IPPR

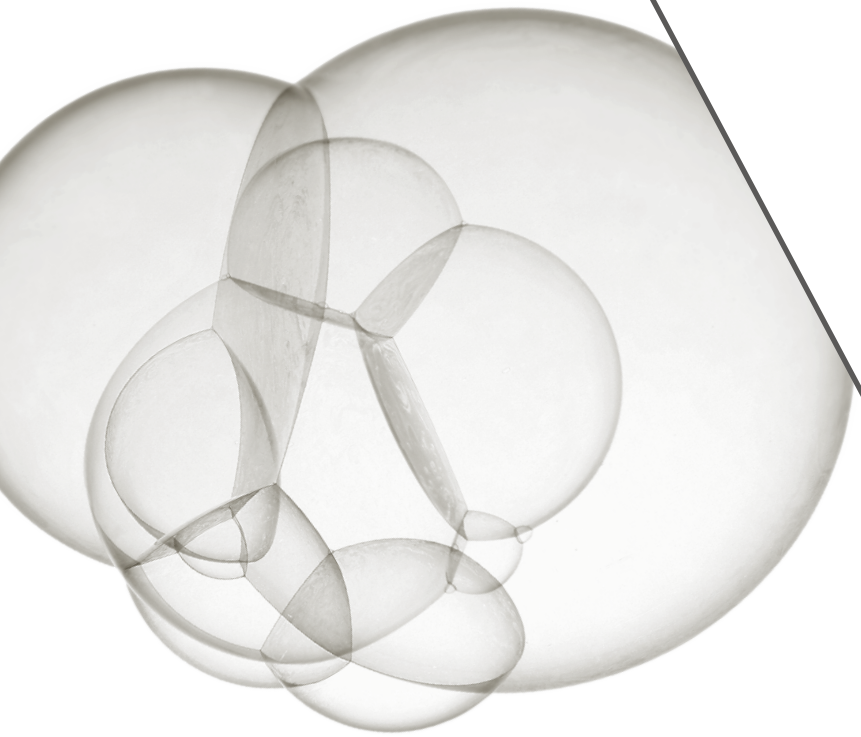
FOREVER BLOWING BUBBLES?

HOUSING'S ROLE IN THE UK ECONOMY

REPORT

Tony Dolphin and
Matt Griffith

May 2011



Institute for Public Policy Research

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EXECUTIVE SUMMARY

This briefing paper is the second to be published as part of IPPR's major programme of research, 'Housing policy – a fundamental review'. The previous paper in the series was on the subject of housing demand. The next will be on housing supply. The current paper focuses exclusively on housing's role in the economy, asking specifically how housing can make a more productive and sustainable contribution to a more stable economy.

Macroeconomic stability matters to the country and everyone in it. Housing has the potential to play either a volatile and destabilising role in the wider economy, as it has in the past, or a stabilising role, as we argue it can and should in the future. Housing's particular contribution to the UK economy merits more attention from policymakers, following the economic crisis, than it has so far received. Analysis of the relationship between the housing market and levels of consumer spending and debt suggests that volatility in the housing market is intimately connected to instability in the economy as a whole.

The housing market is especially vulnerable to bubbles – there have been four in the UK in the past 40 years, including most recently in the mid-2000s (which saw house prices triple within a decade). These bubbles can be hard to spot early, but they must be avoided if we are to avoid the inevitable fallout when they burst. House price bubbles are driven essentially by housing supply and demand and, in particular, by effective demand: that is, demand mediated by finance.

In order to consider effective demand for housing we turn our attention to the mortgage market, in which significant structural changes can be observed over recent times. During the period 1995–2007 the financing base of UK mortgages shifted radically from a deposit-based banking and building society model to one based on capital drawn from international wholesale markets. Securitisation became widespread. The decline of the building society was accompanied by the rise of mortgage intermediaries and non-banks. There was a rapid rise in activity by investment actors in the UK residential housing market, chiefly in the shape of small-scale investors through buy-to-let. A new approach to lending emerged which was based on an affordability model that concentrated not on ratios of loan-to-value or loan-to-income but instead on the proportion of a borrower's disposable income required to service the debt.

These shifts had implications. The large expansion of available mortgage finance via securitisation created a very large increase in credit growth in the UK housing market, and therefore a huge leap in effective demand. The combination of new sources of finance and new financial actors together with heightened competitive pressures also added to pressure for increased risk-taking behaviour. New financing mechanisms added a considerable source of undetected vulnerability in the UK economy. And increased reliance on international markets made the UK more vulnerable to international trends, including not just sudden shocks but also long-run imbalances. The total effect was to exacerbate cyclicality and volatility in house prices, and therefore to heighten the risk of housing-driven economic boom and bust.

Given this, a big question now facing the country is: What lessons should housing policy learn from the credit crunch?

This report ends with some possible answers. Increasing the supply of housing – the subject of IPPR's next briefing paper – is clearly necessary to constrain excessive house price growth in the long term, but alone it is insufficient and slow to take effect. Monetary policy has a part to play too – house prices should be a more explicit consideration in its formulation – but it is something of a blunt instrument, with the level of interest rates

needed to dampen future housing booms likely to come at the cost of excessive pain to the wider economy. Fiscal policy – such as stamp duty or council tax – is certainly important in egalitarian and distributive terms, but arguably tangential in terms of its actual impact on house pricing, and politically highly fraught. And so the area where we (along with the International Monetary Fund and the Organisation for Economic Cooperation and Development) suggest there is most reason to act, as well as the best chance to make a difference, is the regulation of credit.

While this series of briefing papers is primarily analytical in purpose – the majority of our policy prescription will follow in our final programme report at the end of the year – we do at this stage, nonetheless, signpost a possible direction of travel. This includes limiting leverage in the mortgage market (the UK has the highest levels in the developed world), controlling future securitisation as a source of finance in the housing market, tighter control of lending by non-banks, greater deposit requirements on buy-to-let mortgages, and caps on loan-to-value and loan-to-income ratios. We call upon the Financial Services Authority to do more on these fronts in its Mortgage Market Review and on government to make greater house price stability a central plank of its economic policy. It is high time we re-examined the case for mortgage reform in the light of international lessons and our own rollercoaster ride on housing. After all, there is nothing aspirational or equitable about courting another recession.

1. INTRODUCTION

The relationship between the housing market in the UK and developments in the overall economy has always been an important one for policymakers. The recent recession, during which house prices fell by almost 20 per cent, has illustrated just how important that relationship is. As Chris Hamnett, Professor of Geography at King's College London and a leading writer on the UK housing market, puts it:

> **'… housing has played a crucial and growing role in the British economy over the last 40 years and the financial and economic importance of housing and the housing market in national economic and financial management has been starkly illustrated from summer 2007 onwards.'**
> (2010: 110)

Although other factors were important too, housing played a central role in the long economic recovery from 1992 to 2007, and in the subsequent financial collapse and recession.

The interactions between housing and the economy are complex. A number of areas need to be considered:[1]

1. The effect of the housing market on macroeconomic stability
2. The contribution of investment in housing to overall economic activity
3. The role of housing as an asset
4. The relationship between housing and labour market flexibility
5. The costs of housing market failures
6. The effect of housing affordability on the overall competitiveness of the economy.

In this paper, we focus almost exclusively on housing and macroeconomic stability. This seems appropriate after the experience of the last few years, which have seen the deepest recession in the UK since the 1930s. After 15 years of economic growth between 1992 and 2007, it seemed to some that the UK had discovered the holy grail of sustainable economic growth, with housing playing a significant role. The next two years, during which real GDP fell by over 6 per cent, showed how wrong this view was. As a result, the search is now on for ways to change the economy in order to reduce future instability. We argue these changes should include changes to the housing market to make it more stable.

In a number of areas of economic policy the debate about how to increase stability is well advanced. The interim Vickers Report on the UK's banking sector[2] is part of an intense international discussion about regulatory and macroprudential change for financial institutions. The Coalition Agreement promises to abolish the old tripartite regulatory structure, closing the Financial Services Authority (FSA) and putting the Bank of England in overall control of banking supervision.[3] In addition, the Coalition government has put in place a programme of tax increases and public spending cuts designed to eliminate the UK's structural budget deficit over the next four years.

We believe housing has played a central role in recent economic cycles and, given its importance for UK households and financial institutions, there must also be lessons for policymakers concerned with housing. However, there has as yet been far less debate in this area.

1 See Regeneris Consulting 2010: 2–3
2 See http://bankingcommission.independent.gov.uk/
3 See http://www.cabinetoffice.gov.uk/sites/default/files/resources/coalition_programme_for_government.pdf

Some of the reasons for this are institutional. Housing has been afforded too low a priority in British politics, with the Housing Minister rarely at the Cabinet table and a department (in Communities and Local Government [CLG]) with weak links to the key economic departments of state. There are also strong political disincentives to upsetting the powerful owner-occupying voting base. Meanwhile, housing specialists in the academic world and policymakers have traditionally focussed on narrower questions of delivery or tenure and the public debate on housing has often been dominated by strong and vocal producer interests.

The current state of the UK housing market may also explain this failure to debate change. The UK, although it experienced a greater house price boom than the US, has not yet experienced a commensurate slump. Market stagnation is less of a catalyst for intellectual change than market collapse. Furthermore, in the very short term, the talk is of difficulties with getting mortgages and the risk of more falls in house prices. However, we would argue that unless robust action is taken housing will once again add to instability in the UK economy in the future. Considering how to prevent this is a task to be tackled while the last recession is fresh in our minds.

So, in this paper, we examine the role of housing in the UK economy. After a brief recap of developments in the housing market since the Second World War, we look first at its effects on the economic cycle and the stability of output and employment, and at the tendency for bubbles to form in house prices. This leads to an analysis of the drivers of house prices and the causes of house price bubbles. As part of this analysis, we set out four major structural shifts in the UK mortgage market, which we believe have played a significant part in determining developments in the housing market over the last 15 years. Lastly, we look to the future and suggest some of the changes that might be made to the way the housing market operates in the UK in order to reduce future instability in both the housing market and the overall economy.

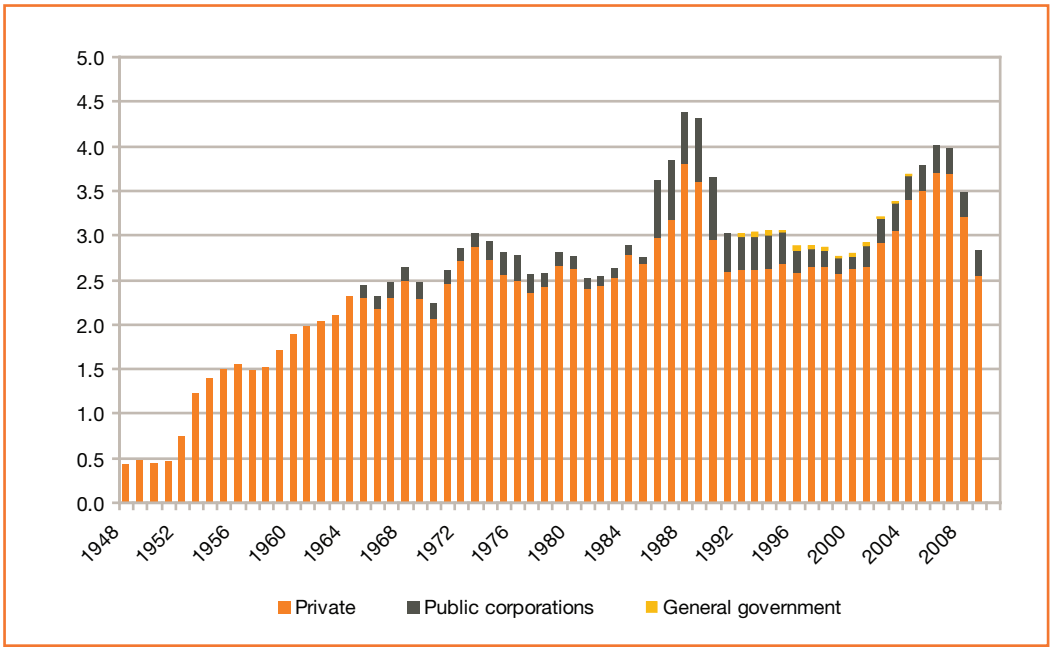
2. HOUSING AND THE ECONOMY

Housing in the UK during the post-war period

Housing affects the macroeconomy in three main ways. First, activity in the housing sector adds to economic output. This includes the building of new homes and spending on consumer durables, decoration and renovation associated with the resale market. Second, changes in household wealth as a result of increases and decreases in house prices affect consumer spending. And third, extreme instability in the housing market leads to increased instability in the overall economy.

Some indication of the direct effect of housing activity on the economy is evident from spending on the construction of new homes. Since the mid-1960s the 'normal' level of investment in new dwellings has been between 2.5 and 3 per cent of GDP. In the 'Lawson boom' of the late 1980s this increased to almost 4.5 per cent, and in the boom of the 2000s to 4 per cent. The surge in new home-building undoubtedly added to the amplitude of the Lawson boom in the late 1980s and house-building also had a role to play in supporting economic growth in the mid-2000s.

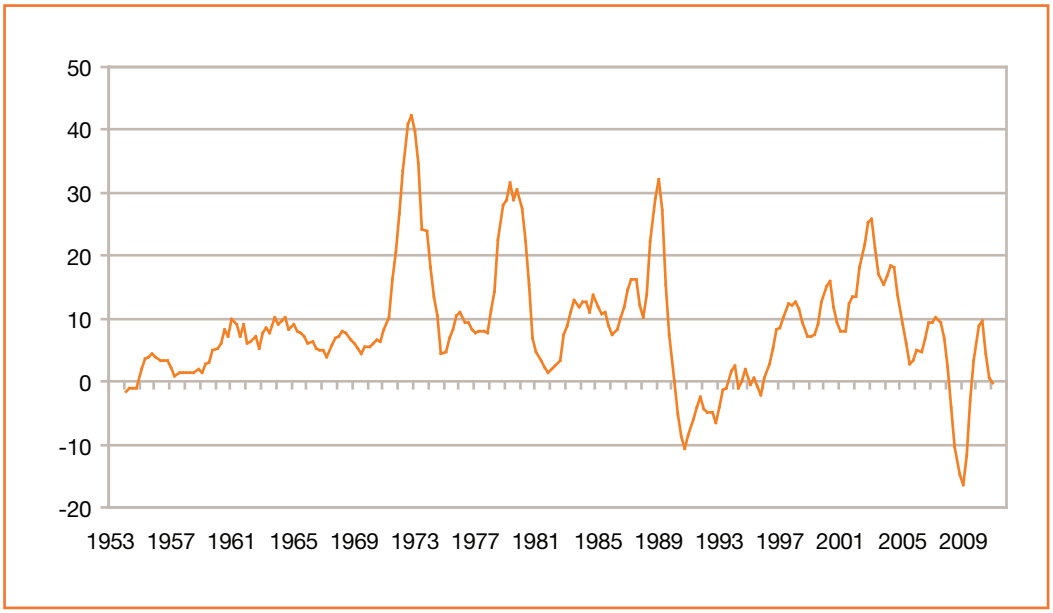
Figure 2.1
Investment in new dwellings (% of GDP)



Source: Office for National Statistics, Quarterly National Accounts

House prices have also been volatile. In 1953, according to the Nationwide house price index, the average nominal price of a house in the UK was £1,884. By 2010 this had increased to £165,483 – an 88-fold rise, equivalent to just over 8 per cent a year.

Figure 2.2
UK house price inflation (%)



Source: Nationwide

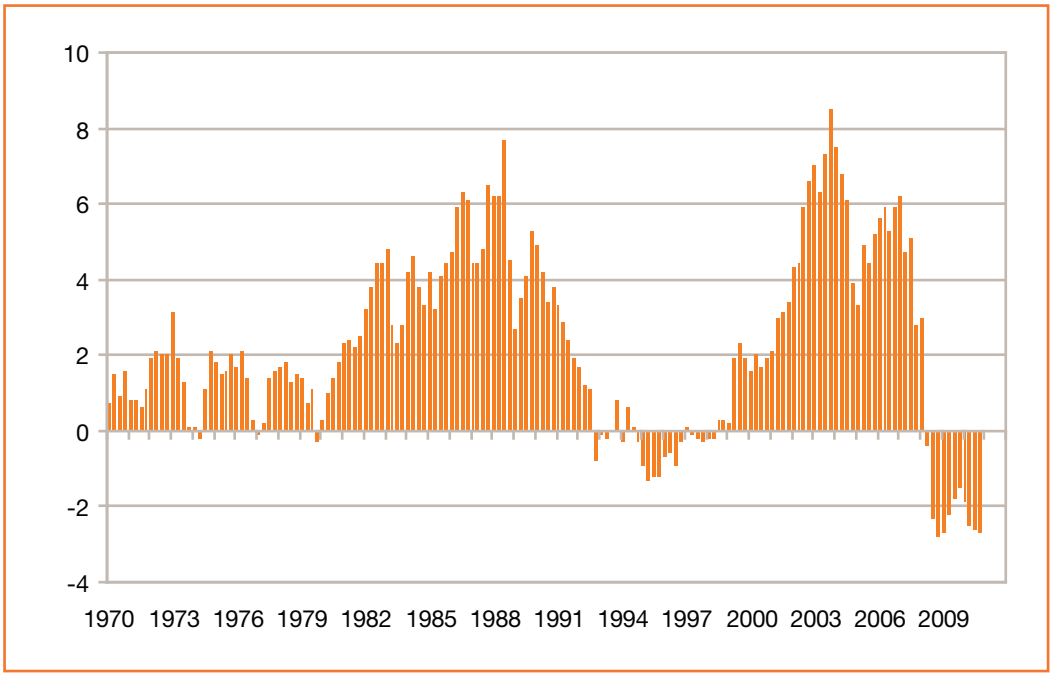
Rising house prices have not followed a smooth path. In the 1950s and 1960s, UK house prices rose consistently, but never by more than 10 per cent each year: there were no bubbles. Since 1970, there have been several periods of very rapid increases in house prices and two periods when they fell substantially. This instability in the housing market appears to be part of a more general increase in instability in asset markets, both in the UK and globally. It could be seen as part of a wider pattern associated with the financialisation of the economy – including slower growth in median wages and increased inequalities in incomes and wealth. However, establishing all these links is beyond the scope of this paper. Here, our concern is that if housing wealth – and thus house prices – has a role to play in determining the path of consumer spending, then this instability in house prices will have translated into some degree of instability in consumer spending, and so in aggregate economic output.

Housing and the economic cycle

Housing is a pro-cyclical element of the economy. Rising house prices increase homeowners' confidence and wealth. As a result, they feel less need to save and more able to spend. Wealth is a common explanatory variable in most economists' models of consumer spending. Rising house prices might also lead to an increase in the supply of new houses. The extra construction activity that this entails will also boost economic growth. And rising house prices will lead to an increase in lending secured on dwellings because they increase the amount of collateral that can be offered to lenders. Falling house prices send all these effects into reverse.

One important transmission mechanism through which households can use higher house prices to boost their spending is housing (or mortgage) equity withdrawal (HEW). Increasing housing wealth encourages people to withdraw or borrow against more of their housing equity (Hamnett 2010: 118). HEW is defined by the Bank of England as that part of lending secured on a dwelling that is not invested in the housing market – the part that is available for investment in financial assets, to pay off other debt, or for consumption. In the housing boom of the late 1980s, HEW reached almost 8 per cent of post-tax income; in the final quarter of 2003, that figure was surpassed when HEW reached 8.5 per cent of post-tax income. More importantly, HEW was sustained at a very high level from 2002 to 2007. Throughout this period, households were taking advantage of the increase in the value of their homes to boost their potential spending power. While government talked of a 'savings culture', UK households developed a 'borrowing culture'.

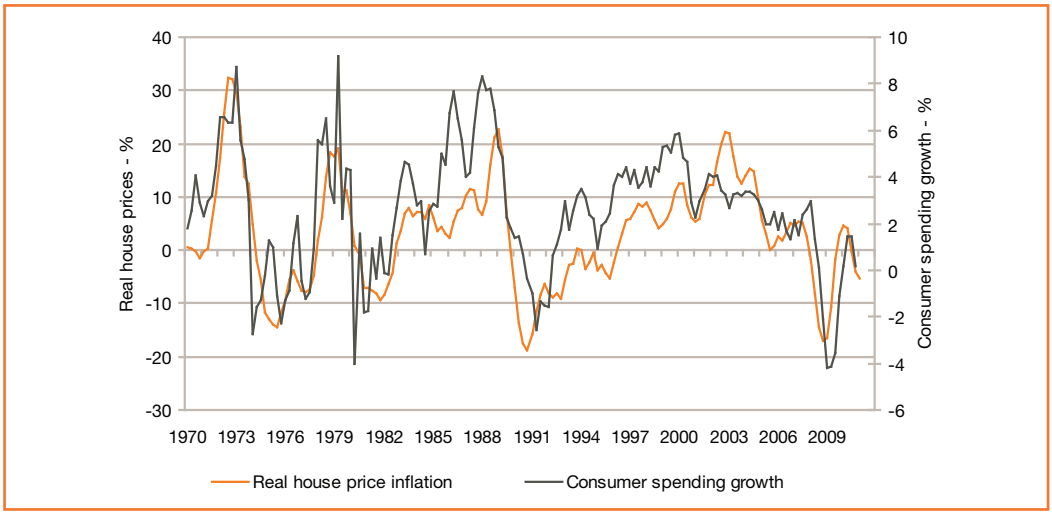
Figure 2.3
Housing equity withdrawal (% of post-tax income)



Source: Bank of England[4]

The relationship between house prices, HEW, consumer spending and economic growth is not a straightforward one. At times there appears to have been little relationship between the housing market and the overall economy; at other times they appear to have moved closely together. However, when they do move together, it does not follow that developments in the housing market were the cause of developments in the wider economy – correlation does not equal causation.[5]

Figure 2.4
Housing and the economic cycle



Source: Nationwide and Office for National Statistics, Quarterly National Accounts

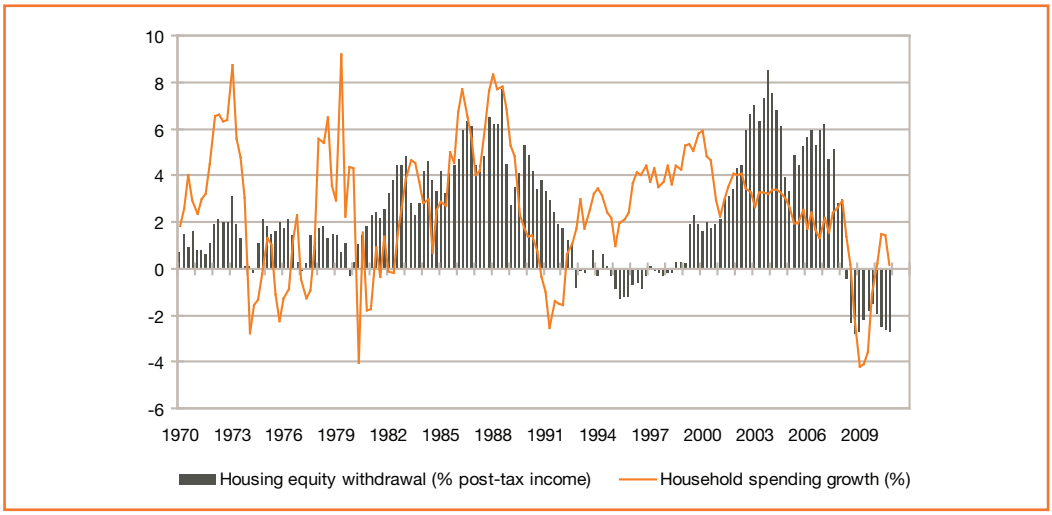
That said, there is clearly a strong relationship between developments in real house prices and developments in consumer spending. The relationship is, however, contemporaneous and it is not at all clear that one is leading the other. This opens up the possibility that both are being determined by other factors – such as real incomes, interest rates and confidence (Benito et al 2006: 142).

4 Accessed on 15 April 2011 at http://www.bankofengland.co.uk/statistics/mew/current/index.htm

5 Equally, however, when the housing market and the aggregate economy appear to be desynchronised, it does not follow that housing is having no influence. It may be that its effect is masked by other factors. An apparent lack of correlation does not mean no causation.

The picture becomes a bit clearer through looking at HEW. Consumer spending in the UK boomed in the early and late 1970s despite what were, by later standards, modest levels of HEW. The next boom in consumer spending – in the 1980s – appears to be much more closely related to developments in the housing market. Swings in HEW were very closely related to developments in consumer spending, providing at least strong circumstantial evidence that during this period the housing market did have a role in boosting demand and growth. But then in the 2000s, the correlation between HEW and spending broke down again, suggesting housing was no longer a driver of the rest of the economy.

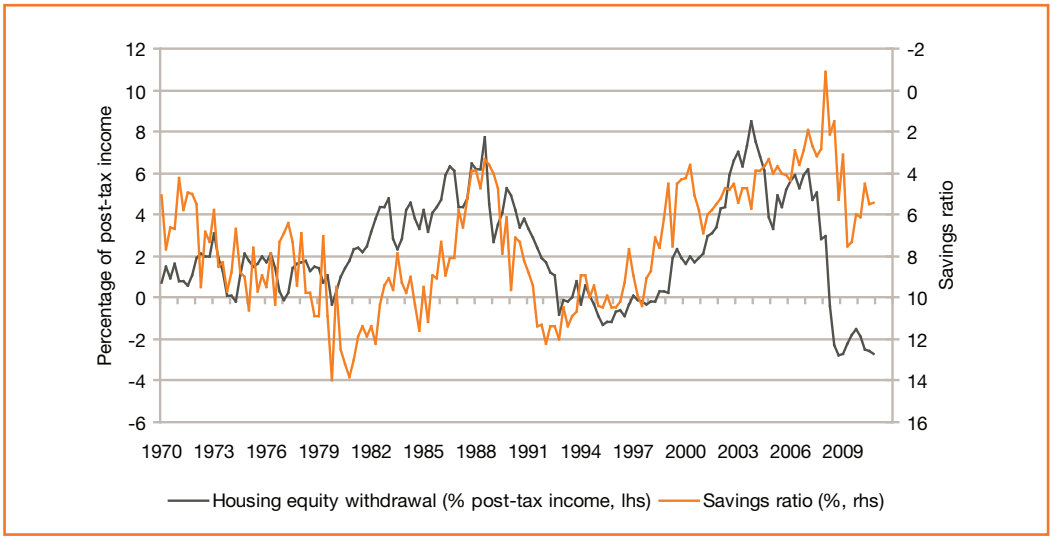
Figure 2.5
Housing equity withdrawal and consumer spending



Source: Bank of England and Office for National Statistics, Quarterly National Accounts

However, looking at HEW and the savings ratio suggests the relationship between housing and consumer spending might have survived into the 2000s. While the savings ratio was relatively stable in the early 1970s, supporting the view that the Barber Boom – in spending and housing – was driven by strong real incomes, both the 1980s and 2000s booms were driven, in part, by falls in the savings ratio. (Note that the savings ratio is inverted in Figure 2.6, so that a fall is represented by a move up the graph.) What is more, these falls in the savings ratio were associated with increases in HEW. People feel less need to save when they can extract and spend housing equity. Although the relationship is far from perfect, this does suggest that housing played a part in supporting consumer spending in the 2000s, as well as in the 1990s.

Figure 2.6
Housing equity withdrawal and the savings ratio



Source: Bank of England and Office for National Statistics, Quarterly National Accounts

The economist Graham Turner has argued that the housing boom in the 2000s was needed, and in some sense deliberately engineered by policymakers, to support spending

at a time when it would otherwise have been weak due to slow growth in real disposable incomes (2008).[6] Perhaps it is more accurate to say that policymakers were unable to control the boom and saw no need to do so. More generally, policymakers may face a contradiction between the need to keep interest rates low to encourage output growth and to meet the inflation target and the risk that low rates will lead to rapid increases in house prices.

This illustrates the significant role that housing plays in economic management, and in monetary policy decisions in particular, 'because of the very large volume of housing-related debt and the sensitivity of homeowners to changes in the bank rate and mortgage rates' (Hamnett 2010: 120). One of the reasons a majority on the Bank of England's Monetary Policy Committee (MPC) is reluctant to increase interest rates now is for fear of the effect on households' finances at a time when they are already being squeezed by low wage settlements, high food and petrol prices, and an increase in VAT. This reluctance will be increased by the record levels of debt held by households in the UK.

Housing and household debt

Mortgage finance is the major component of household debt. At the end of 2009, the UK household sector had debts totalling £1.53 trillion, of which £1.19 trillion, or 78 per cent, was secured on dwellings.[7]

Internationally comparable figures show that UK households have more debt, and more mortgage debt, relative to their income than households in any other major economy. They also show that household indebtedness has increased more in the UK since 2002 (although France and Canada are not far behind) and that almost all the increase in household indebtedness in the UK has been as a result of more mortgage borrowing.

Table 2.1
Household indebtedness (% of disposable income)

	End 2002		End 2009	
	Total liabilities	Mortgages	Total liabilities	Mortgages
United Kingdom	134	97	171	133
Canada	117	71	148	92
United States	110	77	128	96
Japan	134	63	127*	65*
France	76	NA	107	NA
Germany	112	72	99	67
Italy	58	NA	80*	NA*

* 2008
Source: OECD Key Economic Tables[8]

A breakdown of bank lending by the McKinsey Global Institute shows the majority of activity during the period from 2000 to 2008 was concentrated in residential mortgages, rather than in other forms of personal borrowing or business lending. The UK was notable for having the highest levels of mortgage lending as a percentage of GDP – at 81 per cent, higher than the United States (73 per cent), Canada (49 per cent) and Western Europe (44 per cent) – and the highest levels of household and business lending relative to GDP. The United States and the UK saw the fastest growth in mortgage lending between 2000 and 2007 at 52 and 50 per cent respectively.[9]

On a slightly different definition, UK official statistics show that households' liabilities increased from 100 per cent of disposable income in 1997 to 166 per cent in 2007, and

6 In every year from 1998 to 2007, except 2001, consumer spending grew more rapidly than household disposable incomes.

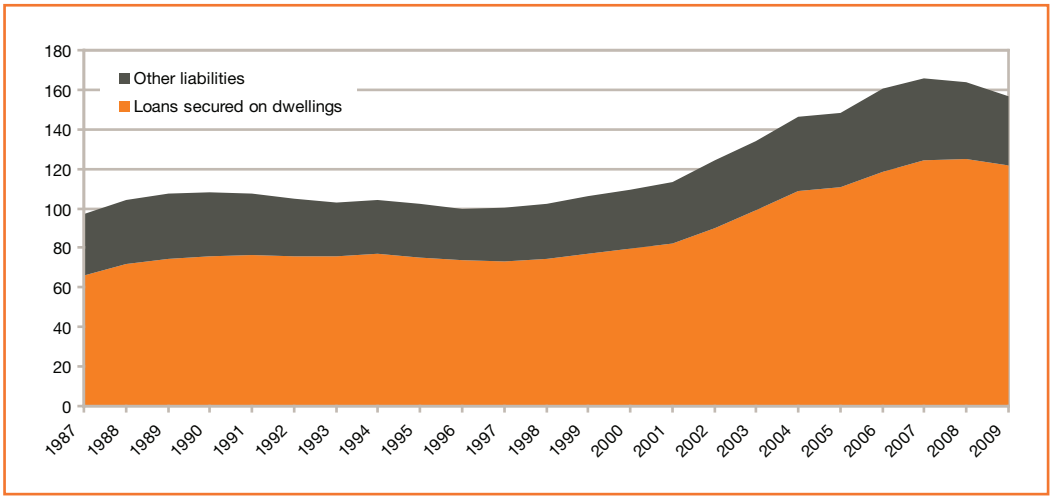
7 The Blue Book 2010, Table 6.1.9 http://www.statistics.gov.uk/downloads/theme_economy/bluebook2010.pdf

8 Accessed on 15 April 2011 at http://www.oecd-ilibrary.org/economics/household-wealth-and-indebtedness_2074384x-table18

9 McKinsey Global Institute, 'Debt and Deleveraging' Jan 2010 http://www.mckinsey.com/mgi/reports/freepass_pdfs/debt_and_deleveraging/debt_and_deleveraging_full_report.pdf

have subsequently fallen back to 157 per cent. Mortgage debt increased from 73 to 125 per cent and has only fallen back to 122 per cent.

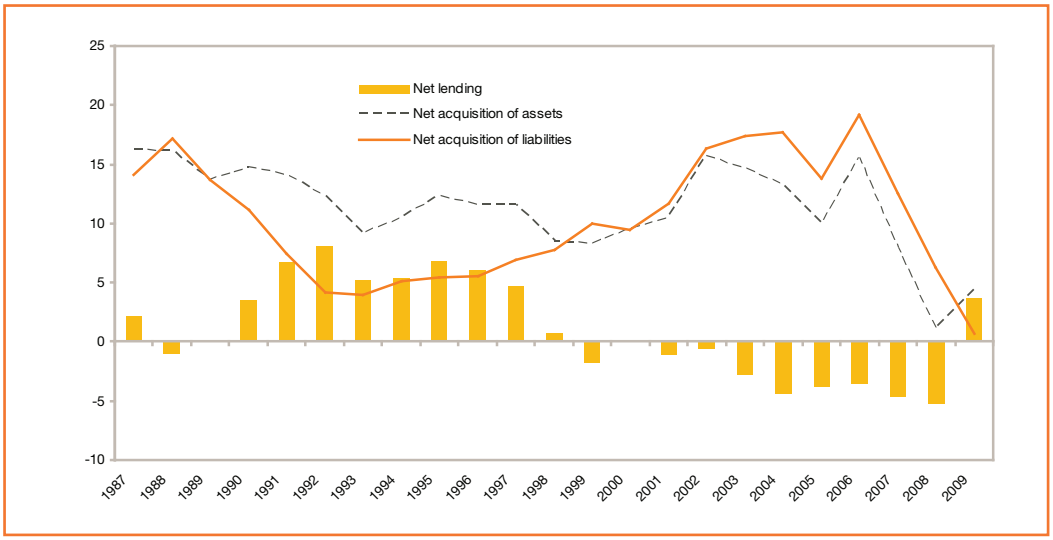
Figure 2.7
UK households' liabilities
(% of disposable income)



Source: Office for National Statistics, The Blue Book 2010, Table 6.1.9

Households' net acquisition of financial liabilities – new borrowing – trended up from 4 per cent of disposable income in 1992 and 1993 to a peak of 19 per cent in 2007. It has subsequently collapsed to close to zero. Meanwhile, households' net acquisition of financial assets, which roughly equates to gross saving out of current income, was volatile but largely trend-less and – until 2008 – always within a range between 8 and 16 per cent of disposable income. In 2008, saving collapsed as households sought to maintain spending in the face of the onset of recession and surging food and energy prices, and it made only a partial recovery in 2009.

Figure 2.8
UK households' saving
and borrowing
(% of disposable income)

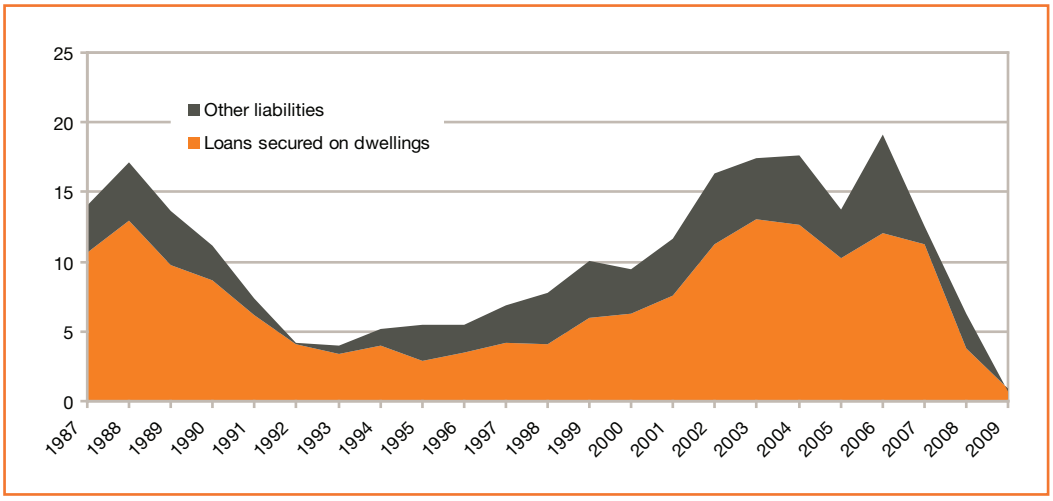


Source: Office for National Statistics, The Blue Book, Table 6.1.8

As a consequence of these trends in saving and borrowing, the household sector shifted from being a net lender in the 1990s to a net borrower in the 2000s.[10] Much of this extra lending was mortgage lending. Total gross mortgage lending in the UK more than tripled between 1999 and 2007, from £115 billion to £364 billion (Hamnett 2009: 3).

10 The net lending rate is equal to the saving rate less fixed capital formation (ie investment in houses) and adjusted for capital transfers. It is, therefore, approximately equal to income less spending on goods, services and new houses.

Figure 2.9
UK households' acquisition of liabilities (% of disposable income)

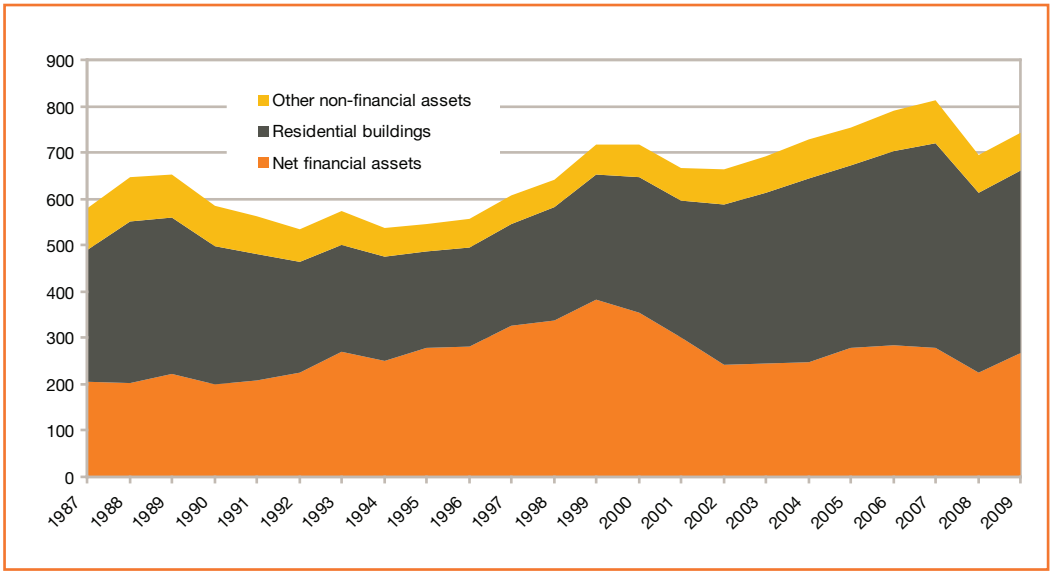


Source: Office for National Statistics, The Blue Book, Table 6.1.8

The scale of mortgage lending in the 2000s could, perhaps, alone be taken as evidence that the housing market was in a bubble.

UK households' shift to be a net borrower throughout the 2000s caused their net financial assets to fall as a percentage of disposable income. Shifts in net financial assets are the result of changes in asset prices as well as new lending or borrowing. Thus, between 1999 and 2002, net financial assets fell, largely as a result of large falls in equity prices. Then, from 2002 to 2007, households' net financial assets edged higher, as rising asset prices were just sufficient to offset the extra borrowing that households were doing. However, in 2008, another fall in asset prices caused net financial assets to drop again – to their lowest level, in relation to disposable income, since 1991.

Figure 2.10
UK households' net worth (% of disposable income)



Source: Office for National Statistics, The Blue Book, Table 10.10

However, householders' behaviour in the 2000s in reducing their net financial assets, especially between 2002 and 2007, probably seemed rational to them because the value of their non-financial assets – principally their houses – was soaring. Total net worth increased from 664 per cent of income in 2002 to 812 per cent in 2007. Financial liabilities were increasing, but total assets (financial and non-financial) were increasing more rapidly. As long as the rise in house prices was sustainable (and financial asset prices did not collapse), there would not be a problem. However, when house prices fell, households had to change their behaviour quickly – hence the collapse in borrowing, which contributed to the depth of the recession.

Even though household net worth has generally trended higher over the last 20 years, high household indebtedness is a problem. It increases households' vulnerability to macroeconomic and income shocks and creates a situation where a downturn in the housing market or in the economy can turn into a nasty negative spiral. This might occur through two channels. First, more debt would mean there is a bigger risk that people will be unable to meet their mortgage payments. This would weaken banks' balance sheets and lead to a cutback in new lending, further weakening the economy and increasing the number of people having difficulty servicing their debt. Second, households facing debt problems would have to cut back their spending. This would have a negative effect on growth and employment and so lead to more people facing debt problems. Policymakers might be able to counter these trends by easing fiscal or monetary policy but that could create other problems, such as a build up in government debt or a misallocation of capital if interest rates are held at very low levels for an extended period of time.

Arguably, this is exactly the position that the UK now finds itself in. The household sector, made vulnerable by its high level of debt, swung sharply from being a net borrower in 2008 to being a net lender in 2009. This contributed to a 3.3 per cent decline in real consumer spending and the economy fell into recession. The government had limited room to support growth with fiscal policy, although it did allow the automatic stabilisers to work and implemented a modest discretionary easing, so most of the strain was taken by monetary policy. The result is that interest rates are at a historically low level even though inflation is running at 4 per cent – two percentage points above its target rate. One reason that a majority of the MPC is reluctant to increase rates is the effect on households. Real incomes are already being squeezed because wage inflation is running well below price inflation and the growth in consumer spending remains anaemic as a result. Higher mortgage payments would add to this squeeze for many families and could, potentially, tip the economy back into recession. If the MPC can hold interest rates at low levels for some time, high mortgage debt may not lead to a negative spiral this time around, but it has the potential to be a drag on growth in the UK economy for several years.

3. HOUSING BUBBLES

What they are and how to spot them

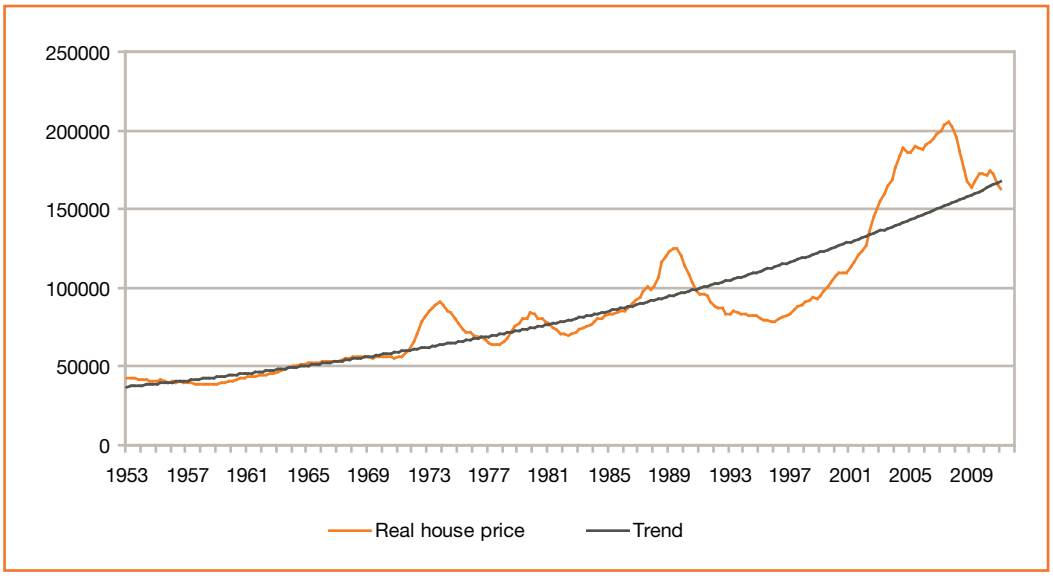
Large swings in house prices and in housing activity – housing bubbles – are potentially bad for the economy. But what exactly do we mean by a 'housing bubble' and can we identify a bubble when it is inflating, or only after it has burst?

A housing bubble can be defined as a period when the price of housing increases rapidly or is at an unsustainable level, relative to other economic variables. These variables might be directly related to the housing market, such as rents, or they might be more general variables, such as retail prices or incomes.

The simplest way to identify the possible presence of a housing bubble is to look at house price inflation. Between the first quarter of 1996 and the first quarter of 2006 the average house price in the UK increased from £51,367 to £160,319 according to the Nationwide house price index.[11] This trebling of prices over the course of a decade represented an annual rate of increase in excess of 12 per cent a year. With hindsight, this certainly looks like a bubble.

However, simply comparing prices at two dates does not take account of other factors, such as the general rate of inflation in the economy and whether housing was undervalued at the start of the comparison period. An alternative way to detect the presence of a housing bubble is to compare house prices to the general level of prices in the economy. Figure 3.1 shows real house prices in the UK since 1953, based on the Nationwide house price series adjusted for movements in the retail price index. Also included is a trend line, fitted from 1953 to 2010 on the assumption that real house prices rise exponentially over time. This trend line increases at the rate of 2.64 per cent a year.[12]

Figure 3.1
UK average real house price (£, 2011 Q1 prices)



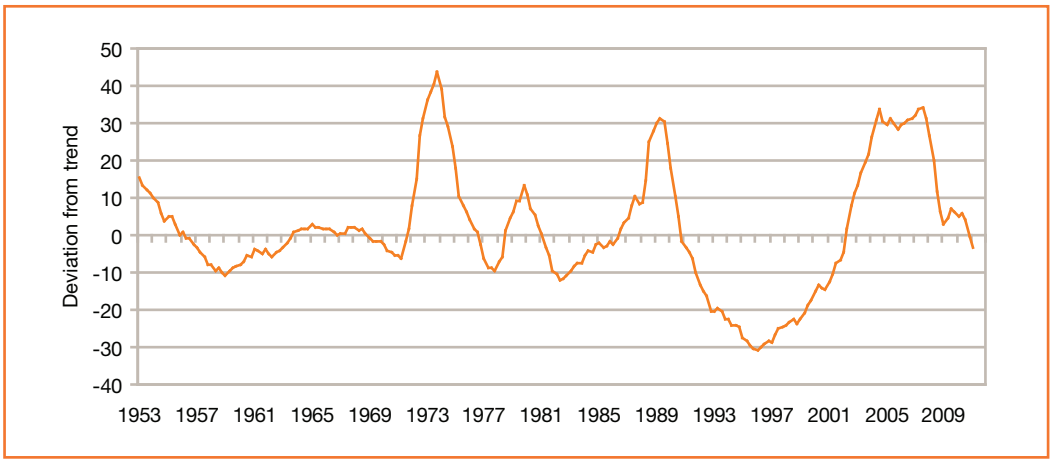
Source: Nationwide, Office for National Statistics and authors' calculations

11 See http://www.nationwide.co.uk/hpi/

12 The government's inflation target for consumer price inflation is 2%. Over the medium term, retail price inflation will tend to increase by about 0.8/0.9% a year more than consumer price inflation (due to differences in coverage and methodology). Therefore, this trend rate suggests nominal house prices might increase at an average rate of about 5.5% a year in future.

There appear to have been four housing bubbles in the UK in the last 60 years: one in the early 1970s, a smaller one in the late 1970s, a third in the late 1980s and an extended fourth one in the mid-2000s. This is more apparent from the relationship between real house prices and their trend.

Figure 3.2
UK average real house price relative to trend (%)[13]



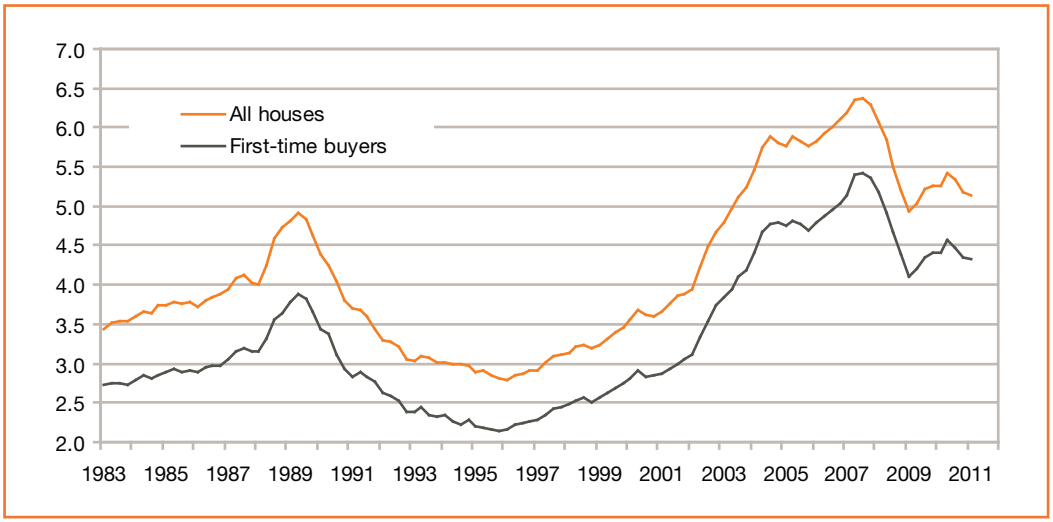
Source: Nationwide, Office for National Statistics and authors' calculations

On this basis, the increase in prices in the late 1970s only qualifies as a 'mini-bubble'. The biggest bubble, in terms of the gap between actual prices and trend, peaked in the final quarter of 1973, when the real price was 43 per cent above trend. The late 1980s bubble was similar in duration to the early 1970s bubble, but prices peaked in 1989 Q2 at just over 30 per cent above trend. The peak in the mid-2000s bubble was of a similar magnitude (34 per cent above trend in 2007 Q3), but what makes it stand out was its duration. Whereas in the two earlier bubbles, prices were more than 20 per cent above trend for only 10 quarters in the early 1970s and six quarters in the late 1980s, they remained at this level for 18 quarters – four and a half years – from 2003 Q4 to 2008 Q1.

Falling nominal house prices and a surge in retail price inflation combined in 2010 to bring real house prices back to their trend level. In the first quarter of 2011 the average real price was 3 per cent below trend.

House prices can also be assessed in relation to incomes because households' ability to purchase houses will depend, in large part, on their earnings. The Nationwide produces a series showing the ratio of the average house price paid by first-time buyers to earnings.[14] From this we can derive a similar measure for all house prices.

Figure 3.3
Ratio of UK house prices to earnings



Source: Nationwide and authors' calculations

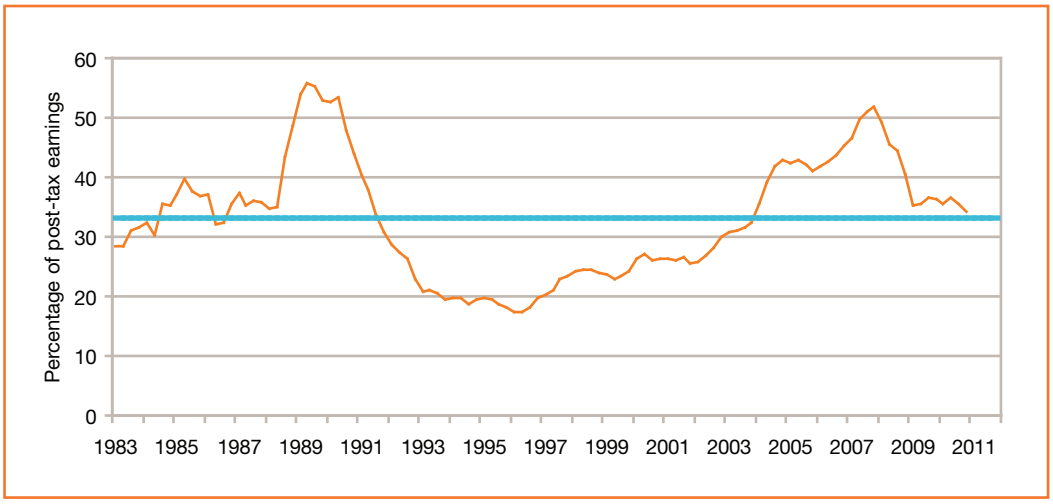
13 This chart is an updated version of a similar chart in Hamnett 1999.
14 Mean earnings for a fulltime worker on adult rates.

There are large swings in the valuation of houses on this basis, suggesting there have been periods of substantial over- and under-valuation of UK housing in the last 30 years. But, in part because of these fluctuations, the underlying trend is unclear, making it difficult to assess how much the market was undervalued at any particular point in time. If the 'normal' valuation of all houses is 3.55 times earnings (the average level from 1983 to 2000), then prices are currently 45 per cent overvalued. If, however, there is a linear trend upwards in the house-price-to-earnings ratio – for example due to the growth of two-income households – then prices may be 3 per cent under-valued.[15]

That it is possible to put such a wide range on the value of housing is not very helpful for the identification of bubbles – but the problem may be even worse. There may not be a stable level, or stable trend, for the house price to earnings ratio to which it will return, or mean-revert. In the early 1990s, when house prices were undershooting most expectations, Geoff Meen, Professor of Applied Economics at Reading University, argued that 'there is no evidence, either empirical or theoretical, to support the use of such rules [based on house-price-to-income ratios]' (1994: 2). Although he was thinking more about short-term price fluctuations, the factors that he identified, other than incomes, as potentially affecting the value that households would place on housing – such as supply, mortgage tax relief, monetary conditions and confidence – could also have longer-term effects.

In response to Meen's arguments, and in an attempt to explain (or perhaps explain away) the increase in the house price to earnings ratio to new highs in the early 2000s, more attention was paid to 'affordability indices' of housing. These attempted to value housing by reference to the costs of house purchase, rather than just relating it to incomes. The Nationwide produces an affordability index alongside its house-price-to-earnings ratio. This measures initial mortgage payments as a percentage of take-home pay for first-time buyers. Its calculations are based on the average lending rate paid by new buyers, assuming a 90 per cent loan-to-value (LTV) ratio and a repayment mortgage. The earnings series is the same one used for the house price to income ratio, adjusted to take account of income tax and national insurance contributions. A higher value for the index implies reduced affordability.

Figure 3.4
UK first-time house buyer affordability



Source: Nationwide

On this basis, the bubble in housing valuations in the 2000s looks less extreme. This is largely the result of lower nominal interest rates, which appeared to make housing more affordable and to justify some of the increase in prices that took place. It also appears that – if we assume that the series reverts to its mean – housing is now close to some notion of fair value.

15 Over the period from 1983 Q1 to 2011 Q1, retail prices increased by 3.7% a year, mean earnings by 5.2% and house prices by 6.7%. Judging the extent of the current overvaluation of housing requires a view on the sustainability of house price inflation that is 1.5% a year in excess of earnings inflation and 3.0% a year in excess of price inflation.

However, the Nationwide methodology is a partial one. It defines affordability by reference only to the initial mortgage payment. The nature of repayment mortgages is such that initial payments are largely interest payments – and therefore very sensitive to the mortgage interest rate. Only later in the life of the mortgage does repayment become important. The affordability index is, therefore, an example of money illusion – a failure to distinguish nominal and real changes. It fully reflects the long-term decline in nominal interest rates between the 1980s and the 2000s, but it does not take account of the lower level of wage inflation that was also part of this decline (dubbed the 'Great Moderation' by economists), which meant that real interest rates fell much less. In the 1970s and 1980s, rapid wage inflation meant that mortgage payments on any individual mortgage (which are constant in nominal terms) shrank dramatically as a share of earnings over the life of the mortgage. Mortgagors could afford relatively high initial payments in the expectation that inflation would eat away at their real value. Much lower wage inflation means this is much less likely to be true now.

Table 3.1
Effect of wage inflation on mortgage payments

	Mortgage payment as percentage of post-tax income				
Wage inflation	Year 0	Year 5	Year 10	Year 15	Year 20
4%	35	29	24	19	16
8%	35	24	16	11	8
12%	35	20	11	6	4

Source: Authors' calculations

If mortgage interest rates increase from their current rate of 3.5 per cent to their average rate over the last 10 years of 5.15 per cent,[16] then the Nationwide's housing affordability index for first-time buyers would shift from 34 to 44 (remembering that an increase represents a fall in affordability), unless house prices fell in response to the rise in rates. Housing is probably not, therefore, as affordable as it was in 1985 or 1992, as suggested by Figure 3.4.

A final method of gauging whether the UK has experienced a bubble is looking at the relationship between rents and house prices. Renting is the nearest 'substitute good' to market housing – ownership is a form of 'renting from yourself'.[17] It should therefore have a close relationship with pricing in housing. As house prices rise, rents should follow.

Between 2000 and 2007, market rents rose by 35 per cent, faster than inflation (which rose by 21 per cent[18]) but significantly less than house prices, which rose by 124 per cent.[19] House prices departed from rental prices during the boom period and this departure appears to have a cyclical pattern, rather than one that can be attributed to one-off advantages that owning may have over renting (for example, its better financial benefits as a tax vehicle). In fact, as renting is a more liquid market than the owner-occupation sector, rental prices should give us a truer estimate of supply and demand.

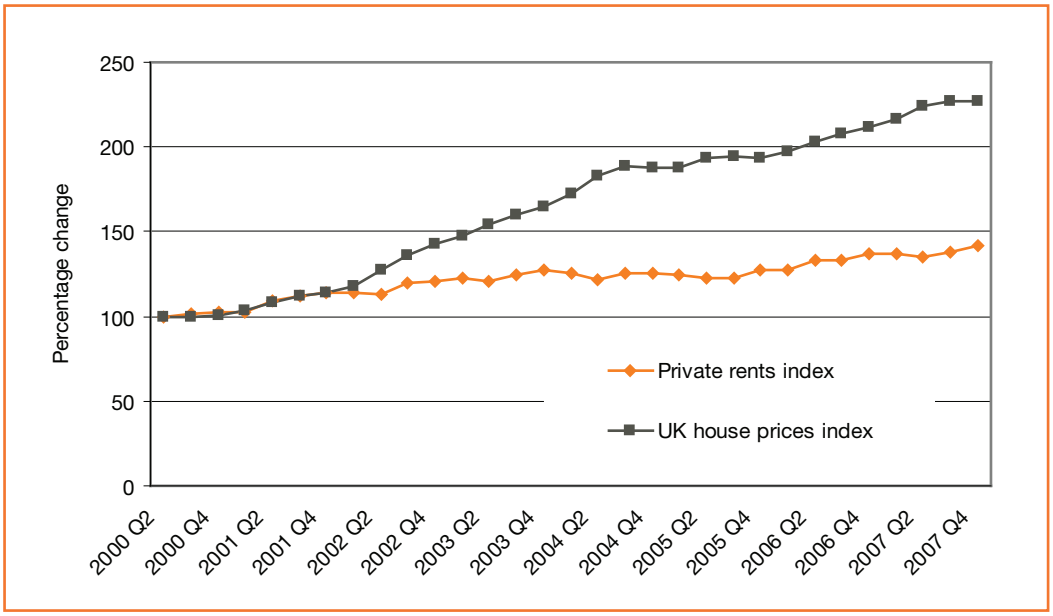
16 Source: Council of Mortgage Lenders (CML) via http://www.myintroducer.com/view.asp?ID=6399

17 Renting, however, has significant disadvantages over owner-occupation in the UK and in periods of strongly rising house prices there appears to be a strong preference for owner-occupation.

18 http://www.bankofengland.co.uk/education/inflation/calculator/flash/index.htm

19 Private rents measured from 2000 Q2 to 2007 Q2, CLG live table 740 – Private Sector Rent Index, house prices measured from 2000 Q2 to 2007 Q2, Nationwide House Price Index.

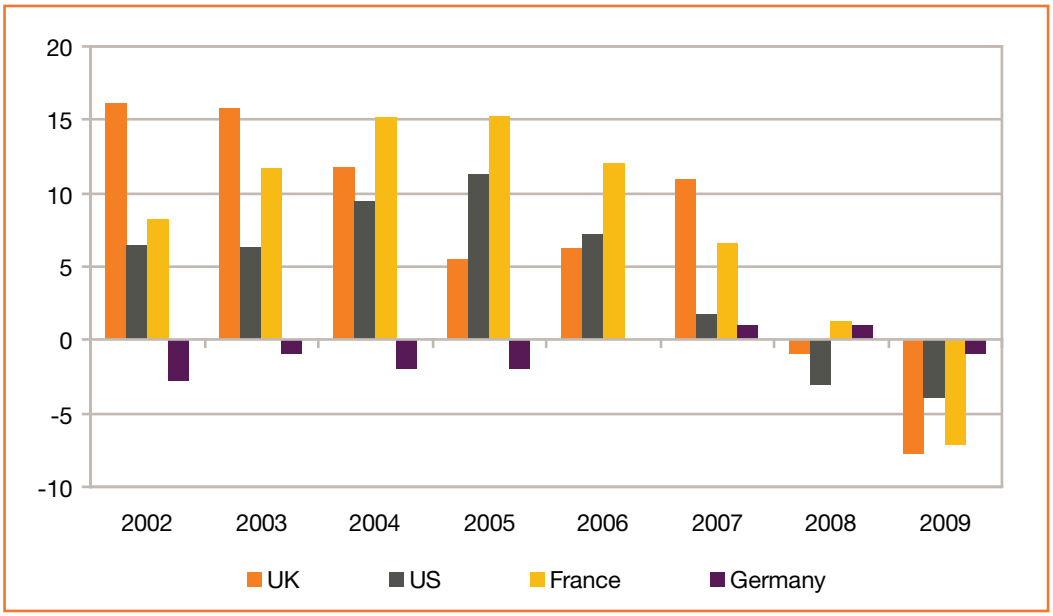
Figure 3.5
Percentage change in UK house prices and private rents from 2000 Q2



Source: Nationwide and CLG

So, the evidence suggests the UK has experienced three major housing bubbles in the last 60 years: one in the early 1970s, one in the late 1980s and one in the 2000s. To UK observers, this may appear a particularly home-grown pattern of behaviour, but the UK is far from alone in having experienced a housing market rollercoaster. Housing market bubbles are frequent in advanced and emerging economies. The period from 2002 to 2007 was particularly notable in producing rapidly rising housing markets across most of the advanced economic world. In 12 out of 19 countries for which the OECD reports data, house price inflation from 2002 to 2007 averaged 8 per cent or more.[20]

Figure 3.6
Annual house price inflation (%)



Source: OECD

Housing bubbles are readily identified ex-post, when prices have fallen back again. But there are a few simple metrics, such as the relationship between house prices and the overall price level, which indicate when a house price bubble is forming. If policymakers believe that house price bubbles are detrimental to the performance of the overall

20 http://www.oecd-ilibrary.org/economics/house-prices_2074384x-table17, accessed on 9 May 2011.

economy, which they should, they ought in future to find ways of tackling the causes of bubbles before they have a chance to reach dangerous proportions.

Why housing bubbles should be avoided

The earlier analysis of housing and the economy illustrates why housing bubbles are likely to be bad for the economy. There are several good reasons for seeking to prevent them.

First, the central role of housing in household finances means housing bubbles can exacerbate up- and down-swings in consumer spending and so make economic growth less stable. There is little doubt that the surge in consumer spending during the late-1980s 'Lawson boom' in the UK was fuelled, in large part, by developments in the housing market or that the slow recovery of the housing market in the first half of the 1990s hampered economic recovery. Oxford Economics have estimated that lower housing activity and the effect of lower housing wealth on consumer spending together resulted in a fall of around 2 per cent in UK GDP from 2007 to 2009 – around a third of the total fall (Regeneris Consulting 2010: 6). This should probably be seen as an upper estimate. It is important also to remember that some parts of the economy, including housing construction, are inherently more unstable than others.

Second, regional disparities can emerge in housing bubbles. This was not generally the case in the 2000s boom. However, during the Lawson boom, house prices, consumer spending and economic output all grew considerably faster in the southern half of England than in the rest of the UK. But the higher interest rates that were needed to counter these trends affected the whole country. It could, therefore, be argued that Scotland and northern England endured an unnecessary recession in the early 1990s as the price of bursting southern England's housing bubble. In addition, wider house price differentials will increase the mobility trap, making it harder for households in low-price, low-inflation housing areas to move to high-price, high-inflation areas (Stephens 2011: 25).

Third, when housing bubbles burst, the price of houses falls but the value of debt secured on them does not. The American economist Hyman Minsky has argued that this will depress demand in the economy while households save more and borrow less in order to repair the damage to their balance sheets (2008). In the worst cases, this can lead to a negative spiral. As house prices fall, some households will attempt to cut their debt. This could lead to forced sales of housing, pushing prices down further. If more households are then encouraged to reduce their debt and repossessions soar, prices may start to fall uncontrollably.

This is a pretty good description of what happened in Japan in the 1990s, and in 2008 there were many economists prepared to draw parallels between the Japanese experience and what might happen in the UK over the next decade. That such an outcome has so far been avoided is probably due in no small measure to the rapid response of the monetary authorities in the UK. By cutting its bank rate to 0.5 per cent and pumping £200 billion into the economy, the MPC has – so far at least – helped to prevent such a negative spiral.

However, this action is not without its costs. Real interest rates are significantly negative in the UK and this could lead to the misallocation of capital. Meanwhile, consumer price inflation is well above its target rate and low nominal interest rates could contribute to a permanent increase in inflation expectations. Ultimately, there would be an economic price to pay should the MPC have to reverse such an increase with higher interest rates.

Crowe et al, in a general discussion of asset prices, argue that booms and bubbles are not intrinsically bad. What matters is how they are financed: 'Busts tend to be more costly when booms are financed through credit and leveraged institutions are directly involved' (2011: 6). However, they go on to note that housing booms are almost always financed through rapid increases in mortgage lending, meaning that housing busts will always have substantial negative effects.

Fourth, falling house prices are likely to be associated with an increase in mortgage defaults. Business secretary Vince Cable MP says that '300,000 people lost their homes

in the space of five years in the early 1990s due to repossessions (2009: 19). This is devastating for the families concerned. But a high rate of defaults will also impair lenders' ability to make new loans – for house purchase or more generally – resulting in a credit squeeze that holds back demand growth in the economy. As we have just seen, in the worst cases, housing busts can place an intolerable strain on a country's banking system. Reinhart and Rogoff (2009) show that the six major historical episodes of banking crises in advanced economies since the mid-1970s were all associated with a housing bust.

Fifth, depending on the speed at which the bubble inflated and the number of people purchasing houses when prices were close to their peak, the bursting of a housing bubble may lead to a high level of 'negative equity'.[21] There is also evidence that households with negative equity find it more difficult to obtain other forms of credit, which will reduce their ability to spend (Benito and Mumtaz 2006). Negative equity will also affect banks' ability to lend if it leads them to write down the value of their mortgage books.

There are no official figures for the number of UK households with negative equity. Work by analysts at the Bank of England suggests that between 10 and 11 per cent of UK owner-occupier mortgagors, or 1.0–1.1 million households, were in negative equity in the spring of 2009 when house prices were around 20 per cent below their peak (Hellebrandt et al 2009). The authors also note that mortgagors with high LTV ratios (and therefore most at risk of negative equity) have modest financial assets, which are, on average, likely to be offset by other unsecured liabilities (ibid: 120).

A household with negative equity may find it harder to move to take up an available job opportunity without moving into smaller accommodation because they may not be able to secure a new mortgage as large as their existing one. If many households are in this position, vacancies may not be filled, or not filled by the best-qualified people available, to the detriment of the productive potential of the economy.

Sixth, when the housing bubble is inflating, there is a risk that too many houses will be built. Resources that might otherwise have been devoted to more productive investment – in infrastructure or in plant and machinery – are used to build houses that no one wants to live in. This was clearly the case in the United States in the first half of the 2000s when residential investment's share in total GDP increased to 6 per cent. It has subsequently collapsed to 2.5 per cent due to the glut of houses on the market and falling prices. It was also true in Ireland and Spain, though less so in the UK, where there was a supply response to higher prices but it was more muted. This misallocation of resources will tend to reduce the economy's medium-term potential growth rate.

Seventh, higher house prices can lead to higher costs to the state. Between 2000/01 and 2007/08 rising house prices played a major role in driving private rents up by 35 per cent. Largely as a result of this, during the same period, UK housing benefit costs rose by 40 per cent from £11.2 billion to £15.7 billion – a very rapid rise in state expenditure – despite the fact that the number of claimants actually fell by 328,255 from 3,561,451 to 3,233,196.

This catalogue of reasons for avoiding housing bubbles represents a powerful case for action by policymakers to prevent them occurring in the future. But this will only be possible if housing bubbles can be clearly identified when they are developing. Whether this is possible is contentious, but any attempt to do so will require a firm understanding of the causes of housing bubbles.

Why housing is vulnerable to bubbles

Housing has a number of features that make it particularly vulnerable to bubble-type behaviour.

First, momentum behaviour is very strong in house prices because increases in prices feed an expectation of further increases. Home-buyers are more likely to assume house prices will continue to rise after a period of strongly rising prices, rather than expecting a

21 Households owning houses that are worth less than the outstanding debt on those houses.

fall by making reference to 'fundamentals' such as valuation. Karl Case and Robert Shiller, in a study of buyer behaviour in four US city housing markets, found that house-buyers form expectations on the basis of past price movements rather than on knowledge of fundamentals (1988). Buyer psychology also creates situations in which large increases in prices can create a fear of 'missing the boat' – both in terms of losing out as rising prices confer additional wealth on contemporaries and a sense that 'if I do not buy now, I will never be able to get on the housing ladder'.

The attitudes of borrowers can add to these momentum effects. The Miles Review found that buyers placed excessive levels of emphasis on the initial costs of borrowing, were too optimistic about future levels of interest rates and gave insufficient weight to risks associated with future changes in rates (2004).

Second, credit conditions strongly influence pricing. Unlike other investments, housing is consumed primarily through borrowing (that is, through mortgage finance). This means that pricing and purchasing behaviour is conditioned by the availability of credit, which tends to be cyclical and also displays momentum behaviour. Borrowing amplifies price rises and the scale of investor returns as well as the incentives for investors to speculate on further gains.

Third, determining appropriate pricing in housing markets is difficult. It can be very hard for buyers to differentiate between speculative 'froth' in prices and justified changes due to economic fundamentals. Individual houses are not easily comparable to other houses and market prices are set at the margin by a small active market. There is no 'clearing house' in housing. Meanwhile, estate agents compete for listings based upon bidding asking prices higher and prices are usually referenced by what the nearest house sold for. A very similar technique is then used by surveyors, and this underpins these sales prices in the market.

This is a classic example of the effects of asymmetries of information. Potential buyers, particularly those that are looking in housing markets that they know very little about, will tend to assume that estate agents and surveyors know much more about the 'right' level of prices than they do. The result is that prices can depart from fair value for long periods of time.

The housing market also displays the characteristics of 'noise trading' – in which the key players reference their behaviour upon recent news and data rather than looking at long-term fundamentals. This makes it more difficult for those market players seeking to make rational economic choices.

Fourth, there is very little scope for arbitrage[22] in the housing market (Farlow 2004b). Departure from prices based on long-run fundamentals is, therefore, made easier by the fact that overheating prices are much harder to correct.

This is in contrast to the equity, bond and foreign exchange markets, which offer ample opportunity for arbitrage. There is no futures market in UK housing and 'going short' is almost impossible. Even if people believe house prices are overvalued, it is hard for them to bid prices down. Sitting out of the market may also cause individuals substantial losses if prices continue to rise in the short term and involves incurring significant transaction costs when exiting and re-entering the market. These effects are exacerbated by the lack of acceptable 'substitute goods' comparable to housing, which again make arbitrage harder.

Fifth, moral hazard is widespread. Booms are exacerbated by collective 'gaming' behaviour from borrowers and banks alike. Participants come to believe, despite the historical evidence to the contrary, that the government is unlikely to let prices fall. Similarly, they believe households or financial actors will not be allowed to fail, given the

22 Arbitrage is the term for a technique used in financial markets to exploit and profit from differentials in prices or mispricing. Arbitrage is therefore an important mechanism by which market actors ensure prices stay close to 'fundamentals'

political importance of owner-occupiers and the economic importance of the financial system. Recent evidence suggests there is some truth in this view.

An undersupply in housing provides both a compelling economic rationale for continued price rises, but also an important narrative for investors seeking capital gains – 'buy land, they aren't making any more of it'. Buyers suspect a strong asymmetry in the approaches of governments and central banks to the housing market, and this reinforces expectations that prices are bound to rise further.

In short, house price rises are particularly vulnerable to depart from fundamentals and are very hard to correct if they do. Meanwhile market actors are likely to suffer from momentum behaviour and have strong reasons to behave speculatively. So, we move from periodic bouts of fear of 'missing the boat', followed by the pain of negative equity and retrenchment.

Possible causes of the most recent housing bubble

How do these explanations fit with the most recent house price bubble?

The previous government believed that a shortage of housing was a principal factor behind the rapid increase in house prices between the mid-1990s and the mid-2000s. This prompted it to ask Kate Barker to 'conduct a review of issues underlying the lack of supply and responsiveness of housing in the UK' (Barker 2004: 3).

Others are less convinced. Akerlof and Shiller highlight the role of 'stories' in helping asset price bubbles to develop (2009). One story that is common in the UK during house price bubbles is that shortages of land and tough planning restrictions limit the supply of housing in a way that makes it inevitable that prices will increase further and without interruption. Unsurprisingly, this story disappears when prices are falling, even though there is no more land in the UK and planning restrictions have not been relaxed.

Nor does the international evidence suggest lack of supply as an explanation. While housing supply may not have responded to increasing prices in the UK in the way that the government expected during the 2000s, this was clearly not the case in other countries, including the United States, Ireland and Spain, which all experienced booms in housing construction that did little to prevent a price bubble developing. Indeed, in the United States, the construction boom appears to have added to the scale of the bubble in some local markets by making it easier for highly-leveraged speculators to invest in new developments.

Vince Cable is clear about the cause of the recent housing bubble in the UK. He blames it on easy credit, noting that in July 2007 there were 15,600 different mortgage products available in the UK, and on the sense that housing is a good long-term investment (2009: 15). The new twist that this combination brought about in the 2000s was large-scale purchases of housing by buy-to-let (BTL) investors.

How far prices departed from the justified 'fundamentals' of supply and demand is a matter of some debate in the UK. However, many economic commentators began looking for other factors from as early as 2000.

The International Monetary Fund (IMF) UK Country Report for 2003 suggested prices were overshooting fundamentals based upon its modelling from 2000. Andrew Oswald suggested a similar analysis in 2003 (Oswald 2003), as did Roger Bootle of Capital Economics in 2004.

Farlow, in 2004, also found that although the change in some fundamentals provided a rationale for higher prices it was 'nowhere near enough to explain the recent real prices rises':

> **'If an explanation is to be found for recent dramatic house price rises, it is not to be found in the usual demand and supply fundamentals but rather in the behaviour of consumers and banks.'**
> (Farlow 2004a)

An understanding of the role of behavioural factors in explaining price movements has since become more prevalent.

David Miles, then working at Morgan Stanley and now a member of the MPC, conducted econometric analysis looking at the UK housing market in 2006 (Miles and Baker 2006). He suggested that the increase of 113 per cent in real UK house prices over the previous decade could be explained by:

- 28 percentage points due to higher real incomes per head
- 9 percentage points due to an increase in the population
- 14 percentage points due to lower real interest rates
- 62 percentage points due to the expectation of higher prices

Proponents of agent-based modelling also emphasise the role of house price increases in creating further rises. Their models incorporate feedback mechanisms whereby rising prices of housing can lead to increased demand and thereby cause prices to rise even further (this is in contrast to traditional models, which assume that for all goods and services higher prices will reduce demand). Khandani et al suggest three factors – 'rising home prices, declining interest rates, and near-frictionless refinancing opportunities' – came together in the United States in the 2000s to create large increases in household mortgage debt and in US house prices (2010: 1).

Their analysis would seem, in large part, to translate across the Atlantic to the UK experience. The prolonged housing recession of the first half of the 1990s left house prices depressed relative to other prices and earnings. This created a situation in which house prices could increase quite rapidly while valuations returned to normal. However, around the time that valuations got back to normal, nominal interest rates began to fall and conditions in the mortgage market were loosened. This encouraged households to believe prices would keep on rising. And when prices did indeed keep on going up, their confidence increased even further. Add in a huge increase in BTL investors and the bubble inflated.

4. HOUSE PRICES

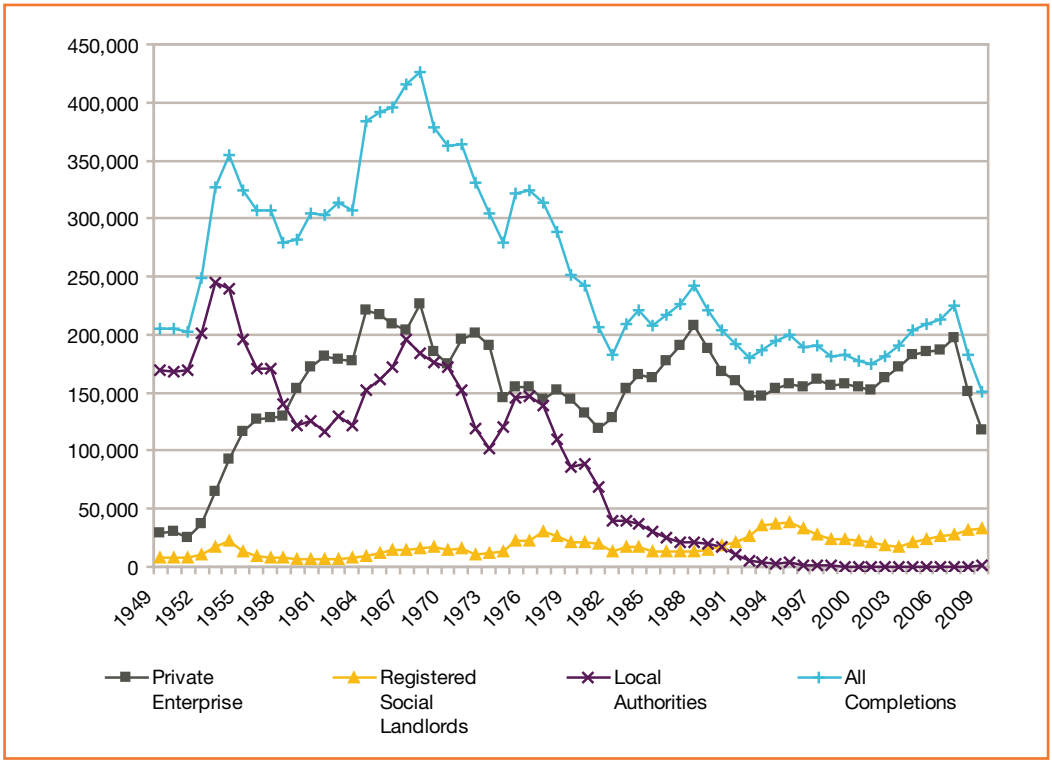
WHAT DRIVES HOUSE PRICES AND VOLATILITY?

The UK has a highly volatile housing market with prices that swing between periods of boom and bust. Why is this and what can be done about it? In an attempt to ascertain what has been important in creating this dynamic, we look at the main factors behind the supply of, and demand for, housing.

Supply

The UK has a well-documented undersupply of housing – as most recently set out by IPPR (Schmuecker 2011). House-building rates in 2009/10 were the lowest since the First World War, at 136,990 completions, compared to rates in the 1970s, which averaged between 200,000 and 350,000 per annum.

Figure 4.1
UK house-building completions by sector



Source: ODPM; National Assembly for Wales; Scottish Executive; Department of the Environment, Northern Ireland; ONS
Note: From 1990/91 data are for financial years.

The fall in overall house-building closely mirrors the fall in state provision via local authorities. Although market house-building had noticeable peaks in the early and mid-1960s, the early 1970s, late 1980s and in 2004–2007 (which mirror peaks in the price cycle), market provision has remained broadly similar over a 40-year period, despite ever-rising real prices.

This has left a substantial shortfall in supply – varying between approximately 50,000 and 180,000 units a year since the 1980s – at a time of rising demand from new household formation. People in the UK now live longer and in smaller family units. Greater levels of wealth also increase the overall demand for housing as a consumption good – as people become wealthier they want to consume more housing, with larger houses or second homes.

Between 1990 and 2000, household formation was estimated at 196,000 a year (Barker 2004). Between 2000 and 2007, the number of UK households rose at a rate of 202,000 households per year.[23] The Office for National Statistics (ONS), at the time of the Barker Review, projected 155,000 additional households a year between 1996 and 2021.

Any demographic projections are tentative. The ONS projections in 1996 did not predict the scale of immigration from the 'Accession 8' EU countries. Equally, high house prices may dampen the move towards the formation of new or smaller households – people may stay in their parents' home for longer, renters may rent with others, and owner-occupiers may extend their houses or bring in a lodger, given sufficient economic incentives.

In some age groups these incentives may cut the other way. The economic incentives to 'over-consume' housing due to its role as an inflation hedge or alternative to other investments contributes to the fact that many older people are 'under-occupying' the family home beyond the time when their housing needs would otherwise suggest downsizing. Some 7.8 million (or approximately 35 per cent) UK households are under-occupiers (or what could be called 'over-consumers'), most notably in the owner-occupation sector.[24]

The benchmark report on UK housing supply was the Barker Review in 2004.[25] Barker found a clear link between undersupply, household growth and the rising real cost of housing. She showed that between 1971 and 2001 UK house prices rose more rapidly than in most European countries.

HM Treasury estimated that the trend of real house price growth from 1970 to 2001 was 2.4 per cent (Barker 2004). Barker estimated that the trend rate between 1984 and 2001 rose to 2.7 per cent (ibid). Government research also calculated that every reduction of 100,000 homes per year in house-building would raise prices by 12–14 per cent each decade (CLG 2005).

This provides some explanation for the upward pressure on house prices in the UK, but house price rises during the 2000s were running at double-digit rates *per year* – in 2002 alone house prices went up by over 22 per cent. It therefore makes sense to look for other reasons why the UK experienced this level of price growth.

Demand

To quote the economist David Miles, UK housing supply is 'all but fixed in the short run' (2008). Britain's total housing supply grows extremely slowly, at less than 1 per cent of the total stock per year, and bears a weak relationship to total levels of demand.

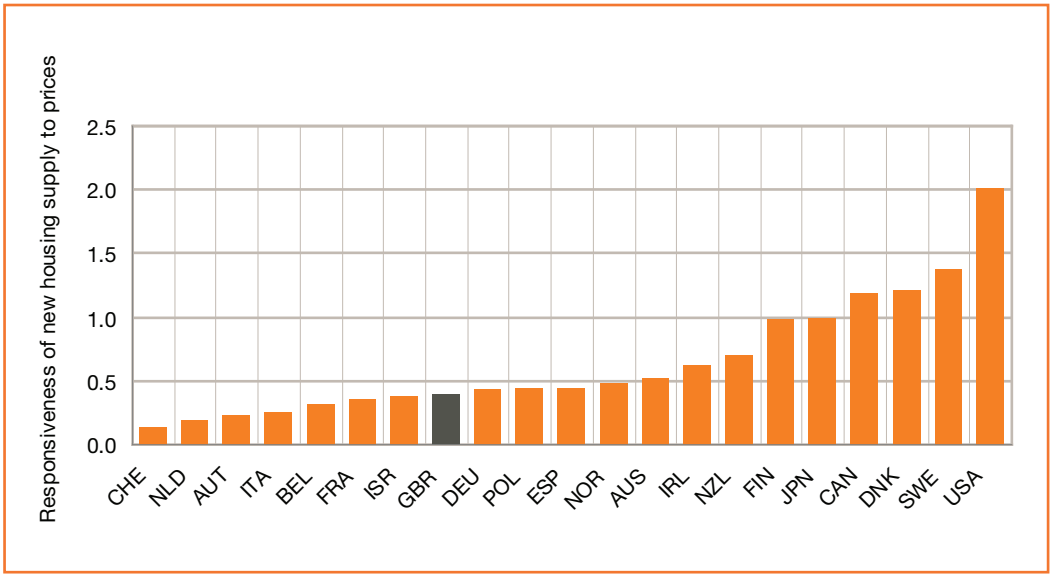
The responsiveness of supply in the UK to higher levels of demand is low by international standards – at half the level of Japan and less than a quarter of the United States, according to recent OECD analysis (OECD 2011). Meanwhile, analysis for the Barker Review found that UK house-building was only half as responsive as the French and only a quarter as responsive as German house-building. Worryingly, it also found that the responsiveness of UK house-building actually *declined* as house prices rose.

23 CLG live table 401

24 English Housing Survey 2008–09

25 Barker recommended a substantial increase in the rate of house-building. She called for an additional 120,000 market homes a year if real price growth of housing was to be brought down to 1.1%. This figure rose to 200,000 per year if housing was just to grow in line with overall inflation. This was to be coupled with an increase in social house-building to help those who could not afford market housing.

Figure 4.2
Variations in responsiveness of new housing supply to prices, selected OECD countries



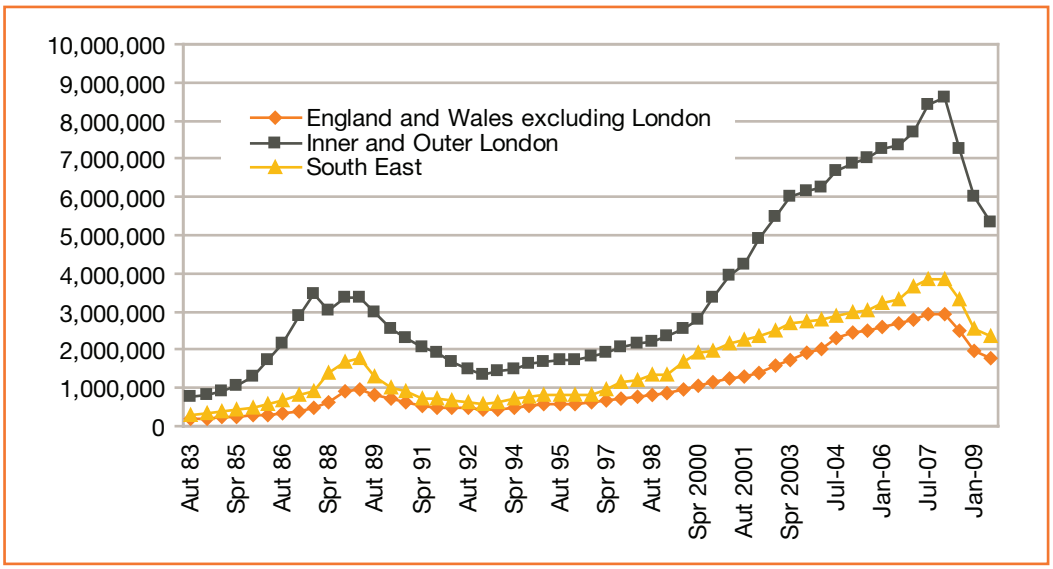
Source: Caldera Sánchez and Johansson 2011
Note: Calculations by OECD.

This poor responsiveness is exacerbated by the volatility of the UK residential land market. As Figure 4.3 shows, UK residential land prices have demonstrated a clear cyclical pattern of boom and bust since the 1980s. Residential land prices have in fact been even more volatile than house prices, rising 173 per cent between spring 2000 and January 2008 and falling 40 per cent between January 2008 and July 2009.[26]

This means that a growing percentage of the cost of residential development has been taken up by land prices. Increased volatility also means that much of the risk of the housing cycle falls upon housing developers. Both trends help explain why UK builders tend to be less responsive to rising prices and are risk averse in their development strategies.

At the same time there has been a growing chasm between the cost of residential land prices and agricultural land prices. A hectare of residential land in England and Wales cost £1,770,000 in July 2009 compared to £12,335 for a hectare of land used for dairy farming – 143 times as much, even after the collapse in residential land values. This indicates the importance of addressing the planning regime in tackling both land volatility and overall supply.[27]

Figure 4.3
Residential land prices (£/hectare)



Source: Valuation Office Agency
Note: The time series changes from Spring/Autumn to January/July from Autumn 2003 to January 2004.

26 VOA Property Market Report July 2009
27 Ibid

The result of this unresponsive supply side is that sudden changes in demand are mainly reflected through price changes rather than extra supply.

The OECD finds strong evidence that, in those countries with supply-constrained markets, adjustment to changes in levels of demand occur overwhelmingly in the price of housing and that these price changes are more volatile. The Barker Report found that from the beginning of the 1990s 'supply has become almost totally unresponsive, so as prices have risen, the supply of houses has not increased at all' (2004: 13). An earlier study, by Meen, finds that the price elasticity of UK supply was very limited and falling, so that houses prices were almost entirely demand-determined (1996).

This means that changes in demand matter. They matter for prices and they matter in terms of their contribution to the UK housing market's volatile nature.

In part demand is about calculations of additional households and a growing population. But for the housing market what matters as much is effective demand – how demand is mediated by the ability to fulfil it: in short, money and mortgages.

5. EFFECTIVE DEMAND

Money and mortgages, boom and bust

Recent economic studies suggest a strong correlation between short- and medium-term changes in housing finance markets and growth and volatility in house prices. To quote a recent IMF report, 'housing booms and busts are intimately linked with the provision of credit' (2011).

The OECD find financial deregulation in mortgage markets has caused a 'notable increase' in effective demand and real house prices – increasing real house prices by as much as 30 per cent in the average OECD country (Andrews 2010). Rapid mortgage credit growth and strong house price increases 'go hand and hand' (IMF 2011).

One recent IMF study of 36 advanced and emerging economies (including the UK) found that a 10 percentage point growth in mortgage credit as a percentage of GDP was associated with a 16 percentage points higher growth of real house prices (IMF 2011).

A second IMF study of 19 advanced countries (also including the UK) found that house price growth was 'positively and strongly associated' with the growth in housing finance credit with, on average, a 10 per cent increase in housing credit leading to a six point increase in nominal house prices (IMF 2011). This relationship between credit and house prices 'remains statistically strong' when real GDP growth, inflation, the rate of population growth, interest rates and unemployment are taken into account.

The individual characteristics and size of countries' housing finance markets also matter.

Both the IMF and the OECD find that higher rates of housing finance leverage and relaxed lending standards contribute to greater levels of housing market volatility – with higher price rises in a boom and larger slumps in a bust (Andrews 2010). Higher LTV ratios 'amplify' house price dynamics caused by underlying economic growth, which 'points to the presence of an accelerator mechanism' amplifying the effect of income shocks on house prices (IMF 2011).

The IMF also finds that countries with mortgages that are more sensitive to interest rate changes have greater levels of house price swings relative to income.

Moreover, the IMF finds a clear relationship between the degree of debt-based leverage in housing markets and the severity of financial crises. Research by the National Institute of Economic and Social Research (NIESR) also identified an acceleration in real house price growth as one of the most important factors contributing to the emergence of a financial crisis (FSA 2010).

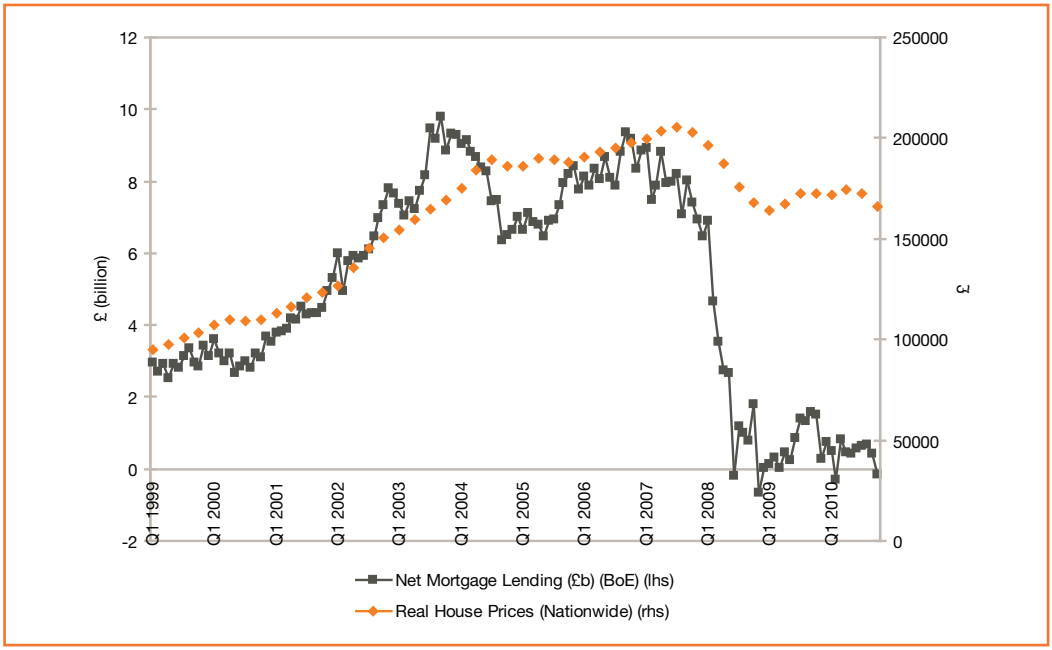
In a recent 40-country study by Crowe et al, 'almost all' countries with a twin boom in housing and credit markets (21 out of 23) ended up suffering from either a financial crisis or a severe drop in GDP growth rate relative to the country's performance in the 2003–07 period. Eleven of these countries suffered from both damage to the financial sector and a sharp drop in economic activity. In contrast, of the seven countries that experienced a real estate boom, but not a credit boom, only two went through systemic crises and, on average, had 'relatively mild' recessions (Crowe et al 2011).

For UK policymakers these findings should be concerning. They suggest that the UK may suffer from the worst of all worlds: a very unresponsive supply side combined with a housing finance market characterised by higher levels of leverage, higher LTV ratios,

a high proportion of mortgages on variable interest rates, and a history of strong and cyclical credit growth.

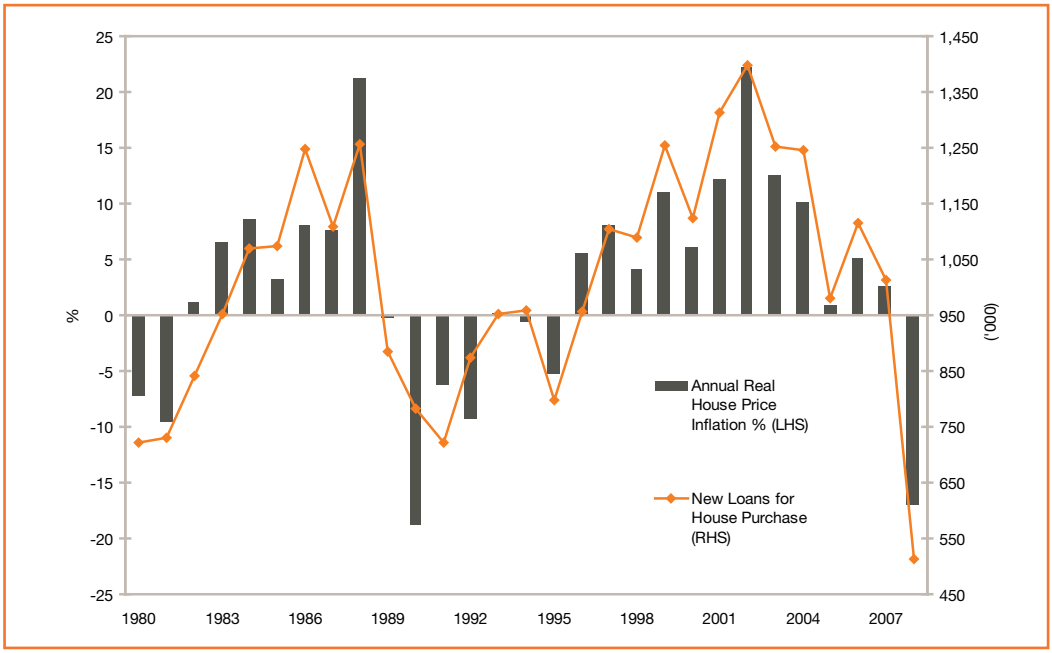
The IMF and OECD findings on the relationship between mortgage credit growth and house price rises suggest that this relationship was a key driver in recent UK price rises.

Figure 5.1
Average house prices and net mortgage lending



Source: Bank of England and Nationwide

Figure 5.2
House price inflation and lending



Source: HPI data from Nationwide; lending data from CML

Figure 5.2 shows price growth around what appears to be a rough equilibrium level in mortgage approvals (at 950,000 per annum). As mortgage approvals rise sharply above this line house prices tend to rise sharply and vice versa.

To understand why the UK underwent such significant rises in household leverage and mortgage debt we need to examine the changes that have occurred within the UK mortgage market since the 1980s. These changes can be seen as a central element in the

financialisation of the UK economy during the period when neo-liberal ideas dominated economic policy.

The Lawson Big Bang

Nigel Lawson's first big bang oversaw the breaking apart of the 'magic circle of housing finance' represented by the monopoly of building society lending in the UK mortgage market.

Deregulation allowed additional mortgage competition from UK banks, broke down the previous building society interest rate 'cartel' to move towards market interest rates, and widened the total amount of money available in the market.

It also broke down previous restrictive approaches to lending. The 1980s saw widespread product innovation with the invention of HEW and the emergence of much higher LTV lending practices – including 100 per cent mortgages. The rise of shorter-term mortgage deals and floating interest rates also made borrowers more sensitive to market interest rate fluctuations.

The result was intensified competitive pressure, the injection of much more liquidity into the housing market and a resulting surge in prices. Many of the mortgage product innovations intensified exposure to the subsequent surge in interest rates and price falls – for example, negative equity was made widespread due to greater levels of mortgage leverage during the boom.[28]

These innovations heralded by the big bang were seen by Lawson himself as a cause of the 1980s price boom, but essentially a one-off event (Lawson 2010).

Big Bang Mark 2

The changes in the UK mortgage market between 1995 and 2007 were of a radicalism comparable to and perhaps greater than the first 'big bang' overseen by Nigel Lawson during the 1980s.

For a market as mature as UK mortgages, the extent of the past decade's changes has been striking and, in some respects, revolutionary. Here we look at four important, recent structural shifts in the UK mortgage market, and hence UK effective demand. These are:

1. Changes to the sources and levels of available mortgage credit
2. Changes to the composition of UK mortgage market actors
3. The rise of new investment actors
4. A new approach to lending policy.

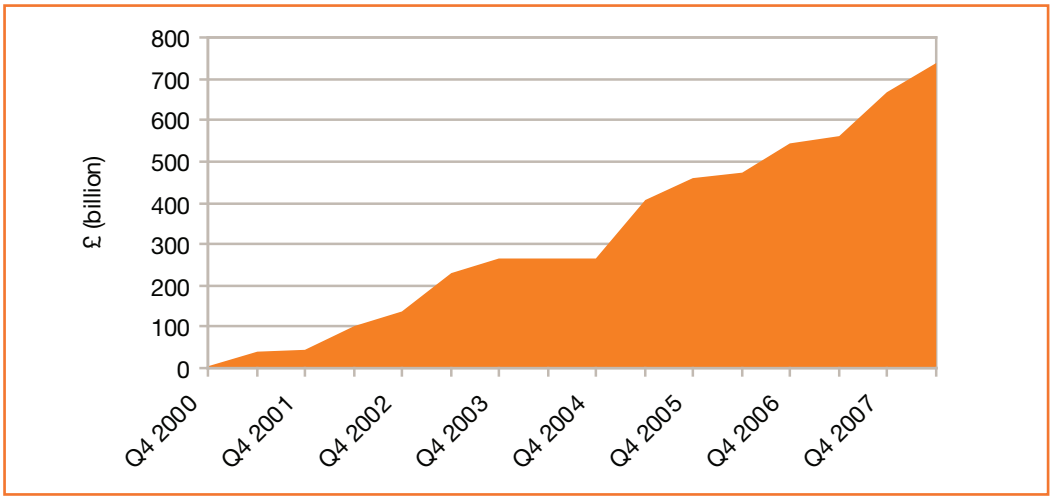
Shift 1: Mortgage credit

During the 1995–2007 period, the financing base of UK mortgages shifted radically from a 'deposit-based' banking and building society model – drawing largely upon local UK deposits – to one where approaching half of all UK mortgage finance came from capital drawn from international wholesale markets.

This occurred through several mechanisms, including covered bonds and the portfolio sales of mortgage books from mortgage intermediaries, but the largest innovation was through 'securitisation' in the form of new residential mortgage-backed securities (RMBS). While operational, the RMBS market enabled UK mortgage lenders to substantially increase the level of money available to lend, through selling loans onto the international market – breaking the previous constraints of the depositor-based approach to lending. Securitisation thus enabled UK lenders to grow their lending book at a much faster rate than their deposit base had previously permitted. A good proximate measure of this changed funding base was the funding gap faced by UK lenders.

28 Interestingly, the damage to the banking sector was limited – with only one building society forced into a merger by the regulator. One explanation for this limited financial fallout was the protection offered to lenders by 'mortgage indemnity guarantees' (MIGs) that shifted losses on to the insurance industry (Stephens 1996).

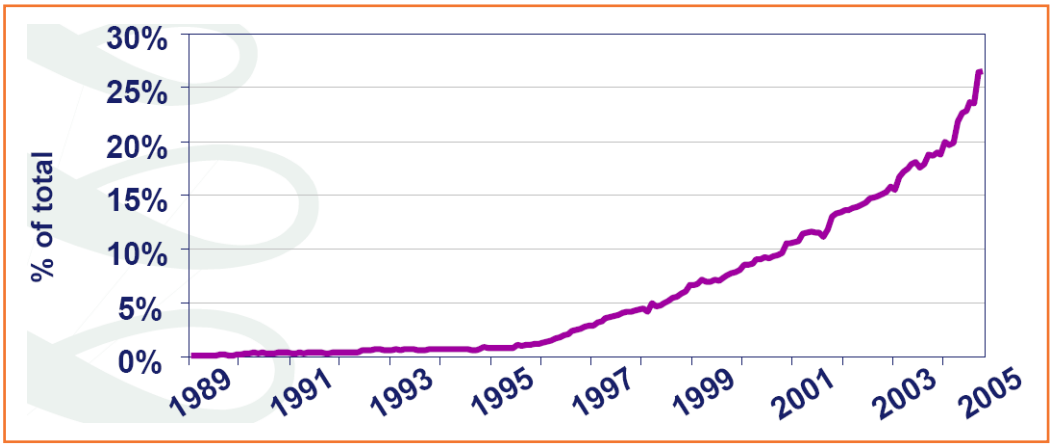
Figure 5.3
Customer funding gap of major UK banks



Source: BoE, Dealogic, ONS, published accounts and BoE calculations

Although the 1980s had seen some early experiments with securitisation (see Stephens et al 2008), the changes seen from 1997 were of a different order of magnitude, with growth at a breathtaking speed.

Figure 5.4
Estimated share of securitised loans in UK mortgage lending



Source: FSA calculations, Bank of England, ONS. Taken from Turner 2009

RMBS rose from less than 5 per cent of UK new mortgage financing in 2004 to over 40 per cent of new mortgage financing in 2007.[29] By the end of 2007, the total amount of outstanding credit securities in the UK had grown to £180 billion, a nine-fold increase compared to 2000 (FSA 2009) and the amount of securitisation-based funding for the total stock of UK mortgages stood at around 20 per cent (BoE 2007).

Shift 2: Mortgage market composition

Structural change in mortgage financing occurred alongside structural change in the composition of the UK mortgage market.

The decline of the building society

Some of this was unfinished business from the 1980s. Intensified competitive pressures led to consolidation within the mortgage sector alongside demutualisation of building societies from 1988. These twin developments saw a decisive shift away from building societies in the market. Until 1995 building societies held two-thirds of mortgage assets; by the end of 1997, it was banks that held three-quarters of mortgage assets (Stephens 2001, Stephens et al 2008).

29 Based on figures from January to August 2007, as September saw the closure of the RMBS market.

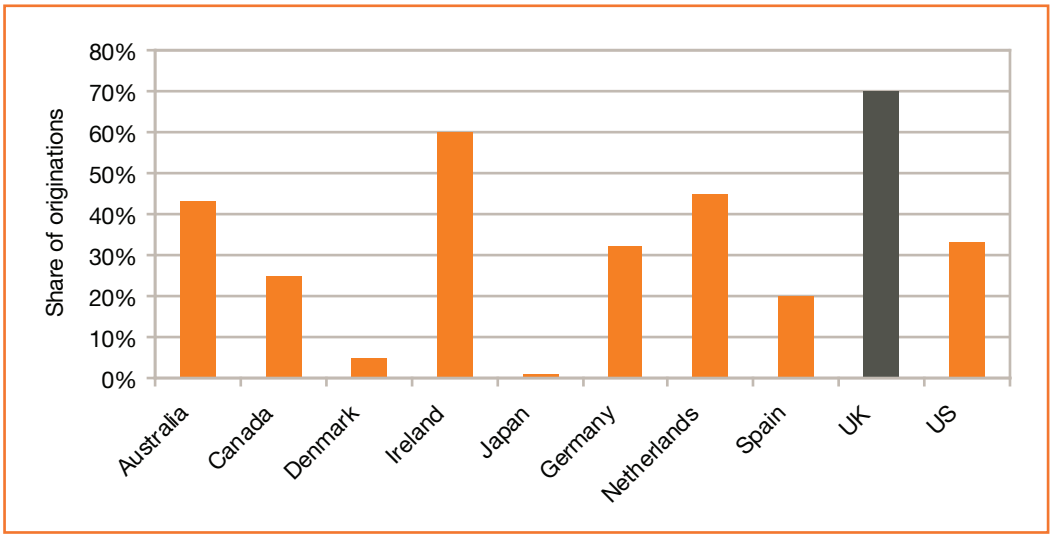
The rise of mortgage intermediaries

Alongside the decline of the building society was the growth of intermediate actors in the buying, selling and origination of mortgage lending. The most basic change in this market was the growth in mortgage brokers who acted independently from traditional financial institutions in the marketing and selling of mortgage products to consumers. In a mortgage market with much greater competition and a growing array of mortgage products these 'brokers' filled a niche, acting as intermediaries between borrowers and banks.

In 2000, intermediaries originated 35 per cent of total lending; in 2007, 61 per cent of mortgage sales were through intermediaries (FSA 2009). The Council of Mortgage Lenders (CML) estimates that in 2008 more than 70 per cent of all sales were originated via brokers and that the majority of existing mortgage lenders got most of their business via this route (Stephens et al 2008).

The UK has a substantially higher proportion of brokers than any other country in the EU (FSA 2009) or North America.

Figure 5.5
Broker share of mortgage originations by country, 2008



Source: From Lea 2010

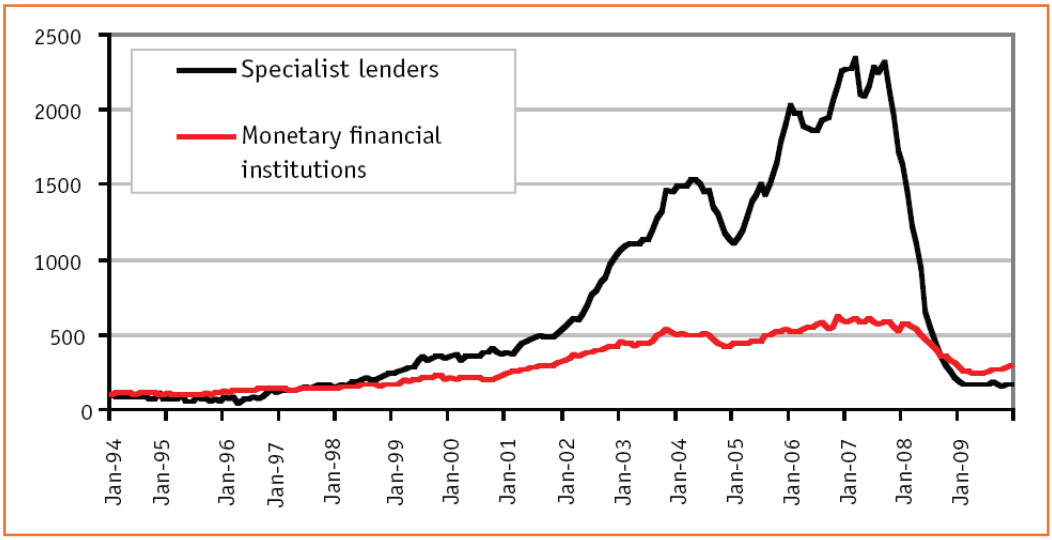
Note: The US context is slightly different. Individual agent 'brokers' are not prevalent in the US market, but a large portion of US mortgage loans were originated by correspondents - smaller lenders that originate loans from their own funds but almost immediately sell them to larger lenders called wholesalers. In the past the US Mortgage Brokers Association has assumed that half the correspondent share comes from brokers, which brings the overall intermediary share to a level above 50%. Since 2007 this share has declined due to tighter regulation of brokers.

The rise of the non-banks

Others actors did away with the need for traditional banks completely and became lenders themselves (known as 'non-banks'[30]), able to originate and sell on new mortgage loans, but with none of the costs of traditional banks and no requirements to hold deposits.

30 Non-bank credit is in essence 'loans by institutions that are not banks on the basis of assets that are not bank reserves' (see Ferguson 2002).

Figure 5.6
Index of gross mortgage lending by lender grouping (Jan 1994 = 100)



Source: Bank of England

Non-banks emerged rapidly to become a substantial player in the UK mortgage market. Their market share for residential lending increased from 4 per cent in 2000 to a high of approximately 15 per cent in 2008 (FSA 2009). Non-banks also accounted for approximately 20 per cent of the BTL market in 2007 (FSA 2010).

Non-banks acted predominately via mortgage brokers and then either sold mortgages directly onto international markets via securitisation or sold portfolios of mortgage books back to mainstream lenders using an 'originate and distribute' model.

Some of the individual examples are striking. For example, GMAC-RFC went from being a new entrant into the UK mortgage market in 2000 to being the 10th largest UK mortgage lender just six years later (source: CML). GMAC-RFC's executive chairman Stephen Knight described their entry into the market via securitisation:

> **'There was no doubt that this was an enormous gamble. We were cranking up the creation side of our business beyond all possible recognition. If we had not been able to similarly expand our trading capacity then we would have exceeded our balance sheets and, almost certainly, have had to exit the assets created at a loss.'** (Knight 2006)

Figure 5.7
UK mortgage balances outstanding by type of lender

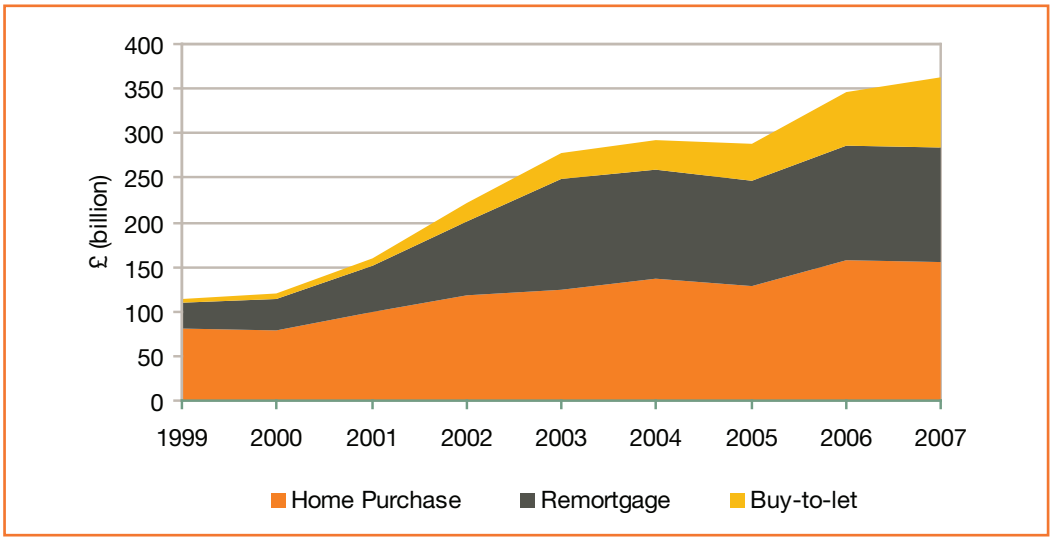
Source: FSA calculations, Bank of England, ONS. Taken from Turner 2009

Shift 3: The rise of the investment actor

A third distinguishing British feature of the recent boom period has been the rapid rise of investment actors in the UK residential housing market – chiefly in the shape of small-scale investors via BTL investment.

Although the private rented sector (PRS) remains a relatively small part of the overall UK housing market (at only 14 per cent of households[31]), it became a much more significant player in the active UK housing market between 2000 and 2007.

Figure 5.8
UK mortgage lending by purpose, 1999–2007



Source: FSA, Bank of England, CML. Based on Turner 2009

The number of outstanding BTL mortgages increased 10-fold from mid-2000 to reach over one million by 2010, with a total value of over £152 billion. It has been *the* outstanding area of growth in total mortgage financing for UK house purchases – expanding at a rate of 20 per cent annually between 2000 and 2007.[32] Between 2001 and 2007, BTL lending rose from 10 to 26 per cent of the UK mortgage market. In contrast, traditional mortgages for home buyers shrank from 49 to 35 per cent.

Official BTL financing is almost certainly an understatement of the total level of BTL ownership in the UK residential market. There was a widespread use of mainstream mortgage finance to fund investment and large numbers of cash purchases were involved. Michael Ball of Reading University estimated that only 54 per cent of BTL landlords used mortgage finance for purchasing their properties (Ball 2006).

Even using the narrow definition of BTL mortgage financing, BTL has grown in the space of just six years from a marginal niche sector to a large part of the UK housing market. BTL mortgages rose from just 3.5 to 28.9 per cent of total house purchase mortgages in the UK between 1999 and 2006. BTL mortgages as a percentage of total housing transactions grew from 3 per cent in 1999 to approaching 20 per cent of transactions in 2006.[33]

To take a more specific example – the rate of growth of BTL mortgages as a proportion of house purchase lending accelerated at a staggering rate throughout 2006. The total of BTL mortgages for the first 6 months of 2006 was 152,000 and in the second half of 2006 it was 177,000. This represented a 20 per cent increase in investor demand in a very short period.

31 See CLG 2009
32 FSA Mortgage Market Review 09/3, October 2009
33 CML tables ML1, ML6 and live table 532, cited in Sprigings 2008

Shift 4: A new approach to lending policy

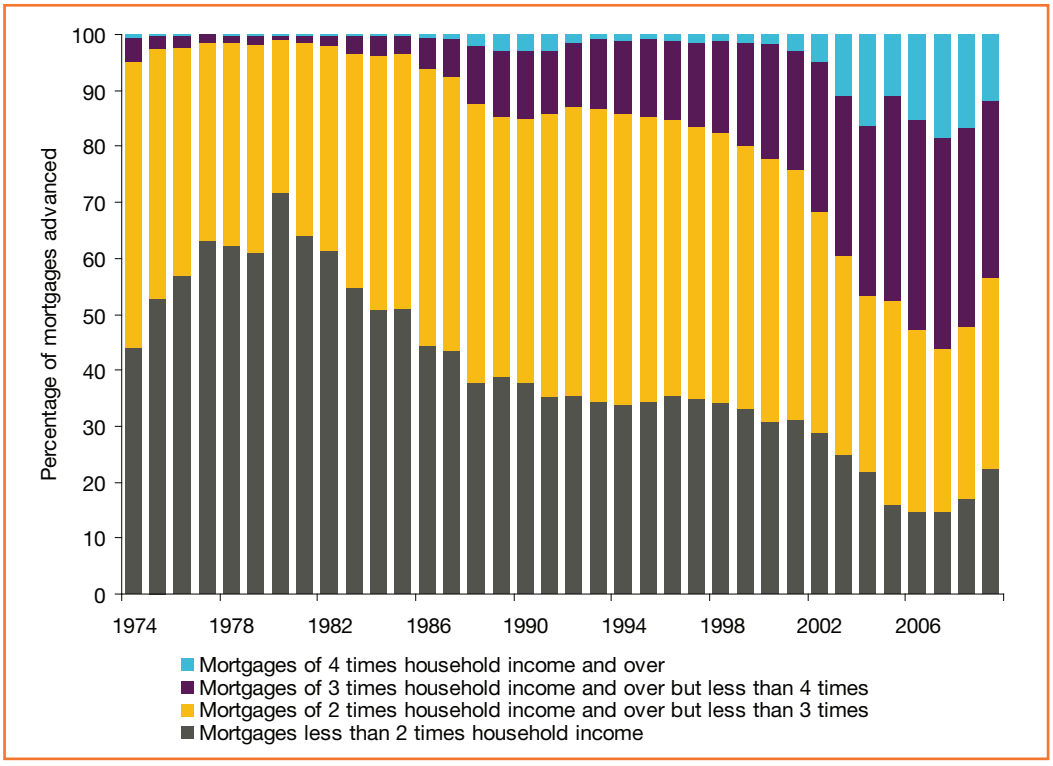
Competition, macroeconomic stability (through lower inflation and interest rates) the rising market and the ease of selling originated mortgages coincided with an industry-wide shift away from previous methods of lending to an 'affordability' model.

The 'affordability' model based loan size on a calculation of the share of the disposable income of the borrower that would go on debt-servicing. This was a qualitative and quantitative break from previous restrictive calculations of lending, which focused on ratios of either LTV or loan-to-income (LTI).

Affordability was a response to the new landscape of lower interest rates and greater availability of loan capital. Although, interestingly, its uptake lagged the calmer macroeconomic environment of the mid-1990s by several years, not becoming widespread industry practice until the 2000s.

The effect of using an affordability rationale for lending was to increase the total volume of lending to individuals substantially – leading to a stretching of previous longstanding LTI ratios.

Figure 5.9
Household income multiples of loans issued for house purchase



Source: CML/Banksearch Regulated Mortgage Survey, Survey of Mortgage Lenders, taken from Pannell 2010

In the UK, mortgages with an LTI of 3.5 or higher comprised 28 per cent of mortgages advanced in 2007. Average LTI ratios for house purchases rose from less than twice the average income in the 1970s and 1980s to more than three times the average income at the market peak. An LTI in excess of 3.5 times income that was mostly unheard of in the 1970s and 1980s became common practice in the run-up to the credit crunch (FSA 2009).

Towards the end of the boom, affordability was further stretched through the widespread uptake of previous niche lending methods – notably the use of interest-only mortgages, stretching the terms of mortgages beyond 25 years, and self-certification (where no proof of income was provided by borrowers).

Implications

What implications do these structural shifts have for the UK housing market and the wider economy?

Rise in effective demand

The large expansion of available mortgage finance via securitisation created a very large increase in credit growth in the UK housing market, and a resulting huge leap in the level of effective demand. The scale of this credit growth within the context of sluggish supply undoubtedly contributed to higher house prices.

Rather than constrain these new levels of demand, competitive pressures within the market and the rise of new mortgage market actors in large part drove it forward.

Securitisation was taken up disproportionately by non-banks and other financial intermediaries, and there is evidence that additional credit availability was driven by the expansion of non-banks, which entered the market to exploit shortages in mortgage supply among traditional lenders (FSA 2010). This is backed up by the international experience, with the IMF finding that credit growth was stronger in economies where securitisation played a bigger role than other forms of financing (IMF 2011).

This large growth in demand was underpinned by a mortgage industry that appeared prepared to 'cut its regulatory coat' to suit its funding cloth via changes in lending practices. The FSA found that a growing share of high LTI lending was a significant factor in the rapid growth of mortgage credit prior to 2007 (FSA 2009). This greater leverage amplified the price impact of income growth and better economic conditions during the last decade.

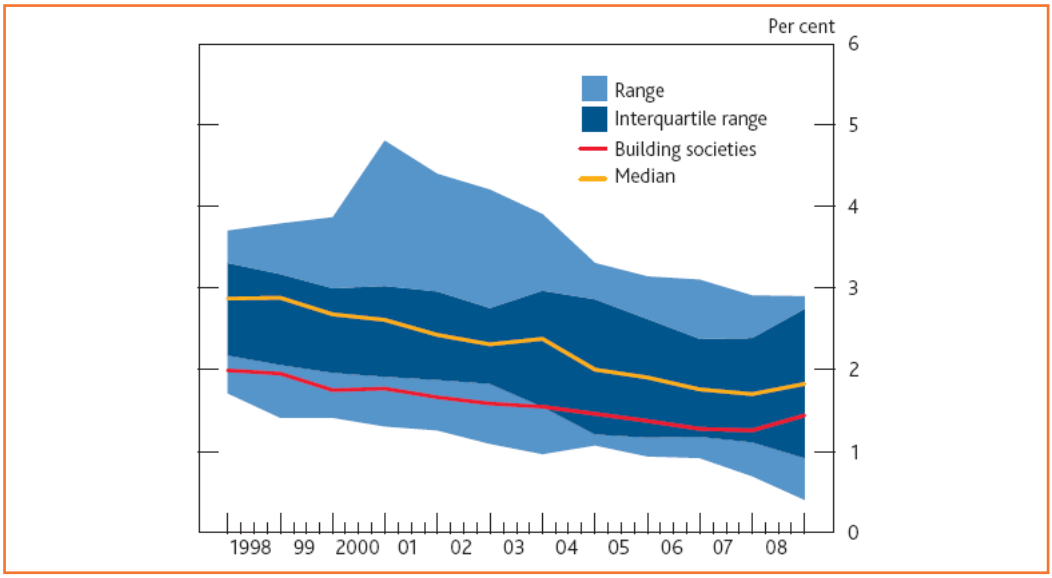
Extra demand thus gave strong additional impetus to a market already noted for its vulnerability to momentum behaviour.

Risk calculation

The combination of new sources of financing and new financial actors together with heightened competitive pressures also added to pressure for increased risk-taking behaviour in the UK housing market.

Cheap and abundant liquidity had already exerted a downward force on long-run global financing costs by the early 2000s. However, the growth of competitive pressure in the UK mortgage market then added to this, particularly in traditionally higher risk parts of the market. There was a continued reduction in mortgage spreads (ie the spread between lending rates and returns) which intensified as prices rose further.

Figure 5.10
Major UK banks' and building societies' net interest margin



Source: Bank of England Financial Stability Report June 2009
Notes:
Prior to mergers and acquisitions, data have not been consolidated on the basis of the current merged entities.
Building societies data excludes Britannia and Nationwide.

Due to the saturation of mainstream mortgage market financing, non-banks specialised in lending into new higher risk ('nonconforming' or 'subprime') parts of the mortgage market previously avoided by traditional lenders. These segments had higher risk premia, but also higher returns.[34]

Their entrance into this riskier market then drew in traditional banks and building societies in a chase for a profitable and growing market niche for market share (FSA 2010).[35] This led to a substantially reduced risk premium for higher-risk lending in the period running up to 2007 – precisely the time when the rapid departure of prices from fundamentals should have made lenders more cautious.

New financing mechanisms helped make this process possible. There is a growing body of work that highlights the role that securitisation played in relaxing risk criteria.[36] The securitisation model transferred credit risk to investors rather than retaining it on lenders' books, leading to strong 'incentive misalignment' (IMF 2011). Underwriting standards were relaxed and lending quality suffered.

In the UK, higher-risk lending was more prevalent in non-deposit-taking institutions.[37] This 'selling of mortgages by non-banks may have been a driver of unaffordable lending' (FSA 2010).

In the UK this may have been exacerbated by the dominance of brokers in the market. Intermediaries had a role in selecting from the booming array of mortgage products, but may also have played an important role in regulatory arbitrage – finding the loosest lending for their clients.[38]

The end result was that by 2007 the risk profile of the UK mortgage base had substantially worsened.

Although smaller than in the United States, UK subprime is larger than in any other advanced economy. According to analysis by Lea, subprime accounted for 5 per cent of mortgages in Canada, less than 2 percent in Australia and negligible proportions elsewhere, notably mainland Europe. The UK had 'a significant share of subprime lending', peaking at 8 per cent of mortgages in 2006 (Lea 2010, IMF 2011).

Riskier, and previously niche, mortgage products designed to stretch affordability also exploded in size. By 2007, half of all mortgages had no income verification and a third were interest only (FSA 2009). The 'vast majority' of interest-only lending had no vehicle to repay the capital of the loan specified. A fifth of all mortgages advanced in 2007 extended into retirement (FSA 2010).

Impact on economic stability

As the Northern Rock experience highlighted, new financing mechanisms added a considerable source of undetected vulnerability to the UK economy.[39] Vulnerability to changes in access to international wholesale markets is not the only reason to see changes to the mortgage market as creating additional forms of risk stability to UK economic stability.

Securitisation has obvious pro-cyclical qualities – booming when risk premia are low and price growth is high, but shrinking as these reverse. New market entrants have

34 It was an explicit business strategy of some of these new market entrants to target these unoccupied segments as a way to increase market share and put pressure on more traditional lenders (Knight 2006).

35 This happened either directly, via subsidiary financial partners or through purchasing mortgage portfolios from non-banks.

36 Mortgage performance as a result has been worse for securitised mortgages in those countries with significant securitisation (Lea 2010).

37 FSA analysis found that non-banks accounted for less than 10% of the originated loans in the lower risk groups, but 50% in the higher risk groups at the peak of the market (FSA 2010). The FSA also found that 30–60% of borrowers on non-banks' mortgage books were in arrears (FSA 2009).

38 Other commentators argue that brokers, driven by commission rather than long term financial relationships, have less incentive to ensure loans are sustainable (Hamnett 2009). The FSA found that, in 2007, 80% of credit impaired sales were through intermediaries (FSA 2009).

39 Northern Rock relied on wholesale markets for 69% of its funding before its collapse (Stephens et al 2008).

exacerbated these pro-cyclical trends. Non-banks, in particular their ease of market entry (and exit) in upswings and downswings, 'exacerbate the pro-cyclicality of the market' (FSA 2009). Worryingly some non–deposit taking mortgage lenders even developed a business strategy based around momentum activity, with evidence of several firms using 'a hit and run tactic', aiming to take abnormal profits and then leaving the market (FSA 2010).

Links to wider global macroeconomic balances and markets

The greater reliance of the UK housing market on funding sources drawing upon international markets also makes it more vulnerable to international trends. This includes not just sudden shocks (as was the case with wholesale markets in 2008) but also long-run imbalances.

The growth of surplus country savings (Chinese, east Asian, net oil exporters) and their decision to run consistently large surpluses since 2002/03 has created a large 'global savings glut' (for more detail, see Bernanke 2005 and Wolf 2010). Many respected economic commentators (see Rajan 2010 and Wolf 2010) see advanced economy housing bubbles in the past decade as, in part, a result of this surplus of savings seeking safe assets to invest in.

These imbalances remain, although there are large questions about their permanence and the path that any rebalancing will take. This leaves deficit countries with open capital regimes, like the UK, vulnerable to outflows of speculative capital. For markets with as far-reaching consequences for household and economic health as housing, this is a problem.

Private rented sector

In providing another form of market tenure, the PRS should be a stabilising influence on price swings within the housing market.[40] However, it is hard not to conclude that BTL has added pro-cyclical volatility in this market cycle.

We have seen how the rise of BTL investment grew in importance for overall mortgage demand, as it added a strong additional driver to demand from owner-occupiers. BTL borrowing behaviour was more likely to amplify price swings than traditional mortgage borrowing. BTL investors relied heavily on gearing – the use of remortgaging from previous properties to invest in new properties. This practice tends to reduce the overall level of portfolio equity and any cushioning to price falls from previous market rises: a particular problem for a market as cyclical as UK housing.[41] BTL investment also offers the ability to achieve substantial debt-based leverage – unlike most other financial investments.[42] This enables BTL investors to multiply the benefits of price rises, but increases the risk of compounding losses from any price falls.

BTL activity also appeared to have a strong speculative component. A recent Treasury paper noted that recent BTL investment has been primarily based on the expectation of capital gain.[43] While for many BTL investors between 2004 and 2007 yields were often negative when financing costs, voids and maintenance costs were taken into account.[44,45] BTL activity has been highly *volatile* compared to the mainstream market.[46]

40 The market rented sector should have better represented supply and demand balances and enabled housing market actors to hedge against rising house prices through exploiting cheaper rents.

41 According to one study, almost half of all BTL landlords funded deposits on the purchase of another property by a remortgage on an existing BTL property (Scanlon and Whitehead 2005).

42 According to the CML, 'the ability to 'gear' their investment by borrowing has been one of the key attractions for buy-to-let landlords, allowing them to magnify the benefit of capital gain' (Thomas 2006).

43 'Much of the return to current investment in the PRS comes from capital appreciation, as opposed to rental yield' (HM Treasury 2010: 25).

44 One study sponsored by CLG found that: 'by 2004, however, net rental yield was clearly moving downwards, making it a less attractive investment proposition in terms of rental income. This indicates that expected capital gains alone have driven the most recent wave of investment in the sector'.

45 The Bank of England also estimated that after deducting costs, the BTL rental yield was about 2.3 percentage points lower than the mortgage rate in 2007 Q3 (Bank of England Financial Stability Report October 2007).

46 The number of outstanding BTL mortgages increased 10-fold from mid-2000 to reach over one million by 2007. The number of BTL mortgages then fell – with 2008 seeing almost half the level of gross lending than the 2007 peak in lending. In turn, 2009 saw BTL mortgages halve again from 222,700 loans advanced in 2008 to 93,500 in 2009 – an additional 58% decline (CML 2009).

BTL disproportionately utilised the new financing opportunities created by securitisation and was funded via new mortgage intermediaries (FSA 2010). BTL investors are more likely to get into repayment difficulties than mainstream borrowers.[47] Research by Standard and Poor's found that BTL investors have higher LTV ratios than owner-occupiers and are at greater risk of negative equity.[48]

The BTL lending sector has also suffered notably more damage than the mainstream market. Eight of the top nine UK BTL lenders in 2007 have either been rescued by the tax-payer after threatened bankruptcy, closed for further business or were badly damaged by the financial crisis and underwent substantial retrenchment. This excludes substantial numbers of non-balance-sheet UK BTL mortgage originators who traded via specialist mortgage brokers and withdrew from the market in 2008.

Table 5.1
Top 10 UK BTL lenders in 2007 and their trading status in 2009

	Lender	Parent company	Status in 2009
1	Mortgage Express	Bradford & Bingley	Closed to new business after parent company nationalised to prevent bankruptcy
2	Birmingham Midshires	HBOS	Trading at reduced volumes; parent company taken over and part nationalised
3	Paragon Group	–	Substantial restructuring, emergency rights issue and ceased trading new mortgages
4	Bristol & West Group	Bank of Ireland	Ceased trading and parent company part nationalised
5	Cheltenham & Gloucester	Lloyds TSB	Trading at reduced volumes; parent company part nationalised
6	Northern Rock	–	Nationalised to prevent bankruptcy
7	Capital Home Loans	Irish Life & Permanent	Ceased trading
8	Mortgage Works	Nationwide	Substantially reduced business
9	Mortgage Business	HBOS	Ceased trading; parent company taken over and part nationalised
10	Woolwich	Barclays	Continued trading

Source: CML / Paragon Mortgages ranked by balances outstanding in 2007 / Author's analysis[49]

There are also reasons to suspect that BTL has had an important upward pressure on market pricing, particularly in lower entry-level properties.[50] Lower-quartile house prices rose faster than the housing market as a whole between 1996 and 2009, indicating increased demand in this segment of the market – despite government efforts to focus subsidised house-building in this quartile. The displacement of first-time buyers from the market also tracks the rise of BTL closely.

BTL also gives an interesting example of how pressure on supply was exacerbated by additional high demand from investment actors.

47 In 2009, according to the CML, repossessions of BTL properties were higher than in the UK residential mortgage market – substantially so, well over twice the rate, when the 'Receiver of Rent' mechanism available to creditors is taken into account (CML 2009).

48 Norman 2011

49 Quoted in Heron 2009

50 BTL financing calculations are based on borrowing using interest only mortgages set against the cost of rental income. This will tend to lead to prices being set by calculations of rental yield versus financing costs – which in an environment of low interest rates and high rental demand has the potential to shift prices upwards significantly.

Table 5.2
Net annual loss of owner occupation to BTL dwellings in UK housing supply 2003–09

	New UK Private Sector Housing Completions	New UK Buy-to-Let Mortgages	Net Annual Loss of UK Housing Supply from Owner Occupation to BTL
2003/04	172,360	187,600	-15,240
2004/05	184,500	217,700	-33,200
2005/06	189,680	223,800	-34,120
2006/07	192,130	330,300	-138,170
2007/08	187,230	346,000	-158,770
2008/09	139,250	222,700	-83,440

Sources: CLG housing statistics and CML data

Additional high levels of BTL demand absorbed existing stock leading to a net loss of 647,300 homes from owner-occupation – even during a period of concerted government effort to expand housing supply.

There are therefore good reasons to think BTL activity substantially added to the momentum within the housing market between 2000 and 2007.

6. THE FUTURE

How do we reduce future volatility in the housing market and ensure housing policy learns lessons from the credit crunch?

A sensible starting point for policymakers would be to look at why UK housing has been so vulnerable to bubbles, and think of effective ways to intervene to lessen these tendencies.

This means looking at supply, monetary policy, fiscal policy, specific interventions to temper housing market volatility and a new look at regulatory policy in the light of changes to the UK mortgage market.

Supply of housing

Increasing supply is a vital part of addressing the UK's housing problems. Undersupply underpins scarcity and higher house prices. The perception of undersupply also encourages market expectations of higher prices, thus encouraging speculation and over-consumption of housing as a good. For long-term reasons of economic health and social equity, the UK needs more homes.

However, as this paper has set out, increasing supply is a necessary but not sufficient element of reducing the destabilising role that housing has played in the UK economy over the past 40 years, and one that can only help over the long term. In the short to medium term there are big questions about the ability of market housing to expand supply sufficiently. The delivery of market house-building since the 1960s has been fairly constant, producing between 150,000 and 200,000 units a year, and the empirical evidence of the behaviour of UK house-builders shows them actually reducing their responsiveness as prices rise. How we fill the annual shortfall in supply left by the withdrawal of local authorities is therefore a pressing question for policymakers, but it is unlikely that market actors will step into the breach without significant changes. One obvious focus should be on reducing the volatility of residential land prices by increasing the amount of agricultural land available for housing development. For UK house-builders, limited production makes sense both as an economic calculation and as a business strategy – the growth in the underlying cost of land makes house-building less profitable, while the control of supply and limited expansion of production helps maintain prices and profit margins.

There are also additional questions about the current capacity for the UK to increase housing supply. The pre-2007 period was noticeable for both the market and the state pursuing pro-cyclical approaches to the housing market. The large UK house-builders now suffer from significant problems of an overvalued asset base, primarily due to the purchase of large amounts of overpriced land in the latter years of the boom. This is hampering their ability to expand supply, despite much cheaper land prices. At the same time, the government's ability to spend money on housing is now constrained both by the fiscal position of the UK and by its own budgetary decisions.

Increased volatility in UK house prices adds an additional disincentive for UK house-builders to invest and places greater risk on their financing and development models. It also encourages all market participants to exacerbate market swings and thus puts extra pressure on UK house prices – which makes the politics of new supply much harder.

Monetary policy

Apart from addressing supply, the central role of the housing market in the UK economic cycle – and in the last two booms and busts in particular – should lead policymakers to look afresh at their macroeconomic policy.

One policy tool the government and the Bank of England are considering is making house prices a more explicit consideration in monetary policy and, in particular, the setting of interest rates. Helping monetary policy 'lean against the wind' of asset price rises seems a sensible lesson to take from the credit crunch. Policymakers have failed to identify the last three bubbles in the housing market or to take measures to arrest surging prices. Rectifying this failure in the future would represent a significant step towards increasing the stability of the economy.

Many commentators now think Bank of England policy was too accommodating during the boom years, and that there were important moments when its signalling gave the impression of providing a 'put' under possible house price falls.[51] Increasing interest rates in a boom will raise the cost of mortgage borrowing, and reduce the incentives and ability for house prices to rise. It may also reduce leverage and risk-taking in the financial sector (De Nicolo et al 2010). It would also be particularly effective in the UK context, where floating mortgage rates make up a significant element of the market. Explicitly using interest rates to target fast rising house prices can also provide an important signal of intent from central banks, which may reduce perceptions of asymmetry in intervention.

However, there are notable downsides. Raising interest rates will impact all sectors of the economy, not just housing. Reducing the risk of a housing bubble would imply reducing the overall growth rate in the economy.[52] This makes it a blunt policy instrument, but also one that is likely to face heavy political opposition in implementation. The level of pain is likely to be particularly acute given the total size of UK household debt – particularly mortgage debt – and the political weight of owner-occupiers.[53]

There are also concerns about whether raising interest rates would provide enough of a monetary headwind to dampen a house price boom. During periods of house price booms the perceived rate of return from housing is likely to be much higher than the counterbalancing raise in the base rate. Given the UK context, investors and buyers are likely to view the former as a more powerful motivating factor than the disincentives provided by slightly higher borrowing costs.

Although it is important that the Bank of England pays more attention to housing in its monetary policy decisions, it is unlikely that this can be the sole source of counterbalance. Politically the pain is too great, and practically its effectiveness faces real constraints.

Fiscal policy

There is a strong case for fundamental reform of taxation of housing, and this could play a role in helping to calm boom and bust in the housing market. However, it is important to differentiate between different forms of taxation and their effectiveness at reducing market volatility. Some property taxes may be justifiable for reasons of redistribution or encouraging the more efficient use of housing resources, but they may be ineffective in reducing the likelihood of boom and bust.

Property currently benefits from substantial tax advantages over other forms of investment. In particular, the lack of capital gains tax (CGT) makes property attractive as both a long-term investment vehicle and a short-term method of seeking capital returns. Making the tax treatment of property closer to other forms of investment would also make property less appealing to investors. And greater transaction taxes should reduce the incentives for speculative short term entry into the housing market.

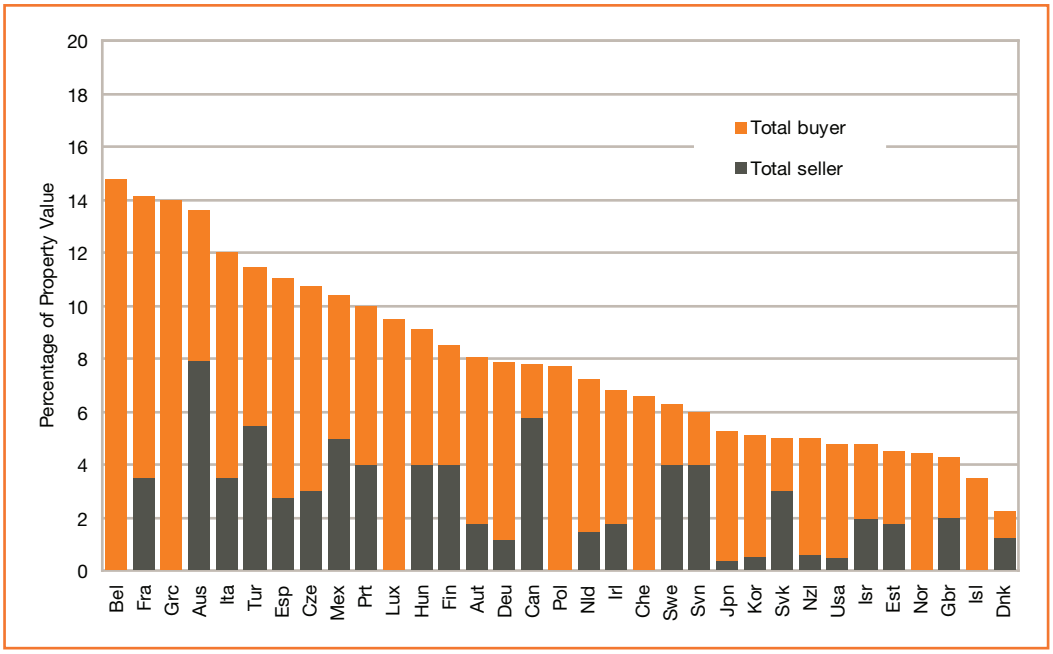
51 The most notable being in August 2005, when base rates were cut just after house prices had started to cool. House prices then underwent a final surge during 2005–2007.

52 In the UK there are possible regional inequalities in such an approach, with higher house prices likely to be a feature of the South East and South West, but interest rates impacting all of the UK economy.

53 Some respected economic analysts issue dire warnings for the UK's 'zombie households' if the Bank of England even raises base rates above historically unprecedented low interest rates of 0.5% (Gabay and Britton 2010).

Contrary to popular perception, the UK has low levels of property transaction taxes compared to other advanced economies. The UK comes third-lowest out of 33 OECD countries in the size of transaction taxes as a percentage of property values, with only Israel and Denmark coming lower. The UK's stamp duty regime is tiered to penalise higher priced property,[54] which could reduce the momentum in booms to the extent that housing bubbles tend to start in the more expensive London and South East markets, and in the top end of these markets. It is also more socially equitable. Higher levels of stamp duty are a possibility – and the recent use of stamp duty exemption for first-time buyers has set a precedent for a more targeted use of the regime in favour of particular forms of demand. On the downside, higher stamp duty levels are likely to reduce flexibility in the housing and labour markets.

Figure 6.1
Average property transaction costs for buyers and sellers across countries, 2009



Source: OECD
Note: Transaction costs refer to average costs. The estimates do not take into account the various tax breaks that exist in countries for certain dwellings implying that the estimated cost may overestimate the actual cost in some countries, in particular in Italy, where such tax breaks are frequent.

Council tax could provide a heavier penalty for over-consuming property and reduce the incentives for using housing as an investment vehicle. At present it is regressive in its impact, meaning those with more expensive properties have less reason to sell than the rest of the market, while council tax is lower for the holders of second or third properties. But council tax is also notoriously unpopular, despite it being much smaller than income tax, and objectively more 'unfair'.

There is therefore scope to raise taxes in the upper bands of the property market or reform council tax. Moves towards a 'mansion tax' or heavier annual taxation of larger value properties make sense, and also fit in with economic theory that favours the taxation of wealth rather than income. This could be developed more radically through the use of a 'land value tax'[55] or a national property value tax (as recommended by Stephens 2011: 76). But these proposals are likely to be more effective in achieving other policy objectives (such as redistribution) than in achieving market stability. It is also hard to think of a politically more unpopular proposal than raising or revaluing council tax bands.

The international literature maintains a particular concern with the use of mortgage interest deductibility as encouraging housing leverage in the economy. The UK abolished mortgage interest relief at source (MIRAS) on residential property in 1989, but mortgage

54 Although the current thresholds regime creates distortions around particular prices and could be improved.
55 There is a growing debate about the use of a land value tax. This is an issue which IPPR will examine in more detail in later reports.

interest deductibility is retained in the BTL sector, albeit with corresponding CGTs. Mortgage interest deductibility gives incentives for investors to maximise the use of debt in their financing strategies, increasing both leverage and gearing.[56] The experience of BTL suggests that this has been borne out in practice, contributing an important source of additional volatility in the residential property market.

CGT is another area where reform aimed at reducing the pro-cyclical nature of the housing market is possible. At present, CGT is lower than income tax and makes no differential between investment behaviour through the holding of short- or long-term investment. This does little to dampen the rationale for short-term speculative investment.

The primary residence is also completely exempt, and CGT on investment properties is more honoured in the breach than in the observance, with substantial evidence of wide-spread avoidance by BTL investors. This latter area would be a relatively easy form of tax avoidance to target, particularly if combined with reform and professionalisation of the PRS.

However, additional property taxes are likely to be politically unpopular – particularly if targeted at traditional owner-occupiers. The economic literature also suggests that taxation issues have not been the main driver of recent house price booms and that stiffer taxation may not have prevented them from developing. Other policy changes should be given greater priority (Keen et al 2010, Crowe et al 2011).

Specific interventions in the housing market

In addition to broad changes to macroeconomic policy, attempts to control housing market volatility would also benefit from more specific forms of intervention that sought to counter housing's particular vulnerability to boom and bust. Here are three areas where such changes could occur.

Improving the strength of 'substitute goods'

Government could make it easier for market participants to choose alternatives to owner-occupation and allow them to 'arbitrage' the housing market.

This points to the obvious need for reform of the PRS. At present, the PRS is a poor choice for those buyers who wish to hedge their participation in the housing market – tenure rights are weak and the sector is poorly prepared for larger families and their needs. The professionalisation of the sector is much needed to make it the natural choice for those who wish to sidestep the risks of the owner-occupied housing market.

This should be coupled with reform of the PRS to make it a less destabilising influence in the UK housing market. As we have seen, BTL investment has too often been speculative, volatile and a cause of pro-cyclical price pressures in the housing market. Worse still, it appears to have cannibalised existing housing stock, led to a weak response in total housing supply, distorted existing supply incentives to encourage the overproduction of small city-centre flats, and driven out large institutional investors by pushing prices up beyond sensible yields.

There is a strong case for government taking a much firmer role in shaping PRS investment flows – discouraging short-term punts on capital gains and ensuring long-term 'build to let' to benefit from the opportunities that a growing UK supply base should provide.

Improve market pricing

Government could also look to ensure that market pricing is less based on 'noise trading' and more likely to dampen rapid upward jumps in valuation.

Estate agents are unlikely to change their spots, but there is room to ensure that surveyors, coupled with lenders, take a more fundamentals-based analysis and rein in rapid price rises in their assessments. There is considerable room to make market pricing more sophisticated than is achieved by simply looking at the previous sale and adding 10 per cent.

56 See IMF 2011

Looking at moral hazard and government asymmetry in the housing market
Another area where the government could constructively look to change market behaviour is in clearer signals to prevent moral hazard – to stop borrowers thinking the housing market is a one-way bet.

The Housing Minister, Grant Shapps, has already tentatively floated the idea of the desirability of 'house price stability' with house prices rising slower than wage inflation. Yet at present the minister still lacks any meaningful levers to create housing stability, and housing remains unarticulated within the objectives of the government's economic strategy. This idea could be strengthened by giving clear signals that government is committed to increasing supply and to keep prices below a certain rate of appreciation through monetary and fiscal intervention.

The government could give clear signals about the extent of intervention within the market to rescue reckless behaviour. There is currently much debate about the need to strengthen the housing safety net for owner-occupiers (Stephens 2011). But strengthening the safety net for homeowners without taking tougher action on demand would risk encouraging even more people to view housing as a one-way bet – exacerbating rather than ameliorating market volatility.

It would be sensible to ensure that any strengthened safety net comes with a clear articulation of the extent of risk-taking the government is prepared to tolerate. Those taking out high LTV mortgages could have more limited access to mortgage protection schemes; those who are found to have lied about their income to obtain a mortgage could be excluded. Lenders could be made to contribute to government mortgage support schemes. Banks could have to take greater precautions to reflect the level of mortgage risk and ensure borrowers over certain thresholds take out mortgage insurance.

Regulatory policy

The obvious candidate for greater efforts at reform is mortgage regulation. The increase in household leverage and mortgage finance was the main driver behind the recent boom, and has caused major economic fallout in the bust. This is a repeat of the story from the Lawson boom 20 years ago. It is here where interventions to reduce volatility are most merited.

For the UK, the question is also one of looking at the lessons of the recent boom period and reflecting on which elements of the UK mortgage market have been particularly responsible for increased leverage and risk. This includes reflecting on a period of substantial and far-reaching structural changes in the UK mortgage market.

The UK's love affair, bordering on an obsession, with houses – backed by the notion that 'an Englishman's home is his castle' – and our willingness to get sucked into housing bubbles have survived previous collapses in the housing market and it would be a foolish economist who ruled out altogether a renewed surge in mortgage lending and house prices at some point in the next decade or two, unless there are changes in the mortgage market and elsewhere within the economy to prevent such surges occurring.

Attitudes of lenders will be important. It would be wrong to blame all the excesses of the 2000s on mortgage lenders – lenders, borrowers and regulators were all implicated – but tighter lending standards would help prevent a repeat of the credit and house price bubbles.

As the explosion and subsequent implosion of subprime lending in the US has shown, there is a balance to be struck between making affordable credit available to as much of the population as possible and not encouraging households, especially those on low incomes, to take on more debt than is sensible.

There is some complementarity therefore to improving other substitutes to owner-occupation outlined in this paper (see above), notably in a reformed PRS. Low-income households should not be given the choice between an insecure rented tenure and a high-risk attempt to scramble onto the housing ladder. Nor should they face watching owner-

occupiers becoming progressively wealthier through no cause but house price inflation – better methods to accumulate savings need to be developed for those outside of home ownership and the unearned gains of property ownership should be undercut by long-term government efforts to reduce the rate of house price appreciation.

Individual banks and mortgage lenders think they are acting rationally when they increase lending during credit booms, but their collective action produces unwelcome results. There is, therefore, a case for intervention at the macro level to control total lending. This could be specific to the mortgage market, for example through controls on LTV ratios, or it could be applied across the whole of the financial system through what the Bank of England calls 'macroprudential policy'.

Given the risks created by excessive mortgage leverage and the very large externalities that the most recent cycle of boom and bust has placed upon the UK economy there is ample justification for tougher government supervision. The substantial majority of UK mortgage lenders have received direct government support during the credit crunch either in the shape of nationalisation or other intervention or via access to the Special Liquidity Scheme.[57] Until now, though, government has not sufficiently articulated a 'quid pro quo' in terms of clear parameters for future mortgage lending.

The current approach being set out by the FSA in their Mortgage Market Review has much to recommend it. Their proposals are welcome: ensuring borrowers prove their income and do not take on more than they can afford to repay is hardly overreaction by the regulator – they should be the bedrock of sensible mortgage lending.

However, from a macroeconomic perspective, it is hard not to view the FSA proposals as inadequate. The FSA has placed its emphasis on consumer protection and patterns of current arrears in its rationale for intervention, rather than looking at questions of macroeconomic stability and the build-up of leverage within the economy. For example, it has rejected caps on LTI lending, citing low levels of default rates, despite analysis showing LTI lending played a major role in driving up the level of leverage within the mortgage market.

The FSA has also placed strong emphasis on a continued approach to 'affordability' lending, with discretion being put primarily in the hands of mortgage lenders. This raises questions as to whether this approach does enough to constrain the overall level of debt taken out by individuals and of mortgage leverage within the economy. In placing lending decisions within relatively loose and subjective 'affordability' criteria it also suggests the danger of an inherently pro-cyclical approach from lenders – loosening criteria in booms and tightening them again in busts.

There is a strong case for taking a broader view than this – given the economic importance of the market involved.

Limiting leverage in the housing market

The UK has experienced some of the highest levels of mortgage leverage in the developed world – at the level of individual borrowing, as a percentage of bank lending to households and as the percentage of housing debt to GDP.

The UK had the highest LTV ratios of 32 out of 33 OECD countries, higher than the United States, Ireland and Spain and only lower than the Netherlands (Andrews et al 2011). The UK comes second only to Switzerland in levels of household borrowing relative to income and the levels of housing debt relative to GDP (McKinsey Global Institute 2010). These high levels of leverage are empirically proven to contribute to greater levels of house price growth and volatility.

These provide strong reasons for restrictions to leverage to be firmly on the table as policy options. This includes caps on LTV or LTI. They should also include targeting particular elements of the mortgage market that exacerbate leverage, such as interest-only mortgages, or placing limits upon gearing within investors' portfolios.

57 When measured as a percentage of UK mortgage market share based upon 2006 values (source: CML).

Mortgage funding and securitisation

Any meaningful attempt to wrestle with the experience of the most recent boom must come to grips with the rise and fall of securitisation.

Securitisation poses real questions for UK economic policymakers, particularly in the context of global imbalances and a 'savings glut'. It has proved a highly unstable source of finance, has weakened the bonds of risk assessment between lender and borrower and has been an important cause of the spike in short-term effective demand which drove UK house prices so high.

While securitisation is still in abeyance, we should be asking questions about whether such a source of finance is sensible for the UK housing market and how it should be controlled in the future. This may not come naturally for a country that has become so used to being open to international capital flows, but it will be a central question for future market stability.

Regulation and non-bank credit

The growth of non-bank credit in the UK mortgage market – through intermediaries and securitisation – poses significant challenges to traditional monetary policy and regulatory oversight.[58] It weakens the link between the central banks' reserve controls and the wider credit system and could blunt monetary authority attempts to control excessive credit growth.

Reliance on mortgage market stability through just targeting bank reserve ratios thus leaves a large part of the new mortgage market unconstrained. It also suggests limitations for an approach to interest rate policy that attempts to 'lean against the wind' in future asset price movements. Non-banking trends threaten to make the modern central bank, in Milton Friedman's words, 'an army with only a signal corps'.[59]

Tighter control of non-banks looks necessary, particularly to control their ability to exacerbate pro-cyclical movements in the housing market. For states with a nationally bounded consumer market like the mortgage market, targeting behaviour at the *retail level* (where non-banks increasingly operate) looks like being an indispensable policy approach in the regulator's toolkit. Unfortunately, recent signals suggest that the government is rowing back from targeting retail behaviour in favour of just targeting reserve requirements within the banking system. Considering the nature of changes in the UK mortgage market, this would be a significant oversight.

58 For Mervyn King's early insight into these wider dilemmas of non-banking see King 1999.
59 Cited in Ferguson 2002.

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