate price bubble was not confined to the USA. Whenever free, unregulated mortgage markets coincide with low interest rates there is a danger of the residential sector falling into a boom and bust cycle. In the UK, Ireland, Spain and eastern Europe, particularly in the Baltic countries, house prices rose even faster than in the USA. In the UK, the boom was fuelled by the fact that residential construction reacted only little to the strong demand increase, especially in Greater London. In the other countries, prices were driven by convergence towards the higher level in the rest of Europe.

The risk of price bubbles emerging is particularly high in times following a swift liberalisation of credit markets, as implemented in Sweden and Finland at the end of the 1980s⁴. Additional risks in the USA were the tax deductibility of interest payments and the fact that liability for mortgage debt was limited to the real estate object.

In continental Europe, and especially in Germany and Austria, prices of residential property rose even somewhat less than consumer prices overall during the last 15 years. Austria, due to the strong public influence in the housing sector (public subsidies to residential construction, fixed-interest loans granted by building societies – "Bausparkassen") was shielded from exaggerated price ups and downs. One may take this as the Keynesian "socialisation of residential investment". In Germany, real estate prices declined after the re-unification boom; besides, mortgage markets in

Real estate bubbles in the Anglo-Saxon countries

² Likewise, a massive currency devaluation (e.g., in Iceland and Argentina) reduces drastically the value in foreign currency of real estate and securities of the respective country.

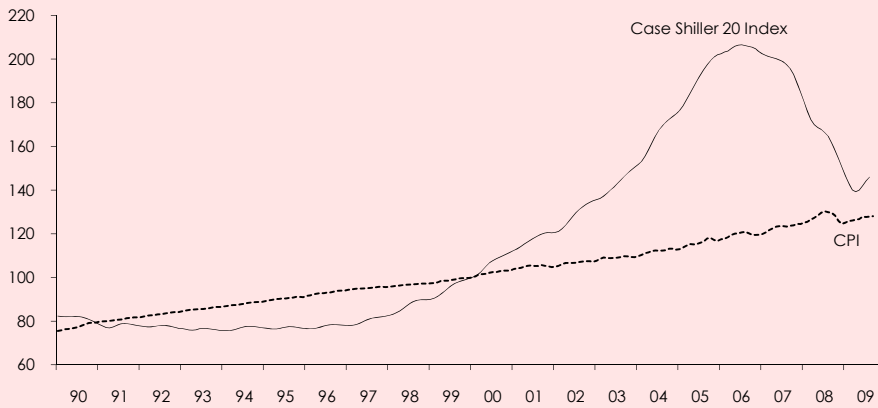
³ The analysis of the real estate boom in Florida before the Great Depression by *Galbraith (1955, p. 32)* may describe also the present situation: "The Florida boom contained all elements of the classic speculative bubble. There was the indispensable element of substance . . . On that indispensable element of fact men and women had proceeded to build a world of speculative make-belief."

⁴ In Denmark, where credit markets were liberalised much more gradually, a financial market crisis could be avoided.

Germany are less developed than in the Anglo-Saxon countries where residential mobility is much more frequent.

Figure 1: House prices vs. consumer prices in the USA

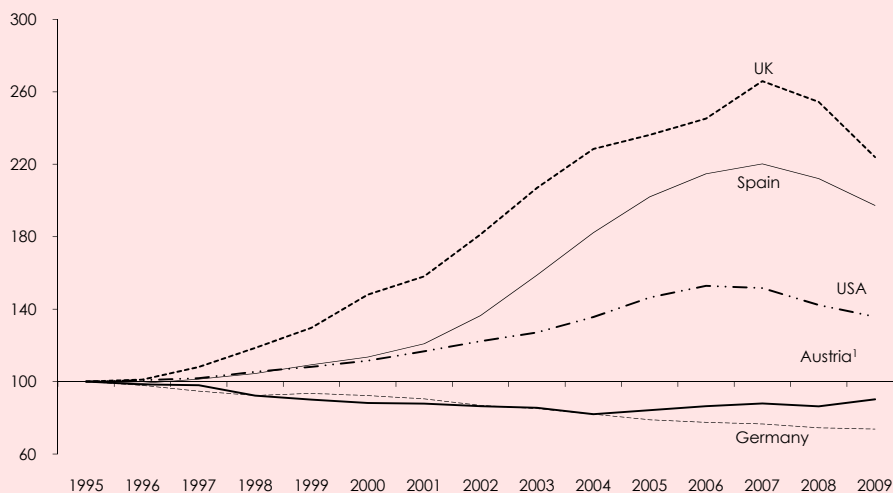
January 2000 = 100



Source: Standard & Poor's, OECD.

Figure 2: Real house prices

2000 = 100



Source: OECD, OeNB, WIFO calculations and estimates. – ¹ Until 1999: Vienna.

In Germany and Austria, the development of the housing sector is rightly seen as a long-term process depending primarily on demographic trends. Business cycle variations in these countries are not shaped by residential construction, but by exports and investment in machinery and equipment. However, in the Anglo-Saxon countries the importance of the housing market for business activity is such that *Leamer* (2007) even claims that "housing is the business cycle".

Supply-side-oriented economics explains the medium-term trend of economic growth and growth differentials between countries by supply-side factors. Deregulation of mortgage markets and labour market flexibility are claimed to have led to above-average growth in many countries (OECD, 2004). However, the medium-term growth differentials – though not the long-term ones – between the European coun-

Role of the housing market for economic development

tries are explained, according to *Marterbauer – Walterskirchen (2005)*, to a large degree (by about half) by the "cyclical" effects of house prices. As a rule, housing market cycles are extremely (up to 15 years) long.

Table 1: House prices, interest rates, residential investment and economic growth

Volume	Long-term	Residential	Real GDP		House prices	
	interest rate	investment	1998-2007	1998-2007	2008	2009 ¹
	Ø 1999-2007 Percent p.a.	1998-2007	Average year-to-year percentage changes		Percentage changes from previous year	
UK	2.9	+ 3.5	+ 2.8	+ 8.3	- 4.3	- 14.1
Spain	1.2	+ 7.4	+ 3.7	+ 8.1	- 3.7	- 7.4
France	2.8	+ 3.1	+ 2.2	+ 7.6	- 1.8	- 9.1
Ireland	1.3	+ 7.2	+ 6.5	+ 6.5	- 11.6	- 10.7
Sweden	3.2	+ 10.6	+ 3.2	+ 6.5	- 0.1	- 3.5
Denmark	2.7	+ 6.7	+ 1.9	+ 6.0	- 7.9	- 16.4
Italy	1.9	+ 2.9	+ 1.5	+ 5.0	- 1.7	- 4.7
EU 15	2.5	+ 2.5	+ 2.3	+ 4.6	- 2.7	- 6.7
Finland	2.7	+ 3.8	+ 3.4	+ 4.1	- 3.3	- 0.1
USA	2.5	+ 0.8	+ 2.9	+ 3.9	- 6.2	- 3.1
The Netherlands	1.9	+ 1.7	+ 2.5	+ 3.9	+ 0.7	- 5.0
Switzerland	2.2	.	+ 2.0	+ 1.2	+ 0.2	+ 5.1
Austria	2.6	- 1.0	+ 2.4	- 0.3	- 1.9	+ 4.6
Germany	3.0	- 1.9	+ 1.5	- 2.3	- 2.7	- 1.8
Japan	2.3	- 2.3	+ 1.5	- 3.4	- 2.9	- 3.3

Source: Eurostat, OECD, OeNB, WIFO calculations and estimates. – ¹ Latest quarterly data, respectively.

Figure 3: Growth of mortgage loans

Change 1999-2006, as a percentage of household disposable income



Source: OECD. – ¹ Long-term loans. – ² Medium- and long-term loans.

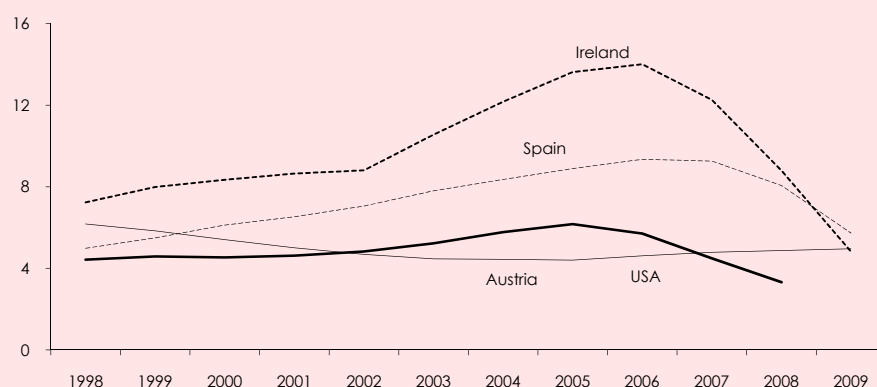
Over the period 1995-2008, economic growth was significantly higher in the USA, the UK, Spain and Ireland than on average in the euro area. In these countries, the strong upward drift of house prices was the driving force of GDP growth overall (*Walterskirchen, 2006*), via wealth effects on private consumption: the rising value of land and buildings facilitates as collateral the access to consumer credit and represents "capital gains" which are partly translated into higher consumption. The boom in construction, private consumption and employment was fuelled by higher house prices and the expansion of mortgage loans. The private household saving ratio fell sharply in countries developing real estate bubbles, such as in the USA from 8 percent in the early 1990s to nearly zero in the middle of the present decade

(Cynamon – Fazzari, 2008)⁵. In 2009, the US saving ratio has probably rebounded to 4 percent at the expense of private consumption.

Mortgage loans have seen an extraordinarily fast expansion in the USA and the UK since the middle of the 1990s. Low real interest rates and tax deductibility of debt service cost encouraged demand for credit. However, periods of swiftly-rising house prices are inevitably followed by a collapse of prices (often triggered by a marked increase in interest rates) with negative repercussions in the real economy. Monetary policy in the USA first reinforced the boom via extremely low interest rates (2001 to 2003) before turning it into a crash by raising interest rates.

Figure 4: Residential investment

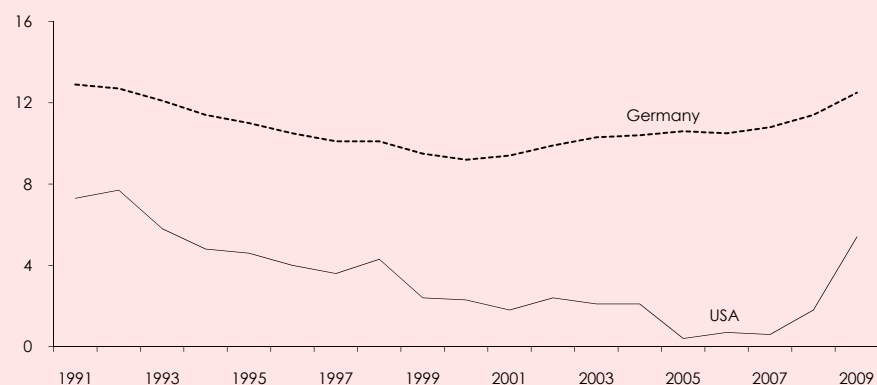
As a percentage of nominal GDP



Source: Eurostat. 2009: forecast.

Figure 5: Saving ratio of private households

As a percentage of disposable income



Source: OECD. 2009: forecast.

In the Anglo-Saxon countries, in northern and eastern Europe as well as in Spain, the impact of real estate markets turned strongly negative in the last few years. Thus, single family housing starts in the USA tumbled from 1.8 million in January 2006 to 1.1 million in autumn 2007 (Mishkin, 2007, p. 1) which by itself reduced GDP growth by 1 percentage point.

⁵ In the national accounts, the saving ratio is that part of disposable income which is not spent on consumption. "Capital gains" are increases in asset values which are not part of disposable income. Since at least part of these are also used for consumption, the saving ratio is *eo ipso* reduced.

Price bubbles develop on speculative markets (stocks, real estate, commodities) because of "perverse" reactions to price changes. On "normal" markets, demand decreases when prices go up. Conversely, on speculative markets purchases increase when prices rise since further price increases are expected. Expected price increases have a self-fulfilling tendency on all markets as purchases are carried forward; on asset markets, there is the additional expectation of an increase in real values.

Prices rise up to the point when the bubble bursts. Speculative bubbles are not always recognised as such: certainty exists only after they have burst. Before, they are often interpreted in an economically rational way, as efficient market price formation.

Thus, the price mechanism is not working the usual way on speculative markets, which is why real estate and financial markets must be regulated. In the case of a "bet", one bank loses while another bank wins. In the event of a collapse in real estate values, all banks lose.

A recession triggered by a financial market crisis is usually of above-average duration (*Reinhart – Rogoff, 2009*): in the face of increasing credit defaults, banks ask for higher risk premia and additional collateral for new credits. In addition, residential construction dwindles because of lack of demand. The loss in real wealth reduces the appetite for private consumption and the access to credit. Calculations with the NIGEM model for the USA suggest that a fall in house prices by 10 percent leads to a fall in GDP by $\frac{3}{4}$ percent to 1 percent (*Walterskirchen, 2006*). Such a strong reaction of real estate prices was considered unlikely within the economics profession, although US house prices fell off by more than one-third from their peak. Residential investment contracted from its high reached in 2005 by about half in real terms, in a similar way as during the Great Depression (*Mishkin, 2007*).

It was undoubtedly a political aim to liberalise financial and real estate markets in order to enhance their efficiency. Notably the OECD pushed all countries to perfect their mortgage markets in order to accelerate in this way economic growth like in the USA and the UK (*OECD, 2004*). According to the US economist Larry Summers, the theory of efficient financial markets has been the greatest error in the history of economics.

Because of the disastrous effects of a financial market crisis, economic policy should obviate in a timely manner the emergence of bubbles on real estate markets, in order to reduce the risk or at least the extent of a real estate and financial market crisis. Yet, in the Anglo-Saxon countries, in Spain and in the Baltic countries, policy made no attempt to rein back a price bubble on real estate markets, since

- the speculative bubble was not recognised as such before it burst ("this time is different"),
- the necessity of counter-action was politically not undisputed, and
- a conventional set of policy measures to counter an overheating on real estate markets was lacking.

The *European Central Bank* (2005) expressed its concern about the speed of house price increases in many countries⁶. However, the US Federal Reserve under Alan Greenspan did not consider it a task of a central bank to react to a jump in asset prices and thereby dampen economic growth in a timely way, i.e., before the emergence of consumer price inflation ("better to clear the garbage afterwards").

⁶ In November 2009, the Chinese Central Bank warned against a real estate price bubble in China and called for an end to public support of the real estate market, as the unfettered speculation put future growth at risk.

Causes of speculative bubbles

Conclusions for economic policy

From the macro-economic policy point of view it is certainly problematic to choke off a cyclical upswing via higher interest rates just because of an unhealthy boom in one sector. In such a case, fiscal policy measures targeting specifically the residential construction sector are deemed more appropriate than monetary policy action.

This holds particularly for the euro area and its common monetary policy. The key policy-controlled interest rate for the euro area may thus be relatively high for Germany as a low-inflation country, but rather low for less price-stable countries such as Ireland or Spain. These differentials between real interest rates should be compensated by a wage policy co-ordinated at international level. Chances for such a policy to be implemented are nevertheless poor. For the euro area, it is therefore up to fiscal policy in the first place to prevent bubbles from emerging in housing markets of particular countries (see *Fitz Gerald, 2009*). Among the appropriate policy tools figure

- tax deductibility of interest payments,
- subsidies to residential construction,
- maturities of mortgage loans,
- promotion of saving for homebuilding and residential construction bonds,
- cost associated with purchase of residential property (real estate tax, etc.),
- regulation of ceilings for real estate serving as collateral (in Austria usually 70 per cent),
- public investment in residential construction, etc.

In case of speculative price bubbles emerging, these instruments should be used to prevent overheating at an early stage.

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The Burst of the Real Estate Bubble – More Than a Trigger for the Financial Market Crisis – Summary

The bursting of the housing bubble in the USA was a key factor to propel the ensuing financial crisis. When real estate suffers a massive loss of value, banks are in greater trouble than when faced with a stock market crash because land is the main collateral for bank loans and home ownership is much more widespread than shareholdings. Historical studies have found a close link between real estate crises and financial crises. A collapse of real estate prices typically precedes a financial crisis by about a year.

The housing crisis was not restricted to the USA. The UK, Ireland, Spain and Eastern Europe (the Baltic countries) had developed even bigger housing bubbles. Austria was protected from excessive fluctuations thanks to a strong public component in the housing market (housing subsidies, building society loans, etc.). In both Austria and Germany, the housing sector's development chiefly depends on demographic developments; cyclical swings in general are determined by exports and investment in machinery and equipment. In the Anglo-Saxon countries on the other hand, the housing market has a critical impact on the business cycle, through its effect on residential construction and consumption.

Considering the disastrous effect of a financial crisis, governments in their monetary policy and particularly in their budget policy should respond to bubbles in the housing market while they are still only emerging.

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