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# The impact of the financial crisis on European housing systems: a review

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# Preface

The global financial crisis has revealed that housing markets in EU are important causes of instability. As a consequence, financial systems have changed; through adjustments in regulations as well as through more careful mortgage management.

Therefore, it is urgent to explore how the EU and its member countries have tried to recover by modifying housing finance markets. However, the crisis hit countries at different times and to a different extent. As a result housing market adjustments and government responses have also been different. As an example, there was considerable divergence in experience between countries who mainly had high debt to GDP ratios and those that had reasonably consistent price increases.

This report focuses on two main elements: first, how house prices have moved across different groups of countries; and second, how governments and markets have responded to the crisis in terms of mortgage products, regulation and output levels.

Overall the evidence is that credit markets are generally tighter and there are fewer options available to new mortgagors. Mortgage market now have stricter regulation; higher capital adequacy ratios and tougher repayment requirements. One exception is a group of Eastern European countries where mortgage markets are still very much in their infancy and debt to GDP ratios are low.

When looking to the future, there are at least four fundamental tensions that give cause for concern with respect to mortgage and housing markets:

First, if the Euro economy and the world economy more generally do start to grow there will inherently be pressures on both house prices and rents. This may generate further volatility both in prices and output;

Second, interest rates are at historic lows but personal debt levels remain high in many countries. If interest rates rise, even by quite small amounts, many households will be put under pressure;

Third, the CRDIV, Basel III and other regulatory changes are likely to increase the cost of borrowing and make it more difficult for those without pristine records to borrow.

Finally, volatility in housing and mortgage markets results in developers facing higher risks and greater problems in obtaining funds. The strongest evidence from this survey is that, in almost all European countries the major remaining financial constraint is development finance.

Jörgen Hettne
Acting Director

# About the authors

*Christine Whitehead* is Professor in housing Economics at the London School of Economics. She is an internationally respected applied economist whose research is well-known in both academic and policy circles. She has conducted an extensive programme of research on various aspects of the housing market, with special reference to housing finance and subsidies, social housing provision and land use planning, as well as on urban, industrial policy and privatisation issues. She works closely with both Kathleen Scanlon and Jens Lunde on European housing finance and regulation issues. She is co-chair of the ENHR housing finance working group. She was awarded the OBE for services to housing in 1991.

*Kathleen Scanlon* is a Research Fellow at the London School of Economics. She has carried out a number of international comparative studies of housing policy and outcomes across all three tenures. She is co-editor of Social Housing in Europe, published in 2014 by Wiley, and is currently working on a four-country project looking at the impact on the private rented sector of changes in rent regulation.

*Jens Lunde* is Associate Professor in Finance at the Copenhagen Business School. He specialises in research on housing market and the macro economy, housing and property markets, financing and taxation across tenures. He is current working with Christine on an edited book looking at milestones in housing finance over the last twenty five years. He is joint author with Kath Scanlon and Christine Whitehead of two academic journal papers looking at developments in housing finance in Europe since the turn of the century. He is co-chair of the ENHR Housing Finance Working group.

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# Executive summary

Since the mid-2000s many national housing finance systems in Europe have been under great strain, in part because they grew so rapidly in the early part of the century. Even though some major countries have ridden the storm relatively easily, the Euro zone as a whole has seen housing as an important cause of instability and one that must be addressed by stronger regulation.

During the upswing most countries followed more or less the same path in terms of house prices and housing market adjustment but the crisis hit countries at different times, to a different extent and for shorter or longer periods. As a result housing market adjustments and government responses have also been different.

This paper looks at the evidence on how the European Union, European national governments and markets have coped with the crisis and with the subsequent recession. It draws on secondary data and responses to a series of questionnaires to the ENHR housing finance working group on how housing markets and their governance have changed since the financial crisis across a range of European and comparable industrialised countries. It concentrates on two main elements: first, how house prices have moved across different groups of countries and how these patterns relate to housing and mortgage market activity; and second, how governments and markets have responded to the crisis in terms of mortgage products, regulation and indeed output levels.

## Secondary data analysis

Perhaps the main finding from the secondary analysis is that prior to the downturn in financial terms there appeared to be two main groups of countries – with Germany, Switzerland and Austria showing little signs of over-heating, while most of the other countries showed consistent upward pressure on prices and activity. If in addition real output levels were taken into account three countries: Ireland, Spain and Iceland stood out as being far more supply responsive than average.

The secondary data show that there were immediate effects of the global financial crisis in almost all countries in our sample. However relatively quickly there was considerable divergence in experience between a group who mainly had high debt to GDP ratios (Denmark, Great Britain, Iceland, Ireland, Spain and – in a rather different category, Slovenia) where prices fell at least to 2010 and those that had reasonably consistent price increases (Austria, Belgium, Germany and Switzerland). Since then prices have risen in some of the countries that had large declines, but have fallen somewhat across a wide range of countries, reflecting recession in real economies. Declines are still strong in Ireland, Spain, to a lesser extent Portugal, and also in the Netherlands where policy changes have reinforced downward pressures.

Perhaps surprisingly the ratio of residential loans to GDP has continued to rise in many countries. On the other hand transactions reached their height before the crisis in all but three countries and have fallen massively in Ireland, the Netherlands, Portugal and Spain. Germany, Finland and Slovenia on the other hand have actually seen rises in transactions throughout the period to 2012.

## Policy responses

Overall the evidence is that credit markets are generally tighter and there are fewer options available to new mortgagors. This is true in countries where there have been historically conservative lending policies, such as Germany and Austria, as well as in countries that expanded lending rapidly before the crisis. However there are two apparent exceptions: some countries in Eastern Europe which had limited exposure to debt mortgage finance where the main issue has been constraining foreign exchange denominated mortgages; and Sweden and Finland and to a lesser extent other Nordic countries where it seems to be mainly business as usual, notably with respect to interest only mortgages.

Outside the three or four economies where the real economy as well as the financial system has been particularly badly hit by the crisis and supply far exceeds demand - Iceland, Ireland, Portugal and Spain – the problems appear to be more about how to get the financial system working better rather than a major crisis facing large proportions of individual borrowers. In part this is because interest rates remain at historically low levels.

The trends are towards stricter regulation; higher capital adequacy ratios and therefore, over time when demand picks up, higher interest rates; stricter loan to value and loan to income ratios; and tougher repayment requirements. The only real exceptions are mainly Eastern European countries where mortgage markets are still very much in their infancy and debt to GDP ratios are low. Even so the extent of regulatory change has proved less than initially predicted, in part because governments are concerned to support some return to 'normality'.

The picture with respect to funding new housing development appears to be much more negative than with respect to consumer mortgages in most countries included in our sample. This is in part because asset values have still not recovered to pre-crisis levels so many banks are carrying overvalued assets as well as non-performing loans to the development industry.

The countries that still see themselves experiencing mortgage market as well as housing market problems included the obvious – Spain and Ireland but also Portugal, Slovenia and, least predictable, the Netherlands. In the UK the picture is more mixed but clearly still fragile. In all these countries demand side issues are currently just as important as credit availability and reflect the extent to which housing markets remain in disequilibrium.

## Looking to the future

There are at least four fundamental tensions that give cause for concern with respect to mortgage and housing markets into the future:

First, if the Euro economy and the world economy more generally do start to grow there will inherently be pressures on both house prices and rents. This will in turn put pressure on governments to try to stabilise the system – which may generate further volatility both in prices and output;

Second, interest rates are at historic lows but despite deleveraging, personal debt levels remain high in many countries. If interest rates rise, even by quite small amounts, many households will be put under pressure;

Third, the CRDIV, Basel III and other regulatory changes are likely to increase the cost of borrowing and make it more difficult for those without pristine records to borrow. Mortgage markets in traditionally more open finance systems will probably never return to pre-crisis levels of activity.

Finally, there is the issue of supply. Volatility in housing and mortgage markets results in developers facing higher risks and greater problems in obtaining funds. The strongest evidence from our survey is that, in almost all European countries as well as in other market based systems such as the USA and Australia the major remaining financial constraint is development finance.

# 1 Introduction: the basis for our research

Since the mid-2000s many national housing finance systems in Europe have been under great strain, in part because they grew so rapidly in the early part of the century. Even though some major countries have ridden the storm relatively easily, the Euro zone as a whole has also seen housing as an important reason for instability and one that must be addressed by stronger regulation. Problems in housing finance link closely not just to the stability of housing investment, housing and the capacity of households to achieve the housing to which they aspire but also the capacity of governments to manage macro-economic policy effectively.

Over the last twenty five years housing finance markets in Europe and across the world have been liberalised and in some instanced developed from scratch. Between the late 1980s and 1999, European mortgage markets expanded rapidly, more than doubling in nominal terms over the period. This was made easier by the European Union's Directive om Own Funds and Solvency Ratio (Directives 89/647/EEC and 91/633/EEC) which took effect in 1993 which introduced a preferential weighting for residential loans and significantly increased the lenders' ability to finance mortgage credit. At the end of the decade, the volume of outstanding mortgage loans amounted to just over €3 trillion, representing more than 35% of EU GDP. In the early part of the century the expansion continued at an increasing rate at the same time as lending standards eased almost continuously across Europe, reflecting increased competition among lenders (Johnson et al, forthcoming). As a result, outstanding mortgage loans nearly doubled from 2000 to 2007 to over 6 trillion, almost 50% of EU GDP. Thereafter however residential lending fell for a year and then grew again but only by about 10% over the following five years. That period saw very considerable credit constraint in some countries and increasing pressure for greater regulation.

This paper looks at the evidence on how the European Union, European national governments and markets have coped with the crisis and with the subsequent recession. It draws on secondary data and responses to a series of questionnaires to the ENHR housing finance working group[1] on how housing markets and their governance have changed since the financial crisis across a range of European and comparable industrialised countries. The paper builds on two earlier publications by the same authors which looked at issues around the build up to 2007 and the immediate responses to the crisis[2]. It clarifies how markets and policy makers have responded to the crisis and sets out a range of findings with implications for the future role of housing finance in Europe and comparable countries.[3]

During the upswing most countries followed more or less the same path in terms of house prices and housing market adjustment but the crisis hit countries at different times, to a different extent and for shorter or longer periods. As a result housing market adjustments and government responses have also been different. This paper concentrates on two main elements: first, how real house prices have moved across different groups of countries and how these patterns relate to housing and mortgage market activity; and second, using the responses to the questionnaire and other case study materials, how governments and markets have responded to the crisis in terms of mortgage products and regulation.

The initial research was conducted in the late stages of the boom. In it we tracked how house prices and mortgage debt were increasing rapidly and how markets were responding particularly to problems of affordability by the introduction of new instruments that reduced the early year costs of homeownership. These instruments aimed to limit the initial costs of entering owner-occupation by reducing down payments, the use of interest only and variable rate mortgages, and extensions to the available mortgage periods.

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1 Thanks to Judy Yates, University of Sydney (Australia), Edwin Deutsch, TU Vienna (Austria), Frank Vastmans, University of Leuven (Belgium), Martin Lux and Petr Sunega, Institute of Sociology, Prague (Czech Republic), Tommi Laanti, Environmental Administration (Finland), Bernard Vorms, ANIL (France), Michael Voigtlander, Cologne Institute for Economic Research (Germany), Tom O'Connor, formerly of IBF (Ireland), Jan Rouwendal and Marc de Graaf, VU University (Netherlands), Rolf Barlindhaug, NIBR (Norway), Hanna Augustyniak, National Bank of Poland (Poland), Paulo Conceicao, University of Porto (Portugal), Andrey Tumanov, Institute for Urban Economics (Russia), Andreja Cirman, University of Lubljana (Slovenia), Baralides Alberdi (Spain) and Lars Mikael Wallen, CBI (Sweden)

2 The first two papers are published in the *International Journal of Housing Finance*: Scanlon, K, Lunde, J and Whitehead, C (2008) 'Mortgage product innovation in advanced economies: more choice, more risk' *International Journal of Housing Policy* 8:2, 109-131 and Scanlon, K, Lunde, J and Whitehead, C (2011) 'Responding to the housing and financial crises: mortgage lending, mortgage products and government policies' *International Journal of Housing Policy* 11:1, 23-49

3 We hope that this paper will form the basis for what we hope will be the third academic journal article in our series, monitoring change since the mid- 2000s

The original impetus for what has become a series of research projects was the observation that housing and mortgage markets in developed countries seemed to be highly synchronised (IMF2004a). As owner-occupation became more widespread and house prices and mortgage debt increased (both at the level of individual borrowers and nationally), some countries reached the point where mortgage debt levels were higher than their GDP. Rising house prices led to increasing affordability problems, particularly for newcomers to the housing market.

Lenders responded by developing products with lower initial monthly repayments. In Western countries there had been widespread general deregulation of finance markets with particular emphasis on mortgage markets, while, after the fall of communism, many central and eastern European countries had created mortgage systems based on western models. Together these developments enabled a wave of mortgage product innovation that would have been impossible 20 years previously. The standard annuity mortgage was supplemented or even largely replaced, in most countries where the regulatory system permitted, with innovative mortgage products that reduced initial payments (e.g., interest-only mortgages, longer terms, or mortgages denominated in foreign currencies). As importantly in countries which had traditionally operated with fixed rate mortgages, such as the USA and Denmark, there was a move towards the use of adjustable rate mortgages in the early part of the decade while in the UK and other variable rate based systems there was a growing use of discounted short term fixed rates.

Such mortgage market initiatives were beneficial in the short-term in allowing households to acquire property that would otherwise have been financially out of reach. On the other hand they were riskier for borrowers and helped contribute to house-price inflation. Moreover, many of the initiatives were taken up more by existing owners allowing households to withdraw housing equity or to invest in additional housing through renovation and improvement or buying a second home. All of this put pressure on first time buyers even though some of the expenditure was by parents helping their children into owner-occupation. We recognised that ‘there must be major concerns especially for those buying or re-mortgaging at the height of the boom about their capacity to maintain repayments in the face of worsening economic conditions. The likelihood is that the inflation rate is going to rise, increasing repayments; house prices will stabilise or fall and unemployment will rise - all putting pressure on individuals to sell into an already uncertain market (Scanlon et al 2008, p. 129). Some of these remarks in retrospect seem prescient while others were less well focussed.

The second publication focused on government reactions in the immediate aftermath of the financial crisis. Data gathering took place in 2009, after housing and mortgage markets had experienced the enormous upheavals of the sub-prime crisis especially in the USA and the more general global financial crisis, which closed some housing finance markets almost completely and impacted heavily on housing markets across the world. The crisis had profound effects on households, institutions and governments. In some countries house prices which had often turned as early as 2006 collapsed, leaving many households in negative equity-those who had purchased near the peak with high loan-to-value mortgages were especially vulnerable. Some financial institutions also collapsed and many more came close before being rescued by government intervention or forced merger. The proximate cause was not generally the poor performance of loan portfolios - which in the main benefited from lower interest rate costs - but rather the banks' exposure (actual or presumed) to complex securitised debt as well as supply side lending. At the extreme, some countries with high public and foreign debt required rescue operations by international economic organizations.

New mortgage lending fell dramatically in most countries not only because of the general credit crunch but also because demand contracted (as a result of lack of consumer confidence in the housing market, unemployment fears and the reluctance of sellers to reduce prices) and the supply of funds tightened (because of a generalised reluctance to lend, application of stricter qualifications for borrowers and a fall in the number of mortgage lenders). In most countries the issuance of new types of mortgage was curtailed. However despite the economic gloom, arrears and foreclosures did not increase a great deal: interest rates were generally low and most borrowers still in employment could afford to continue repayments. Moreover there was little immediate evidence that those who had taken out innovative products were particularly badly hit.

Just as the economies of most developed countries had exhibited similar trajectories on the upswing, now government in those same countries faced similar pressures in the downswing: to help borrowers who were in over their heads, to try to prevent further housing market declines, and to put in place more sustainable frameworks for mortgage lending in future. In a number of countries, specific instruments were implemented to help those households facing difficulties in paying their mortgages. Usually this took the form of short-term financial assistance, often repayable at some future date or capitalised into the mortgage itself. Other programmes enabled borrowers to re-mortgage or change their loan terms. Although such programmes were highly visible on the political scene, most specific measures have had only limited effects in the markets—partly because of strict eligibility requirements and bureaucratic complexity. More general forbearance measures generally had greater impact but also involved the potential for building up problems for the future.

The second paper noted that in housing and mortgage market terms the synchronisation in the downturn appeared to be much less than had been experienced in the upturn. Some countries were hardly affected, while others experienced massive reductions in house prices, housing market activity and the availability of mortgage credit. However, the paper concentrated particularly on government responses and took only limited account of these different developing trajectories except to the extent that they provided the economic background to policy change.

In the past there have been many occasions when individual countries and regions have experienced credit crunches but these have normally been resolved over a relatively short period. The global financial crisis was initially highly contagious immediately after the Lehmann bankruptcy with very few countries if any unaffected for a few months. Thereafter however the impact varied greatly – in part because of the varying extent that government intervention was required to maintain operational banking systems and more obviously because of the extent of indebtedness in the face of house price volatility. Some countries appeared to return to 'normal' quite rapidly. Others are still even at the end of 2013 in the process of making major adjustments. But in almost all countries since 2010 more fundamental economic pressures have generated recession, or at least much slower growth, as well as more general financial uncertainties – notably with respect to the Euro. In response, governments have introduced austerity measures to bring down public sector borrowing and stabilise currencies. Again there are very considerable differences across countries – but very few European countries have seen a full return to economic growth and consumer confidence. This in turn has impacted on housing and mortgage markets, in many instances to a greater degree than the credit crunch itself.

This paper reports on a third examination of developments in mortgage and housing markets in Europe and selected other developed countries that have occurred since the mid-2000s. It looks at three distinct issues:

(i) house prices and mortgage market trends and how these vary across countries;

(ii) how governments and regulatory bodies in particular have been responding to both the original crisis and the continued economic uncertainty; and

(iii) how country commentators see future developments.

Most of the first element draws on secondary data from OECD and other sources – notably the European Mortgage Federation. In addition data were provided by country correspondents. The second and third elements are based mainly on information from these specialists as well as comparative analyses. There have been three surveys: a questionnaire which was distributed to respondents (one in each of 18 countries) in early 2011 and updates in April 2012 and July – December 2013. The questionnaires asked experts to provide the most recent data for their country on housing and mortgage market activity and on the structure of the mortgage industry. They were also asked to provide a short narrative about how mortgage markets have behaved after the global financial crisis, and where possible to identify any factors which made the crisis worse in their country, or conversely mitigated its effects. Finally, they were asked about regulation of mortgage lending, government interventions and future expectations.

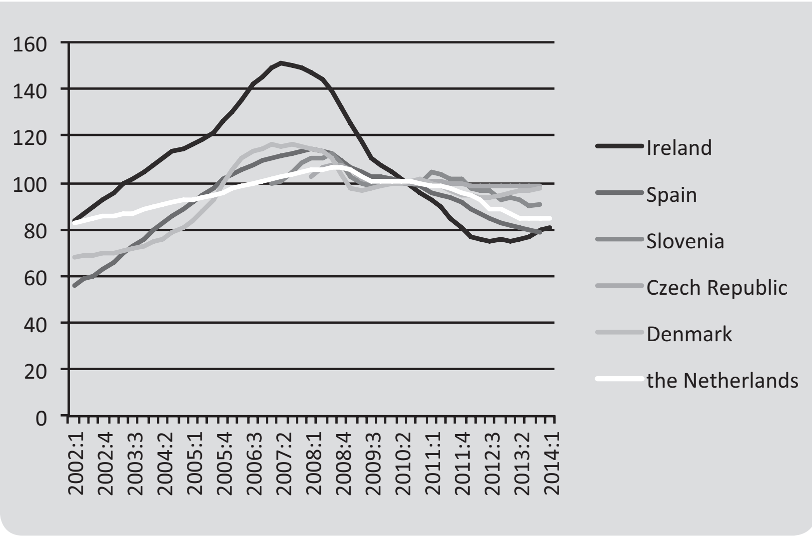
# 2 House finance and housing markets since the crisis

This section examines secondary data to help clarify how European housing and mortgage markets have developed since the turn of the century and the impact that the credit crunch and subsequent economic problems have had on these markets.

## 2.1 House prices

During the upswing in the early 2000s, housing markets in most countries followed more or less the same upward path (Scanlon et al 2008). During the crisis most - but not all - countries experienced a house-price trough. The timing of the crisis varied slightly between countries, depending partly on which indicator was used (Scanlon et al 2011). Thereafter there have been many adjustments in each countries housing markets – but, although most housing markets rose together pre-crisis, they have not all headed in the same direction since then.

**Figure 1 Changes in nominal house price for Ireland, Spain, Slovenia, the Czech Republic, Denmark and the Netherlands.** (Index: 2010 = 100).




Source: OECD House price statistics of May 1st 2014.

Figure 1 (see previous page) which shows the pattern of prices in six countries reflects this finding. In the period before 2007/2008 prices in many countries rose extremely rapidly (here exemplified by Ireland, Spain, Denmark and to a somewhat lesser extent the Netherlands. Thereafter some show massive declines - Ireland and Spain in particular but across the board reflecting nominal falls of less than 20% to more than 60% over the period to the end of 2013. In some of these countries the decline has been almost continuous; in others there have been periods of price increases although of course from a lower base; in still others prices are only lately starting to rise. None have yet returned to 2010 levels even in nominal terms.

A better way of looking at the broader comparative picture is to adjust changes for the effects of differential rates of inflation as some countries, notably the UK, have in comparative terms seen relatively rapid inflation over the post crisis period while others have seen general prices declines. Table 1 (see page 18) shows how real house prices in seventeen of the major European countries have moved since near the pre-crisis peak in 2007 through 2010, when the first effects of the credit crunch were wearing off, to the latest evidence in late 2013. The USA is also included in the table as the most important world economy and one where the financial crisis was most clearly led by mortgage market failures particularly in the subprime self-certified market. Australia is also included as an anglo-saxon country with a similar although more regulated institutional framework.

The table shows that, not surprisingly the biggest falls were concentrated among countries most open to the financial crisis. Ireland experienced the largest measured fall from 2007 to 2010 at over 40%, followed closely by Iceland. In both these countries debt had grown particularly rapidly before the crisis and in both construction was a large part of their real economies so expectations fell dramatically. House prices in Spain on the other hand fell by 'only' 17%, much more slowly than expected, given the economy's exposure to residential construction. Other similarly open systems, such as the UK, saw falls of up to 10% as did some Eastern European countries (here represented by Slovenia and to a lesser extent the Czech Republic. However not all anglo-saxon style countries saw declines. Australia is one example of such a country which stabilised quickly, even before their real economy realised increased benefits from mining and raw material sales to China.

At the other extreme there is a group of countries that hardly noticed the credit crunch after the first few months and either stabilised or saw continued growth in house prices over the period to 2010. These countries are usually

**Table 1 Real house price changes from 2007 in major European countries and comparator countries** (2010, average = 100)

| | *2007, 3rd quarter* | *2011, 1st quarter* | *2013, 4th quarter* | *Comments* |
|---|---|---|---|---|
| **USA** | 124 | 95 | 103 | Large scale consistent falls until end of 2010 but then turning up |
| **Australia** | 91 | 98 | 98 | Falls through 2011, then a rise up to same level in 2013 |
| **Austria** | 95 | 100 | 114 | Fairly consistent increases |
| **Belgium** | 96 | 99 | 101 (2013.3) | Stabilising after 2010 |
| **Czech Republic** | 104 (2008.1) | 101 | 93 | Falling since early 2011 |
| **Germany** | 100 | 102 | 115 | Rapid increases since end of 2010 |
| **France** | 105 | 103 | 98 | Fairly buoyant until 2012 then slightly declining |
| **Great Britain** | 113 | 96 | 98 | Fairly consistent falls but weak upturn in 2013 |
| **Denmark** | 124 | 100 | 91 | Fall until 2011 then nearly stable |
| **Finland** | 99 | 100 | 98 | Falls before 2010 now fairly stable |
| **Iceland** | 147 | 100 | 105 (2013.3) | Rapid falls but turning up 2013 |
| **Ireland** | 138 | 92 | 76 | Very rapid falls but turning around 1st quarter 2013 |
| **Netherlands** | 106 | 97 | 79 | Slight increase to 2008 peak, then heavy falls |
| **Norway** | 101 | 105 | 112 | Consistent increases to peak in 2013.1, then falling |
| **Portugal** | 95 | 98 | 90 | Consistent falls from 2010 |
| **Slovenia** | 112 | 104 | 87 | Consistent falls |
| **Spain** | 117 | 93 | 74 | Consistent heavy falls |
| **Sweden** | 96 | 101 | 101 | Some volatility over whole period |
| **Switzerland** | 91 | 102 | 116 | Consistent increases since mid 2008 |
| **Euro zone** | 105 | 99 | 92 (2013.3) | Slow falls almost throughout the period |

Source: OECD House Price data, version of 04.04.2014.

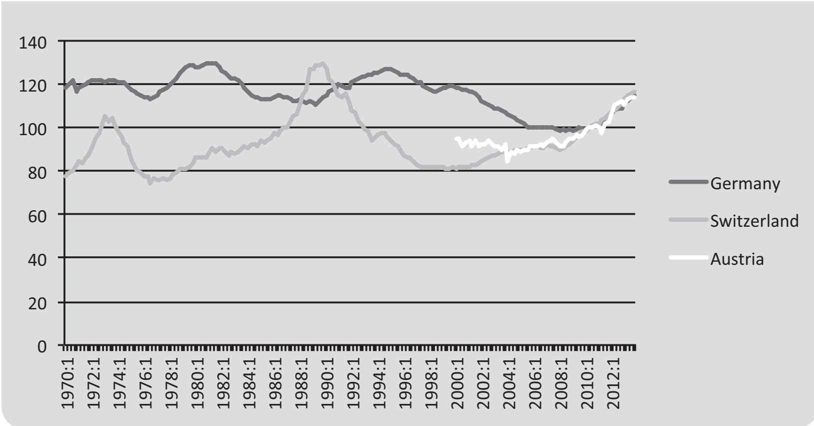
characterised as Germanic, with highly regulated housing finance systems. Among this group Germany itself saw near total stability (as against earlier falls in real house prices) while Austria and Switzerland experienced nearly 10% growth over the 3 year period. But Sweden, with an open finance market, also saw quite significant increases.

In between were a number of countries that experienced some volatility over this early period but with variations on no more than 5% of their 2010 levels. These included a mix of countries that have rather different attributes, ranging from France and Norway, where there was strong government support for the market, the Netherlands with very high housing debt and Portugal, an economy particularly hard hit by the post Lehmann crisis but where house prices actually rose slightly over the period.

By 2010 there was considerable optimism that even housing markets in countries that had experienced significant declines would slowly return to some sort of pre-crisis ‘normality’ and that overall there would be increasing stability in European housing markets. Looking specifically at mortgage markets and prices, the expectation was that the impacts of the credit crunch would have mainly unwound. In reality, recession, austerity and increasing government involvement in general finance markets have taken over.

There are seven European countries that have seen significant further falls in real terms between 2010 and 2013. Two, Ireland and Spain, continued to suffer from massive overhangs in terms of unsold new construction reinforced by large scale unemployment across their economies, especially in the construction industry. Both saw falls of around a further 25%. Portugal had some of the same attributes although these had initially been offset by government intervention. Slovenia reflects more general declines in housing market activity in Eastern Europe – the Czech Republic with a more interventionist government also saw falls – but smaller ones. But perhaps the two most surprising members of this group are Denmark, which has seen a decline of almost 30% since 2007 and the Netherlands where there has been a fall in house prices of around 20% since 2010 in part as a result of the government’s austerity measures, which are set to continue. The most obvious cause lies in their extremely high household debt to income and mortgage debt to GDP ratios. Another three countries, Finland, France and the UK have continued to experience declines in real house prices – but at a much slower rate.

**Figure 2 Three countries with relatively stable real house prices. 1970.1-2013.4**




Base value: 2010 = 100.
Source: OECD house price statistics of 4th April 2014.

Over the same period, five countries, Sweden, Finland, France, Iceland and Belgium have seen generally stable house prices – the first three continuing past trends, Iceland achieving stability in 2009 after more than a 40% decline in the previous eighteen months, while Belgium reversed an upswing from 2007 caused mainly by policy change. The USA and Australia on the other hand saw rapid declines followed by rapid increases. This brought the USA above their 2010 level by late 2013 but in Australia prices had not quite offset the 2010/11 falls. The big difference however is that in the USA prices in late 2013 were still 25% below their 2007 levels while in Australia they were 10% above.

Latterly, Austria Germany and Switzerland have bucked all the more general trends and experienced quite rapid house price rises - particularly in Germany where past longer experience had been of stable or declining real house prices especially from the early 1990s (see figure 2 above). In all three countries this rise in prices is related to a significant shift towards owner-occupation very much at odds with their experience of tenure stability over the previous decades.

Thus, using prices as the main indicator, the evidence suggests that housing markets are by no means back to their pre-crisis or even their early 2000s position. But it also suggests that there are no straightforward groupings that help identify the main causal factors for individual country trends.

## 2.2 The impact of increasing levels of debt to GDP

One particular measure that is relevant to understanding the patterns of prices is the relationship of residential mortgage debt to national income – normally measured by Gross National Product (GDP). Since 2007 mortgage debt across the EU, perhaps surprisingly, has increased, if much more slowly than in the past. Equally, in many countries GDP has declined over much of the period – so the relationship is not straightforward.

There is a clearly a group of countries where issues can be associated with rapid increases in levels of debt prior to the crisis (see table 2 on next page). Countries that suffered large initial house price falls with major impacts on their real economies include Iceland, Ireland Spain and the USA. Within the group all had observed very rapid expansion of mortgage debt to GDP ratios in the early 2000s. But even among this group post 2010 trajectories are very different with Iceland and the USA showing earlier signs of improvement and Spain continuing to decline. Secondly, both Denmark and the Netherlands which had the highest levels of mortgage indebtedness in 2007, and indeed now, have observed very large reductions in house prices but with different patterns over time. Denmark suffered immediately after the credit crunch even though their mortgage system was particularly robust. Their rate of decline has slowed and the market is just beginning to show slight signs of recovery. The Netherlands on the other hand saw most of their house price decline after 2010 as government policy moved strongly towards austerity and shows no signs of bottoming out. Finally there is the UK with the fourth highest level of mortgage debt in 2007– although much lower than Denmark and the Netherlands - which has suffered fairly consistent, but much slower, declines in real house prices (in part because of relatively high inflation) and is also now showing signs of recovery – in part because of specific government measures.

At the other extreme there are those countries that hardly suffered – Germany, Austria, Norway, and Switzerland in particular. In two of these countries, Germany and Austria, debt levels were low and prices historically relatively stable yet these countries are now showing signs of overheating in the housing market. In, Norway debt levels are much higher and increasing and house prices rose fairly consistently over the period. Finally, Switzerland did not participate in the debt rise game even though they originally and by tradition had the highest debt ratio in the whole of Europe (even with low loan to value ratios) and experienced quite rapid house price increases especially immediately after the crisis.

The other group which was initially little affected, mainly in Eastern Europe, were countries where mortgage finance remains unimportant. However, their markets have become increasingly affected as their economies weakened.

**Table 2 Ratio of Outstanding Residential mortgage Loans to GDP (%)**

| | *2001* | *2007* | *2012* | *Latest Owner-occupation rate* |
|---|---|---|---|---|
| **USA** | 60 | 86 | 69 | 66 (2010) |
| **Australia** | 50 (2002) | | 85 | 69 (2010) |
| **Austria** | 14 | 24 | 28 | 57 (2010) |
| **Belgium** | 27 | 38 | 49 | 78 (2007) |
| **Czech Republic** | 2 (2002) | 10 | 14 | 79 (2010) |
| **Germany** | 53 | 48 | 45 | 46 (2011) |
| **France** | 22 | 35 | 43 | 58 (2011) |
| **UK** | 57 | 83 | 81 | 65 (2011) |
| **Denmark** | 71 | 93 | 101 | 53 (2012) |
| **Finland** | 20 | 35 | 44 | 74 (2011) |
| **Iceland** | 73 | 107 | n/a | 77 (2009) |
| **Ireland** | 33 | 75 | 78 | 70 (2011) |
| **Netherlands** | 73 | 96 | 108 | 56 (2009) |
| **Norway** | 42 | 60 | 70 | 85 (2003) |
| **Portugal** | 43 | 60 | 67 | 74 (2011) |
| **Slovenia** | 0.5 | 8 | 15 | 78 (2009) |
| **Spain** | 33 | 61 | 61 | 82 (2011) |
| **Sweden** | 48 | 66 | 81 | 64 (2011) |
| **Switzerland** | 113 (2003) | 132 (2006) | 103 | 44 (est 2010) |
| **Euro zone** | 43 (2004) | 49 | 52 | 67 |

Sources: EMF/OECD.

In the middle there are a few countries which have apparently had relatively stable prices particularly after 2010, including Belgium, France, Finland and Sweden. Again the group is not entirely a coherent one: all have had rising debt levels but three from quite low levels while Sweden now, at 81% of GDP, is among the highest. Equally, three of these countries have a tradition of significant government financial management but Belgium has been strongly market oriented.

It is clear from this analysis that any simple grouping will have exceptions - and other possible explanations. What is also clear is that the problems associated with the euro crisis, austerity and government responses to these problems have had far more fundamental and long lasting impacts than the specifics of the initial credit crunch. There is some sign of improvement – reflected in upturns in prices over the last few months in some of the worst affected countries including the USA, the UK, Denmark, Iceland and Ireland – but there are also countries where the market continues to decline and some evidence that core Euro countries are also beginning to suffer. What is perhaps clearest is that we are nowhere near a new stability.

The final column of table 2 clarifies current owner-occupation rates. Residential debt includes that relating to the rental sectors as well as that for owner-occupation but the important risks of high debt ratios lie mainly with individual owner-occupiers. Although there is some general relationship there are very clear exceptions particularly in relation to the lowest and highest debt ratios. Much of Eastern Europe, where restitution programmes usually involved no debt, have high owner-occupation rates but particularly low debt ratios. At the other extreme Switzerland has one of the highest debt ratios even though only a minority of people own their own home because their debt market for private rental investment is very well developed. House prices there are also very high and there is no requirement to make capital repayments. The increasing ratio is also related to mortgage form as, for example in Sweden, where there is an emphasis on interest only loans there may also be little incentive to make capital repayments. The Netherlands and Denmark also have relatively low owner-occupation rates with extremely high debt ratios - here associated with the availability of mortgage tax relief.

Overall the picture with relation to the ratio of debt to GDP depends on a whole range of issues to do with the history of rental, owner-occupation and privatisation, the tax position of residential debt and available mortgage instruments across owning and renting as much as the liberalisation of housing and general finance markets. Nothing is straightforward. The core issue for the longer term is the implications for macro policy and potential volatility of high debt ratios in an environment where interest rates may rise into the medium term.

## 2.3 Residential loans

It is logical next to look at the pattern of net lending over the period from near the turn of the century (in this case 2002) and 2012. Here there are data for sixteen European countries (see table 3 below). What is clear is that generally the highest levels of net lending were in the run up to the crisis. Even so in many countries net lending was higher in 2012 than in 2002 and in Germany, Norway and Sweden net lending was considerably higher in 2012 than in the years just before the crisis. Other countries – notable Iceland Denmark, Ireland the Netherlands, Spain, Portugal and the UK - had lower net lending in 2012 than in 2002. While there have clearly been attempts at deleveraging, all these countries have seen rising ratios of debt to GDP over the same period.

**Table 3 Net Residential Lending per annum (Euro, millions)**

| | *2002* | *2007* | *2012* | *Years of highest/ lowest net lending* |
|---|---|---|---|---|
| **Austria** | 6,366 | 5,160 | 2,201 | 2004/2009 |
| **Belgium** | 5,220 | 12,277 | 11,567 | 2006/2002 |
| **Czech Republic** | 902 (2003) | 4,750 | 1,989 | 2007/2002 |
| **Germany** | 17,021 | -28,092 | 21,070 | 2006/2007 |
| **France** | 26,100 | 74,100 | 30,800 | 2006/2002 |
| **UK** | 66,112 | 12,406 | 58,929 | 2006/2008 |
| **Denmark** | 9,205 | 16,458 | 4,237 | 2005/2012 |
| **Finland** | 3,503 | 6,865 | 4,565 | 2005/2002 |
| **Iceland** | 556 | 2832 | -3,816 (2009) | 2005/2009 |
| **Ireland** | 8,869 | 16,574 | -3,759 | 2006/2010 |
| **Netherlands** | 46,153 | 38,909 | 6,750 | 2005/2012 |
| **Norway** | 18,891 | 23,690 | 35,330 | 2009/2008 |
| **Portugal** | 7,473 | 9,198 | -3,396 | 2006/2012 |
| **Slovenia** | 102 | 714 | 87 | 2008/2003 |
| **Spain** | 41,008 | 74,873 | -25,436 | 2008/2012 |
| **Sweden** | 11,040 | 12,671 | 26,424 | 2004/2008 |
| **Sweden** | 48 | 66 | 81 | 64 (2011) |
| **Switzerland** | 113 (2003) | 132 (2006) | 103 | 44 (est 2010) |
| **Euro zone** | 43 (2004) | 49 | 52 | 67 |

Source: EMF/UK: CML.

The evidence in Table 3 suggests that quite a number of countries broke free of the credit crunch relatively rapidly, notably Germany but also Norway, Belgium and particularly Sweden. However in the majority of countries there has been little increased activity since the crisis. Some of this can clearly be explained by lower demand as well as by continuing constraints on funding – including in Iceland, Ireland, Portugal and Spain which have shown negative growth lending and massive declines in their real economies.

## 2.4 Transaction levels

Transactions data sometimes give a better indication of housing market activity than prices and mortgage data. In particular, prices may rise either because of larger scale demand against a healthy supply of properties for sale or they may increase because the market is not generating supply. The first picture applied fairly generally to the early part of the century, resulting in particularly high levels of transactions. The second has emerged over the last couple of years in a number of housing systems, generating higher prices at least in high pressure areas – such as London, Stockholm and even parts of Dublin – but associated with lower levels of transactions. But there are also countries – those identified as riding the crisis effectively - where markets have maintained and increased activity levels since 2008.

Looking at table 4 (see page 27) which covers fifteen of the countries in our study, we can first identify important differences between countries in the scale of activity over the whole period even though the definitions used in each country's statistics may differ.[4] Thus the UK had relatively high levels of transactions as compared even to the USA at the peak of the boom if you take account of the relative size of population over 18 in the two countries (roughly 0.033 as compared to 0.026 in 2007) – but similar to Portugal with a much lower level of debt. Norway's transactions levels were even higher at 0.050 while Iceland's was highest at 0.056 with its tiny adult population of 232,760. Yet Denmark and the Netherlands with their very high ratios of housing debt were actually in the second group of countries with ratios of transactions to adult population of around 0.016, similar to that in France, Belgium and Finland where debt ratios were low. Spain and Sweden's ratios were nearly 40% higher (with debt levels around 60% of GDP) while Ireland ranked well below the UK at 0.025. At the bottom end of the scale was Germany at 0.007 and countries like Slovenia at 0.003. These groupings provide only a very general indication of relative transactions activity rates because definitions are not strictly comparable. They do however make it clear that transactions are not as tightly linked to mortgage debt ratios as might have been expected.

[4] In particular some exclude the sales of new building; others exclude certain types of property.

Turning next to how transactions have responded to the financial crisis in different countries again the pattern is complex. Portugal is at one extreme with high transactions rates at the beginning of the century when prices peaked and considerably higher than just before the crisis even though the debt ratio rose rapidly during that period. At the other are Germany, Finland and Slovenia which saw their highest transactions rates in 2012, but with debt ratios falling in Germany but rising quite rapidly in Finland and Slovenia. Between these two extremes there is a large group that have seen big declines in activity including the obvious ones of Ireland, Iceland, Spain and the UK but also the Netherlands and Denmark. it is also clear that declines – often quite rapid declines - in transactions (as sometimes in net lending) began well before the crisis, as early as 2005 in the USA, Iceland and Denmark and none later than 2007. Thus the housing markets across much of Europe and indeed the world were slowing well before the Lehmann crash arguably associated at least in part with issues of affordability and high debt exposure (Whitehead and Scanlon, 2011). Again therefore the underlying story is more about fundamentals than strictly about the over- availability of housing debt finance.

## 2.5 Housing investment

A rather different issue is the impact of the credit crunch, recession, the Euro crisis and austerity measures on real investment in housing, as reflected in new house building.

The pattern of housing investment shown in table 5 (see page 29), covering seventeen of the countries in our sample, is very much more consistent than either prices or mortgage markets. Three trends stand out: the rises in completions in the early part of the new century in most countries; the consistency of the downturn; and the generally very slow improvement thereafter. Only two of our sample countries bucked the trend of increasing output in the first half of the decade: Germany and Portugal. German output levels were highest in 2001 and fell consistently to 2009, while output in Portugal peaked in 2002, just before real house prices peaked in 2003 and then fell throughout the period.

Six countries experienced rapid increases in output levels of more than a third from 2001 to the peak. These were the Czech Republic, France, Iceland, Norway, Sweden and particularly Spain. Output in Spain rose by 75%. All the other countries saw smaller but significant increases.

**Table 4 Numbers of Transactions (000s)**

| | *2001* | *2007* | *2012* | *Year with highest transactions* | *Ratio of transactions to population over 18 2007* |
|---|---|---|---|---|---|
| **USA** | 6,243 | 5,816 | 5,107 | 2005 (8,359) | 0.026 |
| **Belgium** | 111 | 125 | 123 | 2007 | 0.015 |
| **Germany** | 498 | 457 | 613 | 2012 | 0.007 |
| **France** | 778 | 810 | 709 | 2007 | 0.016 |
| **UK** | 1,458 (E and W) | 1,613 | 931 | 2006 (1,670) | 0.033 |
| **Denmark** | 68 | 70 | 45 | 2005 (85) | 0.016 |
| **Finland** | n/a | 70 (2008) | 76 | 2012 | 0.016 |
| **Iceland** | 8 | 13.2 | 6 (2011) | 2005 (13.4) | 0.056 |
| **Ireland** | 69 | 84 | 18 (2010) | 2006 (111) | 0.025 |
| **Netherlands** | 196 | 202 | 126 (2010) | 2006 (210) | 0.016 |
| **Norway** | 156 | 183 | 181 (2011) | 2007 | 0.050 |
| **Portugal** | 327 | 281 | 167 (2011) | 2002 (329) | 0.032 |
| **Slovenia** | n/a | 5 | 11 | 2012 | 0.003 |
| **Spain** | 848 (2004) | 837 | 363 | 2006 (955) | 0.023 |
| **Sweden** | 123 | 164 | 143 | 2007 | 0.022 |
| **Spain** | 41,008 | 74,873 | -25,436 | 2008/2012 | |
| **Sweden** | 11,040 | 12,671 | 26,424 | 2004/2008 | |
| **Sweden** | 48 | 66 | 81 | 64 (2011) | |
| **Switzerland** | 113 (2003) | 132 (2006) | 103 | 44 (est 2010) | |
| **Euro zone** | 43 (2004) | 49 | 52 | 67 | |

Source: EMF.

The peak in completions was reached in the majority of countries between 2005 and 2007 ie before the crunch. Only the Netherlands did not turn until 2009. Thereafter, although the troughs were mainly in 2010 and 2011 in most countries there was very little improvement in the following years. Thus even in countries where the credit crunch had very little direct effect on prices the impact of the longer term crisis in the real economy in Europe has had a continuing negative impact on almost all housing markets. Only Germany saw output levels above those in 2007 in 2012, and then only by a tiny amount – and those output levels were anyway only two thirds of those in 2001.

Another issue around real investment is the enormous difference in supply responsiveness across countries. Looking at 2007 when many countries reached their peak in completions France was producing more than double the output of Germany even though they have only 80% of the population. Equally the UK, with a very similar population to France was producing only 55% of their output. Supply in Germany had declined was particularly low, reflecting over-supply in some parts of the country. At the other extreme, as is well-known, Spain and Ireland had very high levels of production. Indeed Spain's output level in 2007, built often for foreign buyers and second homes, was much higher than any other European country and 40% of that in the USA with six times the population.

Looking at completions per thousands of population over 18 the lowest rate was in Germany at only 308 per thousand. The UK and Slovenia had ratios under 5 per thousand. Ireland at over 20 per thousand followed by Spain and Iceland were clearly way out of line with the usual rates for mature economies. Most other countries had rates between 6and 10 considerably higher than the long term trend which is better reflected in the 2002 figures. By 2012 many countries faced investment levels of less than half of 2007 (sometimes far less). On the other hand there was a group of six mainly smaller countries, Austria, Belgium the Czech Republic, France, Finland and Sweden that have returned to the levels seen at the beginning of the century.

## 2.6 Overview

The secondary data show that there were immediate effects of the global financial crisis in almost all countries in our sample. However relatively quickly there was considerable divergence in experience between a group who mainly had high debt to GDP ratios (Denmark, Great Britain, Iceland, Ireland, Spain and – in a rather different category, Slovenia) where prices fell at least to 2010 and those that had reasonably consistent price increases

**Table 5 Housing completions (000s)**

| | *2001* | *2007* | *2012* | *Year with highest/lowest output levels* | *Completions per 000 population over 18, 2007* |
|---|---|---|---|---|---|
| **USA** | 1,571 | 1,502 | 649 | 2006/2012 | 6.7 |
| **Austria (building permits)** | 40 | 46 | 42 | 2006/2010 | 6.8 |
| **Belgium (starts)** | 42 | 55 | 42 | 2006/2002 | 6.5 |
| **Czech Republic** | 25 | 42 | 29 | 2007/2001 | 9.8 |
| **Germany** | 326 | 211 | 215 | 2001/2009 | 3.1 |
| **France (starts)** | 303 | 435 | 304 | 2007/2009 | 8.7 |
| **UK** | 192 | 234 | 136 | 2007/2009 | 4.8 |
| **Denmark** | 21 | 25 | 10 | 2006/2009 | 5.8 |
| **Finland** | 27 | 30 | 28 | 2005/2009 | 7.1 |
| **Iceland** | 2 | 3 | 1 | 2007/2011 | 12.8 |
| **Ireland** | 53 | 78 | 9 | 2005/2012 | 23.5 |
| **Netherlands** | 73 | 80 | 58 (2011) | 2009/2010 | 6.2 |
| **Norway** | 22 | 30 | 19 (2011) | 2007/2010 | 8.2 |
| **Portugal** | 115 | 67 | 23 | 2002/2012 | 7.6 |
| **Slovenia** | 7 | 8 | 4 | 2008/2012 | 4.7 |
| **Spain** | 366 | 641 | 120 | 2007/2012 | 17.3 |
| **Sweden** | 15 | 31 | 26 | 2008/2010 | |

Source: EMF.

(Austria, Belgium, Germany and Switzerland). Since then prices have risen in some of the countries that had had declines (notably the USA, Australia and Iceland and recently Ireland and the UK (excluding Northern Ireland) , but have fallen somewhat across a wide range of countries, reflecting recession in real economies. Problems remain particularly bad in Ireland, Spain and to a lesser extent Portugal where economic conditions remain poor and also in the Netherlands where policy changes have reinforced downward pressures.

Perhaps surprisingly residential loan values in relation to GDP have risen in many countries, notably Denmark, the Netherlands and Australia. The ratio has however stabilised in Spain and the UK and fallen somewhat in Germany and quite heavily in Switzerland. The patterns are however as much about what has been happening to GDP as to residential loans. Net loans have only fallen heavily in the USA, Spain, Ireland Iceland and Portugal. On the other hand transactions reached their height before the crisis in all but three countries and have fallen massively in Ireland, the Netherlands, Portugal and Spain. Germany, Finland and Slovenia on the other hand have actually seen rises up to 2012.

Looking to the longer term, one of the most important and consistent patterns has been the negative impact of the crisis on output levels. Only in Germany have completions risen (and then only slightly) since 2007 but the 2012 level was less than two thirds that for 2002. In all the other countries in the sample completions are still lower than 2007. In all the other countries there is little sign of a return to pre-crisis investment levels.

Perhaps the main finding from the statistical analysis is that prior to the downturn in financial terms there appeared to be two main groups of countries – with Germany, Switzerland and Austria showing little signs of over-heating, while most of the other countries showed upward pressure on prices and activity. If in addition real output levels were taken into account three countries: Ireland, Spain and Iceland stood out as being far more supply responsive than average.

After the immediate shock of the global financial crisis the pattern was more diverse. Some countries eg France and Belgium - in addition to Germany, Switzerland and Austria – recovered rapidly, sometimes with government support. Others are still nowhere near back to the position in the early 2000s let alone the boom years of 2006/7.

Overall there is strong evidence that problems in the real economy are now more important than the immediate outcomes of the financial crisis. No country's housing market has escaped unscathed from the effects of recession and of the Euro crisis. As a result the current reality is still pretty negative especially in terms of output levels. Prices on the other hand show some recovery, which is a mixed blessing, helping to build confidence which may help investment but also worsening affordability especially in countries where GDP has not returned to pre-crisis levels.

# 3 Policy responses to the crisis and beyond

The statistics discussed above tell us about patterns and trends but nothing about institutional and policy response to the crisis. Survey results can help us better to understand the detail of what is happening in each country, particularly with respect to mortgage markets and regulatory change.

This section is based on evidence from eighteen country correspondents, seventeen in Europe, collected over a three year period. Questions were asked around the mortgage products available, the extent of problems faced by mortgagors with respect to arrears and foreclosures; how government regulators have responded to the crisis; how developers can fund new development; and how the overall mortgage and housing market is now settling down. More general questions were also asked about how commentators perceived the causes of the crisis, how the system responded and where the future might lie.

## 3.1 The availability of innovative mortgage products

During the early part of the decade there was very considerable innovation in mortgage products to support increased lending and help early years affordability. This position changed after the crisis because of shortage of funds, a lower appetite for risk among institutions and households and regulatory change.

The most important finding on innovatory products is that, whatever the experience of the crisis all countries and whatever their house-price trajectory, nonstandard mortgage products have generally become less available since 2009. In some cases this has come about because of regulatory changes (see below) especially as Basel III begins to be implemented but in most cases it reflects the decisions of individual lenders, who have become much more risk-averse. Sometimes lenders' decisions were strengthened by policy; in the Netherlands, for instance, the fall in the availability of interest-only mortgages coincided with increased government concern about them.

However the picture, even with respect to mortgage products, is not straightforward (see table 6 on pages 34-35). While the general picture is of fewer innovative products being available with tighter conditions there are considerable difference both between countries and types of product. Some innovative approaches were anyway never available in some countries; in others where the general pressure has been to tighten up on credit availability some specific instruments have become more popular; in others the initial restrictions on their use have either been reversed or stabilized; in others the pressures towards more traditional approaches remain dominant.

Early on in the crisis there were two distinct views about what might happen over the following years: the dominant theme in countries heavily affected was that there would be large structural changes, reducing credit availability into the medium and longer term; the alternative view was that over time things would return more to normal but without the hype of the immediate pre-crisis period. Neither has as yet really turned out to be the case. Rather the downturn in the housing markets and the financial crisis have in many countries turned into a recession in the real economy resulting both in concern – especially among the financial institutions - that financial over-restriction will kill the recovery and more conservative attitudes among both consumers and providers. What is clear is that even five years on the effects of the financial crisis were still being felt in the majority of countries and no long run equilibrium in either mortgage or housing markets had emerged.

Turning to the detail, interest-only and high LTV loans appear to be the mortgage products that have declined in most countries. Regulators in the UK and elsewhere have expressed concern about the riskiness of these two products, especially in conjunction, because in the case of a fall in house prices such borrowers would very quickly be exposed to negative equity. In most countries, maximum LTVs at the time of borrowing had by 2011 fallen to around 80%, whereas during the boom period loans at 100% LTV or even more were available in many countries. Since then, available ratios have generally stabilized at this lower figure. A number of countries stand out: Australia still has higher ratios although considerably lower than in the pre-crisis period. In the Netherlands while LTVs have fallen they are still very high compared to most countries. The main reason for this is the existence of a state mortgage guarantee, which backs loans of up to 104% LTV (down from 110%), means that such loans are not perceived as risky by lenders or borrowers (Scanlon & Elsinga, 2013). France is also an outlier with ratios of well over 100% remaining available mainly because there has been no repayment crisis and the processes by which such mortgages are issued limits their use to very low risk borrowers (Tutin and Vorms, 2013). Finally, in the UK, while on average these ratios fell sharply from 2007 to 2009 and then stabilized there have been a number of government initiatives to enable particular groups of households to buy with a 5% deposit.

High loan to value ratios negatively impact on financial institutions' capital requirements. First, when LTVs rise, especially above 80%, the capital

**Table 6 Availability of Mortgage Instruments for new loans: changes since 2009**

| | *Interest-only* | *High LTV Loans* | *Loans with Longer Terms* | *High Loan to income ratios* | *Other* |
|---|---|---|---|---|---|
| **Australia** | Initially up and now stable | Declined, now 80-90% | No | Metric not employed; little changed; using debt service capacity | Decline in low-doc lending |
| **Austria** | Less available | Less available | Less available Max now 20 years | Anyway limited availability and now less available | Decline in FX loans and now not available |
| **Belgium** | Legal but not used | No good data | Down but no good data | No good data | |
| **Czech Republic** | Initially low now slightly more | Initially down but now slightly more | No change | Initially down now stable | Self- certification down |
| **Denmark** | Initially up but now while legally unchanged additional constraints by banks | Not legal for mortgage but bank loans available | Not used | Credit evaluation tightened but no data | Fees up for IO & adjustable rate |
| **Finland** | No change | No significant change - some up to 100% | Less | No data | Plans for binding LTV limit |
| **France** | No Change; very few | A little less available | Less | | |
| **Germany** | No Change | Down | No change | Initially down and now stable | |
| **Ireland** | Less available | Less available but now no data available | Data no longer available | Data not available | |

| | | | | | |
|---|---|---|---|---|---|
| **Netherlands** | Less available | Initially up but now less available | | Less available | Less overall funds available |
| **Norway** | Initially down now stable - not available for high LTV | Down to 85% | | Less available | Some regulatory constraints |
| **Poland** | Not available | Less available | Less available | Less available | Fx denominated less available |
| **Portugal** | Legal but no evidence on use | Less available | Less available | Less available | |
| **Russia** | Not available | Less available | Less available | Less available | |
| **Slovenia** | Less available | Not available – no change | Less available | Less available | |
| **Spain** | Not available | Increasingly less available | Increasingly less available | Increasingly less available | Family credit & cash purchases by foreigners |
| **Sweden** | No change – very common | Less available | Unchanged | More Common | |
| **UK** | Less available | Initially down –now stable but government initiatives | Not available | Initially less available now fairly stable | Regulatory restrictions but policy sometimes working in other direction |

requirement is generally increased more than proportionately. Secondly, under Basel, covered bond and other national regulations institutions are forced to increase their capital when house prices are falling. Thus in markets where prices may fall institutions tend to be much more careful. The position with respect to interest only mortgages is more specific to national regulation. In a number of countries interest only mortgages remain illegal and there is no pressure to change that position. In countries such as Germany and Belgium where they were little used the situation remains unchanged. On the other hand in many of those countries where they became an important element in the pre-crisis boom such loans have become less available and the conditions under which they are granted have become more restrictive. A good example here is the UK where, while in principle they remain available, borrowers must be able to prove that they are capable to making repayments at levels at least equal to traditional annuity terms. Another is the Netherlands where mortgage tax relief has been removed from newly issued interest only loans.

However there are important exceptions. In Australia the use of interest only loans increased for a while immediately after the crisis as government worked to maintain demand. Their use has now stabilized. In the Czech Republic, where indebtedness is generally low rather more such loans are being issued. Most importantly in Sweden and to a lesser extent in Norway and Finland where such loans have been generally available there has been little change in that availability. This has caused considerable concern which has been addressed more by reducing loan to value ratios particularly on this type of loan than by limiting their availability. In Denmark there have been greater restrictions by lenders on these types of loan but these voluntary restrictions have been withdrawn as a result of competition. However it still remains relatively easy to top up mortgage loans from banks and to substitute a mortgage loan by a bank loan in Denmark.

Another innovation before the crisis was to lengthen the loan period as lenders sought ways to reduce initial payments. Since the crisis their use has generally contracted. However norms vary across countries; in Portugal, for example, banks were in 2011 still offering mortgages for a maximum of 40 years, down from 50 years in 2009. Both these numbers would be regarded as very high in many other countries.

In a small number of countries, mostly in Eastern Europe, foreign denominated mortgages have been of particular importance. The country with the most serious problems arising from these mortgages is Hungary which is not included in our sample. Here one third of such loans are in arrears and the government has in some circumstances enforced repayments at artificially low rates. Poland has also suffered and there foreign exchange mortgages (notably in Swiss francs) are far less available. In Austria, where subsidiaries of Swiss banks have been an important source of such funding to Eastern European countries such loans are no longer available for home purchase.

Finally there is the issue of what has been happening to loan to income rules. In this context countries break into two main groups. In the first, although capacity to pay principles are clearly fundamental to lending and policy is often conservative, mortgage lending is more formally based on the security of the asset putting much of the emphasis on loan to value ratios. In others lending is more directly based on capacity to pay and the security of the household income stream (often using formal credit scoring rules). It is in this second group of countries, which may well have allowed higher loan to income ratios because of falling interest rates, where data on loan to income ratios tend to be more available – and in almost all such countries the trend has been to require greater income cover. The only major exception to this picture is Sweden where higher loans in relation to income appear to have become more common. Taken together with the continuing use of interest only loans this must be seen to be of concern.

Overall the evidence is that credit markets are generally tighter and there are fewer options available to new mortgagors. This is true in countries where there have been historically conservative lending policies, such as Germany and Austria, as well as in countries that expanded lending rapidly before the crisis. However there are two apparent exceptions: some countries in Eastern Europe which had limited exposure to debt mortgage finance where the main issue has been to enable continued expansion while constraining foreign exchange denominated mortgages; and Sweden and Finland and to a lesser extent other Nordic countries where it seems to be mainly business as usual, notably with respect to interest only mortgages with increasing constraint limited to lower loan to value ratios.

## 3.2 Arrears and foreclosures

The most obvious evidence on consumer problems arising from both indebtedness and reductions in income from unemployment and more limited hours comes from that on arrears and foreclosures. Data are patchy and many countries do not have readily available data (see table 7 on next page). However this tends to be because it is not seen as a major problem. Country commentators made it clear that this applied to all the countries that provided nil returns. In some of these countries they also thought there had

**Table 7 Arrears & Foreclosures 2011 - 2012/13**

| | *Arrears* | *Foreclosures* |
|---|---|---|
| **Australia** | Now falling (o.6% > 3 months) | Now Falling (0.15%) Slightly Higher for high % loans. Highest in WA |
| **Austria** | Not available but low | NA |
| **Belgium** | Not available but low | NA |
| **Czech Republic** | Not available but low | NA |
| **Denmark** | Falling 0.3% | Consistent but v low < 5000 p.a |
| **Finland** | Stable 0.6% | No information – but low |
| **France** | Very low | NA |
| **Germany** | Not available but low | NA |
| **Ireland** | Rising 11.9% | Falling end 2012 (454) |
| **Netherlands** | Rising 1.6% (2013) | 0.06 |
| **Norway** | NA | NA |
| **Poland** | No formal evidence but low | No formal evidence but low |
| **Portugal** | Rising 6.1% loans | NA |
| **Russia** | Falling 2.96% 1/13 | NA |
| **Slovenia** | 3.8% Loans roughly constant | NA |
| **Spain** | Rising 4.0% 3/13 | 43,850 mortgage evictions 2012. Rising from 2011 |
| **Sweden** | Very low and unchanged | Very low and unchanged |
| **UK** | Falling 1.98 2013.3 | Falling 0.05 |

been an increase in arrears but from such low numbers as to continue to be unimportant. Among those countries that collect data arrears have been stable or falling in the majority since 2011. Among our respondent countries continuing increases are now observed only in Ireland, the Netherlands, Portugal and Spain. Three of these countries continue to suffer from their deep decline in economic activity following the crisis. The Netherlands has suffered much less but it also going through a period of very significant restructuring in the housing market.

Reasons why arrears have not increased as many expected include that interest rates fell sharply at the outbreak of the GFC in 2008, helping mortgagors with adjustable rate mortgages and, there have been smaller than expected increases in unemployment, except in those countries most heavily affected by the financial crisis.

Foreclosure data are even less available – in part because in many countries the process is such that they take many years. In countries with relatively high levels of arrears governments have usually acted to put in place forbearance requirements or at the limit have made it impossible to evict households for some period of time. The exception is Spain where the foreclosures have risen rapidly and there are now popular political moves to try to halt evictions. There is some evidence that governments learned from the problems of the early 1990s how to manage foreclosures through versions of forbearance. However among those who 'benefit' from such an approach, will be many who cannot expect to repay even in the longer term. This subset must either sell to clear the debt or walk away especially if the property is underwater. What options are open depend significantly on whether mortgages are full recourse or not. In parts of the USA and in Ireland and to a lesser extent in the UK there has been a growth in walking away even where full recourse mortgages are the norm. There is little evidence as yet on how much effort lenders will put into trying to obtain repayments when most of the households have little or no capacity to do so. More generally the problems of those in long term debt are best solved by improvement in the real economy and employment rather than the housing market.

Outside the three or four economies where the real economy as well as the financial system has been particularly badly hit by the crisis and supply far exceeds demand - Iceland, Ireland, Portugal and Spain – the problems appear to be more about how to get the financial system working better rather than a major crisis facing large proportions of individual borrowers. In part this is because interest rates remain at historically low levels. What happens when they start to rise again may give a very different picture.

## 3.3 Regulatory changes

Table 8 (see next page) provides examples of how changes in regulations are affecting mortgage lending in the countries included in our survey. This information was collected from country experts in May 2011 and again in 2013 when regulators were becoming clearer about their objectives. It is not comprehensive but gives a flavour of the issues being addressed. It shows that regulators in many places are focusing on the particulars of product features, with regulations or proposals to limit interest-only loans (Denmark and the Netherlands), loans to households in negative equity (Ireland), high loan-to-income loans (Netherlands), foreign currency loans (Poland), and self-certification loans (UK), foreign exchange based loans (Austria, Poland). However across the board the move is towards more rather than less regulation of available products for new mortgagors.

## Table 8 Regulatory Changes

| | |
|---|---|
| **Australia** | Mortgage exit fees on variable-interest loans banned on new loans from 1 July 20112013 Basel III requirements introduced early. |
| **Austria** | Minimum standards for FX & interest only loans. Minimum standards for Bauspar Loans; possibility of issuing covered bonds. |
| **Belgium** | No new rules although central bank calling for prudent lending. |
| **Czech Republic** | No change. |
| **Denmark** | Discussion about limiting interest-only and adjustable-rate mortgages but no regulations yet. |
| **Finland** | Potential introduction of binding loan to value limits as still used widely. Basel III has led to increase in interest rate margins from 0.5% in 2009 to 1.5% in 2013. |
| **France** | Bank of France has advised lenders to limit the length of loans and loan to value ratios. |
| **Germany** | No change. |
| **Ireland** | Code of conduct on mortgages arrears refining their requirements on lenders treatment of borrowers in arrears to help long term resolution. Resolution targets for lenders. Some metrics for Buy to Rent. |
| **Netherlands** | Limit on LTV of 104% introduced; interest-only portion of a loan was limited to 50% of the total mortgage; LTI (loan-to-income ratio) reduced from about 6 to 4; and tighter supervision of these criteria by the Financial Market Authority (AFM) was introduced. |
| **Norway** | No change – but possibility of limits on loan to value ratios. |
| **Poland** | New law to permit reverse mortgages. Foreign currency borrowers permitted to choose currency in which to pay; also down payment requirements increased and tighter credit assessment for foreign currency loans. |
| **Portugal** | Late 2012 - four new laws to protect borrowers & manage debt - the capacity to use pension money; forbearance measures; possibility of limiting recourse agreement between lender & borrower; additional evaluation rules for possession. |
| **Russia** | Registration of sales & purchases no longer required; removal of pre-payment penalties.<br>Regulations are attracting household funds for construction etc. |
| **Slovenia** | No legal changes but banks here tightened rules. |
| **Spain** | Mechanisms for allowing debt restructuring and greater flexibility in foreclosure for those in extreme poverty. Government has suspended the possibility of eviction for 2 years; considerable pressure to increase forbearance. |
| **Sweden** | Supervisor has put in place a voluntary agreement with Bankers associate to offer individual amortisation plans. Loans to be capped at 85% of loan to value. |
| **UK** | Lenders to assess borrowers' ability to repay interest-only loans as if the loans were on a full repayment basis; documentary income evidence required from all borrowers; consumers must be able to repay without recourse to future house-price rises, and affordability assessments must allow for the possibility that interest rates will rise. |

At a more general level the move is more towards tighter regulation, sometimes through formal requirements; sometimes through non-statutory guidelines that do not have the force of law but nevertheless have strong directive power. In Norway, for example, the financial regulatory issued guidelines in March 2010 suggesting a maximum LTV of 90% except when the borrower had additional security, as well as guidelines for affordability calculations, saying that if these did not have the desired effect it would consider adopting stronger regulations. Similar moves have been made in Sweden and Finland. Mostly the objective is to stop borrowers overstretching themselves in relation to their incomes even when the requirement is put in terms of loan to value. Underlying these approaches are also broader based regulatory requirements based on Basel III which determine capital adequacy ratios and require far higher security for higher loan to value mortgages.

Two broad approaches can be discerned in these new regulations. The first is fundamentally proscriptive: banning or advising against certain types of loans or practices – for example, interest-only loans or mortgages of over a certain LTV. The second is informational: requiring lenders to provide fuller information to borrowers about the conditions of their loans and what might happen under various scenarios. These two approaches reflect two rather different ideas about how markets should operate, and how consumers can best be protected. The first substitutes the government's or regulator's decision for that of the lender or household. Market actors are viewed as 'exuberant' and regulations are often presented as 'protecting the borrowers from themselves'. The second approach – that of providing more information – sees the consumer as able to make rational decisions as long as they are provided with enough knowledge.

Examples of proscriptive regulation include new limits on loan-to-income ratios and interest-only mortgages in the Netherlands and a prohibition on loans to households in negative equity (later relaxed) in Ireland. The approach that requires enhanced information for consumers has been adopted for example in Finland (where banks must assess borrower ability to pay if the interest rate were to rise to 6% and inform them about the consequences of higher rates). The two approaches—proscriptive and informational—can go hand in hand; Poland is requiring lenders to provide more information for foreign-currency borrowers (informational) but has also increased the collateral required for such loans (proscriptive).

In some cases regulatory change is being backed up by other policy changes aimed at reducing mortgagors' exposure to debt. Here the most notable

| Table 9 Funding for New Residential Development (2013) | |
|---|---|
| **Australia** | Large developers self-finance Banks require 70% in pre-sales of higher equity. Developer self-financing lend for separate homes. Rest by end purchaser. |
| **Austria** | Funding from retail & special banks & public loans/subsidy. Less availability & fewer subsidies. |
| **Belgium** | Mainly from banks but more prudent than before. Government looking for low energy - more credit |
| **Czech Republic** | Beginning to become more available – but from a low base |
| **Denmark** | Only commercial loans available for building process; hit by credit crunch; continuing problems |
| **Finland** | Some survey evidence that bank finance - usual source – is more difficult |
| **France** | Most developers ask for 50% advance commitments from purchases |
| **Germany** | Banks are more reluctant & risk premia are higher. |
| **Ireland** | At peak construction 20% GDP. Hardest hit. National Asset Management Agency (NAMA) main actor bringing some residential developments to completion for social housing/ ownership/rental on case by case basis. |
| **Netherlands** | HAs most important investor but tax uncertainties reducing investment; low demand in market sector |
| **Norway** | Banks fund development often demanding pre-sales of 50-60%. Interest rates nearly 10% as compared to 3.8% to individual mortgagor (some bank) |
| **Poland** | Readily available from universal and mortgage banks |
| **Portugal** | Funding through banking system & prospective buyers. Nearly a quarter of loans overdue on construction. Severe credit availability problems |
| **Russia** | Purchasers expected to find 100% - cheaper for developer than direct bank loans. |
| **Slovenia** | Banks stopped financing real estate because of high concentration of non-performing loans |
| **Spain** | Almost no funding available although banks advertise developer loans but very hard conditions |
| **Sweden** | No general shortage of capital but smaller construction firms face problems |
| **UK** | Bank finance very difficult to obtain has particularly hit smaller & regional /local builders. Large developments may use private equity until on-site. Developers also use own finance. Government initiatives to provide loans. |

example is the Netherlands where mortgage tax relief is being restricted for new loans – in particular interest only loans are no longer to be eligible for relief.

However there are exceptions to the pressures to increase regulation, limit products and constrain borrowing capacity. Russia for instance has relaxed some rules while Poland now allows reverse mortgages. Some countries are also taking the opportunity to limit market power and make the market more efficient by limiting lender capacity to charge for particular products (Australia; Poland; Russia).

Finally with respect to regulation, in many countries where existing mortgagors are facing particular difficulties regulations are being put in place to support forbearance and other approaches to enabling households to remain in their homes. These are sometimes further supported by tax breaks – (the Netherlands where those unable to sell their homes may be eligible for tax relief on two mortgages; the UK where initially income support for mortgage payments was made more generous for certain households facing unemployment).

So far we have discussed only national approaches to strengthening regulation. These have clearly concentrated on areas where there have been identified weaknesses in their own national markets. There have also been major changes at the European level aimed at both improving consumer protection and reducing the chances of systemic failure (Konig, 2013; Johnson et al, forthcoming). Prior to 2007 the major emphasis was on liberalisation, while recognising that the extent to which legal conditions for loan agreements and consumer protection at the national level differed so greatly that an internal market could not readily be developed. Immediately before the crisis there were further moves to encourage a more integrated system aiming to make lending easier.

Since the crisis there has, not surprisingly, been movement towards greater mortgage regulation and stronger capital requirements through respectively the Mortgage Credit Directive (Directive 2014/17/EU) proposed in 2011 and introduced in March 2014, and the Capital Requirements Directive IV Package (Directive 2013/36/EU) which transposes the Basel III Framework into EU legislation starting from January 2014 with completion in 2018.

The first of these concentrates on improving pre-contract information and understanding and greater care in assessing creditworthiness – as well as

| Table 10 Overall Market Situation | |
|---|---|
| **Australia** | Concerns about the general economy |
| **Austria** | Functioning reasonably well |
| **Belgium** | Functioning reasonably well |
| **Czech Republic** | Now, slightly improving – but nowhere near back to pre-crisis conditions |
| **Denmark** | Slightly improving but concerns about interest rate increases |
| **Finland** | Mortgage funding tighter and more expensive. Decline in building and demand for owner-occupation because of macro economy |
| **France** | Back to trend levels although concerns about the future. |
| **Germany** | Mortgage market normal but output levels remain low |
| **Ireland** | Still dislocated. Some house price rises reflect poor data & low supply. Slight increase in approvals. Advantage of mortgage tax relief have ended Legal restraints on foreclosure being resolved & emphasis on individual restructuring |
| **Netherlands** | Last 2 years worsening situation but maybe at bottom? (but concerns that industry feels the need to predict 'normality' |
| **Norway** | No change in mortgage availability. Housing market new build – worsening |
| **Poland** | Functioning reasonably well |
| **Portugal** | Crisis continues to deepen. Value of loans in mid-2013 less than 10% of that of 2007; new build approximately 11%. Affected by belief that there is a large surplus of dwelling units ; people expected to use their own capital if they buy. |
| **Russia** | Completely recovered from recession - but mortgage rates increasing. In medium term banks face high risks as they are competing by offering lower income requirements |
| **Slovenia** | Worsening because macroeconomic conditions worsening & expectations negative. Demand rather than supply determining current position. Prices still falling. |
| **Spain** | Mortgage availability continuing to worsen; house prices still falling; some increase in transactions; new build declining |
| **Sweden** | Near normal but tightening regulation and concern re general non repayment of mortgages |
| **UK** | Output levels are only just starting to increase. Affordability is improving although real incomes still lower than in 2007. House prices rising especially in London, but still well behind 2007 prices and in some parts of the country still falling. Advances increasing slowly. Unemployment declining & GDP improving. |

tightening up principles covering topics such as property valuation, arrears and foreclosure. These regulations are likely to close down certain types of mortgage in the context of self-certification and foreign exchange based loans. They also support assessment based on possible future changes in for instance interest rates and capital values. National approaches have taken these requirements into account but in very different ways and there remains concern that the approach will stifle innovation.

The second aims to improve the banks' capital bases to increase resilience and introduce liquidity and leverage provisions in the face of adverse housing market conditions. It sets detailed prudential rules and sets out supervision arrangements. Again the concern is that the EU wide regulation may limit the role that mortgage markets play in increasing economic activity while not necessarily being flexible enough to address the range of business models that exist across the European Union market. In practice much of the powers and certainly the responsibilities lie with national governments and central banks, who face difficult trade-offs within this framework into the future.

One important point to note is that our inquiry did not look directly at either more general rescue operations which helped save banks in many countries or the impact of specific government policies such as subsidies and guarantees to help support the housing and mortgage markets. Sometimes these are consistent with regulatory change; while others especially those which involve high loan to value ratios appear to be against the trends in regulatory change. The UK provides a good example with policies to put in place mortgage guarantees up to 95% and others to enable equity share mortgages with only a 5% deposit. Equally it does to address the issue of whether changes in regulation are being put in place directly to improve the housing and mortgage market or rather to meet wider macro-economic stability objectives (eg in the context of loan to value ratio constraints, see Reserve Bank of Australia, 2013).

Overall however the trends are towards stricter regulation; higher capital adequacy ratios and therefore, over time when demand picks up, higher interest rates; stricter loan to value and loan to income ratios and tougher repayment requirements. The only real exceptions are countries where mortgage markets are still very much in their infancy and debt to GDP ratios are low. Even so the extent of regulatory change has proved less than initially predicted, in part because governments are concerned to support some return to 'normality'. How the regulatory story plays out will depend on what happens when both demand for mortgages and interest rates start to rise as economies improve.

## 3.4 Funding residential development

The picture with respect to funding the development of new housing appears to be much more negative than with respect to consumer mortgages in many of the countries included in our sample (see table 9 on page 42). This is in part because asset values have still not recovered to pre-crisis levels so many banks are carrying overvalued assets as well as non-performing loans to the development industry (Heath et al, 2013). Only two countries, both in Eastern Europe, suggested that bank funding was relatively easily available while in almost all other countries debt finance was still either almost completely unavailable or much curtailed. Where available, the cost of debt has generally increased and terms and conditions – such as the proportion of pre-sales required – had tightened. In some cases the problems with obtaining credit have been exacerbated by cutbacks in government subsidies available for new building.

Developers who wish to be in the market have been using other sources of funding – from their own resources, from customers, from expensive private equity. But, as we have already noted, completion rates mainly remain below 2007 levels and often below 2001 levels. This appears to be partly because of credit restrictions but more generally reflects lack of demand and consumer uncertainty.

## 3.5 The current market position

Finally, respondents were asked about the current market situation in their country. Most answered mainly in relation to mortgage markets and house prices so the picture gives relatively little additional information (see table 10 on page 44). A small number of countries saw the situation at least with respect to the mortgage market as mainly back to pre-crisis 'normality' or even improving – these included Russia, Poland and the Czech Republic among Eastern European countries and countries that had experienced only short term effects from the global crisis – including Austria, Belgium, France, Germany and to a lesser extent Sweden. Even so, as already noted, in most of these countries investment levels had not reached levels observed before the crisis.

The countries that still saw themselves s experiencing mortgage market as well as housing market problems included the obvious – Spain and Ireland but also Portugal, Slovenia and, least predictable, the Netherlands. In the UK the picture is more mixed but clearly still fragile. In all these countries demand side issues are just as important as credit availability and reflect the extent to which housing markets remain in disequilibrium.

Consistent with this is the extent to which some correspondents pointed to fragilities in the current position and concerns about the future – with respect to the general economy, interest rates, government austerity measures and certain specific mortgage products.

# 4 Conclusions: current trends and future concerns

In our research questionnaire, we asked housing experts to give us their own views about the origins of the crisis in their countries, the current situation, and the outlook for housing and mortgage markets. This section draws on their replies and draws out more general conclusions.

## 4.1 Trends

On the basic question of whether we have reached the bottom in international macro terms there is no agreement. The IMF clearly does not think so (CITE), and if they are correct house prices may well still be overvalued. More importantly this implies that underlying stagnation could last past 2015 or even 2020. This is very different story from earlier adjustments (except for Japan). While house prices are rising in real terms in only 6 out of 72 OECD countries, there have been signs of an upturn in house prices except in the worst affected countries, notably USA, the UK, Ireland and Spain. The particular attributes of these two countries is the massive overhang in unsold dwellings, which is also true in Portugal where overall supply far exceeds the numbers of households.

There are clear divisions between those countries where the crisis is continuing and those that are on the way to recovery—or never even experienced much of a crisis. In Germany, Austria, Belgium, Finland and Sweden, markets experienced relatively little disruption and are now stable or improving. Until very lately Norway stood out as maintaining strong pressure on house prices. Little has been done in these countries to change the behaviour of borrowers or lenders. Similarly, many transition economies were little affected by the crisis because levels of debt were so limited, but even in these countries there is still some credit constraint and there have been falls in housing market activity.

Almost all countries except those which never really saw major growth in household debt have seen large declines in mortgage and transactions activity. These are not just below the 2005/7 highs but well below long-term averages. Some of these countries implemented stimulus packages which had relatively short term effects, but then were withdrawn or were followed by austerity measures. France for example has reversed its First Time Buyer programme and now seems to be looking towards austerity. Australia is heading in a similar direction as the commodity boom falters. The biggest issues are around those countries where austerity packages now dominate: Ireland and Spain (where there is enormous oversupply) and Portugal, and to a lesser extent the UK and the Netherlands. In these countries it is unclear whether demand exists to generate increases in mortgage or investment activity even if the funding became more readily available. However, existing mortgagors continue to be protected from the effects of the crisis while interest rates remain low and there are fewer signs of long running arrears than had been predicted.

In terms of regulation, country experts agree that to a significant extent it is the industry that is leading government in terms of greater conservation in lending? There have been concerns that regulatory bodies are moving towards systems that may exclude large numbers of households who could afford to buy over their lifetimes – but so far this is more a matter of rhetoric than reality.

Owner-occupation rates have generally been stagnant or falling, and the crisis has added fuel to this trend. The structure of the housing market in each country determines how readily private renting can substitute for owner occupation. In the UK in particular there is almost complete tenure flexibility, but elsewhere adjustment is more difficult, and in Spain for example homes built for owner occupation remain empty even while there is high demand for renting.

Almost nowhere is there real evidence of expansion in housing output. In most countries the financial crisis reduced incomes and demand in the short run resulting in supply overhangs in a number of countries. It is some years therefore before one could expect supply to bounce back unless expectations are highly positive. At the present time there is little evidence that housing supply can respond if and when economies improve. What is particularly concerning is whether the changes in mortgage markets are further inhibiting potential growth. But these problems will emerge only when and if macro-economies start to improve more rapidly.

The major determinant of demand for housing and mortgages is what happens in the real economy. Many housing markets are still far away from equilibrium – but perhaps not mainly for financial reasons. There are various scenarios for the world economy: stability, slow growth or decline. Housing supply has either adjusted downwards or is very unresponsive – meaning that when economic growth does resume there will be limited supply available to meet that demand potentially worsening price instability.

In terms of the long-run impact on the mortgage market, housing investment and the real economy, few of the experts are confident that they know what will happen in the future. They can identify the likely effects of regulations specifically directed at the mortgage industry, such as limits on LTVs, but there have been a number of much more general regulatory changes (such as those arising from Basel III that will also significantly affect credit availability and pricing in the sector. Their individual effects can be difficult to foresee and their cumulative effect even harder to predict.

## 4.2 Conclusions from the project

During the long build-up to the peak, housing markets in developed countries moved in a remarkably synchronised way (Girouard et al, 2006a and b). Since the crisis in 2007/08, however, trajectories have been much more disparate and difficult to predict. In many countries house prices continue to decline, but in a few they are rising and in others the direction is unclear and there are often increasing disparities between regions within countries.

In mortgage markets the commonalities are more evident. Housing transactions (and by extension mortgage issuances) are down in most countries, although there is some evidence of slow revival in some countries. Mortgage lenders have become more conservative in terms of their product offers and the risk assessments they conduct on borrowers. Governments generally have not led lenders but rather followed them, introducing new regulations that limit higher-risk loan types and requiring more information to be provided to consumers. Such regulations often merely formalised what lenders were already doing, and will only begin to bite in earnest when prices and transactions rise steadily. In terms of the broad picture, mortgage market policies at the present time seem to be relatively unimportant - their impact is dwarfed by that of other, macro-oriented, policies. Mortgage regulation is a useful tool in a world with stable levels of debt and pro-owner-occupation governments—but it is not clear when or whether such a situation will return. Currently the actions of mortgage regulators generally seem to be less restraining than their rhetoric – in part because they are concerned to enable markets to return to some form of normality.

The evidence suggests that there is no universal definition of what constitutes a risky mortgage product, and what should be regulated or prohibited. Most of the loan types in Table 6 are regarded as standard in some countries but as extremely risky in others. Housing and mortgage markets are highly path-dependent, and in most cases change is incremental; regulators work within the legal and cultural framework of their own countries and may not consider international examples relevant.

What is most obvious is that we are nowhere near some longer term equilibrium position in any of the major countries of Europe. This is true for countries which were massively affected by the credit crisis with wholesale markets near to closure and continuing constraints on available mortgage funding. But it is also true for countries where mortgage markets appeared, after a short period of adjustment, to return to pre-crisis levels of activity. This is because the credit crunch was followed by both the Euro crisis and Europe wide recession which have adversely affected almost all European economies, reduced consumer spending capacity and increased risks in both the employment and housing markets.

In many ways the most important concern is the lack of funding available for housing investment rather than concerns about the mortgage market per se. This means that new investment has been constrained in many countries reducing the capacity of the construction industry and putting pressure on the housing market as economies revive.

## 4.3 Looking to the future

Over the last year house prices in the Eurozone were still in decline in real terms. Two sets of countries were showing some significant increases: a group that had had some of the worse declines, including the UK, Iceland, Ireland and Denmark and a group led by Germany (and Switzerland, outside the Eurozone) that had in the past seen relatively stable prices. But others were still declining quite rapidly notably Spain and the Netherlands – both within the Eurozone and perhaps finding it more difficult to adjust than these with freely floating exchange rates. The picture is therefore quite diverse – and is not simply about housing but about macro-economic conditions on the one hand and consumer confidence and longer term planning on the other.

There are at least four fundamental tensions that give cause for concern with respect to mortgage and housing markets into the future:

First, if the Euro economy and the world economy more generally does start to grow there will inherently be pressures on both house prices and rents, especially if economic growth is relatively concentrated in certain regions. This will put pressure on governments to try to stabilise the system – which in itself may generate further volatility both in prices and output;

Second, interest rates are at historic lows but despite deleveraging, personal debt levels remain high in many countries. If interest rates rise, even by quite small amounts, many households will be put under pressure. Those could trigger the arrears and foreclosure problems that have been avoided up to now – and at the least could slow recovery because consumer spending will be curtailed;

Third, CRDIV, Basel III and other regulatory changes are likely to increase the cost of high loan to value borrowing and make it more difficult for those without pristine records to borrow. This may well mean that mortgage markets in traditionally more open finance systems will never return to pre-crisis levels of activity. Yet the other side of that story has been that there is evidence in some economies – notably Russia and the Czech Republic – that competition among lenders is already leading to riskier lending policies. So again there is little sense that structural adjustments are complete. In this context there must also be continuing concerns about the limited range of instruments available to national governments to fine-tune finance markets in the face of increasing regional differences in housing markets; continuing dissonance between property markets and the real economy in many countries; and the need to stimulate economic growth across Europe and the industrialised world.

Finally, there is the issue of supply. Market based investment is always easier to stop than to start. So volatility in housing and mortgage markets results in developers facing higher risks and greater problems in obtaining funds. The strongest evidence from our survey is that, in almost all European countries as well as in other market based systems such as the USA and Australia the major remaining financial constraint is development finance.

Taking, on the one hand, the diverse mortgage and housing market conditions observed across Europe and, on the other, the benefits of a well operating investment market, national governments and the European Union have a tightrope to walk between over and under regulation and stimulation. Some governments are looking to use the continuing crisis to make structural changes in taxation and subsidy; others are introducing specific policies, such as guarantees and kick start funding as well as support for new owner-occupiers; still others, especially those with traditionally relatively regulated systems are making no additional interventions. At the European level there have been moves towards greater regulation but the fundamentals of very different legal systems as well as very different financial markets still make a coherent approach to an integrated market still seems a distant dream. At this stage there is little evidence on what is likely to be the most appropriate set of approaches to generating stability in mortgage and housing markets. What is clear is these markets will be quite different from those experienced in the early part of the century.

## References

Berkovec, James A. and John L. Goodman, JR. (1996): “Turnover as a Measure of Demand for Existing Homes”. *Real Estate Economics.* Vol. 24, No 4, pp. 421-440.

Bourassa, Steven C., Donald R. Haurin, Jessica L. Haurin, Martin Hoesli, Jian Sun (2009); “House Price Changes and Idiosyncratic Risk: The Impact of Property Characteristics”. *Real Estate Economics.* Vol. 37. Number 2. Summer. pp. 259-278.

Celza, A, Monacelli, T and Stracca, L (2009) *Housing Finance and Macro Policy*, Frankfurt, European Central Bank.

European Mortgage Federation (2014) *Hypostat 2013*, Brussels, EMF.

Girouard N, Kennedy M, van den Noord P and Andre C (2006a) *Recent house price developments: the role of fundamentals,* OECD Economics Department Working Paper No 475, Paris, OECD.

Girouard N, Kennedy M and Andre C (2006b) *Has the rise in debt made households more vulnerable?* OECD Economics Department Working Paper no 535, Paris, OECD.

Heath, A, Packer, F and Windsor, C (2013) *Property Markets and Financial Stability*, Sydney, Reserve Bank of Australia.

International Monetary Fund (2014) *World Economic Outlook*, Washington, IMF (April 2014).

Johnson, J et al, (forthcoming 2015) ‘Milestones in European Regulation’ in Lunde, J and Whitehead, C (eds) *Milestone in European Housing Finance*, Oxford, Wiley Blackwell.

Kofner, S (2014) The German housing system, fundamentally resiliant, *Journal of Housing and the Built Environment*, vol 29, no 2. pp 255-275.

Konig, C (2013) *The creation of an internal market for mortgage loans: A never ending story?* Stockholm. Swedish Institute for European Policy Studies.

OECD (2011) “Non-financial accounts by sectors”, “Financial accounts” and “Financial Balance sheets”, *OECD National Accounts Statistics* (database), http://dx.doi.org/10.1787/na-data-en, (Accessed on <ddmmyyyy>).

Priemus, H and Whitehead, C (2014) Interactions between the financial crisis and national housing markets, *Journal of Housing and the Built Environment,* vol 29, no 2, pp193 - 200.

Scanlon, K and Elsinga, M (2014) ‘The global financial crisis, housing and government intervention in two European countries: England and the Netherlands’ *Journal of Housing and the Built Environment*, vol 29, no 2. pp 335 - 360.

Scanlon, K, Lunde, J and Whitehead, C (2008) 'Mortgage product innovation in advanced economies: more choice, more risk' *International Journal of Housing Policy* 8:2, 109-131.

Scanlon, K, Lunde, J and Whitehead, C (2011) 'Responding to the housing and financial crises: mortgage lending, mortgage products and government policies' *International Journal of Housing Policy* 11:1, 23-49.

Tahiri S and Six J (2014) *European Housing Markets may be on a Slow Path to Recovery*, Standard and Poors Ratings Direct, Paris, S&P.

Whitehead, Christine M E and Scanlon, Kathleen (2011) 'The UK and Europe's selective housing bubble' In: Bardhan, Ashok and Edelstein, Robert and Kroll, Cynthia, (eds.) *Global housing markets: crises, policies, and institutions*. John Wiley & Sons, London, UK, 173-194.

# Sammanfattning på svenska

Sedan mitten av 2000-talet har många nationella bostadsfinansieringssystem i Europa varit under stor press, delvis för att de växte så snabbt i början på seklet. Även om vissa stora länder har ridit ut stormen utan större problem, så har bostadsmarknaden i euroområdet varit en grund för instabilitet och krävt kraftfullare lagstiftning.

Under återhämtningen drog de flesta länder mer eller mindre åt samma håll vad gäller bostadspriser och anpassningen på bostadsmarknaden. Samtidigt påverkade krisen olika länder vid olika tidpunkter, i varierande grad och för längre eller kortare tidsperioder. Därmed har också bostadsmarknaderna anpassat sig på olika sätt och regeringarnas åtgärder har också skiljt sig åt.

Denna studie granskar hur EU, medlemsländerna och marknaderna har hanterat krisen och den därpå följande lågkonjunkturen. Den grundar sig på sekundärdata och svaren i en rad olika frågeformulär från en arbetsgrupp inom European Network for Housing Research (ENHR). Dessa visar hur styrningen/regleringen av bostadsmarknaderna i en rad europeiska och andra jämförbara industriländer har förändrats sedan finanskrisen. Studien koncentrerar sig huvudsakligen på två aspekter: för det första hur bostadspriserna har förändrats i olika grupper av länder och hur dessa mönster kan hänföras till aktiviteterna på bostads- och bolånemarknaderna. För det andra hur regeringarna och marknaderna har svarat på krisen vad gäller bolåneprodukter, lagstiftning och produktionsnivåer.

## Analys av sekundärdata

Den kanske viktigaste slutsatsen av analysen av sekundärdata är att länderna före den finansiella nedgången verkade kunna indelas i två grupper. Dels Tyskland, Schweiz och Österrike som visade väldigt få tecken på överhettning, dels flertalet andra länder som hade ett jämnt uppåtgående tryck på priser och aktivitet. Om man dessutom tog hänsyn till reala produktionsnivåer framstod tre länder – Irland, Spanien och Island – som mer påverkade av utbudet.

Sekundärdata visar att den globala finanskrisen hade omedelbara effekter i nästan alla länder i vårt urval. Ganska snart uppstod dock stora skillnader mellan länder med hög skuldsättning i förhållande till BNP (Danmark, Storbritannien, Island, Irland, Spanien samt i en helt annan kategori även Slovenien) där priserna föll till 2010 års nivåer och länder med relativt jämna prisökningar (Österrike, Belgien, Tyskland och Schweiz). Priserna har sedan dess ökat i vissa länder där man tidigare såg stora prissänkningar men har minskat något i en rad andra länder, vilket återspeglar en lågkonjunktur i den reala ekonomin. Minskningarna är fortfarande stora i Irland, Spanien och i viss mån Portugal, men även i Nederländerna där priserna har pressats nedåt till följd av politiska förändringar.

Det som kanske förvånar är att bolån i relation till BNP har fortsatt att öka i många länder. Å andra sidan nådde antalet fastighetstransaktioner sin kulmen före krisen i alla utom tre länder och har sjunkit mycket i Irland, Nederländerna, Portugal och Spanien. I Tyskland, Finland och Slovenien har dock antalet fastighetstransaktioner ökat under hela perioden fram till 2012.

## Politiska åtgärder

Alla tecken pekar på att kreditmarknaderna är allmänt stramare och valmöjligheterna för nya bolånetagare färre. Så är det i länder som historiskt sett har präglats av en konservativ lånepolitik, exempelvis Tyskland och Österrike, men även i länder som före krisen ökade sin utlåning mycket snabbt. Det finns dock två tydliga undantag: vissa länder i Östeuropa som hade en begränsad skuldfinansiering samt Sverige och Finland och i någon mån även andra nordiska länder. Där verkar allt ha fortgått som vanligt, speciellt vad gäller amorteringsfria lån.

Förutom de tre eller fyra länder där såväl den reala ekonomin som det finansiella systemet har drabbats hårt av krisen och där utbudet vida överstiger efterfrågan – Island, Irland, Portugal och Spanien – verkar problemen mer handla om hur man ska säkerställa att de finansiella systemen fungerar bättre än om risken för att många enskilda låntagare drabbas. Något som delvis beror på att räntan har legat på historiskt låga nivåer.

Trenden går mot strängare lagstiftning, krav på högre kapitaltäckning och – när efterfrågan väl ökar igen – även högre räntor, strängare syn på belåningsgrad i förhållande till fastighetsvärde och belåningsgrad i förhållande till inkomst samt hårdare krav på återbetalning. De enda verkliga undantagen är de huvudsakligen östeuropeiska länder där bolånemarknaderna fortfarande är i sin linda och där skuldsättningen i förhållande till BNP är låg. Trots detta är antalet regeländringar färre än man hade kunnat förvänta sig, delvis p.g.a. att regeringarna har velat stödja en återgång till det ”normala”.

Jämfört med bolånen till hushållen förefaller bilden av finansieringen av nya bostadsprojekt vara betydligt mer negativ i de flesta länder som ingår i vår studie. Det beror delvis på att värdet på tillgångar inte har återgått till de nivåer som rådde före krisen, vilket i sin tur innebär att många banker tyngs av såväl övervärderade tillgångar som ”non-performing loans” till fastighetsbranschen.

Till de länder som fortfarande känner av problem på såväl bolånemarknaden som bostadsmarknaden hör föga förvånande Spanien och Irland men även Portugal, Slovenien och kanske mer oväntat Nederländerna. I Storbritannien är bilden mer sammansatt, men situationen är fortfarande ömtålig. I dessa länder är för närvarande problem med efterfrågan lika viktig som tillgången till krediter och återspeglar hur bostadsmarknaderna förblir i obalans.

## Låt oss blicka framåt

Minst fyra grundläggande faktorer utgör orosmoln när det gäller bolåne- och bostadsmarknaden i framtiden:

För det första, om euroekonomin och världsekonomin allmänt börjar återhämta sig kommer detta att sätta press på såväl bostadspriser som hyror. Det kommer i sin tur att öka trycket på regeringarna att försöka stabilisera systemet, vilket kan innebära att situationen vad gäller priser och produktion förblir instabil.

För det andra ligger räntan på en historiskt låg nivå samtidigt som den privata skuldsättningen befinner sig på en fortsatt hög nivå i många länder. Om räntan höjs, om så bara marginellt, kan många hushåll påverkas negativt.

För det tredje är det troligt att CRDIV, Basel III och andra regeländringar ökar lånekostnaden och gör det svårare att ta lån. Bolånemarknaderna i traditionellt sett mer öppna finansiella system kommer troligtvis aldrig att återgå till aktivitetsnivåerna före krisen.

Slutligen har vi utbudsfrågan. Instabila bostads- och bolånemarknader leder till större risker och större svårigheter för byggföretagen att skaffa finansiering. Den viktigaste slutsatsen i vår studie är att i nästan alla europeiska länder och andra marknadsekonomier – som t.ex. USA och Australien – så är den största begränsningen finansieringen av nya projekt.

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