OECD Economics Department Working Papers No. 867

Improving the Functioning of the Housing Market in the United Kingdom

Christophe André

https://dx.doi.org/10.1787/5kgc42th5df2-en

OECD

Unclassified **ECO/WKP(2011)36**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **25-May-2011**

English - Or. English

ECONOMICS DEPARTMENT

ECO/WKP(2011)36
Unclassified

IMPROVING THE FUNCTIONING OF THE HOUSING MARKET IN THE UNITED KINGDOM

ECONOMICS DEPARTMENT WORKING PAPERS No. 867

By Christophe André

All Economics Department Working Papers are available through OECD's internet web site at www.oecd/org/eco/workingpapers

JT03302391

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English - Or. English

ABSTRACT/RÉSUMÉ

Improving the functioning of the housing market in the United Kingdom

A well-functioning housing market is essential for economic prosperity and well-being. A combination of favourable economic and financial conditions and tight housing supply led to sharp increases in real house prices between the mid-1990s and end 2007, which spurred household consumption. While this boosted output growth, economic imbalances and financial weaknesses mounted, leaving the economy vulnerable to the global financial crisis. Current land use planning policy is excessively restrictive, making supply unresponsive to demand and contributing to creating housing shortages and reducing affordability. While additional supply in the private rental market provides an alternative to homeownership for a significant number of households, social housing waiting list numbers have increased rapidly over the past decade. A reform to replace top-down building targets with incentives for local communities to allow development is underway, but the outcomes are somewhat uncertain. Housing taxation is regressive and encourages excessive demand for housing. More effective taxation could help contain demand and stabilise the housing market. Relying more on long-term and diversified funding for mortgages would also improve the stability of the housing market.

JEL classification: R21, R31, R38, R52, E21, G21, H24, L74.

Keywords: Housing markets; house prices; housing policies; land-use planning; household saving; household wealth; mortgage markets; property taxation; construction; United Kingdom.

This Working Paper relates to the 2011 OECD Economic Survey of the United Kingdom (www.oecd.org/eco/surveys/UnitedKingdom).

+++++++

Améliorer le fonctionnement du marché du logement au Royaume Uni

Un marché du logement performant est indispensable à la prospérité économique et au bien-être. Des conditions économiques et financières favorables conjuguées à des tensions sur l'offre de logements ont entraîné une flambée des prix réels de l'immobilier résidentiel entre le milieu des années 90 et la fin de 2007, ce qui a dopé la consommation des ménages. Cela a stimulé la croissance de la production, mais les déséquilibres économiques et financiers ont pris de l'ampleur, rendant l'économie vulnérable à la crise financière mondiale. La politique actuelle d'aménagement du territoire est trop restrictive, ce qui a pour effet de rendre l'offre peu réactive à la demande, contribuant à créer des pénuries de logements et à réduire l'accessibilité financière à la propriété. Tandis qu'une offre supplémentaire sur le marché locatif privé constitue une alternative à l'accession pour un nombre substantiel de ménages, les listes d'attente dans le secteur du logement social se sont rapidement allongées durant la décennie écoulée. Une réforme est engagée pour remplacer les objectifs de construction déterminés de manière centralisée par des incitations octroyées aux collectivités locales pour qu'elles autorisent des projets immobiliers, mais les résultats sont assez incertains. La fiscalité du logement a un caractère régressif et encourage une demande de logements excessive. Une imposition plus efficace aiderait à contenir la demande et à stabiliser le marché du logement. Un recours accru à un financement à long-terme et diversifié des prêts hypothécaires renforcerait également la stabilité du marché du logement.

Classification JEL : R21, R31, R38, R52, E21, G21, H24, L74.

Mots-clés : Marchés immobiliers ; prix des logements ; politiques du logement ; aménagement du territoire ; épargne des ménages ; patrimoine des ménages ; marchés hypothécaires ; fiscalité immobilière ; construction ; Royaume-Uni.

Ce Document de travail se rapporte à l'Etude économique de l'OCDE du Royaume-Uni 2011 (www.oecd.org/eco/etudes/Royaume-Uni).

Copyright © OECD, 2011. All rights reserved. Application for permission to reproduce or translate all, or part of, this material should be made to: Head of Publications Service, OECD, 2 rue André-Pascal, 75775 PARIS CEDEX 16, France.

TABLE OF CONTENTS

Improving the functioning of the housing market in the United Kingdom 5

Recent developments in the housing market.....5
House prices remain high despite recent drops 5
Worsening affordability has boosted demand for rentals and social housing 6
House price developments have contributed to volatility in the wider economy.....9
Some households and financial institutions are vulnerable.....13
Improving the efficiency and resilience of the housing market 15
Supply should be made more responsive to demand.....18
Reforming planning is key 19
Strong competition in the construction sector can contribute to lower costs and increased supply.....23
The rental market is important and may benefit from greater professionalisation.....24
Social and subsidised housing.....25
Property taxation could have a stabilising effect.....28
The stability of the mortgage market needs to be strengthened 30
Loosening of lending standards contributed to vulnerability 30
The funding model also made the sector vulnerable to changes in market sentiment 32

Bibliography.....34

Figures

1. Housing prices 6
2. Ratio of median house price to median earnings 7
3. Financial burden on households.....8
4. First-time buyers share of total loans.....8
5. Real residential investment 10
6. Household wealth and savings.....11
7. Housing equity withdrawal 13
8. Gross household debt.....13
9. Real houses prices.....16
10. Housing supply is unresponsive to demand pressures 19
11. Permanent dwellings completed, by tenure 26

Boxes

Box 1. How does private consumption relate to housing wealth? 12
Box 2. How do house prices relate to fundamentals? 15
Box 3. The top-down planning system did not allow enough homes to be built 20
Box 4. Encouraging local communities to promote development 21
Box 5. Building the right type of housing in the right places 23

IMPROVING THE FUNCTIONING OF THE HOUSING MARKET IN THE UNITED KINGDOM

By Christophe André[1]

A combination of favourable economic and financial conditions and a tight housing supply led to sharp increases in real house prices in the United Kingdom between the mid-1990s and end 2007. Demand for housing was pushed up by strong income growth and a rise in mortgage lending as real interest rates declined and lending standards were loosened. Investment in housing is also encouraged by the tax system, which favours homeownership over other tenures. The excessively restrictive land use planning policy left supply unresponsive to demand, contributing to housing shortages and reduced affordability. Deteriorating affordability had halted the increase in homeownership by 2003. While additional supply in the private rental market provided an alternative to homeownership for a significant number of households, social housing waiting list numbers have increased rapidly. Rising house prices were partly a symptom of growing economic imbalances and made the economy vulnerable to the global financial crisis. As the crisis unfolded, weaknesses in financial institutions were revealed, residential investment collapsed and lower house prices weighed on private consumption. A well-functioning housing market is essential for economic prosperity and well-being. Developments in the housing market can affect macro-economic volatility, financial stability, competitiveness and growth, distribution of wealth, social conditions and the quality of the environment. To respond to housing needs and enhance the stability of the housing market, both supply and demand side policies should be considered. This paper provides an overview of recent developments in the UK housing market and discusses policy options to improve the effectiveness and stability of the housing system, including planning reform, taxation, mortgage market regulation and social and subsidised housing policies.

Recent developments in the housing market

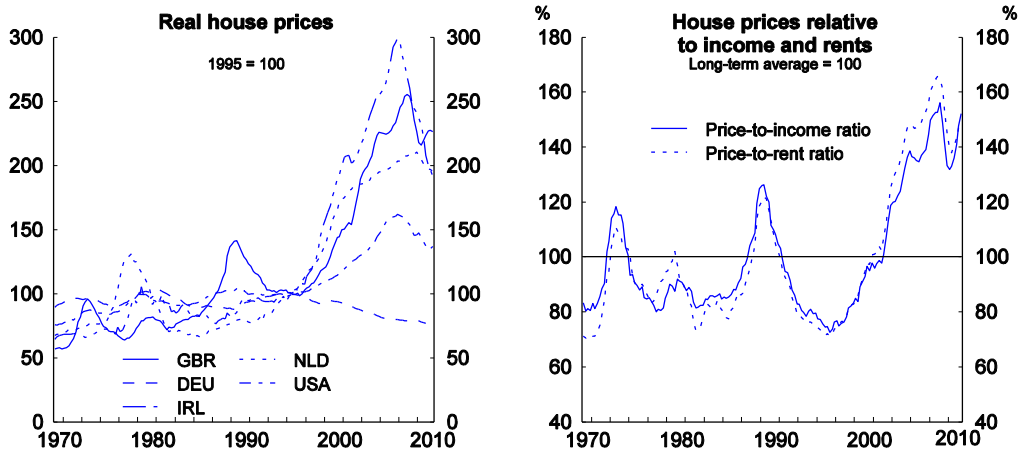
House prices remain high despite recent drops

Between the mid-1990s and the end of 2007, real house prices in the United Kingdom were multiplied by more than two and a half, which was among the sharpest rises in the OECD (Figure 1, first panel). The price-to-income and price-to-rent ratios are currently around 40% above their long-term averages (Figure 1, second panel), suggesting overvaluation. These ratios have generally tended to revert to their long-term average, even though they can be shifted by changes in economic or demographic variables and have often deviated from historical norms for protracted periods.

---

1. This paper is largely based on work originally prepared for the Economics Survey of the United Kingdom published in March 2011 under the authority of the Economics and Development Review Committee (EDRC). It includes additional analysis of the mortgage market. The author would like to thank Andrew Amerasekera, Kate Barker, Henrik Braconier, Andrew Dean, Robert Ford, Andrew Gurney, Geoffrey Meen, Lee O'Rourke, Orna Rosenfeld, Piritta Sorsa, Mark Stephens, Christine Whitehead and other colleagues for useful comments and suggestions on earlier drafts, interesting discussions and/or valuable data and information. Jérôme Brézillon provided excellent statistical assistance and Olivier Besson and Deirdre Claassen excellent editorial assistance. The author retains full responsibility for any errors or omissions.

Figure 1. Housing prices



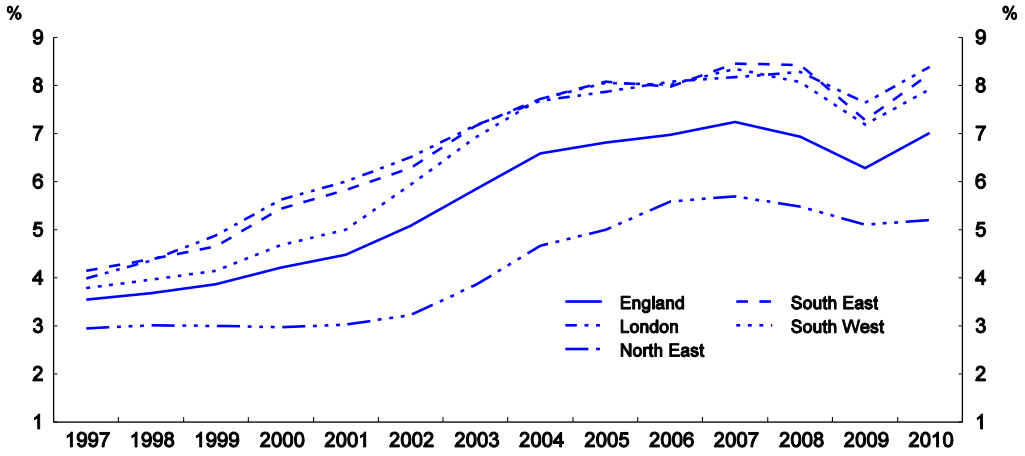
Source: National sources and OECD calculations.

The 2008 financial crisis accelerated adjustments in an already weakening housing market. Prices and demand for housing fell substantially when credit dried up in the wake of the collapse of the US subprime mortgage market. However, compared to the preceding increases, price falls have generally been fairly modest – except in Northern Ireland, where the market is affected by developments in the neighbouring Republic of Ireland. In mid-2009, UK real house prices had fallen by about 15% from a peak in the last quarter of 2007. Since then, they have moved up again and are now on average only about 11% below their peak level, albeit showing renewed signs of weakness in a market where the number of transactions remains low.

Worsening affordability has boosted demand for rentals and social housing

The increase in the homeownership rate stalled after 2003, mainly as a consequence of reduced affordability. Around two-thirds of UK households are owner-occupiers, which has long been encouraged by housing and tax policies. House prices are currently high relative to household income, especially in London and the South of England. The ratio of median house prices to median annual employee earnings in England rose from 3.5 in 1997 to 7.2 at the peak of the market in 2007 and, after falling back to 6.3 in 2009, rebounded to 7.0 in 2010. This is still well above the long-term average of around four. In London and the South, median prices represent more than eight times income in 2010 (Figure 2). The decline in social housing provision since the 1980s contributed to an increase in homeownership until affordability deteriorated in the 2000s, pushing up demand for private rentals.

Figure 2. Ratio of median house price to median earnings



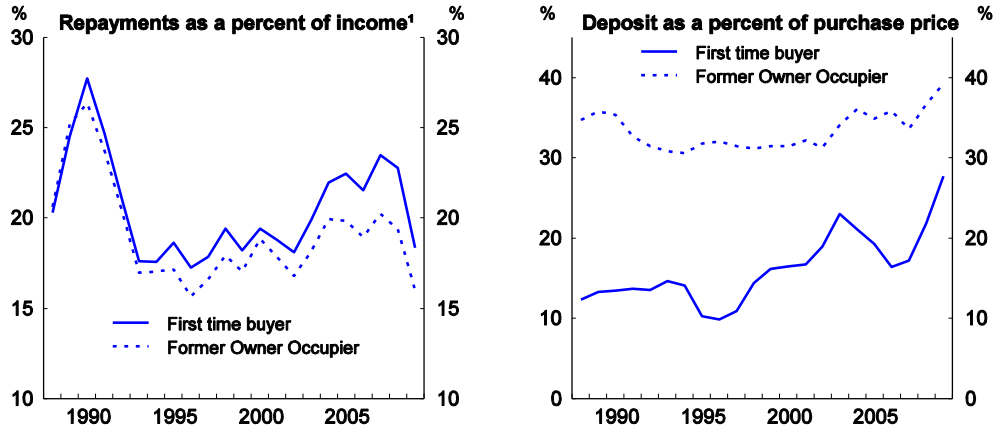
Source: DCLG Table 577.

Housing affordability has been affected by financial and social factors. The impact of high house prices on affordability has been partially offset by the low level of interest rates. Total mortgage repayments as a percentage of income rose during the boom, but have fallen back since to a level that is close to that seen in the mid-1990s (Figure 3, first panel). The easing of lending standards during the boom, including a rising share of subprime loans, also improved access to housing finance during that period. Nevertheless, the deposit put down by buyers has increased substantially, even before the onset of the financial crisis. While existing homeowners could use their accumulated housing wealth to move up the housing ladder, providing the required deposit has proved increasingly difficult for first-time buyers, with their deposit increasing from about 10% of the purchase price in 1995 to close to 20% before the crisis and more than 25% in 2009 (Figure 3, second panel).[2] As a result, the share of first-time buyers as a percentage of total loans for house purchase has declined since the mid-1990s (Figure 4). Even though factors such as later entry into the labour market because of longer education and later family formation have contributed to this trend, there is no doubt that reduced affordability has played a significant role. Hence, young households who do not benefit from intergenerational transfers are increasingly excluded from homeownership.[3] Tighter lending conditions in the wake of the financial crisis imply that recent declines in house prices are unlikely to translate into easier access to homeownership.

2. Before the crisis, the increase in the deposit was mainly driven by market forces. Thereafter, stricter limits on loan-to-value ratios imposed by banks are likely to have played a significant role.

3. Tatch (2006) estimates that while under 10% of first-time buyers aged under 30 needed funds over and above their plausible savings to fund a deposit in 1995, this proportion had risen to nearly 50% by 2005.

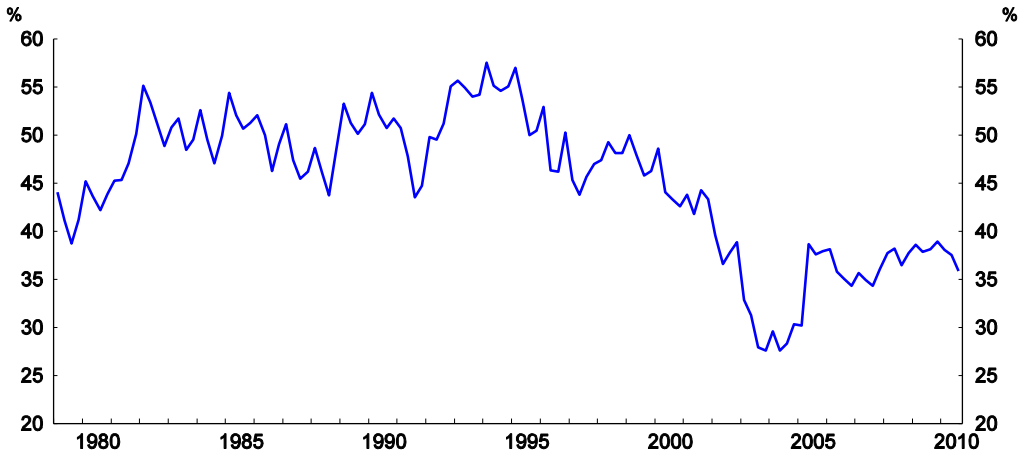
Figure 3. Financial burden on households



1. Repayments data up to and including 2000 takes into account mortgage tax relief.

Source: DCLG Table 539.

Figure 4. First-time buyers share of total loans



Source: Council of Mortgage Lenders.

The private rental market has expanded significantly since the turn of the century to cover nearly 14% of households. Rent increases have been roughly proportional to that in household income, leaving the rent-to-earnings ratio fairly stable since the early 2000s, at around 20% for the England average and 25% for London. These developments can partly be attributed to the growth of the buy-to-let market, which helped the private renting sector to expand from just under 2.5 million units in 2000 to almost 3 million in 2006 (Wilcox, 2008). As a consequence, in many places renting has become cheaper than buying. The National Housing and Planning Advice Unit (NHPAU) estimates that "on average across England the cost of renting a 2 bedroom house was 72% of the cost of buying in 2008 although there was significant regional variation".[4] Nevertheless, nearly a quarter of private renters are spending more than half of their income on rent (Reynolds *et al.*, 2008). Furthermore, the quality of rented accommodation is often a concern, with 47% of private rented properties falling below the decent homes standard, mainly at the lower end of the market (Wilcox and Bramley, 2010).

4. Comparison between private rents and mortgage costs based on a 100% standard 25 year annuity at the 5.5% prevailing average new mortgage interest rates in 2008 (Wilcox and Bramley, 2010).

Deteriorating affordability has also led to an increase in demand for social housing. In 2009, there were about 1.8 million households on social housing waiting lists in England, a 70% increase over ten years. It is uncertain whether this number is an accurate reflection of housing needs, as there are no qualifying criteria to register. People may register on more than one list, registers might be out of date and the large discounts relative to market rents – on average about 50% – might raise demand. In 2008, only 43% of households on the social housing waiting list were from a "reasonable preference category."[5] In any case, low affordability is putting pressure on social housing. Since 1997, the policy focus has been on improving the quality of social housing and the number of households living in non-decent social homes has been reduced by more than a million, about half of total (DCLG, 2007). Meanwhile, new additions to the social housing stock have failed to keep pace with needs. The Housing Green Paper (DCLG, 2007) estimated the need for new social rented homes at 50 000 per year, nearly 50% above the 1997-2009 average addition. The new government has committed to delivering up to 150 000 new affordable homes by 2014-15 (HM Treasury, 2010).[6] Despite housing shortages and low affordability, policies have been successful in containing homelessness, in contrast to much of the OECD (Fitzpatrick and Stephens, 2007).

The deterioration of affordability has adverse economic and social consequences

Household formation might decrease, as young people now find it increasingly difficult to buy or rent suitable dwellings. In recent years, household formation has been lower than projected on the basis of demographic trends (Meen and Andrew, 2008; Holmans, 2008). Though other socio-economic factors have played a role, low affordability is likely to have been an important factor.[7] Higher affordability can have positive growth and competitiveness effects. Household mobility would be increased, improving the allocation of labour and employment creation. In regions where house prices are high, especially London and South England, hiring and retaining workers can be difficult. This is particularly true for the public sector, where the inability to attract or retain experienced key workers (*e.g.* teachers, nurses) may impair the quality of public services. High housing costs raise the cost of living and labour costs, resulting in a loss of competitiveness for the British economy (Barker, 2004; Solutions, 2009). Improving affordability might also reduce social inequalities. Increases in house prices generate a transfer of wealth from renters to homeowners and from younger to older households.

House price developments have contributed to volatility in the wider economy

Housing-related activity is a large and volatile part of the economy. The construction sector is an important and labour-intensive sector of the economy, and real estate services and housing finance contribute further to economic activity and employment. Housing investment accounts for a relatively modest but highly volatile share of GDP. During the expansion, as supply constraints were tight in the United Kingdom, residential investment contributed modestly to GDP growth, adding on average 0.15% per year between 1995 and 2006. This is considerably less than in countries experiencing comparable house price increases, such as Spain or Ireland (Figure 5). During the downturn, the collapse of residential investment contributed significantly to the contraction in GDP. The drop in residential investment was

5. Local Authorities are required by statute to give reasonable preference to people who: are homeless; are living in overcrowded/unsanitary conditions; need to move on medical/welfare grounds; need to move to avoid hardship.

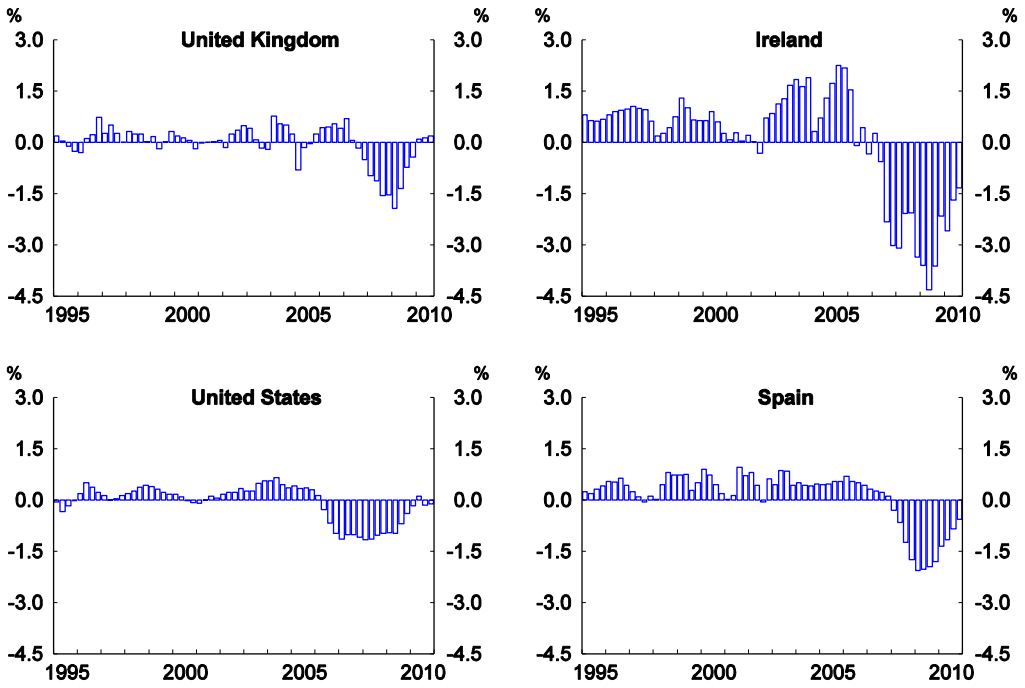
6. Affordable housing includes social rented and intermediate housing. Intermediate affordable housing is housing at prices or rents above those of social rent but below market price or rents, including shared equity and low cost homes for sales.

7. NHPAU analysis suggests that as many as 1.2 million households cannot be formed in England alone because high housing costs force young adults to live with their parents or share dwellings (NHPAU, 2009).

more spectacular – 50% from peak to trough – and more prolonged than that of prices, with the current level still about 40% below the peak. As a result of economic uncertainties and financing constraints, the number of permanent dwellings completed in England fell by nearly a third between 2007 and 2009 to less than 120 000. This is half the target set in the Housing Green Paper issued by the Department for Communities and Local Government in 2007 (DCLG, 2007). Construction also contributes heavily to swings in employment. Between the 1997 and 2008, more than half a million construction jobs were created, nearly one in five jobs created over that period. Between the third quarter of 2008 and the first quarter of 2010, about 300 000 construction jobs were lost or about half of job losses during the downturn.[8]

Figure 5. Real residential investment

Contribution to year-on-year GDP growth



Source: OECD, *OECD Economic Outlook* database.

As housing constitutes a large share of household wealth, fluctuations in house prices can have a significant impact on private consumption through a wealth and a liquidity effect (André and Girouard, 2010). An increase in wealth is generally estimated to cause a rise in household consumption. However, in the case of housing wealth, households consume housing services generated by their assets and capital gains to homeowners are partly or fully offset by the higher discounted value of future imputed rents. Hence in a world with infinitely long-lived and identical agents housing wealth has no effect on consumption. In reality, house price increases redistribute wealth across households, especially from would-be homebuyers to current homeowners. These wealth transfers can have macroeconomic effects if the propensities to spend of these two groups differ significantly. The second channel is a liquidity channel, operating through the use of housing wealth as collateral for household borrowing. According to the life-cycle theory, consumers tend to smooth their level of consumption over their lifetime, borrowing when their current income is lower than their permanent income and repaying debts when it is higher.

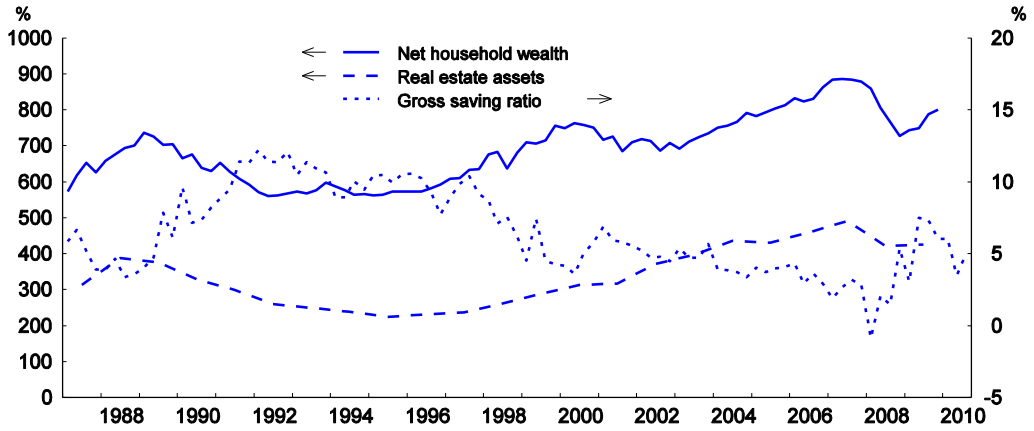
8. The numbers refer to the total construction sector, which also includes non-housing related activities. However, non-dwelling construction is strongly correlated with the housing cycle.

However, in an uncertain world with imperfect financial markets, some households have only limited access to borrowing and, even when available, uncollateralised consumer credit tends to be significantly more expensive than mortgage borrowing.[9] Since housing assets constitute the most important form of collateral available to households, an increase in their value allows more borrowing to finance current consumption.

Net housing wealth appears to be a significant driver of household consumption (Box 1). A one-pound rise in net housing wealth is associated with an increase in British households spending of 7 pence, compared to 4 pence from net financial wealth. Catte *et al.* (2004) provide evidence that the link between housing wealth and consumption is stronger in the United Kingdom and other English-speaking countries with more developed mortgage markets than in most other OECD countries. From the mid-1990s to 2007, increases in household wealth coincided with a steadily declining trend in the household saving rate (Figure 6). Housing equity withdrawal contributed to translating increased housing wealth into higher levels of private consumption.[10] It represented up to 8.5% of after-tax household income in late 2003 (Figure 7). Higher housing wealth provided collateral to secure additional borrowing, which helped finance increases in consumption, though it also substituted for more expensive categories of debt (*e.g.* personal loans or credit card debt). Housing wealth was also used as collateral to borrow to buy more housing or financial assets, which amplified the cyclical upswing through a mechanism known as the financial accelerator (Bernanke *et al.*, 1998; Aoki *et al.*, 2002). Rising asset prices generated wealth, which was used as collateral to increase borrowing, leading to an expansion in demand for assets and thus higher asset prices, and so on, until the credit crunch triggered a sharp reversal.

Figure 6. Household wealth and savings

Per cent of household disposable income



Source: OECD, *OECD Economic Outlook* database and Office for National Statistics.

9. Hellebrandt *et al.* (2009) show that, in June 2008, a mortgage with a below 90% LTV ratio carried an interest rate of below 6%, while the rate on a personal loan was over 9%. Other categories of debt (*e.g*. credit card debt) are generally even more expensive.

10. Housing equity withdrawal is new borrowing secured on dwellings that is not invested in the housing market (*e.g.* not used for house purchase or home improvements), so it represents additional funds available for reinvestment or to finance consumption spending (Bank of England).

Box 1. How does private consumption relate to housing wealth?

From the mid-1990s to the recent recession, private consumption has outpaced household income. This Box evaluates the role of increases in housing and financial wealth in this evolution. A consumption function based on Catte *et al.* (2004) is estimated over the period 1987Q4-2009Q4. The equation relates real private consumption to real labour income, real housing and financial wealth, the unemployment rate and the real short-term interest rate. An error-correction equation is estimated in two steps using the Stock-Watson procedure (Stock and Watson, 1993). The results are as follows:

$$\Delta \ln C = 0.005 + 0.094\, \Delta \ln NHW - 0.010\, \Delta UNR - 0.182\, (\ln C_{-1} - 5.740 - 0.496 \ln Y_{-1} - 0.134 \ln NHW_{-1}$$

(8.5) (4.3) (-4.3) (-3.7) (-6.1) (-8.8) (-12.1)

$$- 0.157 \ln NFW_{-1} + 0.009\, UNR_{-1} + 0.006\, IRS_{-1})$$

(-8.0) (3.9) (2.7)

R^2 =0.49; s =0.005; DW = 2.09

(t values are reported in parentheses)

Where:

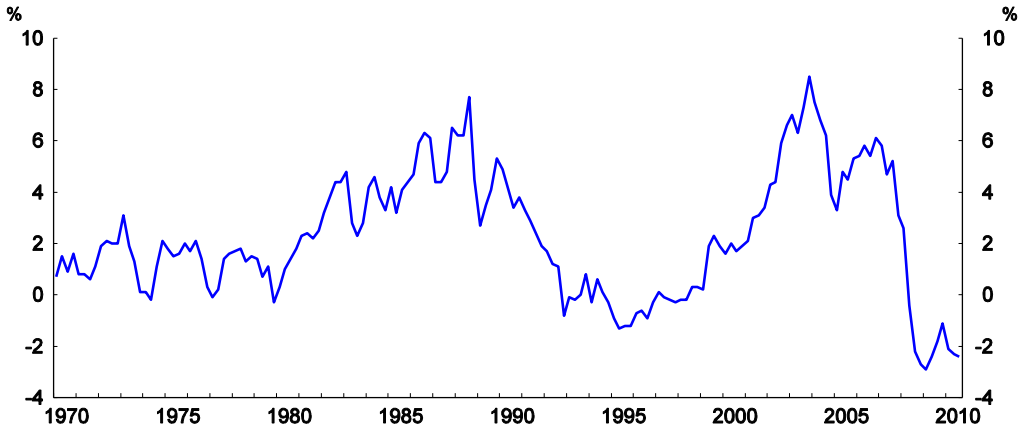
C = Real private consumption
Y = Household real labour income
NHW = Net real housing wealth (housing wealth net of mortgages)
NFW = Net real financial wealth (financial assets net of non-mortgage financial liabilities)
UNR = Unemployment rate
IRS = Real short-term interest rate

The estimation results are in line with those reported in Catte *et al.* (2004). The specification of the equation with constant elasticities of consumption to wealth implies that marginal propensities to consume (MPC) vary over time. MPCs can be evaluated by multiplying coefficients (elasticities) by the average ratio of real consumption to real housing or financial wealth over the sample period.[1] The long-term MPC of housing and financial wealth estimates are respectively 0.07 and 0.04. The short-term MPC of housing wealth is 0.05. The short-term MPC of financial wealth has not been found to be statistically significant.

1. Replacing the ratio of consumption to housing wealth over the sample period by the same ratio at the end of the period would yield slightly lower MPCs of housing wealth, of 0.05 in the long term and 0.03 in the short term.

Figure 7. Housing equity withdrawal

Per cent of after-tax income



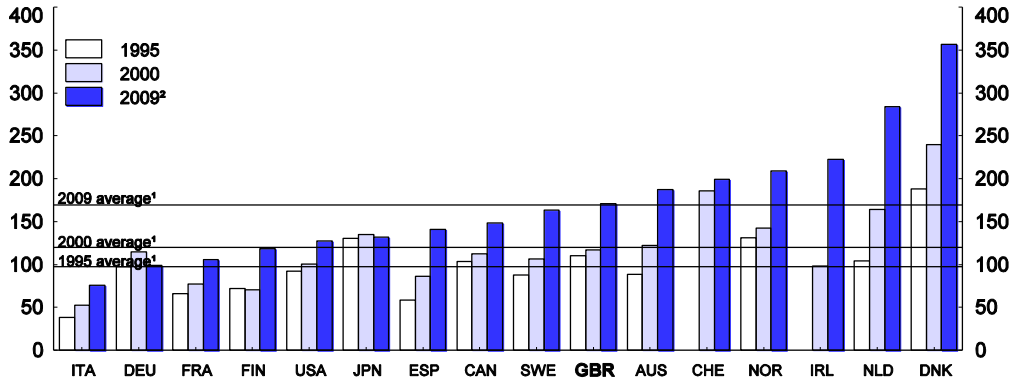
Source: Bank of England.

Some households and financial institutions are vulnerable

Even though recent house price adjustments have eroded housing equity, homeowners on average still have a substantial equity buffer. Household debt in the United Kingdom increased from 110 % of disposable income in 1995 to 170 % in 2009, close to the OECD average (Figure 8). Mortgage liabilities are by far the largest components of household liabilities, at 133 % of disposable income in 2009. At the same time, residential assets amounted to 426 % of disposable income, leaving the household sector with a large aggregate net equity position. According to the Council of Mortgage Lenders estimates for 2007, 42% of housing wealth was owned outright with the rest by mortgage borrowers. But the latter held on average a 48% free equity share in their gross housing wealth (CML, 2008).

Figure 8. Gross Household debt

Per cent of disposable income



1. Averages are unweighted.
2. 2008 for Switzerland.

Source: OECD, National accounts database.

The decline in house prices has led to a rise in the proportion of households with negative housing equity, although on a much more limited scale than has occurred in the United States. The proportion of households with mortgages in negative equity rose from around 4% in September 2008 to 7-11% in the

first quarter of 2009 (Hellebrandt *et al.*, 2009).[11] Although this is a substantial increase, the proportion of households underwater on their loans is nowhere near that of one in four reached in the United States in the first quarter of 2010 (Harvard, 2010). Furthermore, for most UK households in negative equity, the amounts involved were relatively small, with 78% having less than £15 000. In the first quarter of 2009, even as house prices were near recent lows, 75% of UK households had a loan-to-value ratio of less than 75% (Hellebrandt *et al.*, 2009).

Although some households are vulnerable to the housing downturn and deteriorating economic conditions, arrears and possessions during the latest recession have been lower than most observers had feared. The recession has pushed arrears and possessions up from the very low levels observed in the mid-2000s. The rate of mortgages more than 3 months in arrears rose from around 1% to a peak of 2.5% in the second quarter of 2009, before slowly starting to recede. The number of possessions rose from a low point of fewer than 10 000 per year in 2003 and 2004 to 46 000 in 2009 (about 0.4% of mortgages), but is receding slowly with the Council of Mortgage Lenders forecasting 39 000 possessions in 2010 (August 2010). This is much lower than in the early 1990s, when the rate of mortgages more than three months in arrear and possessions reached, respectively, around 6% of mortgages and 75 500 (nearly 0.8% of mortgages). It is worth noting, even though this segment of the market is relatively small, that arrears are particularly high for specialist (non-bank) loans, which expanded steadily during the boom, following a business model based on "equity lending", *i.e.* putting more weight on the value of collateral than on the repayment capacity of borrowers (FSA, 2009). From an international perspective, mortgage arrears in the United Kingdom appear to be much higher than in Australia and Canada, somewhat lower than in Spain, but much lower than in Ireland and the United States (RBA, 2010; Irish Mortgage Arrears and Personal Debt Expert Group, 2010). An important factor behind the resilience of households has been the fall in interest rates. As variable rate mortgages are predominant in the United Kingdom, sharp drops in short-term interest rates have significantly reduced the burden of mortgages. Government schemes – Support for Mortgage Interest, Mortgage Rescue Scheme and Homeowners Mortgage Support – also provided support, though the number of households involved remained small.

Increases in interest rates, a further deterioration in the labour market or renewed falls in house prices could lead to financial difficulties for many households. In 2006-07, around 40% of the lowest income households (with less than £1 000 disposable income per month) were spending more than half of their disposable income on their mortgage (FSA, 2009). Should their income situation deteriorate further and/or interest rates rise, they would face great financial difficulties. Low income households are also the most vulnerable to unemployment. Low interest rates and fairly rapid stabilisation in house prices have improved the repayment prospects for troubled mortgages. This has led lenders, in part encouraged by government initiatives, to adopt generous forbearance policies in the current downturn (Styles, 2010).

Mortgage providers were hit hard by the global crisis, especially those that were heavily reliant on short-term wholesale funding. Three of the top five lenders needed some government support during the crisis, one of them being fully nationalised (EMF, 2009).[12] Lending standards had been relaxed in the years preceding the financial crisis, with an increasing share of non-documented, interest-only and high loan-to-income or loan-to-value ratio mortgages (FSA, 2009). However, as shown earlier, even in adverse economic conditions, arrears on mortgages have not increased dramatically. But mortgage lenders had become increasingly reliant on wholesale funding, in particular via the securitisation of mortgages. In 2001, lending by domestic UK banks to non-bank borrowers was comparable to domestic deposits. By 2008, the funding gap between retail deposits and lending was £738 billion (OECD, 2009a). Wholesale funding allowed very rapid growth in mortgage lending – for example, the average annual growth rate of

11. This corresponds to 700 000 to 1.1 million households.

12. HBOS and Lloyds TSB are now part of Lloyds Banking Group, which is under partial state ownership. Northern Rock is in full state ownership.

loans by Northern Rock between 2001 and 2006 was over 30% (Onado, 2010). When the US subprime market collapsed, investors' appetite for mortgage-backed securities all but vanished, leaving banks unable to fund their portfolios. The financial sector is now recovering, thanks to the considerable support received from the government and the Bank of England, but needs to be better regulated and to rely on more stable and diverse sources of funding going forward.

Improving the efficiency and resilience of the housing market

The overview of the UK housing market has highlighted a number of weaknesses calling for action to improve the efficiency of the housing market and its resilience to economic and financial shocks. A key issue for policy is to determine the extent to which the rise in prices reflects fundamentals or is a bubble related to speculation. In designing housing policies, it is also important to recognise that different parts of the system are interdependent. For example, an efficient mortgage market might improve access to homeownership and lead to better housing conditions for many households. However, if housing supply is not responsive to demand, a great part of the enhanced ability to borrow will translate into higher house prices and access to better housing will not be improved. In addition, the social impact of housing policies needs to be taken into account.

Price increases tend to reflect fundamentals in the United Kingdom

Econometric estimates show that fundamentals can largely explain house price developments in the United Kingdom (Box 2). A large part of the increase in real house prices over the upswing between 1995 and 2007 can be attributed to higher income and an increase in the number of households. Lower mortgage rates have also contributed to push house prices up. However, their contribution seems to have been relatively modest compared to other countries which have experienced housing booms, as the reduction in mortgage rates in the United Kingdom during the period has not been as large as, for example, in Spain or Ireland. But the offsetting effect of higher housing supply has also been much weaker in the United Kingdom, where the response of housing investment to higher house prices has been much more muted than in most other OECD countries (Miles and Pillonca, 2008; André, 2010). Short-term dynamics account for an overshooting of house prices relative to their long run equilibrium level by around 10% at the peak of the market. Such overshooting is to be expected, since house price expectations are, at least to some extent, backward looking.

Box 2. How do house prices relate to fundamentals?

In order to assess the extent to which fundamental factors can explain the evolution of real house prices, an error correction model was estimated. The model is fairly standard in the literature and versions of this equation have given very consistent results over the years (Meen, 2008). In particular, the equation has proved to perform well out of sample. The following house price equation has been estimated over the period 1969Q2-2010Q1:

$$\Delta \ln RHP = -1.19 + 0.24\,\Delta \ln RY - 0.005\,\Delta UC - 0.11\,(\ln RHP_{-1} - 2.94 \ln RY_{-1} - 0.12 \ln RFW_{-1} + 2.089 \ln HS_{-1}$$

(-4.7) (2.7) (-6.9) (-6.7) (-5.1) (-1.4) (4.4)

$$+ 0.04\,UC_{-1} - 2.22\,WSH_{-1})$$

(12.4) (-2.5)

$R^2 = 0.75$; s = 0.016; DW = 1.81

(t values are reported in parentheses).

Where:

RHP = Real house prices[1]
RY = Household real disposable income[1]
UC = User cost of housing
RFW = Household real financial wealth[1]
HS = Housing stock
WSH = Share of wages and salaries in household income

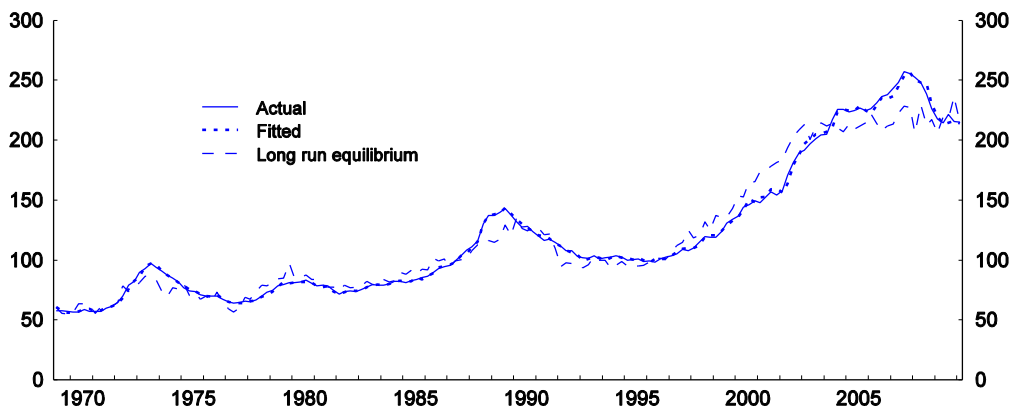
A number of features of the model are worth highlighting. First, demographic variables do not appear directly in the equation. But household real disposable income is the product of real income per household and the number of households. When these two variables are entered separately into the regression, their coefficients are not significantly different from each other. Thus, it is possible to enter only aggregate real disposable income. Second, the user cost of housing – which depends on the mortgage rate, the housing depreciation rate, housing-related taxes and expected capital gains on houses – includes a measure of mortgage rationing (see Meen, 2008, for more details). As expected capital gains are influenced by past house prices, there is a potential endogeneity bias. Omitting expected capital gains reduces the ability of the equation to explain short run dynamics, but does not alter the estimated long run equilibrium significantly. This is consistent with the view that extrapolative expectations tend to cause overshooting during booms. Third, the elasticity of real house prices to both real income and the user cost of housing are high. Hence, small variations in these variables can lead to significant shifts in real house prices. Fourth, as expected, the housing stock has a negative impact on real house prices, but it is fairly small. A one percent increase in the housing stock would reduce real house prices by around two percent. To put this number into perspective, the annual increase in the housing stock has been less than one percent over the last decade. This implies that construction would have to increase by large amounts to put significant downward pressure on prices if demand is strong. Fifth, the share of wages and salaries in household income accounts for the fact that wage and investment income may have different impacts on housing demand (Meen and Andrew, 1998).

The model tracks the data very well, with absolute residuals only exceptionally exceeding 3% (Figure 9). Nevertheless, real house prices adjustments are slow – the speed of adjustment of 0.11 implies that, on average, reverting to the equilibrium level takes more than two years. Furthermore, short-term dynamics tend to drive the market to overshoot during upswings, as can be observed both in the late 1980s and between 2004 and 2007.

Overall, traditional determinants explain real house price developments fairly well. Table 1 displays the contributions of the explanatory variables to the increase in real house prices over the cyclical upswing from the mid-1990s to 2007. Strong growth in income per household, the increase in the number of households due to population growth and the reduction in the size of households and to a lesser extent a lower user cost of housing have played a prominent role in pushing prices up. The increase in the housing stock – about 14% from 1995 to 2007 – has been insufficient to offset the influence of demand factors. Short run dynamics account an overshooting of prices by around ten percent relative to their long term equilibrium level at the peak of the market.

Figure 9. Real houses prices

1995 = 100



Source: OECD calculations.

Table 1. Contributions to change in real house prices

1995-2007

Real income	123
Of which:	
Real income per household	95
Number of households	28
Real financial wealth	9
Housing stock	-38
User cost of housing	23
Wage share	16
Total long run factors	134
Short run factors[1]	17
Actual	151

1. Short run factors include the terms in differences and a small residual.

Source: Source: OECD calculations.

****

1. Real variables are deflated by the private consumption deflator.

The robust link identified by econometric models between real house prices and their main determinants does not rule out sharp adjustments in house prices. Indeed, real house prices are particularly sensitive to changes in real household income and interest rates. Furthermore, some determinants of house prices might themselves deviate substantially from their equilibrium values, giving rise to house price levels, which, despite being justified at the moment, might not be sustainable. This would be the case, for example, if easy financing conditions were unsustainable.

Other econometric studies are mixed on whether the UK house price increases reflect changes in fundamentals, or a "house price bubble", *i.e.* a situation where price increases are driven by expectations of further price increases. Barrell *et al.* (2004) estimated that house prices were around 30% above their equilibrium level already in 2004. The International Monetary Fund pointed to an overvaluation of house prices of about 30% at the peak of the cycle (IMF, 2008). Miles and Pillonca (2008) developed a model which is able to explain house price increases between 1996 and 2006, but find that about a third of the increase can be attributed to expected capital gains. By contrast, Cameron *et al.* (2006), estimating a dynamic panel data model of British regional house prices between 1972 and 2003, find no evidence of a recent bubble. Muellbauer and Murphy (2008) find "no house-price bubble in recent house prices, at least up to 2005, with immigration, income growth, and strong stock-market rises explaining further appreciation and the outperformance of London and the South-east." However, they reckon that by mid-2007, "prices looked a little overvalued". Meen (2008) finds limited evidence for house price bubbles in the United Kingdom between 1997 and 2007. Waldron and Zampolli (2010), using a calibrated overlapping generations model, conclude that "the increase in house prices between 1987 and 2006 was broadly consistent with other changes to the UK macroeconomy over that period".

In the United Kingdom, as high house values reflected more tight supply than excessive demand, house price falls were relatively mild and prices rebounded relatively quickly. This contrasts with several other OECD countries, where large price increases from the mid-1990s to 2006 have been accompanied by buoyant construction activity, sometimes largely driven by speculation. As the increase in demand largely proved unsustainable, there is now a large excess stock of houses weighing on prices in some places, notably Ireland, Spain and some regions of the United States. These examples highlight the fact that when excessive demand for housing is allowed to develop, higher responsiveness of supply might lead to a greater misallocation of resources. While a high elasticity of supply to prices is desirable, the necessity to prevent unsustainable developments in demand becomes even more important in that case.

Supply should be made more responsive to demand

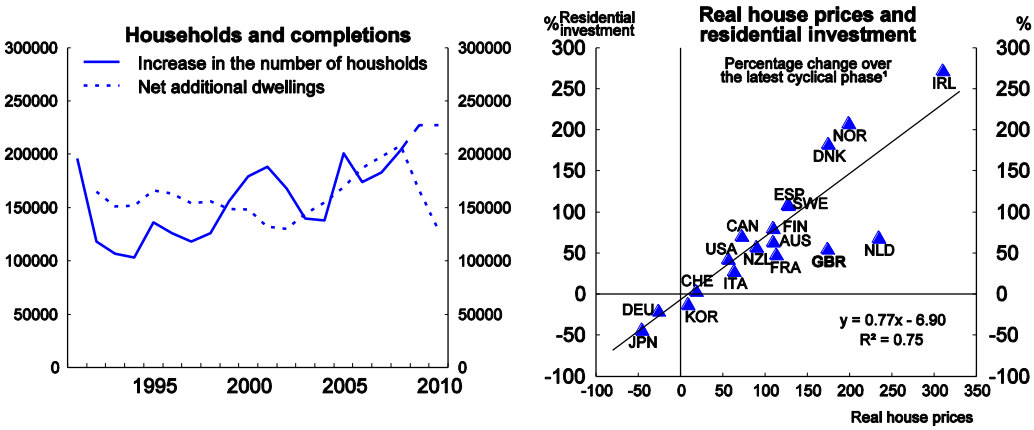
The UK housing stock is on average older and consists of smaller units than in most of OECD. More than 35% of dwellings were built before 1945 and new dwellings are much smaller in size than in continental Europe.[13] The government wants to bring empty homes back into use. But these account for only around 3% of the total housing stock, which seems quite low by international standards (Evans and Hartwich, 2005). A dynamic housing market necessarily implies a certain level of vacancies. Moreover, the empty homes may not be where they would be needed (Solutions, 2009). Hence, while bringing empty homes back to the market is useful at the margin, the potential of such action may be limited.

Despite rapidly rising prices, net additions to the dwelling stock in England since the late 1990s have not kept up with the increase in the number of households, even though household formation itself is likely to have been constrained by housing shortages (Figure 10, first panel). Estimates of housing requirements are very uncertain, but there is widespread agreement that more housing is needed. While the United Kingdom is densely populated, especially in the South, there is a common perception that the land use planning system is the main obstacle to housing development (Barker, 2006b). Hence, making the land use planning system more flexible, more predictable and more responsive to market signals, without compromising its social and environmental objectives, is essential. Easier access to land could also increase competition and allow more innovation in the construction sector, enhancing its ability to adapt to social, demographic and environmental evolutions. Over the medium term, a successful planning reform would help restore housing affordability in the owner-occupied market. But as such reforms take time to bear fruit, access to housing is likely to remain severely constrained for low and medium income and young households in the short to medium term. In this context, it is important that housing policies provide a supportive framework for a sustainable development of the private rental market and the social sector, which provides an essential safety net in a difficult housing and economic environment.

The United Kingdom stands out within the OECD, together with the Netherlands, as having had large real house price increases but only fairly modest growth in housing investment (Figure 10, second panel). While housing supply is always rigid in the short-term, as getting permits for building, developing land and constructing dwellings takes time, it is generally more elastic in the longer term. In a wide sample of OECD countries, housing investment has been highly correlated with house price variations over the last cycle, suggesting that supply is on average fairly responsive to price signals in the medium term. Econometric studies confirm that the price-elasticity of housing supply is low in the United Kingdom. Recent OECD estimates imply that a one percent increase in real house prices raises residential investment by only 0.4% in the long run (Caldera Sánchez and Johansson, 2011). Although many continental European countries also have a low price-elasticity of supply, the United Kingdom is among those where the supply response has been most muted over the last 20 years. Swank *et al.* (2002) report a price elasticity of supply of 0.3 for the United Kingdom, compared to 0.45 for the Netherlands, 1.1 for France, 1.4 for the United States and 2.0 for Germany. Meen (2005) finds a price elasticity of supply close to zero since the 1990s. Recent research confirms that housing supply is less responsive to market conditions in Britain than in the United States or Australia (Ball *et al.*, 2010). The need to increase housing supply is widely recognised. The DCLG Green Paper (DCLG, 2007) set the ambitious target of delivering three million homes by 2020. The new government finds these targets inappropriate, but recognises the need for more houses (HM Government, 2010).

13. The average floor space in new dwellings is 76m^2 in the UK, the smallest in the European Union (15 countries), compared to an un-weighted EU average of slightly over 100m^2 (Evans and Hartwich, 2005a).

Figure 10. Housing supply is unresponsive to demand pressures



1. The latest cyclical phase corresponds to the expansion that ended in 2006-2007 for most countries (see Table 1 in André, 2010). For Japan and Germany, it corresponds to the ongoing downturn.

Source: DCLG tables 104 and 401, OECD, *OECD Economic Outlook* database and national sources.

Physical constraints on the availability of land are limited, notwithstanding England's high population density, especially in the South. The percentage of land that was developed in England and Wales was at most 13.5% in 2000 (Barker, 2008). Around 36% of land is protected from development (nearly 60% in the South-East), either through environmental designations (*e.g*. Areas of Outstanding Natural Beauty, National Parks and Sites of Special Scientific Interest) or through Green Belts. It is worth noting that Green Belts, which cover around 13% of English land, do not correspond to an environmental designation, but to a planning policy designation aimed at preventing urban sprawl (Barker, 2004). GO-Science (2010) estimates that the land take corresponding to the 2007 DCLG objective of 240 000 new buildings per year would be 0.06% of total land in England. Even building 120 000 houses per year in the South-East over ten years – an extreme assumption – would only take 0.75% of the total regional land area (Barker, 2004).[14]

Reforming planning is key

The planning system has been a major obstacle to the expansion of housing (Box 3). Loosening planning constraints in a way that would be consistent with the protection of the environment and social objectives could have a significant impact on house prices. Hilber and Vermeulen (2010) estimate that regulatory constraints have a substantive positive long-run impact on house prices, whereas the effect of constraints due to scarcity of developable land is confined to highly urbanised areas. If the planning regulations were completely relaxed, house prices would be 21 to 38% lower (in 2008) and the standard deviation of prices some 30 to 52% lower (over the period 1974 to 2008). Obviously, it is neither feasible nor desirable to completely relax the planning regulations, but the estimates clearly show a large impact of planning constraints on the level and volatility of house prices.

14. The latter estimate assumes that 60% of homes would be built on Brownfield, corresponding to the government target at the time the estimation was made, which has been consistently exceeded over recent years.

Box 3. The top-down planning system did not allow enough homes to be built

The top-down planning system originated in the Town and Country Planning Act 1947. The new government has set out to reform the system, which has failed to deliver enough building spots, at least over the past two decades.[1] This box describes the top-down planning system as it operated until mid-2010.

National targets for the number of new homes were derived from demographic projections, which were translated into regional spatial strategies (RSS) and local development frameworks (LDF). The RSS provided a broad development strategy for the region over the next 15 to 20 years, identified areas for new housing and regeneration and priorities for infrastructure and the environment. The LDF determined the spatial planning – *e.g.* location, size and type of new homes and proportion of affordable homes – for the local planning authority's (LPA) area. In addition, LPAs could negotiate developer contributions, in particular to infrastructure and affordable housing, as part of a planning obligation (Section 106 of the Town and Country Planning Act 1990). The Community infrastructure levy (CIL) was introduced in April 2010 to allow LPAs to tax planning gains to finance infrastructure in a way that is more straightforward and predictable than through section 106 agreements.

Household number projections, which played a key role in RSSs, are very uncertain, especially at the regional level (Barker, 2008). Moreover, trend-based household projections do not take into account market signals, in particular the impact of house prices on housing demand and household formation (Meen and Andrews, 2008). Hence, building the right amount of homes in the right places has proved challenging. To overcome these difficulties and in response to a recommendation of the Barker Review of Housing Supply (Barker, 2004), the then government adopted affordability targets and set up the National Housing and Planning Advice Unit (NHPAU) in 2006 to monitor affordability and housing supply and to advise the government and the regions.

The planning system also set brownfield and density targets, which have been criticised for having led to the provision of too many flats, when households prefer houses, and to the disappearance of gardens in urban areas – so-called "garden grabbing" (Nickell, 2009).[2]

1. The planning system has also raised obstacles to business expansion – as pointed out by the Barker review of land use planning (Barker, 2006b) and successive editions of OECD Going for growth – and renewable energy projects.

2. Gardens used to be classified as Brownfield. This is no longer the case since June 2010.

In granting planning permissions, the authorities should weigh the costs and benefits of development more carefully. The planning system plays an essential role in promoting environmental – including climate change mitigation and adaptation – and social objectives such as urban regeneration, protection of town centres, shaping of cities. However, the Barker review of land use planning pointed out that the economic benefits of development might not receive enough consideration in planning decisions and that the planning system should be more responsive to price signals (Barker, 2006b). However, both the benefits and costs of more development are difficult to evaluate. Benefits are often diffuse, indirect – *e.g.* impacts on jobs, growth and income distribution – and long-term. Costs include possible loss of amenity, ecosystem resilience or environmental quality, which are difficult to value. Nevertheless, recent studies suggest that, based on a full cost-benefit analysis, the planning system is excessively restrictive. In particular, the Government Office for Science report on Land Use Futures states that:

"There is a strong economic case that planning controls on land in some areas, especially in the South East of England, are tighter than can be justified by current valuations of the net costs of development. Releasing land for development in areas of high demand can confer large social welfare gains and would require some relaxation of planning policy. The long-term social, economic and environmental costs and benefits will need to be carefully weighed." (GO-Science, 2010).

The new government has decided on a major overhaul of the planning system. The central idea, in accordance with the *Localism agenda,* is to "create a planning system where there is a basic national framework of planning priorities and policies, within which local people and their accountable local governments can produce their own distinctive local policies to create communities which are sustainable, attractive and good to live in" (Conservative Party, 2010). Accordingly, the top-down building targets and the regional level of planning have been abolished and the NHPAU closed. Local planning authorities will be responsible for assessing local housing needs and identifying suitable areas where land can be released to meet these needs. The New Homes Bonus (NHB) will provide an incentive for communities to allow development by offering a central government transfer to local authorities that matches the amount raised on new homes through the council tax for six years.

Replacing the top-down planning system with a decentralised framework where local authorities are empowered to set their development priorities and have incentives to allow building is attractive in principle. A fundamental weakness of the top-down planning system was that it provided few incentives for local authorities to allow development. As noted earlier, the benefits of development are often diffuse, indirect and long-term, while the associated costs are local, visible and short-term (Barker, 2006b). Local residents are often not supportive of house building in their local area, an attitude often referred to as NIMBYism (Not In My Back Yard). A recent survey carried out by YouGov for the NHPAU shows that on average only about one in two English adults supports house building in their local area, although there is more support among younger people, in the North East, and in London (NHPAU, 2010). Increased resistance to targets set by national and regional authorities at the local level is an important reason why the top-down system has failed to deliver enough homes to prevent a sharp reduction of affordability in recent years (Burgess *et al.*, 2010). Fostering the willingness of communities to support development will be a key challenge for the "open source" planning system (Box 4).

Box 4. Encouraging local communities to promote development

Providing the right level of incentives to local authorities for allowing development is important. Growing communities require costly public investment in infrastructure and services. The expansion of towns and cities may also result in loss of amenity and increased congestion. House prices may be negatively affected. Against these costs, benefits to residents, such as increased vitality or enhanced job potential, are less apparent. In fact, a large share of the benefits is likely to accrue to newcomers. Hence, residents often tend to resist development. Overcoming this resistance requires appropriate incentives.

If residents are confident that expansion will bring with it the funding required to maintain infrastructure and public services, or even allow improvement in services and lower local taxes, they will be more willing to accept new developments. The YouGov survey mentioned above shows that more than three quarters of people would support house building if they were sure local services (*e.g.* GP surgeries, hospitals and schools) would not suffer. People would also be more favourable to development if adequate infrastructure (*e.g.* roads, utilities) was provided and if the homes were "well designed and in keeping with the local area" and went to local people. Only 13% of homeowners mentioned a negative impact on house prices as a reason for opposing development (NHPAU, 2010).

The new government has committed to providing "strong incentives" for development, but with public finances under severe pressure, funding local infrastructure investments is likely to prove challenging. The level of incentives required to generate sufficient housing supply remains uncertain. The New Homes Bonus could prove insufficient to motivate some communities to allow development. The new community infrastructure levy could contribute significantly to adequate provision of infrastructure. However, providing the right incentives for local communities to adopt a more positive attitude towards development might require a move towards a more decentralised tax system. For example, in Austria, Germany, Switzerland and the United States, local authorities receive a larger share of taxes paid by their residents, which encourages them to allow construction. Supply in these countries has been much more responsive to demand than in the United Kingdom. Some communities, especially among the wealthiest, might resist development altogether and even more the building of affordable housing, arguing that additional housing is not needed in their area. The evolution of housing completions should be monitored very closely and the level of incentives revised if needed.

Decentralisation also offers an opportunity to streamline the planning system. Once local plans are endorsed by communities, the presumption of sustainable development should speed up the process of granting planning permission and make it more predictable (HM Government, 2010).[15] This could bring the system closer to the zoning system operating in the United States and New Zealand or the Master Plans in place in Austria, Germany and the Netherlands. In these systems, a plan defines what type of building is appropriate in a particular area and no development permission is required beyond the requirements of the plan. Such systems tend to enhance housing supply responsiveness relative to systems where individual permissions are required. However, it is "important to distinguish how systems operate in theory from how they are delivered in practice" (Barker, 2006a). For example, the Dutch system has become increasingly restrictive since the early 1990s and New Zealand's planning system also suffers from significant shortcomings (MfE, 2010).

The recent removal of the regional level of planning raises important concerns about strategic planning of infrastructure and public services. In a number of areas, including health, education, transport, waste management and flood prevention, consistency and coordination between local plans is essential. The Localism bill will set a "new statutory duty to cooperate on local authorities, public bodies and private bodies that are critical to plan-making, such as infrastructure providers" (HM Government, 2010). But defining a precise framework for such cooperation is warranted. It is also important to ensure that the strategic planning expertise that existed at the regional level is not lost (Burgess *et al.*, 2010). Furthermore local planning authorities should be provided with technical assistance when needed.

As noted earlier, limitations on the use of land for housing result more from planning constraints than from the scarcity of suitable land. In particular, construction of dwellings is severely constrained by Green Belts. The fundamental aim of Green Belts is to prevent urban sprawl. They also play a role in achieving other objectives, such as protecting the environment or preserving the character of historic towns. But these objectives would be better achieved through land protection closely tied to environmental or social interest rather than location around urban areas. Green Belts include previously developed land and farmland with limited environmental value. Locating homes beyond the Green Belt increases commuting distances and carbon emissions. These considerations point to reconsidering Green Belt boundaries (Barker, 2006b). Changes in boundaries should be justified by a transparent assessment of the full benefits and costs – including environmental and social – of allowing development. Such an assessment could help overcome resistance to change, as there is widespread public support for Green Belts, perhaps because "it is not clear that people understand the function of Green Belts, and it is also unlikely that many appreciate its extent or indirect costs" (Barker, 2006b).

A fundamental question is the location and type of new building sites to be delivered by the bottom-up planning system. This will depend on local circumstances. Nevertheless, general questions may be raised. Increasing home supply implies either higher housing density or new land development (Box 5). In the early days of the system created by the Town and Country Planning Act 1947, urban containment was accompanied by the creation of new towns to accommodate growing demand for housing. Later, the focus moved to increasing density within cities and allocating land for development in growth areas along transport corridors (Solutions, 2009). The previous government also tried to revive the Garden city idea in the form of Eco-towns, but with limited success, due to design problems and local opposition. The new government has announced the end of growth area funding and the Thames Gateway programme, which aimed at maximising the potential of the Thames Gateway to provide London with the space to grow (HM

15. The presumption of sustainable development is a right to build provided that development conforms to national standards and the local plan.

Treasury, 2010). Overall, whether current planning policies can deliver the land for enough housing where it is needed is uncertain and their development will need to be closely monitored.

Box 5. Building the right type of housing in the right places

Over the past decade, the government encouraged development of brownfield sites and "densification", with some success. A target of 60% of all new developments to be built on brownfield land was set in 1998, which was consistently met in the 2000s, with the proportion of homes built on brownfield land reaching 80% in 2008. The average density of new housing has increased from less than 25 dwellings per hectare before 2002 to over 40 in 2007 (GO-Science, 2010). Notwithstanding this success, it should be noted that in a long term perspective the availability of brownfield land is limited and that not all brownfield spots are in areas of high demand.[1]

Brownfield development spares land for other uses, helps city regeneration and tends to reduce infrastructure costs, even though building infrastructure in high density areas can be expensive. High density is often assumed to be friendlier to the environment as it would induce less use of transports and high-density buildings would tend to be more energy efficient. However, this view is increasingly challenged (GO-Science, 2010, Solutions, 2009). Even if high density building were to lower carbon emissions, instruments such as congestion charges or a carbon tax would presumably be more effective than the planning system in promoting efficient energy use. Besides, low density housing would be better for biodiversity than mono-cultural farmland (Evans and Hartwich, 2005).

UK households have a high propensity to live in houses rather than in flats. The proportion of the population living in flats is the second lowest in the European Union (27 countries) after Ireland (Eurostat, Housing statistics, 2010). Surveys confirm that British households have a strong preference towards living in houses and housing policies have often been accused of leading to the construction of too many flats and too few houses. Subscribing to this view, the new government has abolished density targets. This implies that more land will need to be released for building, especially greenfield land.

1. GO-Science (2010) notes that "it would require all urban brownfield sites to be used to meet the 60% target for the planned three million extra homes by 2020, not including the backlog of suppressed demand".

Strong competition in the construction sector can contribute to lower costs and increased supply

The house-building sector has been hit hard by the recession and its production capacity and supply chains have been affected. The sector is heterogeneous, comprising many small businesses – around 6 000 – and a few large developers, the top six of which account for 40% of output (Pretty and Hackett, 2009). Most companies are concerned with high debt levels and cash-flow management. Tight credit conditions weigh particularly on small and medium enterprises. Low interest rates have mitigated the problem for the firms that have retained access to credit.

A strong and competitive construction industry is vital to the provision of quality housing. House-building is an inherently risky business because of the length of the production cycle and the difficulty to predict costs, especially in an uncertain market and regulatory environment (Ball, 2010). Over the last cyclical upswing, the real cost of construction increased faster in the United Kingdom than in most OECD countries.[16] To some extent, this might be linked to the increase in brownfield development, which tends to be more expensive than building on greenfield. The volatility of land and property markets has probably also contributed to increasing costs.

Reforms in the planning system and housing taxation would lead to a more stable and predictable environment, which would have positive effects on home-builders' performance. Planning policies have

16. Real construction costs increased by 48.9% in the UK over the period 2000-07 compared to an average of 17.7% in a sample of 18 OECD countries (André, 2010).

led to a situation in which the house-building industry derives most of its profits from gains on land values. The scarcity of land exacerbates competition between home-builders to secure building plots and reduces competition on the design and quality of construction. Restricted access to land in an area acts as a barrier to the entry of competitors for developers that have secured land. Facing little competition, these home-builders have less incentive to innovate and improve quality. Indeed, customer satisfaction with house-builders tends to be low. The volatility of house prices and the uncertainty in gaining planning permission increase the risks for developers, resulting in reduced investment in technology, innovation, workforce training, brownfield development and responsiveness of supply (Barker, 2004).[17]

The framework improvements outlined above would improve the operational environment of the construction industry and make house-builders more efficient. Structural sources of difficulties for house-builders stem from different regulations that increase costs and uncertainties. Negotiations of development conditions (Section 106; see Box 3) have become increasingly complicated and delay planning agreements. Building regulations also tend to be cumbersome and their evolution uncertain, especially on sustainability standards. Regulations should focus on outcomes rather than means, allowing the industry to find the most effective means to meet specified standards.

Policies should also make sure that the construction industry remains competitive. As noted above, a small number of firms account for a large share of output. Large developers are also better able to secure access to land and planning permissions than smaller ones (Adams *et al*., 2008). But, except for obstacles to access to land, the UK construction industry generally looks competitive. A comprehensive Office of Fair Trading (OFT) market study of homebuilding "found little evidence of competition problems with the delivery of new homes in the UK" (OFT, 2008). Mark-ups in the sector seem to be quite low by international standards, also suggesting fairly strong competitive pressures in the industry (Andrews *et al*., 2011). Nevertheless, the OFT has recently uncovered cases of bid rigging in the construction industry in England (OECD, 2008). This calls for a close monitoring of the degree of competition in the industry. The UK construction sector suffered from a lack of skilled workers in recent years prior to the crisis, albeit mitigated by immigration. A sufficient amount of high quality apprenticeships in construction-related trades should be made available to avoid bottlenecks when demand picks up.

The rental market is important and may benefit from greater professionalisation

A dynamic private rental market forms an important part of the housing market and can play a role in dampening overheating in the owner-occupied housing market and may facilitate labour mobility (Priemus and Maclennan, 1998; Caldera Sánchez and Andrews, 2011). The rise in the private rental market has contributed to limiting increases in rents and has provided an alternative to home ownership for young, relatively high-income households, which require a high degree of mobility (Meen and Andrew, 2008).[18] However, the increase in demand for housing to let has also arguably added to pressures on house prices during the expansion. Growth in the buy-to-let market was mainly driven by expectations of capital gains. A study by the Building Societies Association shows that nearly half of investors were motivated both by the rental income and the prospect of capital gains, but 37% valued the latter only, while just one fifth was

17. On some sites, a one per cent increase in house prices could increase gross development profits by almost eight per cent (Barker, 2004).

18. Nevertheless, the lack of security of tenure limits the potential of the private rental market as an alternative to homeownership or social renting (Rugg and Rhodes, 2008).

interested only in rental proceeds.[19] A widely cited motive for investing in buy-to-let is accumulating capital for retirement (BSA, 2007).[20]

In an environment of stagnating or declining house prices and reduced mortgage availability, the prospects for the buy-to-let market are uncertain. Higher taxes on capital gains for rented dwellings also make the investment less attractive and cuts in the Housing Benefit are likely to discourage investment at the lower end of the market. The development of professional investment in the rental market, in particular by institutional investors such as pension funds, would be beneficial. Such investors can propose long term leases and expertise in management and maintenance. Regulating professional investors is also easier than for individual landlords. By managing large portfolios, institutional investors can spread risks and, by adopting a long-term view, they can have a stabilising influence on the demand for dwellings. From the point of view of investors, a portfolio of houses for rent should have an attractive risk-return profile in the long term. However, institutional investors view the sector as "cash intensive, cyclical and relatively high risk" (Pretty and Hackett, 2009). Other reasons why they have been reluctant to invest in housing include costly regulation, low rental yields, reputational risk, high management costs and lack of scale. Measures favouring the stability of the housing market, as those outlined above, could make it more attractive to institutional investors.

Social and subsidised housing

To provide decent housing for low income households, the policy framework in the United Kingdom incorporates both supply-side measures, such as social housing, and demand-side supporting benefits, notably the Local Housing Allowance (LHA), a means-tested benefit.[21] Over the last thirty years, there has been a shift from supporting supply to demand-side subsidies, the latter now accounting for more than two thirds of the total, as personal subsidies in this form have been considered more effective than social housing financed through bricks-and-mortar subsidies. The private supply of rented housing has failed to make up for the reduction in social provision, however (Figure 11). In fact, there seems to be a general pattern across countries that demand-side subsidies have not prompted the supply response policy-makers expected (Maclennan, 2005; Lawson and Milligan, 2007). The cost of the LHA has almost doubled in nominal terms over the past decade, as a result of median private rents increasing by almost 70% and an increase in the number of claimants since the beginning of the economic downturn. In addition, the LHA, being means-tested, generates disincentives to work and save (Hills, 2007).[22] Some cases of inequity, where households on benefits are able to live in houses many working people cannot afford, have been well publicised. But the new government's reform, while generating significant savings for the budget, is likely to result in a sharp decline in income and deterioration in housing conditions for many low-income households (SSAC, 2010).

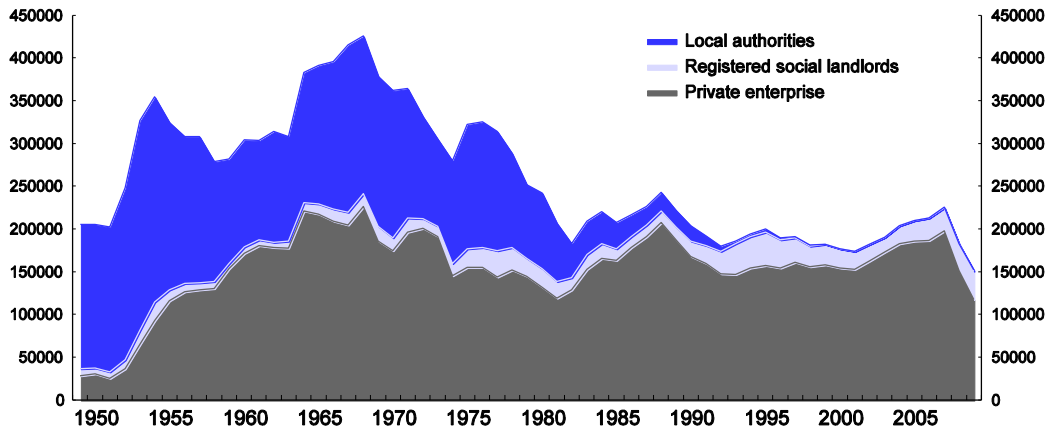
19. Rugg and Rhodes (2008) also note an increase in the investment motive for individual landlords in recent years, but point as well to social trends contributing to the increase in ownership of rental housing by individuals.

20. On "asset-based" welfare, see Doling and Ronald (2010).

21. The LHA is claimed by people in work, retired, unemployed or on disability benefits.

22. The marginal deduction of benefits upon return to work can reach more than 95%. In addition, many out-of-work people fail to understand the Housing benefit as an in-work benefit and administrative complexities and delays act as further disincentives to moving into employment (Turley and Thomas, 2006). Addressing these problems is a key objective of the welfare reform proposed by the new government (DWP, 2010).

Figure 11. Permanent dwellings completed, by tenure



Source: DCLG table 241.

The Local Housing Allowance (LHA) reform, which is part of a broader welfare reform, includes: *i)* setting the LHA rates at the 30th percentile of local rents, instead of the median; *ii)* introducing an absolute cap on amounts payable by size of property; and *iii)* increasing LHA rates over time in line with the consumer price index (CPI) rather than actual market rents. Housing benefits will be cut for virtually all LHA claimants, including many low-income employees. Because of the significant numbers of LHA claimants in the UK private rental sector, the government expects these changes to have a dynamic effect on private sector rents. Some households might be able to negotiate a rent reduction and others will be able to cut other spending. However, estimates by external commentators that do not allow for dynamic impacts suggest that between 68 000 and 134 000 households could face an involuntary move or eviction (Fenton, 2010).[23] This implies that if anticipated dynamic effects do not occur, social segregation may increase, with the social consequences observed in England and in many other countries. Homelessness assistance expenditure and other costs related to the impact of poor housing on individuals might also increase (Diacon *et al.*, 2010). The indexation of the LHA on the CPI from April 2013 would further reduce housing possibilities for LHA claimants, unless there is a marked slowdown in rent increases, which is only likely if housing supply increases significantly or income growth proves particularly sluggish. To mitigate these risks, the government recently announced that it would extend powers for local authorities to pay LHA directly to landlords where they agree to reduce rents to affordable levels.

Housing services to those most in need could be delivered by social housing at sub-market rents. Nearly a fifth of English households live in social housing provided almost equally by local councils and Housing Associations. This is one of the highest shares of social housing in the OECD, lower than in the Netherlands (around a third) and Austria (about a quarter), but similar to France, Denmark and Sweden (Scanlon and Whitehead, 2007). Nevertheless, since the 1980s the proportion of households in social housing has been declining despite rising demand, as the Right to Buy allowed many social tenants to become home-owners while construction declined.

To avoid poverty traps, housing policies should also aim at better integrating social housing into the wider housing system, promoting tenure flexibility, facilitating labour mobility and creating mixed communities. While social housing provides an essential safety net for vulnerable populations with limited access to quality private housing, it appears to create unemployment (Dwelly, 2006). In 2006, more than half of the working-age population living in social housing was out of paid employment. Controlling for

23. In London, 82 000 households could be at risk of losing their home (London councils, 2010).

personal characteristics to account for the fact that the social sector disproportionately houses disadvantaged people, the probability of being employed is still significantly lower in social housing than in other tenures (Hills, 2007). Low employment rates among social tenants can be linked to a number of factors, including segregation, neighbourhood effects, welfare benefits providing little incentives for work and the difficulty of moving. Clearly all these problems cannot be tackled by housing policies alone and coordinated social policy interventions are warranted.

The new government has committed to delivering up to 150 000 new affordable homes by 2014/15 (HM Treasury, 2010). Some charities have argued that it is less than a third of what is needed (Shelter, 2010). New affordable homes would be financed by allowing social landlords to charge higher rents for new tenants – up to 80% of market rents – and by capital investment, though this will be sharply reduced from past levels.[24] It is unclear whether such arrangements will provide sufficient funding and incentives to meet the target. Since the late 1980s, local councils have been discouraged from investing in housing, in particular by ring-fencing the Housing Revenue Account (HRA), which pools and redistributes nationally proceeds from rents and dwelling sales under the Right to Buy (DCLG, 2007). The announced dismantling of the HRA could provide new opportunities for the development of council housing. However, house building by local authorities is now almost negligible – less than 2% of social dwelling completions.

Therefore, Housing Associations are likely to continue to provide the bulk of new affordable housing. These non-profit institutions have been the main providers of new homes in the social sector since policies encouraged local councils to transfer to them a large share of the social stock in the late 1980s (Whitehead, 2007). Importantly, around half of affordable social housing is currently built by private house-builders for Housing Associations under section 106 agreements (Pretty and Hackett, 2009). As noted earlier, section 106 agreements allowing for a variety of contributions from developers have made the planning process increasingly complicated and slow.[25] However, section 106 agreements have been successful in providing affordable homes and creating mixed communities (Burgess and Monk, 2010). Hence there is a case for focussing section 106 agreements on the provision of affordable housing in areas where this type of housing is needed.

Bringing in more private financing for affordable housing would allow government grants to be better targeted on areas where social returns are likely to be high, such as urban regeneration. The reductions in public grants, which financed about a third of new affordable housing, will make funding new construction challenging. Housing Associations will need to leverage public funds with more private finance than in the past to finance their development, through the issuance of bonds or equities (Pretty and Hackett, 2009). Bond financing has been quite successful since the Housing Act 1988 set the formal framework for introducing private finance in social housing funding (Whitehead and Williams, 2009). The Housing Benefit has provided a guarantee for private investors in affordable housing, and scaling it back will make investment in this area less attractive. Attracting private equity into Housing Associations could increase financing possibilities. The Housing and Regeneration Act 2008 allows the registration of for-profit enterprises as Housing Associations from April 2010 (Elphicke, 2010). The legislation ensures the same level of protection to tenants of for-profit and non-profit Housing Associations. A strong equity base facilitates investment in long-term and risky projects, such as urban regeneration. Non-profit organisation active in both the market and social sectors can use cross-subsidisation to finance social housing. However, it is crucial that Housing Associations are carefully regulated so that excessive risk-taking in market activity does not put the provision of affordable housing at risk.

24. Currently, median local authorities and Housing Associations' rents are respectively about 50 and 60% of private rents (Diacon *et al*., 2010).

25. Another potential drawback of providing affordable housing through section 106 agreements is that the supply of social dwellings might become more pro-cyclical than in the case of direct government provision.

Affordable housing also needs to be more flexible and more responsive to tenants' needs. Social housing has become more and more polarised over the past two decades, with particular concentrations of deprivation in some specific neighbourhoods and estates. Residents and neighbourhoods have been increasingly stigmatised and social housing has tended to become the tenure of last resort. To remove the stigma associated with living in social housing it is essential to create mixed communities. Section 106 agreements provide a useful contribution to this objective. In addition, policies should promote more flexible tenures. One example is the HomeBuy scheme, which enables social tenants, key workers and first-time buyers to buy a share of a home and get onto the housing ladder. By allowing social tenants to become homeowners within their neighbourhood, shared-ownership schemes promote tenure and social mix. They allow households who cannot buy outright to participate in capital gains in rising markets. Shared-ownership also allows flexibility during recessions, when people facing difficulties repaying their loans can reduce their equity or stay in their homes as tenants. Older people could also withdraw equity from their homes to finance consumption.

Property taxation could have a stabilising effect

The current set of housing-related taxes in the United Kingdom is quite regressive and encourages excessive demand for housing, which is particularly harmful in a situation where supply is heavily constrained (Andrews, 2010).[26] More effective taxation could help contain demand and stabilise the housing market. Mortgage interests are no longer tax deductible since 2001 and recurrent taxes on immovable property are comparatively high (OECD, 2009b).[27] On the other hand, imputed rents and capital gains on owner-occupied houses are not taxed and there is no VAT on new construction. Finally, there is a stamp duty land tax on housing transactions, but it is on average not very high by European standards (EMF, 2006). UK housing taxation appears to favour wealthier and older households relative to poorer and younger ones (Evans, 2009). As an investment good, owner-occupied housing does not seem to be excessively advantaged, as other investments – such as Individual Savings Accounts (ISA) and pension funds – also benefit from exemptions from taxes on dividends and capital gains. As a consumption good, the absence of VAT on new homes advantages housing over other goods, even if this advantage is partly offset by the existence of the Stamp duty land tax and the Council tax (IFS, 2004).

The introduction of a property tax related to market values has been widely recommended (*e.g.* Barker, 2004; IFS, 2004; IMF, 2005; Muellbauer, 2005, OECD, 2005). The Mirrlees review also concludes that "Council tax should be reformed to relate it more closely to actual property values" (Mirrlees, 2010). The Council tax is a local tax on property. Its level is set by local authorities, although relative tax rates between properties in different valuation bands are determined by central government. Property valuations used for this purpose are still based on 1991 valuations, favouring households whose house values have increased most.[28] Furthermore, the Council tax is highly regressive. In England, the tax liability for properties over £320 000 is only twice the liability for properties of £70 000 and three times

26. The owner-occupier tax advantage is estimated at £23.7 billion in 2007-08. This is higher than the £15.7 billion Housing Benefit bill in the same year. The tax advantages taken into account in this estimation are the absence of tax on imputed rents and of capital gains tax on principal residences (Diacon, *et al.*, 2010).

27. Recurrent taxes on immovable property amounted to 3.2% of GDP in 2007. However, this item includes taxes on business – *e.g.* shops, factories and offices. Taxes on households (essentially the council tax) represented 1.7% of GDP, which is the highest among countries reporting this item.

28. Except in Wales, where a revaluation was carried out in 2005 (based on 2003 property values) and Northern Ireland (which has domestic rates rather than Council tax).

the liability for houses under £40 000.[29] An additional undesirable feature of this tax in a context of housing shortages is a discount on second and empty homes. Hence, the Council tax should be reformed or replaced by a property tax based on current market values or a land tax (Crawshaw, 2009). One positive aspect of the Council tax is that as a local tax it provides local authorities with a steady flow of income independent of central government. Any reform proposal needs to take this into account (see below).

Scrapping the Stamp duty land tax and replacing it with a recurrent tax on property would also increase efficiency. As with any transaction tax, the Stamp duty land tax penalises mobility, with negative consequences on the labour market and economic growth.[30] In addition, the Stamp duty land tax increases the amount of cash needed up-front by house-buyers, penalising young households with little savings in high prices areas. The government tried to use Stamp duty land tax holidays to buttress the market during the early 1990s downturn and again very recently. The results of such initiatives in boosting transactions are mixed (Nationwide, 2010). While using the Stamp duty land tax to dampen cyclical fluctuations can make sense in theory, getting the right timing for changes in rates is challenging and other instruments might be more appropriate.

Tax neutrality considerations would support charging VAT on new homes, especially as VAT is charged on repair, maintenance and improvements of existing homes (Evans, 2009). Housing seems to benefit from a more favourable tax treatment as a consumption good, than as an investment vehicle. However, charging VAT on new homes would reduce housing supply incentives, which is clearly not desirable in the current environment.

A property tax would mitigate adverse distributional effects of supply restrictions. Planning constraints, which to some extent reflect external costs, translate into high house prices, which should reduce demand for land and houses. However, houses are investments as well as consumption goods. As planning constraints lead to rising house prices and thereby expected capital gains, they lower the user cost of housing.[31] In other words, housing is expensive but the prospects of capital gains are high. This leads those who can afford it to over-consume (Barker, 2008). As a result, others, especially young households, are increasingly excluded from homeownership. In some sense, the implicit tax falls on those who can the least afford it, exacerbating wealth inequalities.

A tax on actual property values would likely slow growth in household debt and housing demand, by moderating the financial accelerator, as increases in mortgage debt over recent years mainly came from existing homeowners taking advantage of rising housing wealth to increase investments in dwellings or withdraw equity. It would also make it less attractive to buy houses for an investment motive and provide a disincentive to leave homes empty. A property tax would increase the user cost of housing, contain housing demand through income and collateral effects, and limit expectations of house price increases.

Assessing the quantitative impact of a property tax on house prices is difficult. Nevertheless, a rough calculation suggests that the impact could be significant. An increase in the property tax by one percentage

29. Low income households are entitled to a council tax benefit. However, the take up is only around 65 per cent. The council tax benefit also generates disincentives to work and save (Crawshaw, 2009).

30. The structure of the stamp duty also distorts the price distribution of transactions. Rates are applied on the full value of the property, rather than on the value in excess of the relevant threshold. Hence, house prices tend to cluster just below thresholds (Andrews *et al*., 2003).

31. The user cost of housing is defined as the nominal house price multiplied by the sum of the after-tax nominal mortgage interest rate, the property tax rate on owner-occupied houses and recurring holding costs less the expected capital gains on houses.

point would lower house prices by 4%, through the user cost of capital.[32] Lower after-tax income would reduce house prices by an additional 14%, assuming an income elasticity of house prices of around two and a house price-to-income ratio of seven. The effects of dampening the financial accelerator by limiting increases in collateral and containing expectations of house price increases are difficult to quantify. But altogether, rough estimates suggest that a property tax linked to the value of houses would have lowered prices by at least 20% at the peak of the market in 2007. This result is broadly in line with estimates indicating that the introduction of a tax equivalent to a sixth of imputed rents could lead to a 20 to 25% fall in prices reported by Muellbauer (2005). More stable house prices would foster more balanced and sustainable economic growth, while wealth could be more equally distributed.

The implementation of a property value tax requires consideration of four additional factors. First, a property tax based on market values would bring volatile proceeds, which is undesirable for local finances. Therefore, its introduction would require a reorganisation of public finances between central and local government. As noted by the Lyons inquiry, the council tax is both a charge for local services and a property tax (Lyons, 2007). Local government should receive stable financial flows corresponding to the charge for local services. The more volatile property tax element could be transferred to central government. This split would allow local governments to benefit from increases in the number of dwellings but not from price increases. This is desirable, as benefitting from house price increases could induce local authorities to limit housing development. Second, a regular updating of property values entails administrative costs, but these seem manageable. The Lyons inquiry (Lyons, 2007) states that "the technology now exists to go ahead with a revaluation relatively cost effectively". Nine OECD countries reassess cadastral values at least every five years (Johansson, 2011). Third, as the introduction of a property value tax can have a significant effect on house prices, it might be judicious to phase it in progressively. Policymakers should consider the timing of measures carefully in order not to destabilise a vulnerable market. Safeguard mechanisms for housing rich but income poor households, mainly retired, would also need to be devised. Options would be to defer the payment till the sale of the house or the death of the owner or to develop an efficient market for equity withdrawal to pay for taxes. Fourth, should replacing the stamp duty and the council tax by a property value tax prove politically infeasible, a first step could be to base the council tax on regularly updated property valuations.

The stability of the mortgage market needs to be strengthened

Mortgage market developments during a great part the 2000s have been characterised by an easing of credit standards and the reliance on risky funding models. Financial system reforms, at the national and international level, including greater capital and liquidity requirements, will contribute to enhancing the sustainability of mortgage lending. But issues specific to the mortgage market also need to be examined.

Loosening of lending standards contributed to vulnerability

Loosening of credit standards on broad categories of loans in the run-up to the crisis facilitated by ample liquidity and widespread underestimation of risks made the financial sector vulnerable to a change of market conditions. The Financial Services Authority Mortgage Market Review (FSA, 2009) documented an increase in the share of high-risk products: in 2007, 49% of all regulated mortgage sales involved no income verification and 32% were interest-only loans. While in the past interest-only loans were generally associated with investment vehicles to build up the capital for the repayment of the principal, this was much less frequent in recent years.[33] There is evidence that interest-only loans were

32. This derives directly from the house price equation estimated in Box 2. This result is close to earlier estimates by the IMF (2005).

33. In 1995, 62% of new mortgages were interest-only, of which only 10% had no repayment vehicle. In 2005, 24% of new mortgages were interest-only, of which 20% had no repayment vehicle (Lunde, *et al.*, 2007).

often taken for affordability motives, especially by credit-impaired households, among which they were estimated to account for about half of originations in 2007. Repayment strategies for interest-only loans do not always appear to be credible (Lunde, *et al.*, 2008). In addition, 28% of loans had a loan-to-income ratio higher than 3.5 and 14% had a loan-to-value ratio higher than 90%. Moreover, during the boom, subprime lending expanded rapidly to reach about 8% of total gross mortgage lending in 2007.[34] Subprime lenders, including specialist (non-banks) lenders, were targeting categories of households which had previously little access to mortgage finance, in particular those with an impaired credit history. The business model of subprime lenders was often based on "equity lending", focusing more on the equity in the property than on the ability of the mortgagor to repay the loan. Nevertheless, the loosening of lending standards did not go as far as in the United States, and the UK subprime market represented a smaller share of total mortgage lending.[35]

The FSA Mortgage Market Review has called for a fundamental change in the regulatory and supervisory approach to mortgage finance. The "existing regulatory framework has proved to be ineffective in constraining particularly risky lending and unaffordable borrowing". In the past, the FSA had been reluctant to embark in product regulation, fearing discouraging innovation, and confident that "well managed firms will not develop products which are excessively risky and (…) well informed consumers will only choose products which serve their needs" (FSA, 2009). But, in the light of recent developments, prudential reform is warranted.

A limit on loan-to-value ratios (LTV) could rein in high-risk lending, but it is a crude instrument for slowing the growth in mortgage debt and reducing household vulnerability. High LTVs increase the vulnerability of households to falling house prices and allow rapid growth in household debt. However, recent increases in household debt in the United Kingdom have not generally been driven by high LTVs, even though there are examples of banks which have offered loans with LTVs up to 125%. As shown earlier, the deposit put down by buyers has increased substantially in recent years. Furthermore, the proportion of borrowers taking over 90% LTV loans was lower in the 2000s than in the 1980s and the 1990s. With house prices increasing faster than income, the borrowing capacity of households has been increasingly constrained by their level of income, forcing buyers to build larger deposits to finance their acquisitions. Even if LTVs are correlated with arrears, other characteristics of loans, such as self-certification of income or impaired credit history, seem to be better predictors of default (FSA, 2009). Moreover, limits on LTVs would disproportionately weigh on first-time buyers.

Other options are caps on loan-to-income (LTI) or debt-to-income ratios (DTI). However, the LTI is not necessarily a good indicator of the capacity to repay the mortgage, which depends on many other factors, such as other financial commitments or holding of financial assets. In fact, LTIs appear to be poor predictors of defaults. As about two-thirds of mortgagors also hold unsecured debt and these households are the most vulnerable to possessions (research by the FSA found that only 12% of a sample of possessed properties had only the original mortgage secured on them), limits could be set on DTIs. But, like the LTI, the DTI is not a reliable indicator of repayment ability, in particular because it disregards absolute levels of debt and income and the cost of servicing the debt. Overall, imposing caps on LTVs, LTIs and DTIs does not look like an effective way to reduce mortgage risk and would deny access to borrowing to some households who could afford it, especially many first-time buyers. However, these ratios could still be used as part of a more thorough risk assessment, as suggested by the FSA. Loan-to-value ratios are also being considered, along with other instruments, as a macro-prudential tool for use by the government's proposed Financial Policy Committee.

34. Subprime lending caters to borrowers that do not qualify for conventional loans, because of poor credit history and/or insufficient guarantees to qualify for prime loans.

35. The US subprime market accounted for about 20% of originations at its peak between 2004 and 2006.

The focus should be on affordability and risk assessment, which ultimately determine the sustainability of lending. During the boom, many lenders failed to properly assess the repayment abilities of borrowers. In particular, the share of non-income verified mortgages – either self-certified or "fast track", *i.e.* requiring no immediate proof of income – rose rapidly, to nearly one in two in 2007 (FSA, 2009). Self-certified loans were initially developed to cater to the self-employed who could not document a steady stream of income. Subsequently they were extended to salaried workers, with the risk that they would simply overstate their income. Even though income is far more uncertain for self employed than for wage earners, it should be possible to check that there is a reasonable probability that future income is sufficient to cover repayments. Risk-assessment was also sometimes deficient, with the sustainability of some mortgage portfolios dependent on benign economic and housing market conditions. The vulnerability of borrowers to adverse conditions, such as higher interest rates or declining house prices should be assessed carefully. For example, a benchmark for evaluating the affordability of a mortgage could be the comparison between the annuity on a fully amortising loan of a reasonable duration (*e.g.* 25 years) at a representative long-term rate (*e.g.* 6%) and the household's free disposable income.[36] Such a benchmark avoids loans appearing more affordable than they really are as a result of calculations based on unsustainably low interest rates or excessively long repayment periods. For interest-only loans, the lender should make sure that the borrower has a credible repayment strategy. Housing equity withdrawal allows smoothing consumption and can help households to withstand temporary shortfalls in income. However, lenders should make sure that households are not putting themselves at risk by depleting their equity buffer and taking up unaffordable levels of debt.

Along with sound lending standards, consumer information and financial education are essential to limit high-risk borrowing.[37] There is evidence that households tend to favour mortgages with low initial repayments, even if these imply higher risks (Lunde *et al*., 2008). In a highly competitive market, aggressive commercial practices are bound to worsen the problem. Households should be better informed about the risks associated with the mortgages they are taking, especially when increases in repayment levels over the life of the mortgage are likely. The Miles review of the mortgage market has shown that the structure of mortgage pricing in the United Kingdom generates cross-subsidisation of discounted variable and short-term fixed mortgages, creating unfairness and reducing transparency in the market (Miles, 2004). The review also concluded that such distortions were likely reduce the share of long-term fixed rate mortgages, which are in very low demand in the United Kingdom. There are advantages and weaknesses associated with each type of mortgage contract and the best option depends in part on the profile of the borrower. From a macroeconomic point of view, long-term fixed rate mortgages are likely to lead to more stable housing demand than variable rates (Catte *et al.*, 2004). On the other hand, variable rates generally fall during recessions, providing relief to indebted households. In any case, the mortgage market should provide fair and transparent choices to households.

The funding model also made the sector vulnerable to changes in market sentiment

The difficulties experienced by many mortgage lenders were more linked to structural weaknesses in their funding model than to the quality of their loan portfolio. The rapid expansion of lending in the 2000-2007 period opened a funding gap, which was filled by wholesale funding, with a large share coming from foreign leveraged investors, especially from the United States. With declining household saving rates and strong demand for loans, it became impossible for banks to fund their credit expansion mainly out of retail deposits, as they had traditionally done. CML (2010) documents that "between 2000 and 2007 the total amount of outstanding RMBS (Residential Mortgage-Backed Securities) and covered bonds rose from

36. Free disposable income is the amount of money available for mortgage servicing, calculated as gross income minus expenditure. It is the amount that a borrower can afford to pay towards the mortgage (FSA, 2009).

37. The OECD Project on Financial Education provides useful recommendations in this respect.

£13 billion to £257 billion. This took them from funding 2.5% of the UK mortgage stock to 21.5%". After the collapse of the US subprime mortgage market, investors lost appetite for asset-backed securities, putting the lenders that relied heavily on such funding vehicles in a desperate position. Northern Rock and Bradford & Bingley had to be fully nationalised. The State also took stakes in other mortgage lenders. Furthermore, the special liquidity scheme (SLS) and the credit guarantee scheme (CGS) are still providing funding for about £300 billion (CML, 2010). A key challenge for the UK mortgage market is to secure sufficient stable funding to meet demand, once the SLS and CGS expire (respectively in 2011-12 and 2012-14).

As the retail deposit base is insufficient to replace financing through the SLS and CGS, stable wholesale funding is likely to be needed. CML (2010) estimates that, "at current rates of growth, it would take 9½ years for deposits to fill the gap without any growth in mortgage debt". Recourse to wholesale funding should not be a problem in itself, but has at least two potential pitfalls. First, when loans may be removed from balance sheets through securitisation, as was the case until recently, this may lead to a loosening of lending standards. However, new accounting rules have been designed to prevent assets from being moved off balance sheet. Second, if there is a maturity mismatch between assets and liabilities, as when mortgages are ultimately financed by money market borrowing, there is a liquidity risk.

Measures are needed to revive the RMBS market in a sustainable way. Although the crisis eroded confidence in mortgage-backed securities, securitisation can play a positive role in housing finance if done in a reasonable way. The model based on the securitisation of prime mortgages, which became predominant in the United States after the Savings and Loans crisis of the 1980s, has been quite successful in bringing stability to housing finance before the expansion of opaque securitisation of subprime mortgages undermined the whole system (Schnure, 2005; Green and Wachter, 2007). To avoid the problems with asymmetry of information between the issuer of the security and the investor (principal-agent problem), lenders should be required to keep a significant share of the risk on their balance sheet. High quality loans, respecting some objective criteria (*e.g.* income documentation, non-impaired credit history) could be securitised safely. Securitisation of lower quality loans requires extreme caution. In principle, investors should be free to select products with a risk-return profile matching their investment objectives. Securities based on subprime loans yield a higher return for a higher risk than prime loans. Nevertheless, information requirements are high. The characteristics of the underlying loans should be fully transparent, allowing investors to rely less on rating agencies to assess risks than in the past. Regulators need to make sure that if mortgage-backed securities based on subprime loans are issued, they can be clearly differentiated from those based on prime loans to avoid any contagion in case of crisis.

Covered bonds, another option to fund mortgages, are more widely used in several European countries (*e.g.* Denmark, Germany) than in the United Kingdom. They are generally considered particularly safe for investors as they offer dual recourse to both the mortgage pool and the issuer.[38] They are also often over-collateralised on an ongoing basis, providing an additional guarantee to investors.[39] European covered bonds performed relatively well during the financial crisis compared to asset-backed securities and senior bank debt (ECB, 2008). The issuance of covered bonds could help UK banks to raise more long-term funds to finance mortgages and to diversify their funding sources. Such instruments could support the development of long-term fixed rate mortgages, as the Miles report suggested. Whereas the bulk of demand for floating-rate bonds traditionally comes from leveraged investors, fixed-rate products appeal to long-term investors, such as pension funds, as they provide a more stable source of funding (CML, 2010).

38. But as a consequence, assets are not available to depositors or the taxpayer in the event of the bank's insolvency.

39. Over-collateralisation is also possible within the Master Trust structures used for mortgage securitisation in the United Kingdom.

Bibliography

Adams, D., C. Leishman and C. Watkins (2008), "Understanding Builder to Builder Residential Land Transactions: Literature Review and Hypotheses", Interim Report to Communities and Local Government, March.

André, C. (2010), "A bird's eye view of OECD housing markets", *OECD Economics Department Working Papers*, No. 746, OECD, Paris.

André, C. and N. Girouard (2010), "Housing Markets, Business Cycles and Economic Policies", in: Arestis, P., P. Mooslechner and K. Wagner (eds.), *Housing Market Challenges in Europe and the United States*, Palgrave Macmillan.

Andrews, D. (2010), "Real House Prices in OECD Countries – The Role of Demand Shocks and Structural and Policy Factors", *OECD Economics Department Working Papers*, No. 831, OECD, Paris.

Andrews, D., A. Caldera Sánchez and Å. Johansson (2011), "Housing Markets and Structural Policies in OECD Countries", *OECD Economics Department Working Papers*, No. 836, OECD, Paris.

Andrews, M., A. Evans, P. Koundouri, G. Meen (2003), "Residential stamp duty: time for a change", CML Housing Finance, Summer 2003, Council of Mortgage Lenders, London.

Aoki, K., J. Proudman and G. Vlieghe (2002), "Houses as Collateral: Has the Link between House Prices and Consumption in the UK Changed?", Federal Reserve Bank of New York, *Economic Policy Review*, Vol. 8, No. 1, New York.

Ball, M. (2010), "The housebuilding industry. Promoting recovery in housing supply", Communities and Local Government, London, April.

Ball, M., G. Meen and C. Nygaard (2010), "Housing supply price elasticities revisited: Evidence from international, national, local and company data", *Journal of Housing Economics* 19 (2010) pp. 255–268.

Barker, K. (2004), *Barker Review of Housing Supply. Final Report – Recommendations*, London.

Barker, K. (2006a), *Barker Review of Land Use Planning. Interim Report – Analysis*, London.

Barker, K. (2006b), *Barker Review of Land Use Planning. Final Report – Recommendations*, London.

Barker, K. (2008), "Planning policy, planning practice, and housing supply", *Oxford Review of Economic Policy*, Vol. 24, No. 1, 2008, pp. 34–49.

Barrell, R., S. Kirby and R. Riley (2004), "The Current Position of UK House Prices", *National Institute Economic Review* 2004, 189: 57.

Bernanke, B., M. Gertler and S. Gilchrist (1998), "The Financial Accelerator in a Quantitative Business Cycle Framework", *NBER Working Paper*, No. 6455.

BSA (2007), "House Price Expectations: an Insight into How People Think about Property Purchase", Building Societies Association, London.

Burgess, G., S. Monk and C. Whitehead (2010), "How can the planning system deliver more housing?", Joseph Rowntree Foundation, York, March.

Burgess, G. and S. Monk (2010), "If it works, why fix it? The future of planning obligations through section 106", paper presented at: CCHPR conference "Housing: the next 20 years. Learning from the evidence", University of Cambridge, 16–17 September.

Caldera Sánchez, A. and D. Andrews (2011), "To Move or Not to Move: What Drives Residential Mobility Rates in the OECD?", *OECD Economics Department Working Papers*, No. 846, OECD, Paris.

Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", *OECD Economics Department Working Paper*s, No. 837, OECD, Paris.

Cameron, G., J. Muellbauer and A. Murphy (2006), "Was there a british house price bubble? Evidence from a regional panel", *Centre for Economic Policy Research Discussion Paper* No. 5619, April.

Catte, P., N. Girouard, R. Price and C. André (2004), "Housing Markets, Wealth and the Business Cycle", *OECD Economics Department Working Paper*s, No. 394, OECD, Paris.

DCLG (2007), "Homes for the future: more affordable, more sustainable", Communities and Local Government, London, July.

CML (2008), "Household wealth and housing equity", *Council of Mortgage Lenders news and views*, issue No. 6, 8 April.

CML (2010), "The outlook for mortgage funding markets in the UK in 2010–2015", Report by the Council of Mortgage Lenders, January.

Conservative Party (2010), "Open Source Planning Green Paper", *Policy Green Paper* No. 14, February.

Crawshaw, T. (2009), "Rethinking housing taxation, Options for reform", Shelter, November.

Diacon, D., B. Pattison, J. Strutt and J.Vine (2010), "Support with Housing Costs. Developing a simplified and sustainable system", Consultation at St George's House, Windsor Castle, 22nd–24th June 2010", Building and Social Housing Foundation.

Doling, J. and Ronald, R. (2010), "Home ownership and asset-based welfare", *Journal of Housing and the Built Environment*, 25(2), pp. 165-173.

Dwelly, T. (2006), "Social Housing isn't working" in: T. Dwelly and J. Cowans (eds), *Rethinking social housing*, The Smith Institute, London.

DWP (2010), "21st Century Welfare", Department for Work and Pensions, July.

ECB (2008), "Covered bonds in the EU financial system", European Central Bank, December.

Elphicke, N. (2010), "Housing People; financing Housing", Policy Exchange, London.

Fenton, A. (2010), "How will changes to Local Housing Allowance affect low-income tenants in private rented housing?", Cambridge Centre for Housing and Planning Research, University of Cambridge.

EMF (2006), *Study on the Cost of Housing in Europe*, European Mortgage Federation, Brussels.

EMF (2009), *United Kingdom Factsheet 2009*, European Mortgage Federation, Brussels.

Evans, A.W. and O.M. Hartwich (2005), "Unaffordable Housing - Fables and Myths", Policy Exchange, London.

Evans, A.W. (2009), "Optimal Taxation Theory and the Taxation of Housing", Report to the Department of Communities and Local Government, London.

Fitzpatrick, S. and M. Stephens (2007), "An International Review of Homelessness and Social Housing Policy", Department for Communities and Local Government, London.

GO-Science (2010), Foresight Land Use Futures Project, Final Project Report, The Government Office for Science, London.

Green, R. K. and S. M. Wachter (2007), "The Housing Finance Revolution", paper presented at the Housing, Housing Finance, and Monetary Policy Symposium, sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, WY, 30 August – 1 September.

Harvard (2010), "The state of the nation's housing 2010", Joint Center for Housing Studies of Harvard University.

Hellebrandt, T., M. Waldron and G. Young (2008), "The financial position of British households: evidence from the 2008 NMG Research survey", *Bank of England Quarterly Bulletin*, 2008 Q4.

Hellebrandt, T., S. Kawar and M. Waldron (2009), "The economics and estimation of negative equity", *Bank of England Quarterly Bulletin*, 2009 Q2.

Hilber, C.A.L. and W. Vermeulen (2010), "The Long-Term Impact of Supply Constraints on House Prices in England", mimeo, London School of Economics, August.

Hills, J. (2007), "Ends and means: The future roles of social housing in England", *CASE report* 34, ESRC Research Centre for Analysis of Social Exclusion, London.

HM Government (2010), "Local growth: realising every place's potential", Presented to Parliament by the Secretary of State for Business, Innovation & Skills by Command of Her Majesty, 28 October.

HM Treasury (2010), *Spending Review 2010*, HM Treasury, October.

Holmans, A.(2008), "Homes for the future. A new analysis of housing need and demand in England", Technical Report, Cambridge Centre for Housing and Planning Research, University of Cambridge.

IMF (2005), United Kingdom: Selected Issues, *International Monetary Fund Country Report*, No. 05/81.

IMF (2008), "The Changing Housing Cycle and the Implications for Monetary Policy", *International Monetary Fund World Economic Outlook*, April, Chapter 3.

Irish Mortgage Arrears and Personal Debt Expert Group (2010), Interim Report, 5th July.

IFS (2004), "The taxation of housing", in: Institute for Fiscal Studies, *Green Budget*, January.

Johansson, Å. (2011), "Housing Policies in OECD Countries: Survey-based Data and Implications", *OECD Economics Department Working Papers*, OECD, Paris, *forthcoming.*

Lawson, J. and V. Milligan, "International trends in housing and policy responses", AHURI Final Report No. 110, Australian Housing and Urban Research Institute, Melbourne.

London councils (2010), "The Impact of Housing Benefit Changes in London", London councils, London.

Lunde, J., K. Scanlon and C. Whitehead (2008), "Interest-only and Longer-term Mortgages: Easier Access, More Risk" in: *Hypostat 2007*, European Mortgage Federation, November.

Lyons, M. (2007), *Lyons Inquiry into Local Government*, Place-shaping: a shared ambition for the future of local government, Final Report, London.

Maclennan, D. (2005), "Housing policies, New times, new foundations", Joseph Rowntree Foundation, York.

Meen, G. (2005), "On the Economics of the Barker Review of Housing Supply", *Housing Studies*, 20(6), pp. 949–71.

Meen, G. (2008), "Ten New Propositions in UK Housing Macroeconomics: An Overview of the First Years of the Century", *Urban Studies* 45 (13), 2759–2781.

Meen, G., and M. Andrew (1998), "On the aggregate housing market implications of labour market change", *Scottish Journal of Political Economy* 45(4): pp. 393-419.

Meen, G., and M. Andrew (2008), "Planning for housing in the post-Barker era: affordability, household formation, and tenure choice", *Oxford Review of Economic Policy*, Vol. 24, No. 1, 2008, pp. 79–98.

MfE (2010), *Building competitive cities: Reform of the urban and infrastructure planning system, a discussion document*, Ministry for the Environment, Wellington.

Miles, D. (2004), *The UK Mortgage Market: Taking a Longer-Term View*, Final Report and Recommendations, March.

Miles, D. and V. Pillonca (2008), "Financial Innovation and European Housing and Mortgage Markets", *Oxford Review of Economic Policy*, (2008), Vol. 24, No. 1, pp. 145–175.

Mirrlees, J. *et al.* (2010), *Tax by Design: The Mirrlees Review*, Chapter 16, "The taxation of Land and Property", Institute for Fiscal Studies, London.

Muellbauer, J. (2005), "Property Taxation and the Economy after the Barker Review". *Economic Journal*, Vol. 115, No. 502, pp. C99-C117, March.

Muellbauer, J. and A. Murphy (2008), "Housing markets and the economy: the assessment", *Oxford Review of Economic Policy*, Vol. 24, No. 1, 2008, pp. 1–33.

Nationwide (2010), *House Price Index Review*, March.

NHPAU (2009), "Affordability – more than just a housing problem", National Housing and Planning Advice Unit.

NHPAU (2010), "Public Attitudes to Housing 2010", National Housing and Planning Advice Unit.

Nickell, S. (2009), "The British Housing Market: What has been happening?", *Oxonomics*, No. 4: pp. 10-18.

OECD (2005), *OECD Economic Surveys: United Kingdom*, OECD, Paris.

OECD (2008), *Policy Roundtables, Construction Industry*, OECD, Paris.

OECD (2009a), *OECD Economic Surveys: United Kingdom*, OECD, Paris.

OECD (2009b), "Taxation and Growth", Chapter 5, *OECD Going for Growth* 2009.

OFT (2008), *Homebuilding in the UK, A market study*, Office of Fair Trading, September 2008.

Onado, M. (2009), "Northern Rock: just the tip of the iceberg", in: F. Bruni and D. T. Llewellyn (eds), *The failure of Northern Rock: a multi-dimensional case study*, SUERF Studies: 2009/1, Vienna.

Pretty, D. and P. Hackett (2009), "Mind the Gap – Housing Supply in a Cold Climate", A Discussion Paper for the Smith Institute, the Town and Country Planning Association and PricewaterhouseCoopers.

Priemus, H. and D. Maclennan (1998), "The Different Faces of Private Rented Housing", *Netherlands Journal of Housing and the Built Environment*, Vol. 13, No. 3.

RBA (2010), *Financial Stability Review*, Reserve Bank of Australia, March.

Reynolds, L., H. Parsons, A. Baxendale and A. Dennison (2008), "Breaking point – How unaffordable housing is pushing us to the limit", Shelter, London.

Rugg, J. and D. Rhodes (2008), "The private rented sector: its contribution and potential", Centre for Housing Policy, University of York.

Scanlon, K. and C. Whitehead (2007), "Social Housing in Europe", in: C. Whitehead and K. Scanlon (eds.), *Social Housing in Europe*, London School of Economics, London.

Schnure, C. (2005), "Boom-Bust Cycles in Housing: The Changing Role of Financial Structure", *International Monetary Fund Working Paper*, No. 05/200.

Shelter (2010), *Comprehensive spending review briefing*, Shelter, London.

Solutions (2009), Sustainability of Land Use and Transport in Outer Neighbourhoods, Final Report: Strategic Scale, November.

SSAC (2010), The Housing Benefit (Amendment) Regulations 2010 (S.I. No. 2010/2835), the Rent Officers (Housing Benefit Functions) Amendment Order 2010 (S.I. No. 2010/2836): report by the Social Security Advisory Committee under section 174 (1) of the Social Security Administration Act 1992 and the statement by the Secretary of State for Work and Pensions in accordance with sections 174 (2) of that Act.

Stock, J.H. and M. Watson (1993), "A simple estimator of cointegrating vectors in higher order integrated systems", *Econometrica*, Vol. 61, No. 4.

Styles, G. (2010), "Why current arrears and repossession data may flatter to deceive", Hometrack Lending Strategy – 1 July.

Tatch, J. (2006), "Will the real first-time buyers please stand up?", Council of Mortgage Lenders Housing Finance 03/2006.

Turley, C. and A. Thomas (2006), "Housing Benefit and Council Tax Benefit as in-work benefits; claimants' and advisors' knowledge, attitudes and experiences", *Department for Work and Pensions Research Report*, No. 383.

Waldron, M. and F. Zampolli (2010), "Household debt, house prices and consumption in the United Kingdom: a quantitative theoretical analysis", *Bank of England Working Paper*, No. 379.

Whitehead, C. (2007), "Social Housing in England" in C. Whitehead and K. Scanlon (eds.), *Social Housing in Europe*, London School of Economics, London.

Whitehead, C. and P. Williams (2009), "Development and Change: Private finance for social housing in the UK", London School of Economics, London.

Wilcox, S. (2008), "Can't Supply: Can't Buy. The affordability of private housing in Great Britain", Hometrack, London.

Wilcox, S. and G. Bramley (2010), "Evaluating requirements for market and affordable housing", The University of York, Heriot Watt University and NHPAU.

WORKING PAPERS

The full series of Economics Department Working Papers can be consulted at www.oecd.org/eco/workingpapers/

866. *An analysis of demand for foreign exchange reserves*
(May 2011) Peter Vujanovic

865. *Episodes of large capital inflows and the likelihood of banking and currency crises and sudden stops*
(May 2011) Davide Furceri, Stephanie Guichard and Elena Rusticelli

864. *The effect of episodes of large capital inflows on domestic credit*
(May 2011) Davide Furceri, Stephanie Guichard and Elena Rusticelli

863. *Medium-term determinants of international investment positions: the role of structural policies*
(May 2011) Davide Furceri, Stephanie Guichard and Elena Rusticelli

862. *French social housing in an international context*
(May 2011) Kathleen Scanlon and Christine Whitehead

861. *Making the housing market work better*
(May 2011) by Hervé Boulhol

860. *Surveillance by international institutions: lessons from the global financial and economic crisis*
(April 2011) by Kumiharu Shigehara and Paul Atkinson

859. *France's environmental policies: internalising global and local externalities*
(April 2011) by Balázs Égert

858. *Bringing French public debt down: the options for fiscal consolidation*
(April 2011) by Balázs Égert

857. *Policy frameworks in the post-crisis environment*
(April 2011) by Nigel Pain and Oliver Röhn

856. *Global imbalances, exchange rate pegs and capital flows: a closer look*
(April 2011) by Paul van den Noord

855 *Interest rate pass-through during the global financial crisis: the case of Sweden*
(April 2011) by Niels-Jakob Harbo Hansen and Peter Welz

854 *What drives inflation in the major OECD Economies*
(April 2011) by Diego Moccero, Shingo Watanabe and Boris Cournède

853 *Mitigation potential of removing fossil fuel subsidies: A general equilibrium assessment*
(April 2011) by J.M. Burniaux and J. Chateau

852 *Enhancing labour utilisation in a socially inclusive society in Australia*
(April 2011) by Vassiliki Koutsogeorgopoulou

851 *Meeting infrastructure needs in Australia*
(March 2011) by Claude Giorno

850 *Restoring fiscal sustainability in Spain*
(March 2011) by Pierre Beynet, Andrés Fuentes, Robert Gillingham and Robert Hagemann

849. *Drivers of homeownership rates in selected OECD countries*
(March 2011) by Dan Andrews and Aida Caldera Sánchez

848. *How efficient are banks in Hungary?*
(February 2011) by Margit Molnár and Dániel Holló

847. *Strengthening the macroeconomic policy framework in South Africa*
(February 2011) by Tatiana Lysenko and Geoff Barnard

846. *To move or not to move: what drives residential mobility rates in the OECD?*
(February 2011) by Aida Caldera Sánchez and Dan Andrews

845. *Reforming the labour market in Spain*
(February 2011) by Anita Wölfl and Juan S. Mora-Sanguinetti

844. *Macroeconomic Impact of Basel III*
*(*February 2011) by Patrick Slovik and Boris Cournède

843. *The policy and institutional drivers of economic growth across OECD and non-OECD economies: new evidence from growth regressions*
by Romain Bouis, Romain Duval, and Fabrice Murtin

842. *Limiting Long-Term Unemployment and Non-Participation in Sweden*
(February 2011) by Niels-Jakob Harbo Hansen

841. *Enhancing the cost-effectiveness of climate change mitigation policies in Sweden*
(February 2011) by Stéphanie Jamet

840. *Policies towards a sustainable use of water in Spain*
(February 2011) by Andrés Fuentes

839. *Increasing public sector efficiency in Slovakia*
(January 2011) by Felix Hüfner

838. *Raising education outcomes in Switzerland*
(January 2011) by Andrés Fuentes

837. *The Price Responsiveness of Housing Supply in OECD Countries*
(January 2011) by Aida Caldera Sánchez and Åsa Johansson

836. *Housing markets and structural policies in OECD countries*
(January 2011) by Dan Andrews, Aida Caldera Sánchez and Åsa Johansson