

Working Paper 72

House prices in London – an economic analysis of London's housing market

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Executive summary

This paper looks at the level of London’s house prices from an economic perspective. It looks at the fundamental processes that drive the market for buying and selling homes, considering the extent to which the observed changes in house prices are reasonable, and the possible long-term consequences of house price inflation for London. While highlighting potential issues for particular groups which may have long-term economic consequences, this paper focuses on the price of homes and costs of housing in London in economic terms. It therefore primarily considers the private market for owner-occupied and mortgage-backed housing.

In economic terms, house prices in equilibrium are set by the balance of demand and supply. However if, for example, supply persistently fails to respond to higher prices, or if prices are driven by factors other than the fundamental need for housing, the desire to buy it and corresponding ability to pay, house prices may potentially be deemed unaffordable or overvalued. This can place upward pressure on wages and the costs of doing business as well as increase the risks to macroeconomic stability. Housing affordability is thereby defined in economic terms as the relationship between market-determined housing costs and the ability to pay for them. It does not relate to the concept of ‘affordable homes’, which refers to social rented, affordable rented and intermediate housing, provided to specified eligible households whose needs are not met by the market.

Even at equilibrium, prices will be beyond the budget of some households, leaving some unable to pay and thereby unable to access home ownership. Such a lack of affordability, in social terms, can also have perverse effects on the costs of living by pushing up rents, and may also contribute to ill health and wellbeing due to sub-standard living conditions, over-crowding and insecure tenure. High house prices and the associated concentration of wealth among homeowners may also contribute to greater inequality across the generations and present a barrier to social mobility.

London’s house prices are considerably higher, and have been rising at a faster rate than the country as a whole. This is particularly true in desirable central London boroughs with median house prices in 2014 as high as £860,000 in Westminster (up 11.4 per cent annually in the five years since 2009) and £1.2 million in Kensington and Chelsea (up 12.2 per cent annually in the five years since 2009) based on Land Registry data. This compares to a London borough low median house price of £215,000 in Barking and Dagenham (up 6.1 per cent annually in the five years since 2009), which is still higher than the national average for England and Wales of £192,000 (up 2.6 per cent annually in the five years since 2009).

Over a longer-time horizon, housing markets in London have witnessed a number of ups and downs, with volatile house prices in London tending to amplify changes in national house prices. Although falls in the actual (nominal) value of the average home are relatively rare, London has experienced several episodes of real house price deflation since the ONS data series began in 1969. From the patterns of previous cycles, there are no clear trends from price data alone to suggest whether London house prices are approaching a new peak, and whether this will entail a levelling off, or a more exceptional downward adjustment.

The observed increases in the price of the average London home have far exceeded growth in individual earnings. This has led to house prices which were almost 10 times median earnings in London in 2014, compared to about 4 times in 1997, and considerably higher than a previous peak in 1974. Looking instead only at the earnings of residents in the top 70th percentile of

income earners indicates a ratio of more than 8.4 times earnings, with this measure of affordability also widening over time. Such a measure does not however account for the role of households with multiple earners, non-wage incomes, or the availability of mortgage finance, and may therefore be an imperfect measure of the ability to finance home ownership insofar as these other factors have changed over time.

The ratio of house prices to the incomes of mortgage-holders provides an alternative measure of affordability. Based on this measure, London’s pre-crisis average house prices ranged between 1.9 and 3.5 times the income of mortgage applicants, notably lower than the UK as a whole. In each case the ratio of house prices to incomes ended the period at its peak level immediately before the start of the economic downturn. The average house price in London however is now 5.3 times the average income of mortgage applicants, compared to 4.4 times in the UK as a whole, in excess of its pre-crisis peak. From a borrowers’ perspective, the median value of mortgages secured on properties in London increased from being 2 times greater than buyers’ median income in the 1980s, to more than 3.5 times the value of borrowers’ income by 2013. These measures reflect the high house price rises in the capital but may also capture changes in the profile of applicants, or number of joint applications over time.

Standard measures of housing affordability in terms of the relationship between house prices, earnings and incomes therefore suggest that there is an increasing affordability gap. An alternative explanation for the observed trends in affordability, which the above ratios and multiples do not account for, relates to changes in the quality of the surrounding local area and the access to amenities that it offers. Evidence from academic research suggests that the wider benefits of urban living may explain a part of the difference in housing costs across cities and over time, as for example, cities have become safer, less crime-ridden places to live and a vibrant cultural life has given cities an edge in attracting talent. In the past decade, there is a range of evidence to suggest that London has become increasingly attractive as a place to live.

With the recent growth of the private rented sector and buy-to-let market, and recent growth also in overseas ownership, there are arguably two extra components of demand compared to the past. However, there is limited available evidence that either of these have had a profound impact on house prices. Indeed, although increasingly supported by buy-to-let mortgages, the share of the private rental market in London remains lower than it was previously in the 1960s and 1970s. It is however arguable that the strong long-run performance of London housing relative to alternative investments may have contributed to London’s housing stock being increasingly seen as a vehicle in which to hold money, acting as a possible further incentive towards owner-occupation. With regard to foreign or overseas ownership, the evidence is also mixed, and on balance suggests that it is responsible for only a small share of transactions and likely to have had only modest effects on house prices in London. There is also some evidence to suggest that following the economic crisis, the additional demand for new build properties may have to some extent lessened the negative impact of credit constraints on construction activity.

The purchase price of a house is not however the same as the cost of owning a home. Instead, the annual cost of home ownership can be more accurately measured by considering the share of incomes devoted to housing. Based on measures of the cost of financing mortgage repayments and the overall costs of housing, the annual cost of owning a home in London is below its previous peaks. This is primarily due to the historically low mortgage interest rates that homeowners currently face. This notwithstanding, since property prices (and the corresponding size of advances) are much higher in London, mortgage holding households still spent

considerably more financing their mortgages costs in London than households in the rest of the UK.

Buyers, and particularly first-time buyers, face significant upfront costs in buying a house. The average deposit to income ratio for first-time buyers has increased at a rapid rate in London since 2008, reaching a high of 125 per cent in 2014. This is considerably above its long-run trend in the previous three decades, with deposits averaging 30 per cent of incomes from 1980-2007. The rapid deterioration in the affordability of home purchase, on this measure, is driven by a post-recession shift towards a larger size of deposits as a proportion of house values. There are signs that the value of larger deposits is increasingly being met by young first-time buyers through parental assistance and inheritance, which may have long-term implications for social mobility and entrench wealth inequality across generations.

Insofar as high house prices in London are supported by low costs of credit, this may make the London economy vulnerable to the risk of a price correction, particularly if the costs of borrowing were to rise, or access to credit and alternative income streams were to tighten. The Bank of England reports that a rise in bank rates from the current low of 0.5 per cent up to 2.5 per cent would almost double the proportion of households struggling to pay their mortgages (as those financed by a variable rate would face higher monthly costs of repayment). Given its increasingly high loan-to-income multiples, London households may be particularly exposed to changes in mortgage interest rates. Based on CML data, it is found that an increase in mortgage interest rates of three percentage points would significantly reduce affordability levels to their previous 1990 lows (such that almost a third of household incomes is taken on mortgage payments).

Demand for housing in London is partly driven by the desirability to live and work in London, but is also partly driven by natural changes in population (in terms of births and deaths) as well as socio-economic factors that drive household formation. It is this demand which, coupled with the increased ability to finance home ownership, places upward pressure on the price of housing in the capital. In a well-functioning housing market, the quantity of housing supplied should increase in response.

Comparing the cumulative growth in the housing stock and household population with house prices, it is notable that at a time of relatively stable real house prices from 1991 to 1997, the year-on-year growth in the number of London households was slower than growth in the number of London dwellings. Conversely, from 1998 to 2014, when the rates of growth in London’s population and number of households started to increase in excess of growth in the housing stock, real house prices rose by an annualised average of 9 per cent.

Limits on the responsiveness of supply seem to have amplified London house prices. Periods of high increase in house prices in London have been accompanied by only modest increases in the number of new homes built, and the levels of house-building in London have not kept pace with changes in house prices or the population. A number of factors may explain why housing supply in London has been relatively unresponsive to price signals to date, including constraints of the planning system as well as a number of possible market frictions which may slow, or inhibit, the response of private developers and house-builders. In this respect, further measures to overcome constraints in housing supply can be seen as an important step to address affordability in London’s housing market

1 Introduction

There is considerable public debate and concern over the affordability of house prices in London, and the potential risks of instability from the housing market. But do these concerns have strong foundations? This paper aims to consider the level of London’s house prices from an economic perspective. It looks at the fundamental processes that drive the market for buying and selling homes, considering the extent to which the observed changes in house prices are reasonable, and the possible long-term consequences of house price inflation for London.

The paper begins by considering how house prices are set and why this might matter. It then presents the recent trends in the housing market, including a review of the data sources used and some of the limitations faced in producing the analysis. It then proceeds to analyse whether or not the evidence suggests house prices are in line with underlying economic ‘fundamentals’, based on a range of indicators.

2 How are house prices set and do they matter?

In economics, the efficient allocation of resources requires that in the long run the price of any market good or service should be determined by the balance of supply and demand. This is true for the housing market as well, where the supply of houses for sale and the demand for housing to occupy should determine prices.

In a well operating housing market the quantity of properties for sale should be determined by the factors influencing the available housing stock, including the availability of land and the cost of building new homes. Demand for housing is determined by housing need driven by demographic developments, as well as the ability to pay (incomes, access to finance), and the desire to purchase a house.

Unlike most market goods and services, which are demanded for the good itself – we demand an apple because we want to consume it – some goods or services are instead demanded because they provide access to other goods. Transport services, for example, are often demanded so that we can ultimately consume another good or service (e.g. cinema). Housing is also, in many respects, a good that is demanded indirectly – in terms of access to local facilities, employment opportunities and other services it provides. Because of this, the desire to purchase a house will be affected by demand for these other markets. High house prices in a particular area may therefore reflect a relative abundance of amenities and offer residents a high quality of life¹. London’s abundant amenities and access to employment opportunities, in this sense, may to some extent compensate its residents for the high costs of housing.

High prices, in any market, reflect the intersection of strong demand and limited supply. If, at any given current market price, the number of houses demanded increases then prices will rise assuming fixed supply. Such changes, if driven by the fundamental determinants of demand and supply (as set out above), could result in a dynamic supply response, that is, where possible, there would be an increase in the quantity of houses supplied. Price rises driven by these fundamentals should remain efficient in the long term.

However, in the period of adjustment, prices may be viewed as ‘unaffordable’ while prices are high and the market is not supplying all that it should be. Since the demand for housing is related to the demand for access to employment, local facilities and other services, these high house prices can in turn have knock-on effects.

2.1 Housing market failures and economic imbalances

As stated above, the price for private market housing should, in theory, reflect the balance between the supply of houses and the demand for living in them. In practice, however, the supply and demand for housing may also be distorted by other factors unrelated to their fundamental determinants.

On the demand side, for example, the use of housing as a long-term investment asset may stimulate additional demand from investors and homeowners seeking to speculate on a property’s value in the expectation of realising future capital gains. In turn, this speculative

¹ Taking this logic a step further, it has been argued that ‘unaffordability’ at city level can itself be seen as an indicator of an area’s desirability and the quality of life it offers. See for example, Gibbons, S., Overman, H., and Resende, G. [‘Real earnings disparities in Britain’](#), SERC discussion paper 65.

demand may increase the price for London housing over and above the value of housing derived from living there (because investors are expecting future price increases)².

This effect will be exacerbated if investors choose to leave their investment units empty, and thereby directly reduce the supply of available housing³. There are also a number of innate qualities to housing, such as its long life, fixed location, the uniqueness of each property, and the one-off nature of most transactions, which mean that the market may fail to allocate housing efficiently⁴. On the supply side, for example, local scarcity of developable land, the time it takes to construct new housing and planning restrictions may also impede a timely response to changes in price⁵. As a result, house prices may be subject to high levels of volatility, and remain in excess of what might be considered as their equilibrium price for prolonged periods of time.

The implications of market distortions and knock-on effects can be serious, profoundly affecting the London economy and wellbeing of its residents. For London-based businesses, the rising costs of housing in an area place upward pressure on wages as firms compensate their workers for higher housing costs and/or longer commutes⁶. In turn, this may present an economic risk to London since it increases the costs of doing business, and reduces firms’ ability to recruit and retain staff in the capital⁷.

House price increases that are unrelated to the fundamental drivers of demand and supply, can also pose a threat to economic stability. In the 1980s rising house prices contributed to an economic boom that ultimately proved unsustainable. More recently, unsustainable house price rises in the US contributed to the global financial crisis in 2008. House price inflation in each of these examples increased indebtedness relative to income, and distorted economic behaviour. As house prices accelerate in a boom, households take on increasingly higher levels of debt, lenders are increasingly exposed to a volatile market and investment is increasingly directed towards, arguably, non-productive assets and activities. This increases the risk of economic instability if the costs of financing mortgage debt increases, or if house prices were to suddenly fall in value.

2.2 The wider, social implications of house prices

One of the most challenging obstacles to living in London, in terms of cost, is the cost of housing. In 2013, average housing expenditure in London was £135.90 per week, or 15 per cent of total weekly household expenditure⁸. This is higher than any other UK region, and average

² Alternative investment-based metrics which consider the relationship between house prices, rents and returns from alternative investments are considered separately in Appendix 1.

³ In 2013, an estimated 59,313 properties in London are empty based on DCLG council tax statistics, representing 1.7 per cent of the total housing stock.

⁴ For an overview of the market failures associated with London’s housing market, see: GLA (2003), ‘[Market failure and the London housing market](#)’, accessed on 22/09/14.

⁵ See for example, Department for Communities and Local Government (DCLG), ‘*The impacts of restricting housing supply on house prices and affordability*’, November 2010

⁶ For example, 49 per cent of London employees say they would likely consider moving out of London if house prices and rents continue to increase at current rates. Source: London First/Turner & Townsend, ‘Moving out: How London’s housing shortage is threatening the capital’s competitiveness’, September 2014.

⁷ Based on a representative sample of London business units, the London Business Survey 2014 found that around 63 per cent of businesses rated London as a poor or very poor location for their business in terms of the availability/cost of housing. Source: GLA Economics, ‘[London Business Survey 2014: main findings](#)’.

⁸ Housing expenditure here includes the cost of mortgage repayments and rent (less benefits, rebates and allowances received) on primary dwellings, as well as the costs of maintenance and repairs. It excludes council tax and other rates, property transaction costs, and expenditure on property improvements and insurance. Total expenditure includes all categories recorded

housing expenditure in the UK as a whole was £86.10 per week, equivalent to 12 per cent of total weekly household expenditure. Such higher housing costs drive up the cost of living for Londoners.

An individual household has a given amount of income to spend and cannot influence the price of the goods and services it buys. In the market for any good or service, there will be a number of households that are unable to purchase housing at a given market price as it will exceed their budget. Even in a perfect market, housing costs will therefore be ‘unaffordable’ for those households whose budget constraint falls below the going market rate. Housing affordability in this sense relates to equity, rather than efficiency issues.

It follows that, if the costs of housing increase (relative to changes in household incomes), then increasingly more households will find themselves priced out of the housing market; there will be a growing gap between the willingness and ability to pay. Those priced out of owner occupation will either move away, or turn to renting or social housing (if possible).

This inability to access home ownership is likely to be a particularly acute challenge for those outside the labour market and dependent on fixed incomes from the state or other sources. Rising housing costs may also lead to worse outcomes for those workers in sectors and low paid occupations, where incomes fail to increase in line with the cost of living⁹. It follows that a lack of affordability in social terms can also have long-term implications for London businesses (and their employees) that rely on the support services provided by other sectors, and relatively low-paid workers. The economy in turn may suffer from the consequent impediments to labour mobility as workers are unable to find somewhere to live within easy reach of the workplace.

High and rising house prices have also been linked to a number of social challenges, such as sub-standard living conditions, overcrowding and insecure tenure¹⁰. This can present serious consequences for health, sustenance and the wellbeing of London’s population. A lack of affordability can also place increased pressure on local public finances by, for example, increasing the reliance on housing benefit¹¹ as well as costs associated with health, education and to a lesser extent, crime and offending¹². The social costs of poor housing to individuals and the state are particularly concentrated among those whose housing needs are not met and who experience homelessness and temporary accommodation. While this paper is concerned with the private market for housing, these costs may provide a rationale for the provision of a separate market for ‘social housing’ below market rents.

Finally, the cost of housing can also raise a number of distributional effects. By increasing the barrier to home ownership, high house prices can have a particularly limiting effect on first time buyers, and particularly young households. At the time of the 2011 Census, 50 per cent of London households owned their own homes (either outright or with a mortgage), compared to 65 per cent in England and Wales as a whole, and down from 59 per cent in 2001¹³. Research

in the ONS Living Costs and Food Survey. Source: GLA Economics calculations based on ONS Family Spending 2013, reference table 2.5.

⁹ For analysis of the persistence of low paid employment, see: GLA Economics, ‘[Low pay in London](#)’, February 2014.

¹⁰ See for example: Whitehead, C. and Travers, T. (2011), ‘The case for investing in London’s affordable housing’, LSE London.

¹¹ The total housing benefit bill for London has increased from £2.5 billion to £6.2 billion (146 per cent) from 1998/99 to 2013/14. Source: Department for Work and Pensions, benefit expenditure and caseload tables 2014.

¹² There are numbers of studies that clarify the extent that poor housing increases the costs to public finances. See, for example: Friedman, D. (2010), ‘[The social impact of poor housing](#)’, 2010.

¹³ Source: [GLA analysis of historical Census data](#), accessed on 06/08/15

for Halifax finds that compared with other regions, London has the highest proportion of young people aged 20-45 who worry they will never be able to buy a house (82 per cent)¹⁴, with the majority of Londoners (69 per cent) citing high property prices as the most significant barrier to homeownership.

This barrier can contribute to housing wealth inequality across the generations, and may also limit social mobility. Property wealth is an important component of London’s unequal wealth distribution, accounting for almost 40 per cent of total wealth among the wealthiest 20 per cent of households in London¹⁵. Housing wealth is also an important source of inheritance. During 2010-12, it is estimated that 168,000 individuals in London received some form of inheritance in the preceding two years. Of these, 40,800 included a “house, flat, land, or share in property”, accounting for 24 per cent of all inheritances within London¹⁶.

So in conclusion, issues of house price affordability can be viewed in: (1) efficiency terms – the extent to which demand and supply are in balance; and (2) equity or social terms when prices are, arguably, in equilibrium but people cannot afford to pay. These present a range of different risks and problems for the London economy and the wellbeing of its residents. While highlighting potential issues for particular groups which may have long-term economic consequences, this paper focuses on the price of homes and costs of housing in London in economic terms. It therefore primarily considers the private market for owner-occupied and mortgage-backed housing. It does not relate to the concept of ‘affordable homes’, which refers to ‘social rented, affordable rented and intermediate housing, provided to specified eligible households whose needs are not met by the market’¹⁷.

¹⁴ Findings are based on over 40,000 interviews with 20-45 year olds across the UK from 2011-2015. Source: Halifax, ‘Five years of generation rent: perceptions of the first-time buyer housing market 2015’, April 2015.

¹⁵ The wealthiest 20 per cent of households in London held aggregate total wealth of £1,018 billion, of which £400 million was held in net property wealth. Source: ONS wealth and assets survey.

¹⁶ This does not include inheritance involving property that is sold and reported as a monetary inheritance. Source: [ONS ad hoc analysis of the Wealth and Assets Survey](#), 26 January 2015.

¹⁷ For definitions of these terms, see: DCLG, ‘[Definitions of general housing terms](#)’, accessed on 01/10/15

3 Trends in the London housing market

This report next looks at the different ways in which house prices are measured and puts the most recent house price rises in the context of experiences of the past 45 years. This serves to provide a backdrop for the subsequent discussion on economic affordability and sustainability of London house prices.

3.1 Measuring house prices and house price trends

There are a number of measures of house prices, which can give rise to different estimates of the level of house prices and how they are changing over time. These reflect differences in the underlying data and methodologies for their collection. There are two ‘official’ measures of house price levels in the UK:

- 1) The Office for National Statistics (ONS) house price data: based on a representative sample of UK-wide mortgage lending through the Regulated Mortgage Survey of the Council of Mortgage Lenders¹⁸.
- 2) Land Registry price paid data: based on a complete register of all residential sales at full market value¹⁹ in England and Wales.

Alternative datasets are also produced by Nationwide and Halifax based on their own mortgage approvals, irrespective of whether these result in actual purchases. In addition, comparison websites such as Rightmove.com and Zoopla produce measures of advertised asking prices and estimated prices respectively, while the Royal Institution of Chartered Surveyors (RICS) produces a leading sentiment indicator of conditions in the UK residential sales markets, based on new buyer enquiries. Such indicators can be useful to anticipate emerging market trends. This is because they overcome the time lags associated with the property search and offer process, having a mortgage approved, a transaction completed and registered with the Land Registry²⁰.

However, since they are based on a representative sample or comprehensive register of actual house sales, the two official data sources provide a more reliable measure of the average price of house sales at a particular point in time. Land Registry data is a particularly rich source of data on the ‘going market rate’ of housing at a given time as it can also provide information at borough level. It also includes transactions based on cash purchases as well as those backed by mortgage finance, while the ONS data only captures purchases financed by UK mortgages²¹. ONS data instead benefits from a richer time series, providing data on house prices by UK region back to 1969. The Land Registry data, though available at a more detailed level, dates back only as far as 1996.

Since house price changes over time may be affected by the quality and characteristics of the stock of housing available for purchase, the ONS, Land Registry, Nationwide and Halifax each produce their own House Price Index (HPI). The change in the index compared to a year earlier

¹⁸ For further details see: ONS, ‘[Official House Price Statistics Explained](#)’, April 2013, accessed on 06/08/15

¹⁹ This excludes the sale of part of a property, a share of a property, or the sale of a property at a discount. Examples include ‘Right to Buy’ sales at a discount, repossession sales or transfers between parties on divorce. Further details are available at: <https://www.gov.uk/about-the-price-paid-data#data-excluded-from-the-house-price-index-and-price-paid-data>, accessed on 06/08/15

²⁰ For further information see the Council of Mortgage Lender (CML) [mortgage statistics timeline](#) accessed on 06/08/15.

²¹ Nationwide estimates that cash purchases represented 37 per cent of total housing market transactions in London in 2013, in line with the UK average of 36 per cent. Source: [Nationwide house price index](#), May 2015.

is used to tell whether prices are rising or falling. These indices also seek to isolate changes in prices from changes in the mix of houses sold from period to period, though no source is able to fully account for changes in the quality of housing stock that may result from home improvements or deterioration.

The ONS, Nationwide and Halifax HPIs adjust for the changing mix of properties made available in any given period (in terms of size, number of bedrooms and a range of other characteristics) to measure the price of an ‘average house’²². The corresponding Land Registry HPI is instead a form of ‘repeat sales regression’ index. This means that it measures average price changes in repeat sales on the same properties. It thereby controls for differences in the characteristics of each individual house that is resold. These indices are particularly relevant to understanding the value to those holding property at a particular moment in time, and the value of the housing stock that may be available for sale in the future.

While there are a range of sources available, the Land Registry data provides the most accurate picture of prices paid in the housing market. However, although it is less comprehensive in its coverage of transactions and arguably less rigorous in its mix-adjustment as a result²³, the ONS HPI acts as a useful measure for the actual price of house sales for each UK region over longer periods of time. The alternative datasets are based on advertised, as opposed to the realised price of property transactions. The next section sets out the recent trends in London house prices, and places these in the context of the national picture and previous economic cycles.

3.2 Trends in London house prices

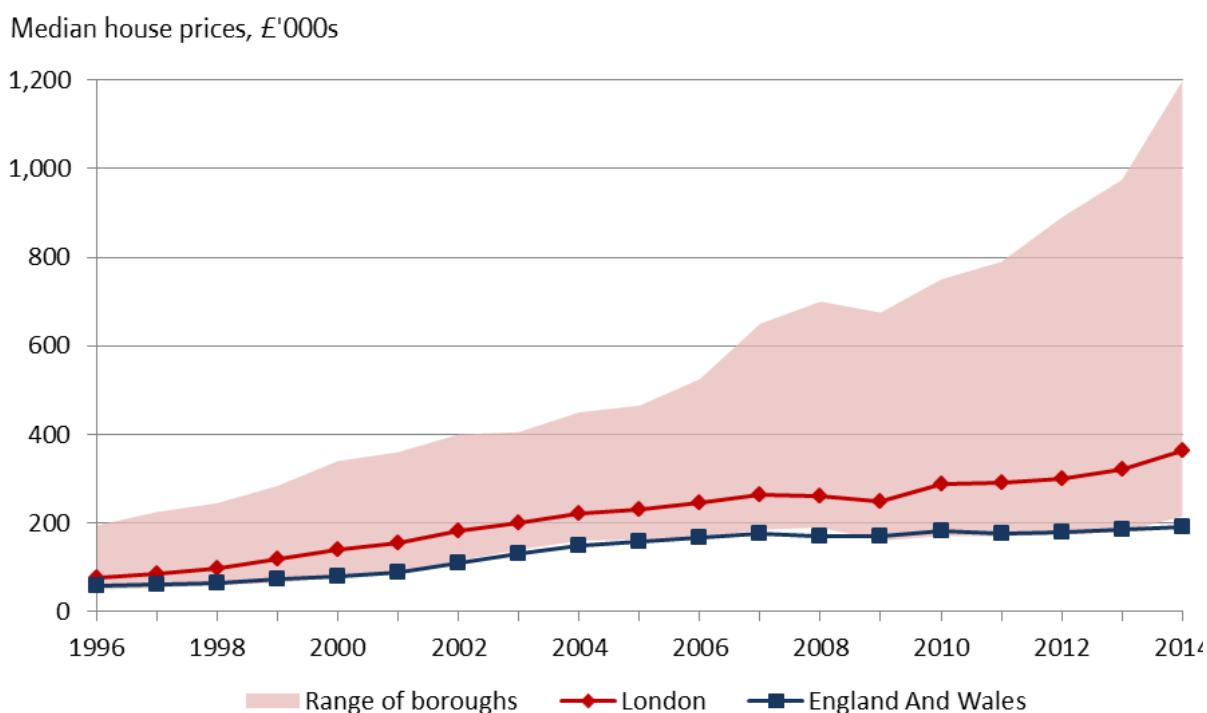
In each year since Land Registry records began in 1996, the average (median) house price in London²⁴ has exceeded the average for every other region in England and Wales. This gap in average house prices between London and the country as a whole has also grown larger in each year, with the exception of 2009 when year-on-year average prices in London fell by £10,000, which was greater than the £1,000 fall in average prices in England and Wales (see Figure 1). In the period from 1996 – 2014 the gap between the average prices paid for housing across the different London boroughs has also grown markedly bigger. This reflects the rapid increase in house prices in central areas, where house prices were relatively high at the start of the period.

²² By combining the average price for each combination of characteristics into an indexed measure of house prices that holds these constant.

²³ Research by the Institute for Fiscal Studies concludes that the ONS measure may be relatively more sensitive to changes in the type of property sold, and consequently may over-estimate current levels of house prices due to the strength of the ‘prime’ London market. Source: Chandler, D. and Disney, R. (IFS), ‘[Housing market trends and recent policies](#)’, chapter 5 in: ‘*The IFS Green Budget: February 2014*’.

²⁴ In presenting the ‘average’ price, the median is typically used as it avoids over-estimates associated with mean values that result from a positive skew in the distribution of house prices.

Figure 1: Median house prices in London exceed those across England and Wales, 1996-2014



Source: Land Registry price paid data. Notes: Excluded from the above figures are sales at less than market price (e.g. Right to Buy), sales below £1,000 and sales above £20 million.

By looking at repeat sales on the same properties, the seasonally adjusted Land Registry HPI signals an even sharper increase in London house prices in recent years. In the 12 months to June 2015 house prices in London increased by 9.2 per cent, compared to 5.4 per cent across England and Wales, and higher than any other region²⁵. In the five years since 2009, nominal house prices²⁶ in London have risen year-on-year by an average of 7.8 per cent, compared to 2.6 per cent in England and Wales (see Table 1).

²⁵ The annual change shown for February 2015 is the percentage change in the Land Registry HPI for the 12 months up to February 2015. This measures average price changes in repeat sales on the same properties, and is not available below regional level. Prices are not adjusted for inflation. For further information, see: <https://www.gov.uk/government/statistical-data-sets/house-price-index-statistical-report>.

²⁶ Nominal (or actual) house prices are not adjusted for inflation, and reflect the historical (or current) prices paid for a property.

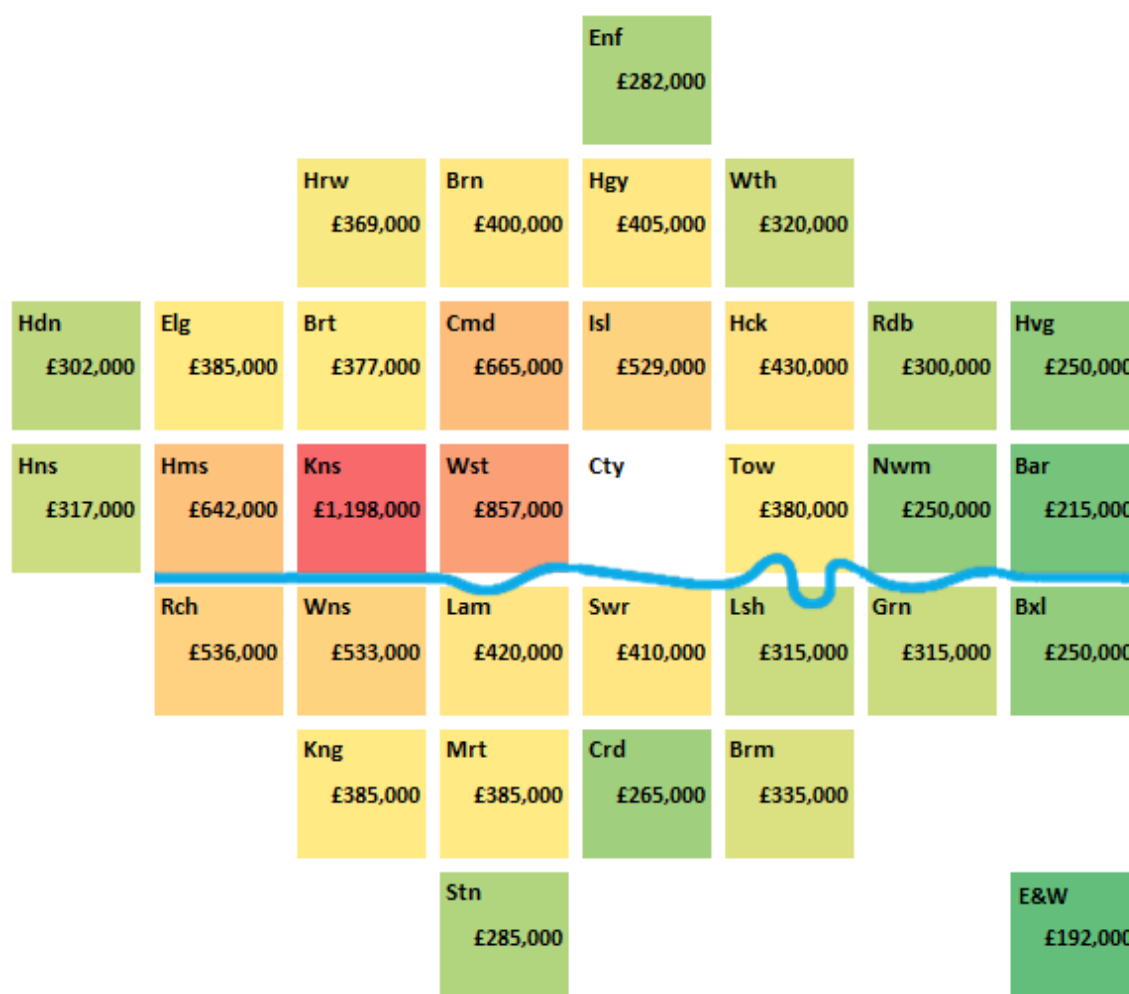
Table 1: Median house prices and house price trends in London, England and Wales, 1996-2014

	Median house prices, £				Compound growth rate, %		
	1996	2007	2009	2014	1996-2007	2007-2009	2009-2014
England and Wales	57,000	176,000	169,000	192,000	10.8	- 2.0	2.6
London	77,000	265,000	250,000	364,000	11.9	- 2.9	7.8
Inner London	87,000	313,000	323,000	462,000	12.3	1.7	7.4
Outer London	74,000	249,000	235,000	315,000	11.7	- 2.9	6.1

Source: Land Registry price paid data, annual median (rounded to the nearest £1,000). The compound growth rate is the the year-on-year rate of growth able to account for the change in house prices over the period.

These aggregate figures for London disguise a great deal of variation across different parts of London. The going market rate for houses sold in central boroughs in 2014 was particularly high, with median house prices as high as £857,000 in Westminster and £1.198 million in Kensington and Chelsea according to Land Registry data. In contrast, the average price paid for a house in Barking and Dagenham was £215,000 in 2014 (see Figure 2). This median figure was however still higher than the national average for England and Wales, which was £192,000 in 2014.

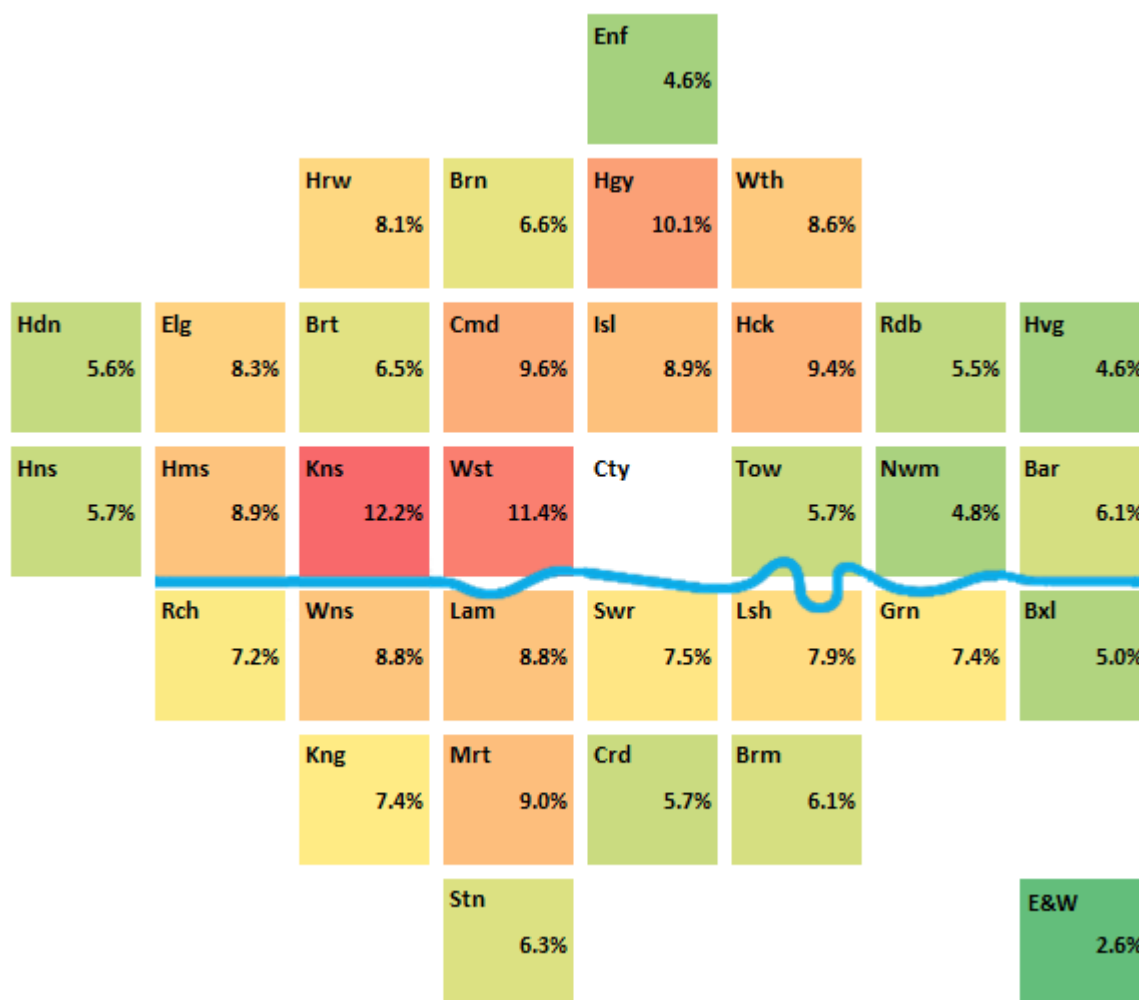
Figure 2: Median house prices by London borough in 2014



Source: Land Registry price paid data. Notes: City of London excluded due to low sample size. Excluded from the above figures are sales at less than market price (e.g. Right to Buy), sales below £1,000 and sales above £20m. Figures are rounded to the nearest £1,000.

Not only are house price levels across the London boroughs higher than the national average, the rates of house price growth since the global recession have seen this gap grow larger. In the five years from 2009 to 2014, average growth rates have exceeded the national average for England and Wales (2.6 per cent) in each of the London boroughs. At the extremes, annual average growth rates in the median house price over the period exceeded 10 per cent in Haringey, Kensington, and Westminster. The average rate of growth in house prices in the outer boroughs, while relatively more modest, is still high and averaged 4.6 per cent in Havering and Enfield over the period (see Figure 3).

Figure 3: Average growth rate in median house prices by London borough, 2009-2014



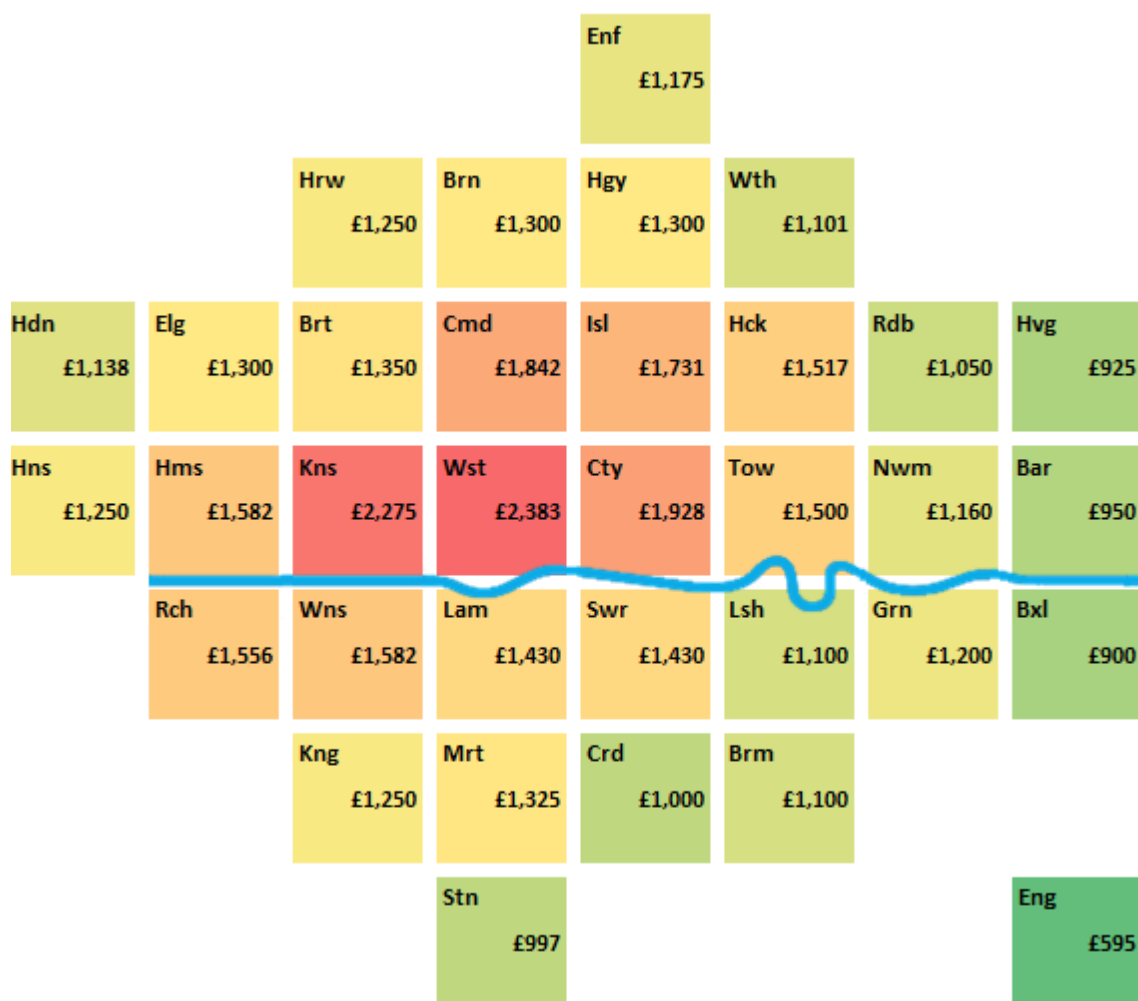
Source: Land Registry price paid data. Notes: City of London excluded due to low sample size. Excluded from the above figures are sales at less than market price (e.g. Right to Buy), sales below £1,000 and sales above £20m. Notes: The average growth rate is the the year-on-year rate of growth able to account for the change in house prices from 2009 to 2014.

The price of London rents

As with the price of buying a home, the median price of private monthly rents in London is also considerably higher than in England as a whole. Based on data on private monthly rents from the Valuation Office Agency (VOA), median rents in London in 2013/14 were £1,350 per month, more than twice as high as median rents in England as a whole (£595 per month). The VOA data provides a ‘snapshot’ on the median value of private monthly rents, and although it cannot enable robust comparisons over time, it can be used to illustrate the differences in

average rents across London²⁷. Figure 4 shows that in the 12 months to March 2014, the median monthly private rent was highest in Westminster (£2,383) and Kensington and Chelsea (£2,275). These were the only two local authorities in England to have a median monthly private rent of more than £2,000 in 2013/14. While considerably lower, median rents recorded in the London Boroughs of Havering, Barking and Bexley were between 50-60 per cent above the national average. These patterns of rents across London shown in Figure 4 appear highly correlated with the house price data in Figure 2, and this relationship between house prices and rents is explored in further detail in Appendix 1.

Figure 4: Median monthly private rents by London borough, 2013/14



Source: VOA median private monthly rents, 2013/14. Notes: Data is based on private rental data entered into the lettings administrative information database were extracted for the twelve months to the end of March 2014. Cases where there was evidence of a transaction (i.e. rent has been paid) were retained while those with limited or no evidence of a transaction were removed.

London is not the only city where its residents face high levels of rents. Data from a UBS 2015 survey of 71 world cities found that London rent levels were, on average, the third highest in the World behind New York and Hong Kong (see Table 2).

²⁷ Further information on the VOA methodology for calculating private rents can be found at: <https://www.gov.uk/government/publications/private-rental-market-statistics-england-only/release-notes-10-june-2014#methodology>, accessed on: 02/10/15.

Table 2: Average monthly rents by selected major city, 2015

	New York	Hong Kong	London	Chicago	Doha	Sydney	Tokyo	Paris	Munich
Normal local rent (£)	£2,530	£1,680	£1,530	£1,440	£1,330	£1,160	£1,120	£1,050	£890
UBS rank	1	2	3	4	6	11	14	16	21

Source: UBS prices and earnings 2015. Notes: The figures given are values for average rent prices (monthly gross rents) for local households. To capture local standards, the UBS survey asked for the price of a newly built apartment of typical size, location, and amenities for the respective city. US dollar values given in the report have been converted to pound sterling using the exchange rate 1 USD = 0.65 GBP.

3.3 Long-term trends in London house prices

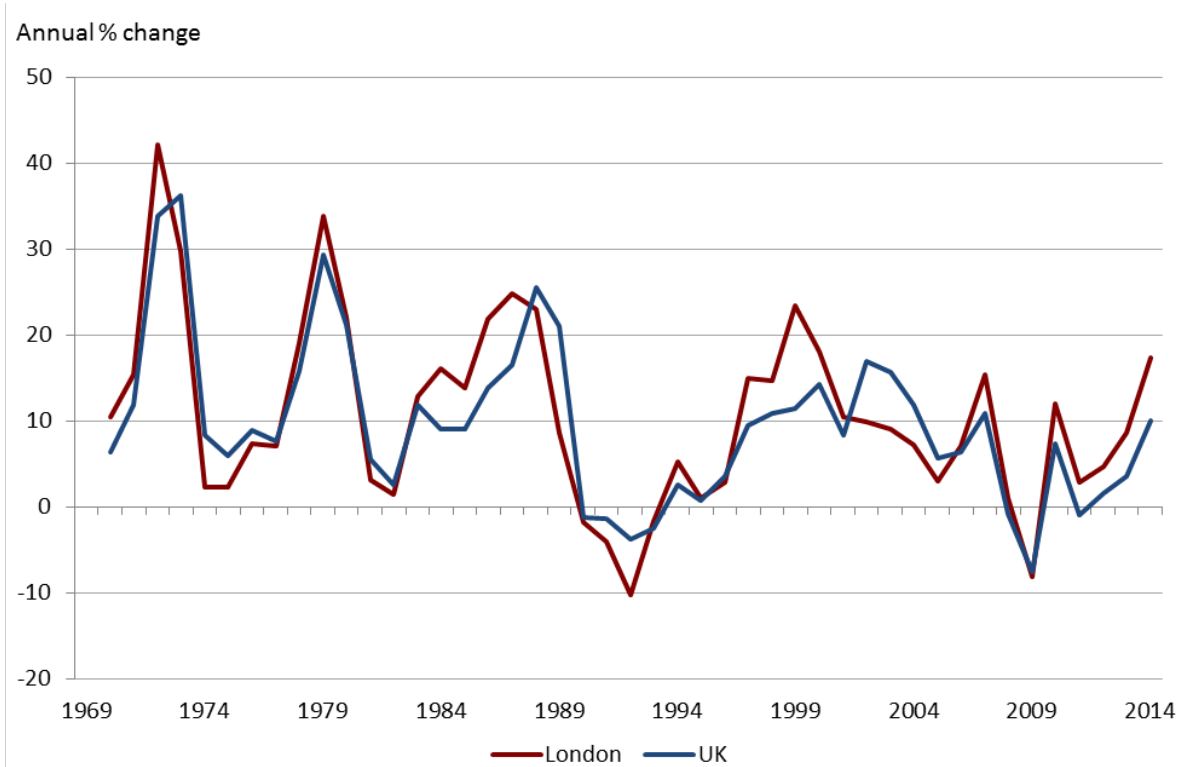
Over a longer-time horizon, housing markets in London have witnessed a number of ups and downs, with the rate of change in London house prices from year-to-year fluctuating widely since the ONS data series on regional house prices began in 1969. This section places the recent, post-downturn house price rises in the context of previous economic cycles and longer-term trends.

Over the past 45 years, since the ONS series began, the London housing market has been characterised by periods of rapidly increasing house prices followed by a levelling off period, or a downward adjustment in house prices. An overall fall in the nominal value of the average house in London is however unusual; nominal house price deflation was experienced in only two periods in the previous 45 years, in 1991/92 and 2009. House price rises in London therefore tend to be the norm, with nominal adjustments relatively rare, as well as relatively short-lived.

Compared to the UK as a whole, Figure 5 reveals a tendency for movements in London house prices to be greater, thereby amplifying changes in national house prices. In addition, house price trends in London have tended to precede those exhibited across the rest of the country. These spatial differences in nominal house price changes across the UK are sometimes referred to as a ‘ripple effect’²⁸.

²⁸ See for example: Meen, G. (1999) “Regional house prices and the ripple effect: a new interpretation”, *Housing Studies*, 14(6), pp 733–753.

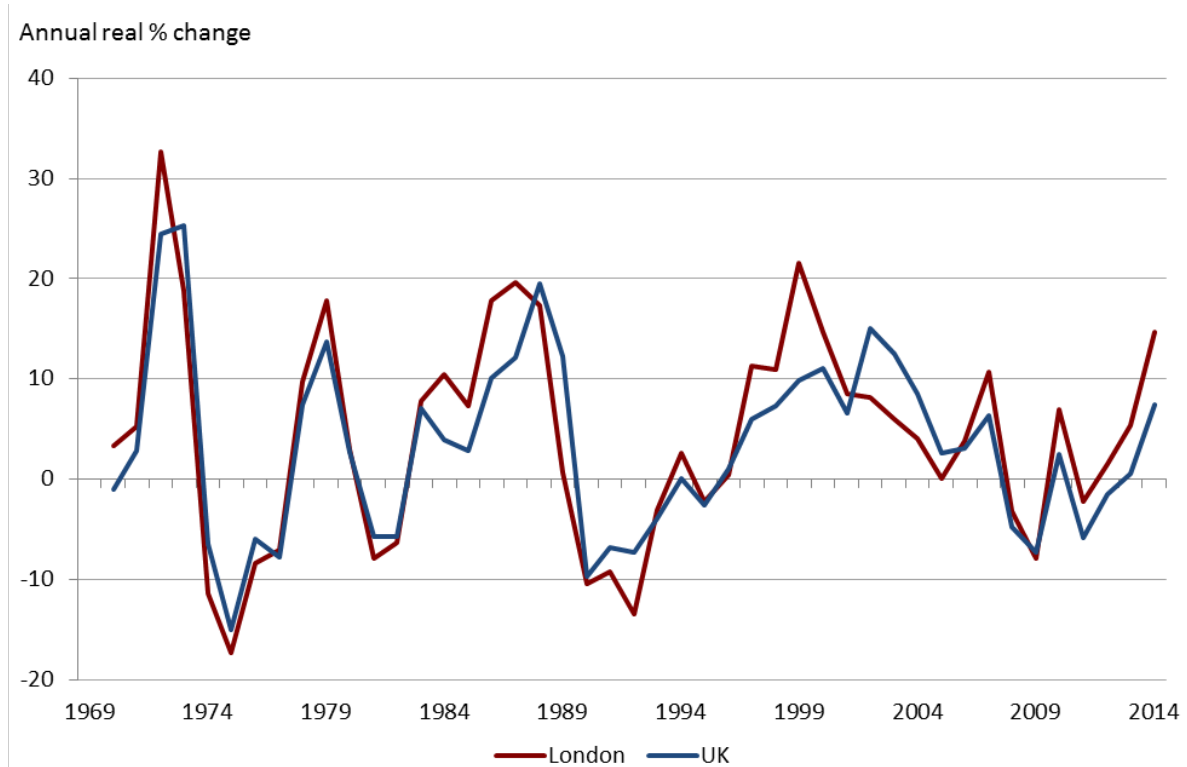
Figure 5: Volatility of year-on-year nominal house price inflation in London and the UK



Source: ONS mix-adjusted house prices index, reference table 33. Notes: Data is based on mortgages completed and adjusted for the mix of dwellings sold.

Figure 6 illustrates the volatility of house prices in real terms, relative to the price of other goods and services consumed by households. This reveals significant episodes of real house price deflation in 1973-1976, 1980-81, 1989-92 and 2007-09. The experience in the mid-1970s is interesting because real house price deflation occurred while actual or nominal house prices were continuing to grow. This occurred because rates of retail price inflation were especially high during this period. For example, while house prices grew by 7 per cent in the year to 1976, retail prices rose by 17 per cent. Relative to other consumer prices, house prices also decreased in real terms in 2005 and 2011 (see Figure 6). So while nominal terms adjustments are rare, in real terms such adjustments are more frequent with real prices decreasing in 11 of the last 35 years.

Figure 6: Volatility of year-on-year real house price inflation in London and the UK



Source: ONS mix-adjusted house prices index, reference table 33, ONS long term indicator of prices of consumer goods and services (RPI all item). Notes: Data is based on mortgages completed and adjusted for the mix of dwellings sold. The house-price index is deflated by all item retail prices to take account of the effects of inflation on purchasing power²⁹.

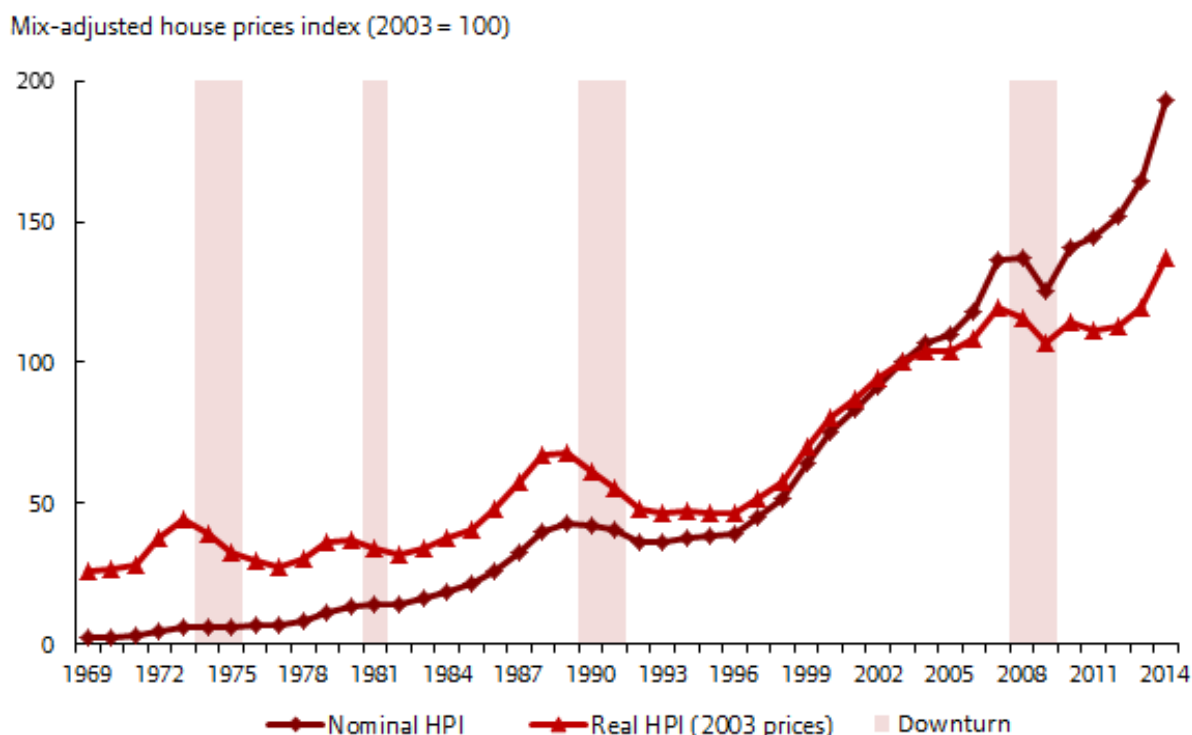
Figure 7 shows the impact of general inflation on house price levels in London, and the relationship with the wider business cycle. The recent upturn in the London housing market follows the sharpest and deepest decline since the early 1990s. Based on ONS data from the Regulated Mortgage Survey, London nominal house prices fell by 18.1 per cent from a pre-recession peak in January 2008 to their lowest value in March 2009³⁰. This compares with a nominal fall in average London house prices of 20.9 per cent from peak to trough in the two-and-a-half years from the second quarter in 1989 to the fourth quarter of 1992³¹.

²⁹ This particular price level is a weighted index of the prices of categories of goods and services consumed by households, where the weights reflect the proportion of total expenditure accounted for by each category of household consumption.

³⁰ In nominal terms, using Land Registry price paid data, the price of an ‘average’ house in London fell from a peak of £350,529 in February 2008 to £292,497 in April 2009. This represents a fall of 17 per cent in less than 18 months.

³¹ Source: ONS table 8, mix-adjusted house price index, by region from Q2 1968 (quarterly) and from 2002 (monthly)

Figure 7: Nominal and real house price levels in London and the business cycle, 1969-2014



Source: ONS House Price Index reference table 33, ONS long term indicator of prices of consumer goods and services (RPI all item). Notes: the real house-price index is deflated by retail prices and rebased at 100 to take account of the effects of inflation on purchasing power. Data is based on mortgages completed and adjusted for the mix of dwellings sold. A downturn is defined as a period in which annual real GDP growth was less than 0 per cent.

Looking specifically at the peaks and troughs over time, there have been several prolonged periods of strong house price increases in London and the UK as a whole (see Table 3). In the eight years from 1982-1989, prior to the previous fall in London house prices in the early 1990s, house prices in London more than tripled as a result of an average annual increase in nominal London house prices of 17.1 per cent (or more than doubled in real terms due to 11.4 per cent average annual real increases).

Periods of sharp house price inflation in London have however not always been followed by a downward adjustment in prices, even in the event of a wider economic downturn. In the recessions of 1974 and 1981, house prices in London continued to rise, albeit at much slower annual rates than previously. The sharp increases in London house prices since the great recession of 2008/09 can also be seen in the longer-term context, to continue on from the pre-crisis trend rate (see Figure 7). In the 12 years prior to the 2008/09 recession, real house prices in London had increased by an average annual rate of 9 per cent, and have subsequently returned to these high levels.

Table 3: House prices and the business cycle in London during selected periods, 1970-2014

Time period	Nominal house prices (CAGR, %)		Real house prices (CAGR, %)		RPI (CAGR, %)	GVA (CAGR, %)	GDP (CAGR, %)
	London	UK	London	UK	All item	London	UK
1970 – 1973	28.5	27.0	18.4	17.0	8.6		4.7
1973 – 1975	2.8	7.1	- 14.4	- 10.8	20.1		- 2.0
1977 – 1979	26.0	22.5	13.7	10.5	10.8		3.6
1980 – 1981	3.0	5.5	- 7.9	- 5.7	11.9		- 0.8
1982 – 1989	17.1	15.2	11.4	9.6	5.1		3.9
1990 – 1992	- 7.1	- 2.6	- 11.4	- 7.1	4.8		- 0.4
1994 – 1996	2.0	2.1	- 1.0	- 0.8	2.9		2.6
1997 – 2007	11.7	11.2	8.7	8.2	1.5	6.3	3.1
2008 – 2009	- 8.2	- 7.6	- 7.9	- 7.3	- 0.5	- 1.5	- 4.3
2012 – 2014	12.9	6.7	9.9	3.9	2.7	*4.0	2.1
Whole period	10.2	9.3	3.8	3.0	6.1		2.2

Sources: ONS mix-adjusted house prices index, reference table 33, ONS regional workplace-based GVA, at current basic prices, 1997 – 2013. ONS UK GDP, chained volume measures (real terms), 1970 – 2014. Notes: The compound average growth rate (CAGR) is the the year-on-year rate of growth able to account for the change in house prices or GVA/GDP from the first year to the last year of the period. *London GVA data for 2012-14 is for the period 2012-13.

From the patterns of previous cycles, there are no clear trends from price data alone to suggest whether London house prices are approaching a new peak, and whether this will entail a levelling off, or a more exceptional downward adjustment. While a long-term trend in rising house prices may be a cause for concern as it may, for example, signal a structural imbalance between the demand and supply of housing, it is not necessarily unsustainable. It is a question instead of understanding whether current house prices differ systematically from economic fundamentals and are therefore vulnerable to an economic shock, or whether something fundamental has changed in London’s housing market that can account for the recent house price increases.

3.4 Summary of house price trends

House prices in London are currently experiencing rapid rates of growth – relative to the rest of the country and relative to overall prices in the economy. One cause for concern may be that the London housing market is characterised by periods of volatility, and though nominal falls in the actual value of the average London home are relatively rare, real term adjustments are not altogether uncommon. High house price inflation in itself is not however evidence that housing is overvalued or unsustainable.

To address this issue, it is necessary to assess whether these prices relate to their underlying determinants of demand and supply (e.g. purchasing a house as a medium to long-term asset for residential purposes), or whether they are distorted by market failures, or a desire to speculate in the expectation of future capital gains, or some other reason. In the next section, a range of indicators are considered to assess whether or not the evidence suggests house prices are in line with underlying economic ‘fundamentals’, and consider the possible economic implications of actual prices for prospective first-time buyers.

4 The affordability of housing in London, risks to the housing market and the responsiveness of housing supply

Section 2 highlighted that there are a number of demand and supply-related factors which could explain London’s house prices and house price inflation of recent years. These include fundamental drivers such as a possible rise in the ability to pay, the increased desirability of London as a place to live and work, as well as socio-demographic developments of the London population and household size.

This section considers a range of indicators in order to benchmark the observed changes in house prices against trends in the ability to pay for housing in London. This provides an assessment of the economic affordability of London house prices and, coupled with an assessment of households’ sensitivity to interest rates and credit market conditions, the sustainability of recent trends. The section finishes by considering the responsiveness of housing supply to meet demand to live in London and dampen house price inflation in the long-term.

4.1 The economic affordability of housing in London

One summary measure commonly used to assess housing market conditions is the degree to which the cost of housing is within the reach of the average buyer. This can either be determined in terms of house prices relative to the levels of incomes and earnings³² among the population, or in terms of the cost of owning a house – specifically, the ability of buyers to obtain a mortgage and meet the expense of monthly repayments and service charges.

If the ratio between the cost of housing and incomes rises too high, purchasing a house would be difficult. This could in turn lead to reduced demand and downward pressure on house prices in the case of a well-functioning market. Otherwise, if market demand is not driven by the economic fundamentals discussed in section 2, increased affordability constraints may lead to the accumulation of unsustainable mortgage debt and could pose a threat to economic stability.

4.1.1 Are earnings and incomes in London keeping pace with house price rises?

A common gauge of whether or not housing is within reach of the typical buyer is the median house price to median annual earnings ratio (‘median multiples’)³³. Earnings data is sourced from the ONS Annual Survey of Hours and Earnings (ASHE), and can be measured on the basis of where workers work (workplace-based earnings), and where they live (resident-based earnings).

While the overall picture for England as a whole is largely unchanged irrespective of whether workplace or resident earnings are used, patterns of commuting mean that greater differences are observed at regional and local authority level. Based on the ASHE data, median earnings for a full-time employee working in London were approximately 7 per cent or (£2,300 higher than

³² Earnings are the paid income from work. Personal or individual income differs from earnings in that it includes income from pensions and investments or social security benefits, for example, as well as earned income. Household income is taken as the combined income for all people in the household.

³³ The median is typically the preferred measure of a typical home, as this reduces the effect of extreme prices (usually at the higher end of the scale) that influence the mean (or average) value.

the earnings of a typical London resident in full-time employment in 2014 (£35,100 vs. £32,800), reflecting the higher earnings of commuters into London from surrounding regions³⁴.

Figure 8 shows the ratio of median house prices to resident earnings in London has been steadily increasing over time. In 2014 house prices were almost 10 times median earnings in London, compared to about 4 times in 1997. House prices in England as a whole have instead remained at around 7 times earnings in recent years from 2005 to 2014.

Demographia’s annual survey of international housing affordability³⁵ suggests that these are also high multiples by international standards. Based on national data from Q3 2014, London is rated the seventh least affordable of 86 major metropolitan markets³⁶ with an estimated median multiple of 8.5. The data however suggests that London is not alone in experiencing issues of affordability, with Hong Kong ranked as the least affordable for the fifth year in a row, with a median multiple of 17.0. These figures should however be treated with caution as they do not account for cross-country differences in the measurement of house prices and incomes or for differences in the size and quality of housing, or differences in the way the city region is defined³⁷.

Earnings in this case, are however average measures that cover the whole population. House prices on the other hand, are determined in a market where specific groups of buyers have different and likely higher incomes than the rest of the population. In a 2005 speech considering the role of house prices in monetary policy, Stephen Nickell³⁸ restricted his analysis to the top 70 per cent of income earners on the basis that the majority of the rest of the population are on state benefits and therefore unlikely to be in the market for houses. Similarly, research by Cheshire³⁹ contends that houses are primarily bought ‘by households with income in the top 70 percent of the distribution’.

Measuring house prices against the earnings of residents in the 70th percentile⁴⁰ on this basis, indicates an average house price to earnings ratio in London of 8.4 in 2014, compared to 9.8 on a median earnings basis. On either metric, the London ratio is much higher than in England as a whole, with this gap widening over the past two decades.

³⁴ In 2014 around 900,000 people commuted into London for work based on the ONS Labour Force Survey.

³⁵ Demographia (2015), ‘[11th annual survey of international housing affordability](#)’

³⁶ The 2015 Demographia survey includes 86 metropolitan markets with a population greater than 1 million in: Australia, Canada, Hong Kong, Ireland, Japan, New Zealand, Singapore, the UK and United States.

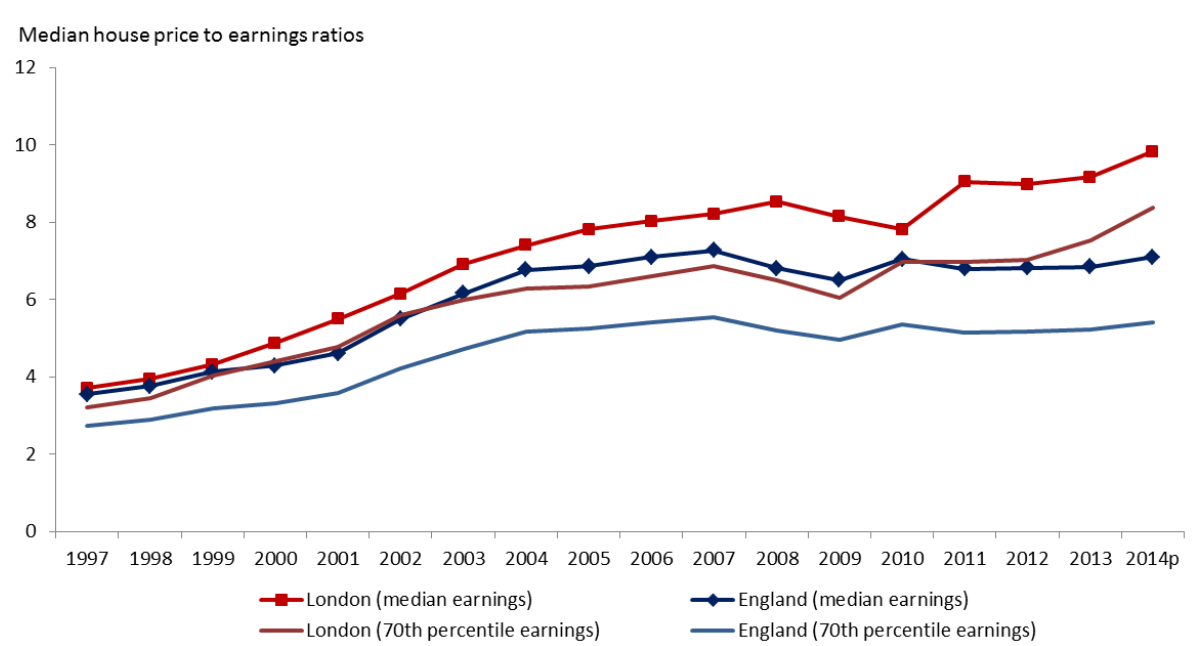
³⁷ Given affordability tends to improve the further out from a city centre the smaller the definition of the city area, the higher median prices will tend to be for example.

³⁸ Nickell, S. (2005), ‘Practical issues in the UK monetary policy: 2000-2005’, British Academy Keynes Lecture.

³⁹ Cheshire, P. and Sheppard, S. ‘Estimating the demand for housing, land, and neighbourhood characteristics’, Oxford Bulletin of Economics and Statistics, vol. 60 (3), pp. 357-382, August 1998.

⁴⁰ 70th percentile earnings among London residents in 2014 are estimated to be £43,400, compared to £36,100 for earners in England as a whole. Source: ONS Annual Survey of Hours and Earnings.

Figure 8: Median house price to earnings ratio in London and England, 1997-2014



Sources: Land Registry prices paid data and ASHE tables 7.7a and 8.7a. Notes: ASHE is based on a 1 per cent sample of employee jobs. Information on earnings and hours is obtained in confidence from employers. It does not cover the self-employed nor does it cover employees not paid during the reference period. The statistics used are full-time individual median earnings (excluding overtime). Data on earnings for 1997 to 2001 are workplace based, and residence-based from 2002 when this data series began. Data for 2014 are provisional. Land Registry data on median house prices excludes sales below market price (e.g. Right to Buy), and those above £20 million⁴¹.

Figure 9 looks back at house price to earnings ratios over a longer time horizon using alternative data sources. This suggests that current levels of affordability based on this metric are considerably higher than the previous peak observed in the mid-1970s, and have been in each year since 2003. The longer time series observed here however relies on simple average house prices which do not adjust for the quality of housing stock purchased, or control for a positive skew in the distribution of house prices (resulting in a likely over-estimate of the ratio throughout the period). In line with the more recent data, the overall trends observed in Figure 9 still point to an issue of increasing unaffordability of housing in London, and house price rises that cannot be attributed to earnings growth alone.

⁴¹ Land Registry price paid data does not distinguish between actual price movements and changes in the mix of housing for sale over time.

Figure 9: House price to earnings ratio in London, 1969-2014



Sources: New Earnings Survey (NES) prior to 1997 and ASHE workplace-based earnings from 1997 to 2014. ONS simple average house prices, 1969-2014. Notes: for consistency with ASHE data, median annual earnings from 1969-1997 are based on weighted estimates of work-based weekly earnings from NES data.

House price to earnings ratios by London borough

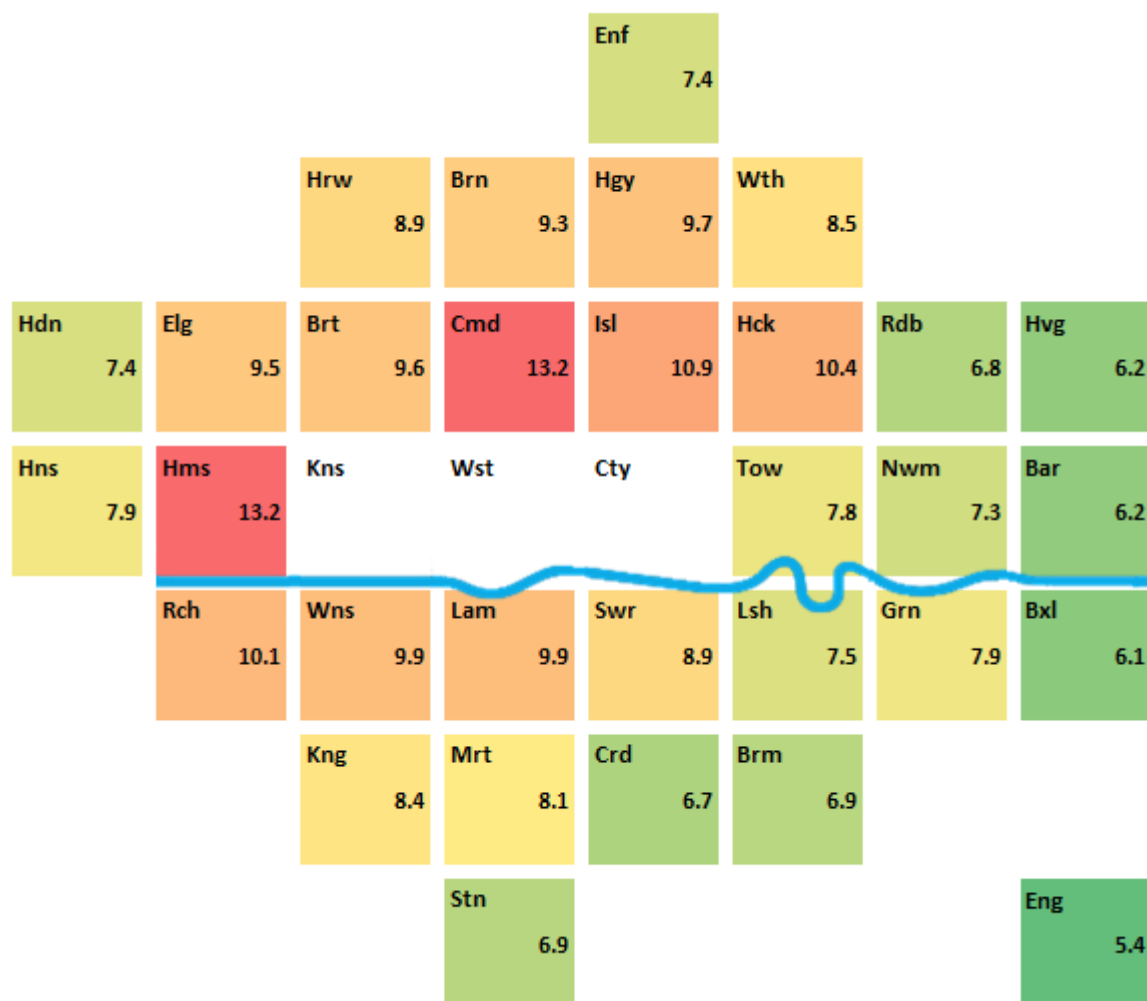
Workplace earnings tend to be higher than those of the typical local resident in centres of employment, attracting in-commuting from other areas such as Hackney and Tower Hamlets. The reverse is true in desirable residential locations such as Kensington and Chelsea, Richmond upon Thames and Bromley where resident median earnings are greater than those earned by those working within the local administrative boundaries⁴². Overall, the local authorities where earnings were highest tend to have the highest house prices, and highest rates of house price increases.

As house prices have increased at a faster rate than earnings, this has led to particularly pronounced house price to earnings ratios in central boroughs. In Kensington and Chelsea, median house prices in 2014 were in excess of 30 times median earnings of those employees working full-time in the borough, and over 26 times median earnings of local residents (despite the borough having the highest level of earnings in the country).

Looking only at those residents working full-time and earning in the 70th percentile, Figure 10 highlights that earnings differentials across London Boroughs are insufficient to offset the price of housing. Across many areas of inner and south-west London, 2014 median house prices were over 10 times greater than 70th percentile earnings of local residents (compared to 5.4 times in England as a whole).

⁴² In 2014, median residents’ earnings in these three Boroughs were estimated respectively to be £15,300, £8,300 and £8,300 higher than median earnings based on workplace. Source: ASHE 2014, tables 7.7a and 8.7a.

Figure 10: Median house price to 70th percentile earnings ratio by London Borough, 2014



Sources: Land Registry price paid data, and ASHE residence based full-time earnings at the 70th percentile. Notes: Earnings data for Lambeth and Richmond are based on 2013. Data for Kensington and Chelsea, Westminster and the City of London are not available due to the small sample sizes.

The slower rate of earnings growth relative to house price inflation across every Borough has meant that this differential has increased in each year since the recession in 2008. At their previous peak in 2007, house prices were considerably below 2014 levels, at up to 9 times’ 70th percentile earnings in the most expensive Boroughs.

Affordability measures based on earnings however fail to account for the role of households with multiple earners⁴³, while also failing to account for non-wage incomes⁴⁴, alternative forms of wealth, or the availability of mortgage finance. That the price of house purchases in London

⁴³ Nationally, joint income borrowers accounted for 56 per cent of regulated residential loans in Q2 2007 and 61 per cent in Q1 2015 based on [Mortgage Lending & Administration Return \(MLAR\) data](#) produced by the Financial Conduct Authority (FCA).

⁴⁴ Incomes used to fund house purchases in London may, for example, relate to wages earned outside of London, or to those earned through self-employment, or based on incentive payments or City bonuses. Households may also have access to unearned income derived from other sources. This may include income from the returns on investments (including the sale of other homes), pensions and/or inheritance. In 2013/14, wages and salaries accounted for 71 per cent of total weekly household income in London. Source: Family resources survey 2013/14.

may be increasingly unaligned with individual earnings does not therefore mean that London houses are necessarily unaffordable in economic terms. Instead, it is necessary to consider further indicators that take account of household incomes, and alternative sources of finance that affect household’s ability to purchase a house in London.

House price to income ratios among those taking out mortgages

A second set of measures of housing affordability considers the relationship between the prices paid for property (or the value of the mortgage loan taken out against it) with the incomes of buyers based on mortgage survey data.

The resulting ratio (or ‘income multiple’) is based on the gross income, or joint incomes, of homebuyers and thereby directly takes account of the role of dual earner households. Such measures however exclude the estimated 37 per cent of transactions in London⁴⁵ that do not rely on a mortgage to finance house purchases.

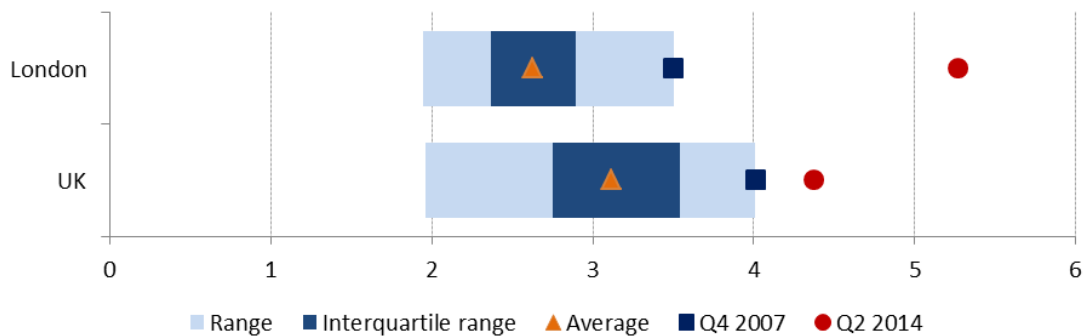
Figure 11 uses ONS data⁴⁶ to divide the average (mean) house price in a region by the average (mean) income (individual or joint) of applicants for mortgages secured on properties in that region. As the ONS house price index captures changes in the price of homes purchased using a mortgage, this ratio can provide an alternative measure of how stretched recent house-buyers have become. Figure 11 plots the range and spread of this variable for London and the UK before the financial crisis between Q1 2002 and Q4 2007, as well as its pre-downturn peak and more recent value in Q2 2014.

Based on this measure, London’s pre-crisis average house prices ranged between 1.9 and 3.5 times the income of mortgage applicants – notably lower than the UK as a whole. In each case the ratio of house prices to incomes ended the period at its peak level immediately before the start of the economic downturn. Comparing the dark blue squares and the red circles in Figure 11 shows that the average house price in London is 5.3 times the average income of mortgage applicants, compared to 4.4 times in the UK as a whole in Q2 2014. While this may reflect the recent growth in house prices, it may also capture possible changes in the mix of applicants able to secure mortgage finance.

⁴⁵ This figure is based on data estimates from Nationwide. See footnote 20.

⁴⁶ Source: ONS, ‘[Economic Review, June 2014](#)’.

Figure 11: Ratio of average house prices to incomes of those taking out mortgages, Q1 2002 – Q4 2007 average, spread and selected periods



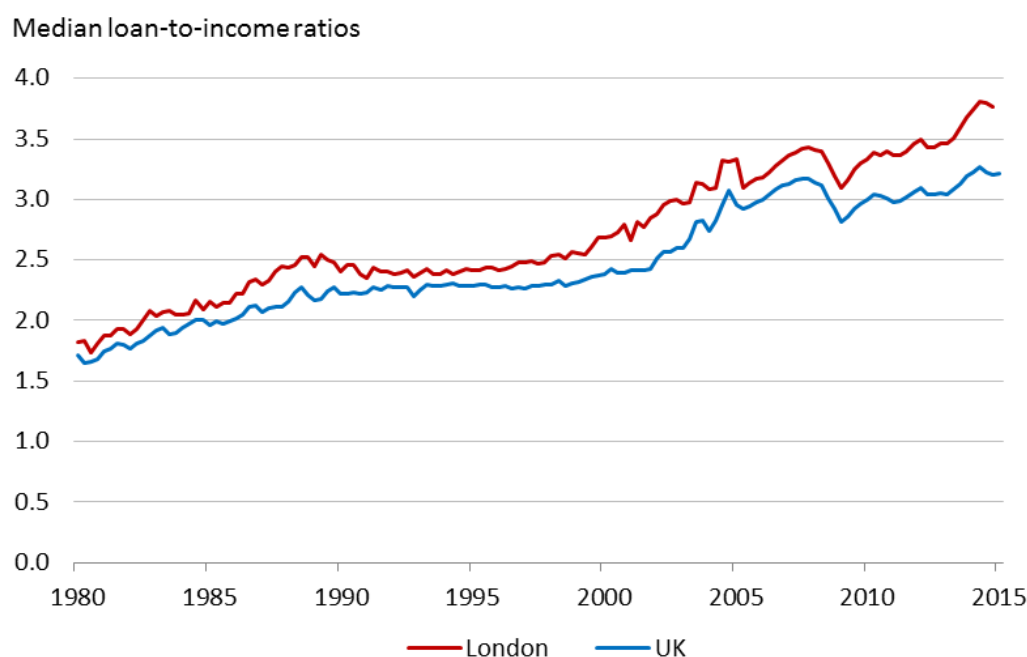
Source: ONS Economic Review June 2014. Notes: The house price measure in the numerator is calculated using the ONS HPI. The income measure in the denominator is the average income of mortgage applicants, based on a sub-sample of Regulated Mortgage Survey data supplied by the Council of Mortgage Lenders. This records gross income of the mortgage applicant or applicants and may therefore be affected by shifts between joint and individual applications.

From a mortgage lenders’ perspective, the economic affordability of house prices is associated with applicants’ ability to repay the mortgage, rather than the house prices themselves. Prior to the UK Government Mortgage Market Review in April 2014 (which introduced greater scrutiny of applicants’ ability to repay)⁴⁷; this was measured on the basis of calculating the value of mortgage loans that an applicant’s income(s) could typically afford, known as ‘income multiples’.

On this measure, using data from the Council for Mortgage Lenders (CML), Figure 12 shows that the median cost of mortgages secured on properties in London increased from being 2 to 2.5 times greater than buyers’ median income in the 1980s to early 1990s, to more than 3.5 times the value of borrowers’ income by 2013. Over this period, income multiples associated with housing in London have been consistently higher than those in the UK as a whole, with this gap widening over the period 1980–2015. This reflects the increasing size of mortgage loans in London, which may reflect the high house price rises in the capital, and may also capture changes in the profile of applicants, or number of joint applications over time.

⁴⁷ For further details on the Mortgage Market review, see: <http://www.fca.org.uk/firms/firm-types/mortgage-brokers-and-home-finance-lenders/mortgage-market-review>.

Figure 12: Income multiples in London and the UK, 1980-2015



Sources: CML Regulated Mortgage Survey (2005 onwards), Survey of Mortgage Lenders (pre-2005), and the Building Societies 5% sample of mortgage completions (prior to 1993). The figures since 1993 are not strictly comparable with earlier ones because of material differences in reporting methodologies and the sample of lenders.

Most standard measures of housing affordability in terms of the relationship between house prices, earnings and incomes therefore suggest that there is an increasing affordability gap, and that incomes cannot alone explain the full extent of house price inflation in London. An alternative explanation for the observed trends in affordability which the above ratios and multiples do not account for however relates to changes in the quality of the surrounding local area and the access to amenities that it offers. Evidence from academic research suggests that the wider benefits of urban living may explain a considerable proportion of the differences in housing costs across cities and over time⁴⁸, as for example, cities have become safer, less crime-ridden places to live and a vibrant cultural life has given cities an edge in attracting talent⁴⁹. In the past decade, there is a range of evidence to suggest that London has become increasingly attractive as a place to live. Its population growth and ability to draw in young people from across the UK and rest of the world⁵⁰ are, for example, in part perhaps testimony to this. There is however limited empirical evidence to suggest that these factors can fully account for the changes in London house prices, and house price to earnings ratios.

4.1.2 Are the annual costs of owning a home in London rising unsustainably?

Each of the above measures of the economic affordability of home-ownership treat the purchase price of a house as if it were the same as the cost of owning a home. In practice however, the annual cost of home ownership can instead be more accurately measured by taking account of the full costs of home ownership, also known in the literature as the ‘imputed

⁴⁸ Glaeser, E., and Gottlieb, J. ‘[Urban Resurgence and the Consumer City](#)’, Harvard Institute of Economic Research, discussion paper 2109.

⁴⁹ de Groot, H., Marlet, G., Teulings, C., and Vermeulen, W. (2015), *Cities and the Urban Land Premium*, Edward Elgar, Cheltenham.

⁵⁰ The impact of London’s attractiveness to domestic and overseas investors on London’s house prices is considered in the next section.

rent⁵¹, and comparing these with household incomes. These annual costs include the cost of foregone interest the homeowner could have earned through another investment, as well as mortgage repayments, plus any expenses on maintenance and repairs, insurance premiums, and other rates and charges such as council tax⁵².

As is often the case with theoretical constructs, the available data does not allow for a perfect measure of such an annual cost of home ownership⁵³. Based on CML data it is however possible to calculate the average cost of servicing mortgage debt, and compare this to buyers’ incomes. This simple metric however only accounts for part of the user costs of housing, while it is also the case that CML data on incomes do not take account of incomes from dependants (household members not responsible for financing the mortgage).

Figure 13 shows that the ability to service that debt measured by the proportion of buyers’ income required to pay the off the full cost of the mortgage (interest plus repayments on the cost of capital) has been relatively stable since 2009 at around 20 per cent. This is down from 26 per cent in 2007/08, and below its estimated historic peak of 33 per cent in mid-1990. Despite the high property prices, mortgage payments as a proportion of income have remained close to their average over the last 35 years. Over time, it is notable that the interest payments component (red line) has decreased in its importance as mortgage interest rates have decreased, and as higher house prices have increased the absolute costs of capital repayment.

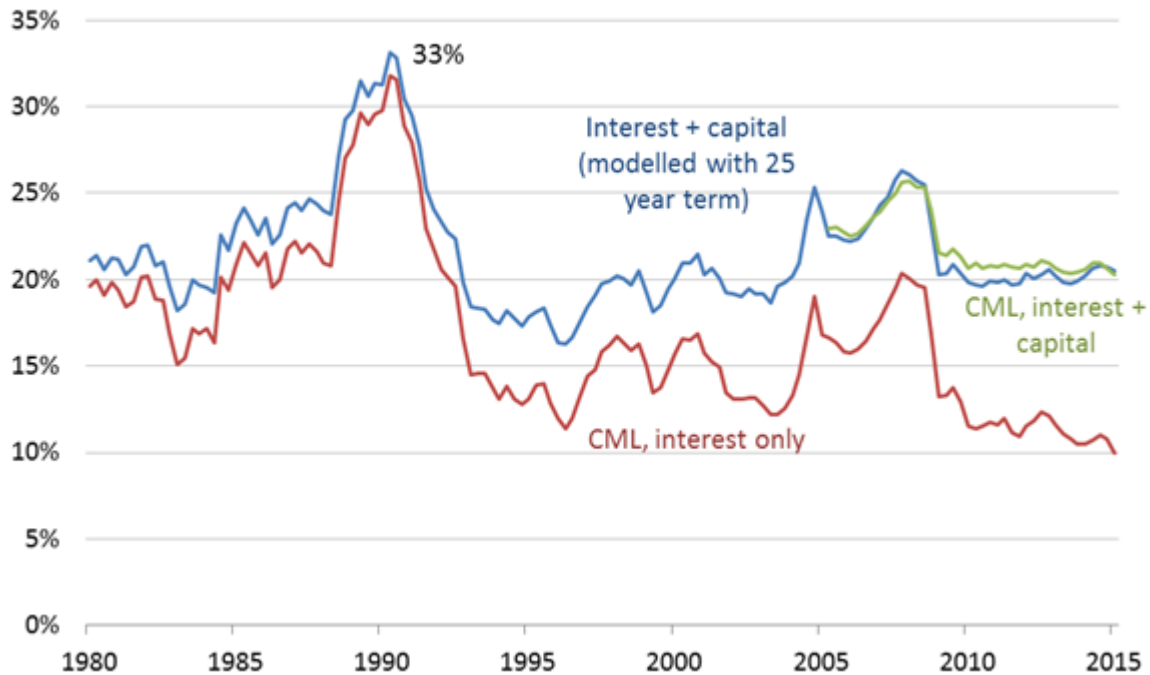
⁵¹ See for example, Poterba, J. (1984), ‘Tax subsidies to owner-occupied housing: an asset market approach’, *Quarterly Journal of Economics* 99, pp. 729-752.

⁵² These items should be viewed in terms of opportunity cost. For example, an owner might pay to carry out maintenance or repairs, or otherwise allow the home to depreciate in value; either way, a cost is incurred. Further information is available from: Himmelberg, C., Mayer, C. and Sinai, T. (2005), ‘Assessing high house prices: bubbles, fundamentals and misperceptions’, National Bureau of Economic Research, working paper 11643, September 2005.

⁵³ At the UK level a working paper by the OBR has set out an approach to modelling user cost. Data constraints however mean that it is not possible to replicate this at regional level. Source: Auterson, T., ‘Forecasting house prices’, OBR Working paper 6, July 2014.

Figure 13: Mortgage affordability in London, 1980-2015

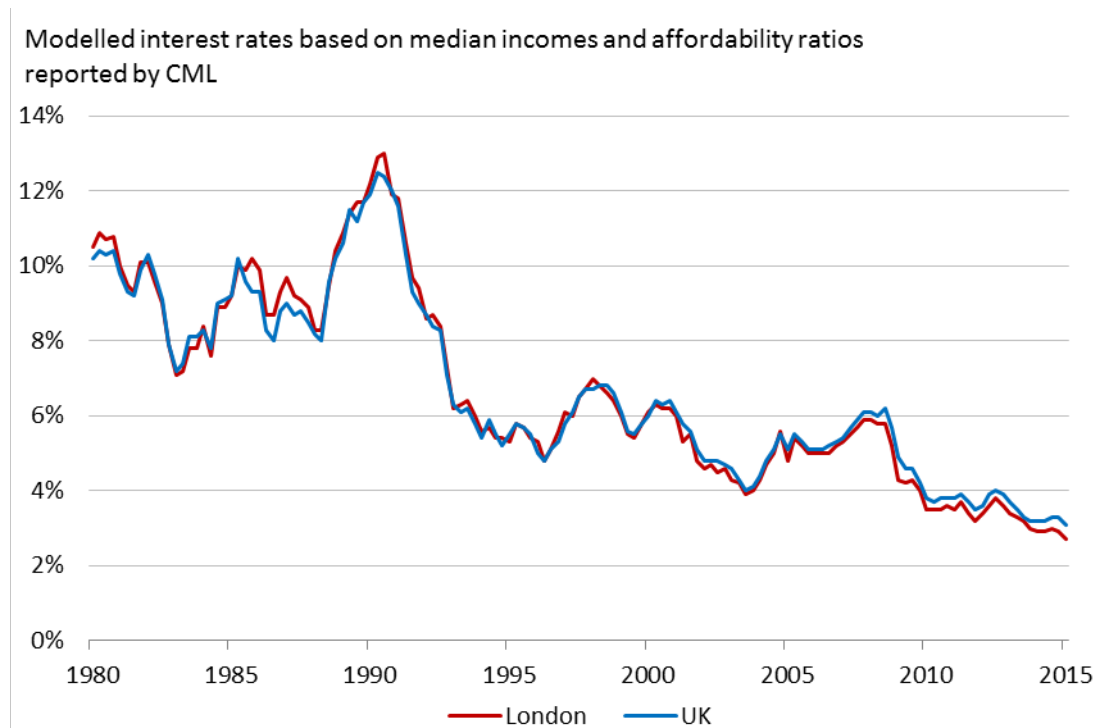
Average mortgage payments as % of income, London



Source: GLA calculations based on CML quarterly data. Notes: data is based on all home buyers including first-time buyers and home movers. Modelled interest plus capital repayments (blue line) assumes an average mortgage length of 25 years. The difference between this and the actual data from Q2 2005 (green line) suggests an average mortgage term for London home buyers of 27 years since 2005.

This indication of moderate affordability by historical standards has been largely driven by the low interest rates on mortgage advances (the total amount of loan actually provided to the buyer, by the lender). Figure 14 shows that interest rates on regulated mortgages secured on properties in London were 2.7 per cent in the first quarter of 2015, down from an estimated high of 13 per cent in 1990. Such historically low mortgage interest rates have reduced the nominal debt repayment burden and increased household’s borrowing power. It is also notable that while Bank of England base rates have been set at 0.5 per cent since March 2009, the mortgage interest rates faced by homebuyers has fallen by 1.6 percentage points in the past five years.

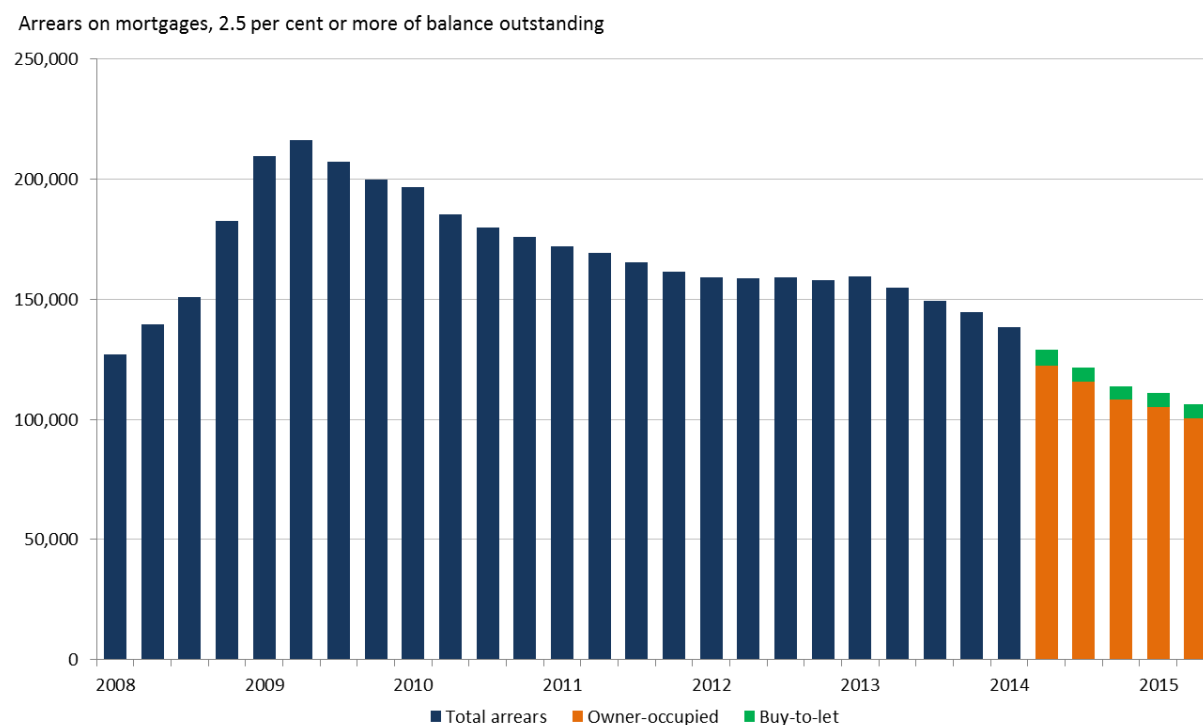
Figure 14: Mortgage interest rates in London and the UK, 1980-2015



Source: GLA calculations based on CML quarterly data. Notes: mortgage interest rates are calculated based on CML data on the size of mortgage advance, borrower income and the interest payments as a per cent of income. Data is based on all home buyers.

Based on the latest 2015 Q2 figures, the total number of mortgages with arrears equivalent to 2.5 per cent or more of the mortgage balance was 106,400 (see Figure 15). This equated to less than 1 per cent of all mortgages, the lowest rate since quarterly records began in 2008. At the same time there were 2,500 properties taken into possession, equivalent to just 1 in 5,000 mortgages (down from a 2009 Q1 peak of 13,200).

Figure 15: Mortgage arrears in the UK, 2008-2015



Source: Council of Mortgage Lenders. Notes: CML arrears figures are for the UK as a whole. No breakdown of data is available for the regions or for individual countries within the UK.

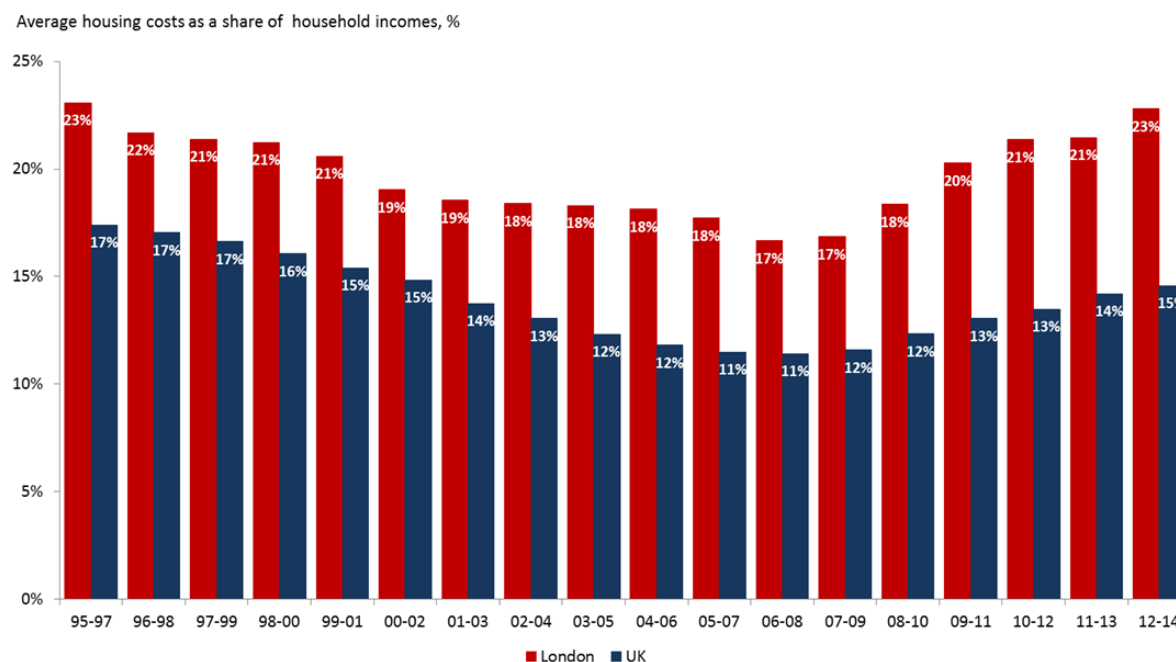
The ongoing costs of mortgage repayments however only account for part of the total user cost of housing. Data from the ONS Family Resources Survey used to calculate the average household incomes can provide an alternative, broader measure of household expenditure on owner-occupation. Housing costs in this measure are made up of mortgage interest payments, as well as the costs of water rates and charges, structural insurance premiums, rent and service charges. Income data from this source provides a measure of disposable income from all household members (including dependants). The data are also equivalised which takes into account the size and composition of households to make the income figures comparable⁵⁴.

Figure 16 shows that housing costs in London represent a much higher share of disposable household incomes than in the UK as a whole, with a gap of between 5-8 percentage points. Based on the latest figures, this share in London has returned to its late 1990s peak, with housing costs representing 23 per cent of disposable incomes. In itself, this indicator suggests that the recent, high house prices have not had a considerable detrimental effect on housing affordability as there has been only a limited effect on the user costs of housing as a proportion of disposable income. Affordability constraints will however be increasingly acute as mortgage interest rates increase from their historic lows⁵⁵, which may place increasing costs on households. The risks to households resulting from changes in interest rates are considered in Section 4.2.

⁵⁴ Equivalisation is the process of accounting for the fact that households with many members are likely to need a higher income to achieve the same standard of living as households with fewer members. Equivalisation takes into account the number of people living in the household and their ages, acknowledging that while a household with two people in it will need more money to sustain the same living standards as one with a single person, the two person household is unlikely to need double the income.

⁵⁵ Bank of England interest rates are expected to rise at a ‘very gradual’ pace from their historic lows. Further details on the outlook for Bank Rates are included in the Bank’s [Quarterly Inflation Report](#).

Figure 16: Housing costs as a share of disposable household incomes in London, 1995-2014



Source: Family Resources Survey. Notes: The figures presented are based on three-year averages. Figures are for the UK from 2002/03 onwards. Earlier years are for Great Britain only.

It should be noted however that this measure effectively averages out the costs of housing across all households, irrespective of tenure and mortgage-holdings. As a result, mortgage spending averaged across all households is lower than it otherwise would be since a relatively low proportion of owner occupiers in London (27 per cent) are mortgage-holding households, compared to the UK as a whole (33 per cent)⁵⁶. Since property prices (and the corresponding size of advances) are much higher in London, mortgage holding households still spent considerably more financing their mortgages costs than households in the rest of the UK⁵⁷.

It is also possible that the increasing share of income spent on housing may itself be a reflection of household preferences. That is, as incomes increase people may switch from renting to home ownership or demand more space, a bigger house, garden, driveway, etc. This places more demand for housing land which, if the supply is fixed, will likely contribute to increases in prices. Evidence suggests that the ‘income elasticity of demand’ for housing in the UK is positive meaning that market demand for housing does indeed grow as people become better off. Research by the Institute for Fiscal Studies however notes that typical estimates lie in the range 0.5 to 0.8⁵⁸, which means that demand for housing tends to rise less than proportionately to income. In certain highly desirable London sub-markets it is possible that demand for housing is more sensitive to changes in incomes.

It has also been argued that two other changes in London’s housing markets, related to the use of property as an investment, have fed into overall increases in house prices: increasing foreign

⁵⁶ 2011 Census data cited in: ONS, ‘Housing Expenditure’, chapter 2 in: ‘Family Spending’, December 2014.

⁵⁷ Data from the 2013 ONS Living Costs and Food Survey estimates that household expenditure on mortgages by London’s mortgage-holding households averaged £211.80 per week in London, 46 per cent above the UK average of £145.40.

⁵⁸ Source: Chandler, D. and Disney, R. (IFS), ‘Housing market trends and recent policies’, chapter 5 in: ‘The IFS Green Budget: February 2014’.

ownership of housing and growth in the buy-to-let market. There is however limited available evidence that either of these have had a profound impact on house prices. Indeed, although increasingly supported by buy-to-let mortgages, the share of the private rental market in London remains lower than it was previously in the 1960s and 1970s. It is however arguable that the strong long-run performance of London housing relative to alternative investments may have contributed to London’s housing stock being increasingly seen as a vehicle in which to hold money, acting as a possible further incentive towards owner-occupation (see Appendix 1 for further analysis).

With regard to foreign ownership, the evidence is also mixed, and on balance suggests that it is responsible for only a small share of transactions and likely to have had only modest effects on house prices in London. There is also some evidence to suggest that following the economic crisis, the additional demand for new build properties may have to some extent lessened the negative impact of credit constraints on construction activity (see Appendix 2 for further analysis).

4.1.3 The impact of house prices on the upfront costs of home ownership

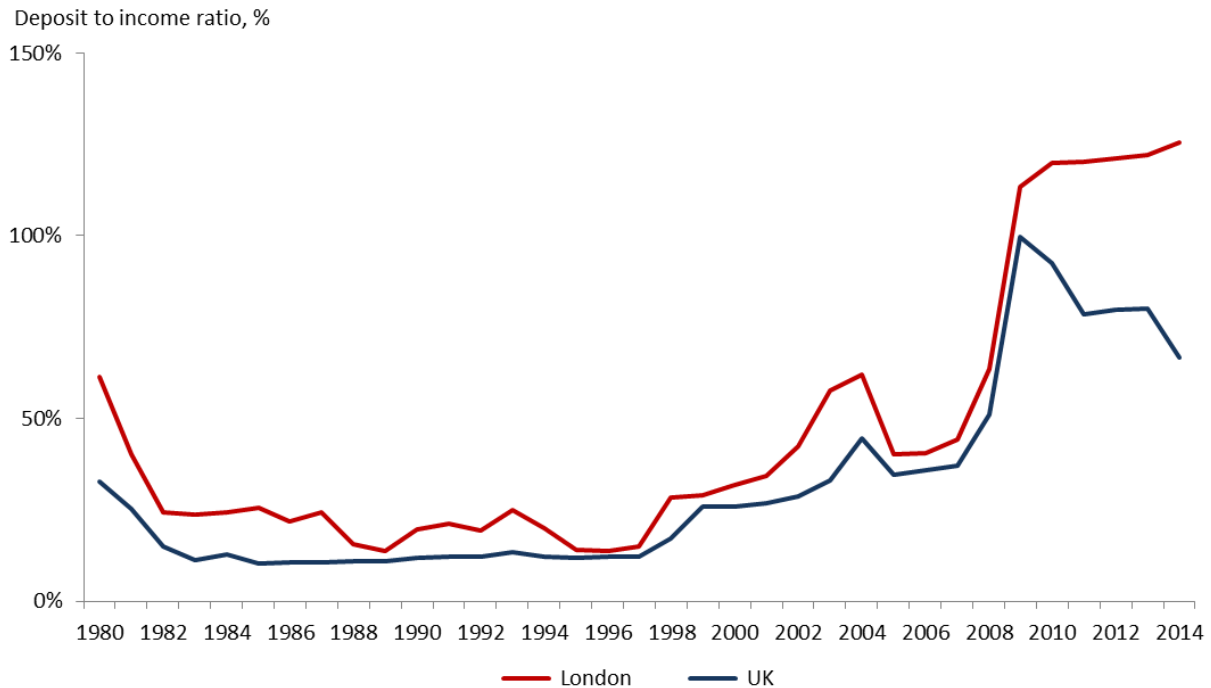
Buyers, and particularly first-time buyers, face significant upfront costs in buying a house associated with the value of the deposit needed to secure mortgage finance, as well as the costs of stamp duty tax on house purchases. As house prices increase, the upfront costs of home ownership (or the transaction costs of home moving) will also increase, other things being equal.

A number of indicators are available that can provide information on these costs and the consequent ability for first-time buyers to finance home ownership in London. This includes measures of the size of the deposit relative to incomes, as well as indirect indicators of first-time buyers’ affordability constraints, such as the proportion of mortgage lending to first-time buyers and the average age of such buyers, and how these compare to their long-term trends.

Figure 17 compares the estimated size of a median deposit for first-time buyers against the median borrower(s) income based on CML regulated mortgage survey data. This shows that the average deposit to income ratio for first time buyers has increased at a rapid rate in London since 2008, reaching a high of 125 per cent in 2014. As a result, the average size of a deposit for house purchases in London in 2014 was almost £70,000, equivalent to 1.25 times median borrower(s) total income. This is considerably above its long-run trend in the previous three decades, with deposits averaging 30 per cent of incomes from 1980-2007.

The rapid deterioration in the affordability of home purchase, on this measure, is driven by a post-recession shift towards a larger size of deposits as a proportion of house values. In each of the six years following the recession, London first-time buyers put down a deposit worth around 25 per cent of the total house price, compared to an average of 12 per cent in the 10 years before from 1998 to 2007. For the UK as a whole in contrast, the average deposit size as a share of the house price peaked at 25 per cent in 2009, but has since fallen back to 17 per cent, with the deposit to income ratio falling from 100 per cent to 67 per cent in this period. This suggests that there may be particularly persistent constraints on mortgage lending, and/or that there has been a shift in the incomes of first-time buyers receiving mortgage finance in London, such as a growth in the number of multiple income households seeking mortgage finance.

Figure 17: Deposit to income ratio for first-time buyers, 1980-2014



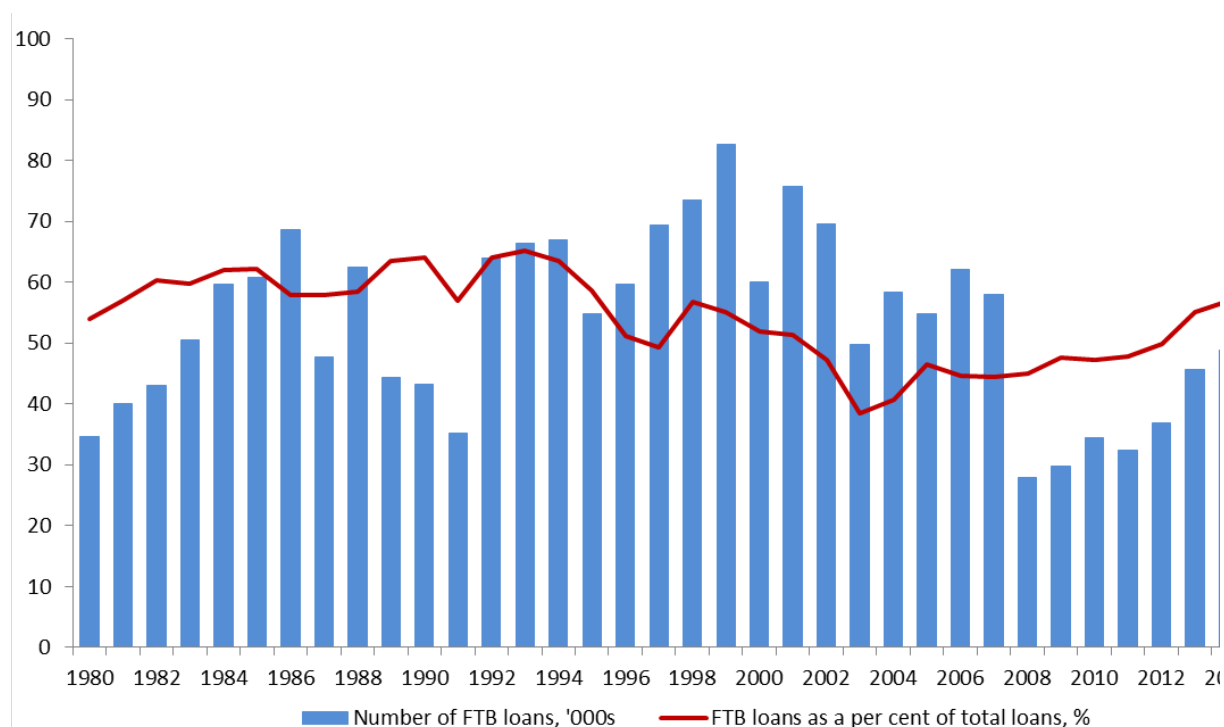
Sources: GLA calculations based on CML annual data for first-time buyers. Notes: median deposit value is calculated based on CML data on the size of the advance and its proportion as a share of the total purchase price.

Indirect indicators of affordability constraints for first-time buyers

In 2014, there were an estimated 48,800 loans for first-time buyers in London, equivalent to 57 per cent of all home-buyer mortgage loans⁵⁹. This represents the highest proportion since 1995 and a return to long-run trends in the 1980s and 1990s. This return to first-time buyers representing a relatively high proportion of mortgage loans in London may be a sign of reduced affordability constraints. It is notable however that the number of first-time buyer loans in 2014 is below pre-crisis levels which averaged around 60,000 per year (see Figure 18).

⁵⁹ First-time buyers in London make up a larger proportion of the total mortgage market (around 50-60 per cent compared to around 40-50 per cent in the UK overall), reflecting demographics in London where there tend to be relatively more young people of a typical first-time buyer age.

Figure 18: First-time buyer loans for house purchases in London, 1980-2014



Sources: CML Regulated Mortgage Survey, annual data for first-time buyers. Notes: First time buyer numbers will include some buyers who have previously owned a property before, but are not in owner-occupation at the time of this purchase. Estimates from the English Housing Survey suggest that that around 20 per cent of stated first-time buyers may fall into this category.

Faced with higher upfront costs to owner-occupation, affordability constraints would suggest that prospective buyers may increasingly delay making a house purchase in order to save enough money to put down a deposit. Evidence from CML data suggests that the median first-timer buyer in London was 31 years old in each year from 2010–2014. This is marginally higher than the long-term, pre-recession average of 29 years old, but remains below a 2003 peak of 32. The expected increase in the average of median buyers in light of increasing affordability constraints may however have been offset by a growing trend towards parental assistance for young buyers. In 2012, the CML reported⁶⁰ that the majority of first time buyers (72 per cent) in London received financial assistance, compared to 66 per cent in the UK overall. The English Housing Survey 2013/14⁶¹ also notes that the proportion of mortgagors who bought their first house with inheritance has increased in the last ten years, more than doubling from 2003/04 (from 3 per cent to 8 per cent). This growing trend towards financial assistance to meet the growing cost of deposits (shown in Figure 17) may have long-term implications for social mobility, and may entrench wealth inequalities across generations that were discussed in Section 2.2.

It follows from this assessment of a variety of standard and non-standard measures of affordability that rather than increased incomes, increased borrowing power (through easier access to mortgage finance and low rates of interest) may have contributed to households choosing to spend more money on housing. In addition, a number of demographic and social trends may have increased demand for housing in the London economy, and thereby driven the

⁶⁰ CML, 'Housing in London: challenges and solutions', November 2012.

⁶¹ DCLG, [English Housing Survey 2013/14](#), 25 February 2015.

price of desirable and favourably located housing that is in limited supply. The role of these broader socio-demographic factors and the efficiency of a supply-side response are considered later in section 4.3, after first having looked at the potential vulnerabilities and risks to London’s housing market that may be associated with higher interest rates and tighter mortgage market conditions.

4.2 Vulnerabilities and risks to London’s housing market

House prices in London are rising in real terms and appear high relative to long-term trends on some measures, although within the realms of affordability on others as a result of historically low costs of credit and/or supported by alternative sources of income. This may make the London economy vulnerable to the risk of a price correction, particularly if the costs of borrowing were to rise, or access to credit and alternative income streams were to slow.

4.2.1 Sensitivity to tighter mortgage market conditions

Mortgage markets have greatly altered the terms and availability of credit for prospective homebuyers in the UK over the past 30 years. A 2005 OECD paper⁶² suggested that financial deregulation since the 1980s, and more recent lending innovations such as offset mortgages which allow borrowers to offset their savings against the mortgage balance, have significantly reduced household costs of borrowing⁶³. The relaxation of borrowing constraints, and the reduced cost of mortgages, in turn may have positively fed back to house prices.

This longer-term trend towards easier access to mortgage finance has however been slightly reversed since the financial crisis. The Mortgage Market Review and macro-prudential measures announced by the Bank of England in 2014⁶⁴, included several measures to tighten mortgage lending criteria including, loan to income caps, stress testing of borrowers’ affordability, and greater capital repayment requirements. These measures are designed to tighten the rules on firms responsible for mortgage lending.

While the analysis in the preceding section suggests that this may have been one of the main factors driving up the upfront costs of home ownership, the full impact of these changes on the prospects for future house price growth and affordability are as yet unknown. Preliminary analysis by Savills⁶⁵ however suggests that the resulting affordability constraints will slow house price growth in London over the next five years as, without a considerable increase in income growth the average buyer will be unable to keep up with house prices in a changed lending environment. US research analysing the role of mortgage credit in driving house prices in developed countries in the past 140 years⁶⁶ finds that while loose monetary conditions tend to make credit cheaper and houses more expensive, tighter credit conditions tend to make credit dearer and houses more affordable.

4.2.2 Sensitivity to changes in mortgage interest rates

Rapid house price growth that is fuelled by easier and cheaper access to credit, if not combined with sufficiently higher incomes, may lead to rising levels of indebtedness and increase the

⁶² OECD, ‘Recent house price developments: the role of fundamentals’, OECD Economic Outlook, 78, pp. 123-154.

⁶³ Based on its analysis of the demand and supply of housing finance, the Office for Budget Responsibility (OBR) also finds evidence on much higher levels of credit rationing prior to 1981. Source: Auterson, T., ‘[Forecasting house prices](#)’, OBR Working paper 6, July 2014.

⁶⁴ For further details, see the FCA summary of the [Mortgage Market review](#).

⁶⁵ Savills, ‘[Residential property focus: the effect of the London affordability squeeze](#)’, February 2015.

⁶⁶ Jordà, O., Schularick, M., Taylor, A. ‘[Betting the house](#)’, NBER working paper 20771, December 2014

number of households that are vulnerable to changes in interest rates. This in turn may reduce the ability of the economy to withstand further shocks.

Based on an annual survey of 6,000 UK households, the Bank of England reported⁶⁷ that a rise in bank rates from the current low of 0.5 per cent up to 2.5 per cent would almost double the proportion of households struggling to pay their mortgages (as those financed by a variable rate would face higher monthly costs of repayment). The Bank however reports that the percentage of households with high debt-servicing ratios (those deemed most at risk of financial distress) is ‘not expected to exceed previous peaks’, assuming a likely gradual path of interest rate increases, and an assumed 10 per cent increase in household incomes.

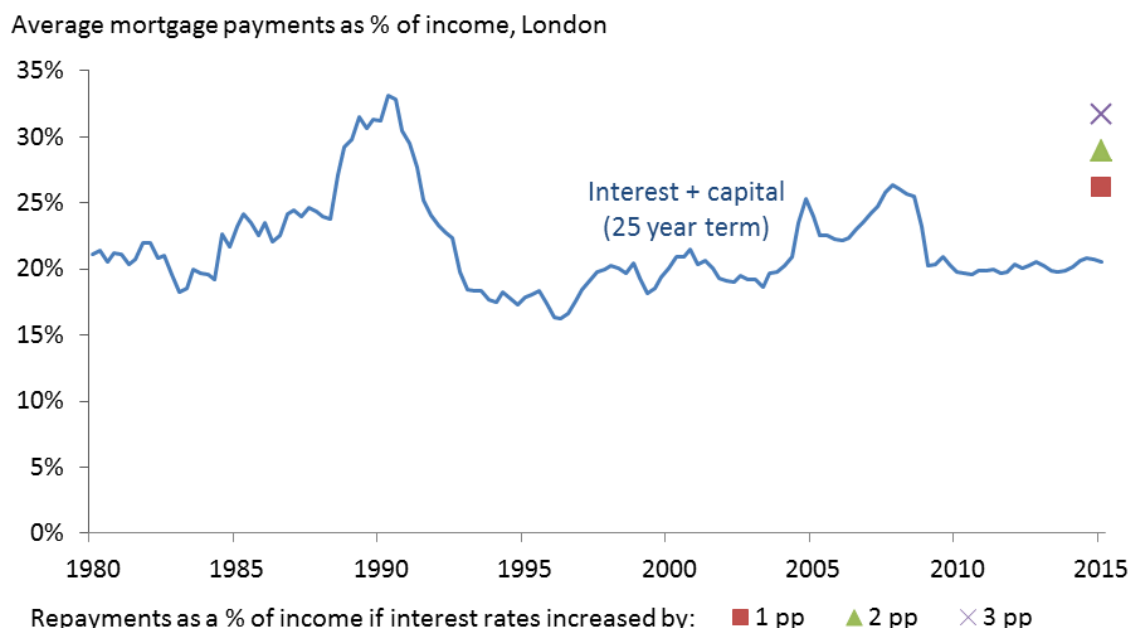
Given the increasingly high loan-to-income multiples seen in Figure 12, London households may be particularly exposed to changes in mortgage interest rates, while data in Figure 14 shows that average mortgage interest rates may also move independently of bank base rates. This may, for example, result from increased competition between mortgage lenders to offer borrowers the best rates, or changed perceptions of the future path of interest rates.

Based on CML data on mortgage repayments, Figure 19 presents the modelled effects of percentage point increases in average mortgage interest rates on the levels of average payments as a proportion of average borrower income(s) in London. This shows that, assuming that those securing a new mortgage or those moving home will face this higher mortgage interest rate, an increase by a single percentage point would mean a return to pre-crisis affordability levels (26 per cent), while an increase by three percentage points would return affordability to levels not seen since the early 1990s. By historical standards such increases in mortgage rates are far from unprecedented, and even in the three percentage point scenario the new levels of mortgage interest rate (5–6 per cent) would remain far below 1980s levels⁶⁸.

⁶⁷ Bank of England, ‘[Quarterly Bulletin 2014 Q4: the potential impact of higher interest rates on the household sector](#)’, December 2014.

⁶⁸ Based on the latest inflation report, the path for UK Bank rates implied by market prices sees an increase of 1.2 percentage points in the next three years. Bank of England, ‘[Inflation report](#)’, August 2015

Figure 19: The estimated impact of higher mortgage interest rates on levels of affordability



Source: GLA calculations based on Council of Mortgage Lenders, quarterly data. Notes: data is based on all home buyers including first-time buyers and home movers. Modelled interest plus capital repayments assumes an average mortgage length of 25 years.

The incomes and costs of housing in the figures presented above are however presented as average figures. There are however likely to be significant distributional consequences of changes in interest rates and the extent of any impact will also depend on developments in household incomes among those that are potentially most vulnerable. At higher levels of indebtedness, households may be more likely to encounter payment difficulties following negative shocks to income or interest rates. In addition, it’s possible that wider concerns about the risk of an increase in interest rates may lead to falls in consumer spending, even if the full impact does not eventually materialise. Rising incomes would however offset the risks to household budgets and wider financial stability that may arise from higher housing costs.

4.3 The responsiveness of housing supply to changing conditions

London is a particularly desirable place to live and work, with people attracted to the city for a number of reasons including the variety of career opportunities, the openness to different cultures, as well as the vast array of leisure and cultural offerings⁶⁹. While these pull factors draw in aspiring home owners from the rest of the UK and overseas, London’s population growth is also partly a product of high levels of natural growth in terms of births and deaths associated with its relatively youthful population. At its most fundamental level, the overall ‘need’ for housing in London can therefore be seen as a product of the impacts of these socio-economic and demographic drivers on the size of the capital’s population, and trends in the size of households.

It is this fundamental need which, coupled with the increased ability to finance home ownership (through higher incomes and access to credit seen in Section 4.1), places upward pressure on

⁶⁹ London’s attractiveness as a place to live and work is considered in more detail in chapter 3 of: GLA Economics, ‘Economic Evidence Base’, May 2010.

the price of housing in the capital. In a well-functioning housing market, rising prices act as a signal of increased demand in London, and will be met, to the extent possible, with an increase in the quantity of housing supplied; as the value of land rises there is an incentive to build on it or, if the land is already occupied, to increase the intensity of its use. If instead, demand is not sufficiently met by the supply of housing, it follows that prices (and rents) will continue to rise until a point is reached at which the benefits of living in London are outweighed by the costs. This section considers the overall trends in growth in the housing stock and construction activity to shed light on the ability of housing supply to respond to higher demand in London in the long term.

4.3.1 Housing London’s growing population

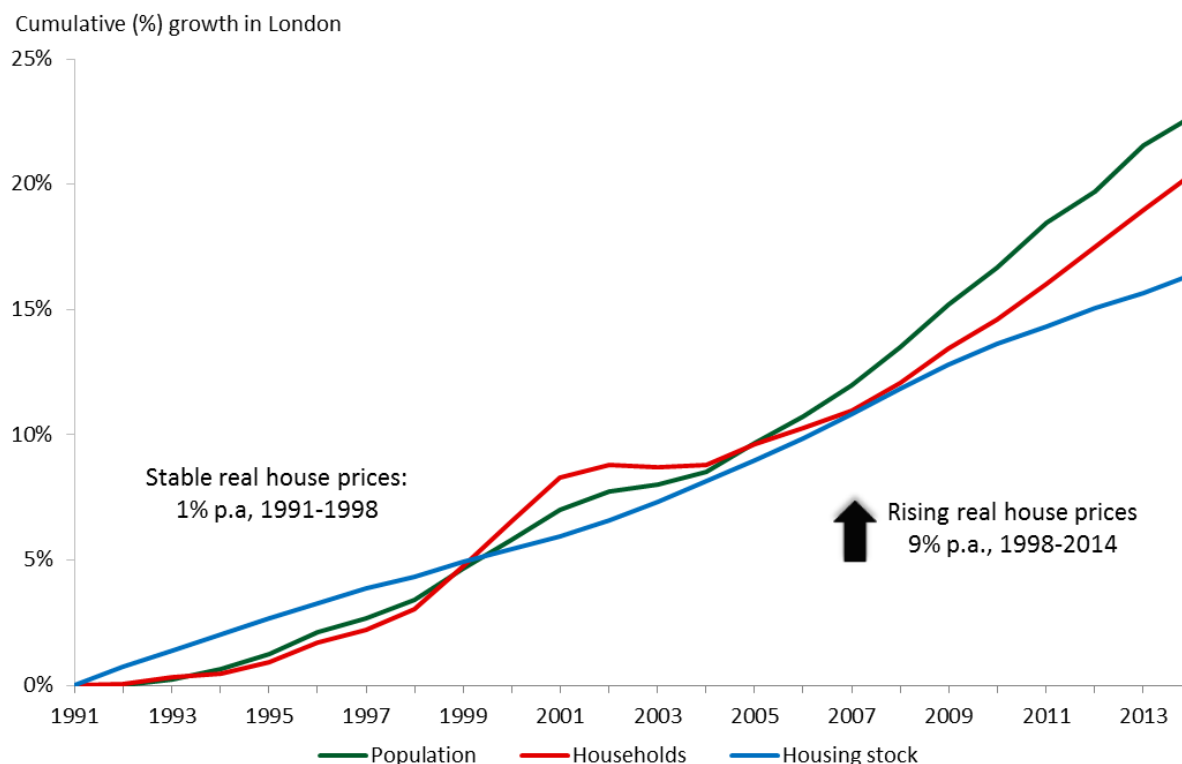
From 1991 to 2014, London’s population grew by 23 per cent (up 1.7 million) to 8.6 million and its number of households⁷⁰ grew by 20 per cent (up 629,000) to 3.4 million. As the numbers of people and particularly, the number of households in London have risen, there is a corresponding need to house this growing population.

Figure 20 brings together trends in the number of people, households and homes in London between 1991 and 2013. All three have grown significantly over the period, but in recent years growth in the population and number of households have increasingly outpaced housing supply, which has remained subdued in the aftermath of the recession. From 1991 to 2014, the number of permanent dwellings in London (its housing stock) has increased by 516,000 dwellings to 3.4 million dwellings, equivalent to an average of 22,435 homes per year.

Comparing the cumulative growth in the housing stock and household population with house prices, it is notable that at a time of relatively stable real house prices from 1991 to 1997, the year-on-year growth in the number of London households was slower than growth in the number of London dwellings. Conversely, from 1998 to 2014, when the rates of growth in London’s population and number of households started to increase in excess of growth in the housing stock, ONS mix-adjusted house prices rose by an annualised average of 9 per cent. This may be indicative of house price sensitivity to shortfalls in growth in the housing stock relative to growth in the need for housing.

⁷⁰ A household is defined as one person living alone, or a group of people (not necessarily related) living at the same address who share cooking facilities and share a living room or sitting room or dining area. The number of households is a distinct measure from population changes as it is influenced by a series of social and behavioural factors in addition to changes in overall population.

Figure 20: Cumulative growth in population, households and housing stock in London since 1991



Sources: Population: ONS mid-year estimates. Households: 1991-2010 calculated by GLA, 2011-2014 based on GLA central population projection. Housing stock: 2001-2014 from DCLG housing table 125. 1991-2001 from DCLG table 109. Figures for 1991, 2001 and 2011 are from the Census. House prices: ONS mix-adjusted house price index, real terms. Notes: The estimated population of an area includes all people who usually live there, irrespective of their nationality. People arriving into an area are only included if their stay in the UK is 12 months or more. The house-price index is deflated by retail prices and rebased at 100 to take account of the effects of inflation on purchasing power.

As the Mayor’s housing strategy⁷¹ highlights, London is not alone in facing a challenge in providing enough new homes to meet the demands of its growing population. From 2001 to 2011, London increased its housing stock at a faster annual rate than Paris and New York (0.8 per cent vs. 0.5 per cent), both of which had lower rates of population growth. However, London’s stock grew at a much slower rate than Tokyo’s, which increased by around two per cent per annum. The ability of the housing market to function efficiently to increase supply in response to demand in the longer-term, is an important determinant of whether London will remain an attractive city in which people can afford to live.

In view of the sustained high levels of London house prices over the past 15 years, the question therefore remains as to why the available supply of housing in London is not responding sufficiently to market signals. While scarce land for development is fixed in the short term, housing supply can be expanded in a number of ways: by building new homes, getting empty houses back into use, making more intensive use of the existing stock, and converting non-residential buildings into residential use. The next section considers the role of construction activity in shaping the availability of London housing for sale.

⁷¹ Mayor of London, ‘Housing in London 2014: the evidence base for the Mayor’s Housing Strategy’, April 2014, p.36.

4.3.2 Construction activity in London in response to changes in house prices

While it is possible for existing owners to put their properties on the market for resale, rent out spare rooms, and for empty homes to come back into use in response to price rises, the overall stock of dwellings in London can only increase through construction activity related to new buildings, extensions and conversions.

In an efficient housing market, higher house prices would lead to an increase in the number of new homes being built, as private builders recognise the potential to make greater returns and expand output, and additional new firms enter the house building market. In reality, however, the supply of new building tends to be rather inelastic, or in other words supply tends to be relatively unresponsive to market signals of increased demand.

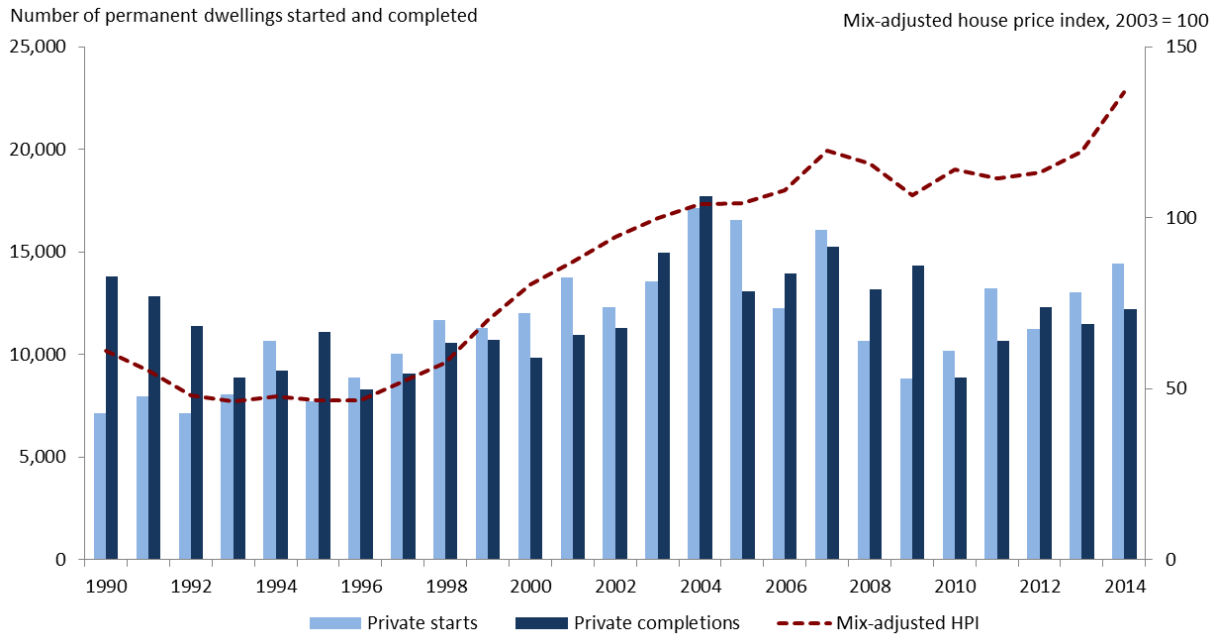
Figure 21 plots the annual starts and completions of new private sector house building against real house prices over the past 15 years. This suggests that while house building is relatively unresponsive to price increases, it does appear to be sensitive to price reductions. The sustained average annual increase in real house prices of 8.7 per cent between 1997 and 2007 was accompanied by a more gradual annual average increase in private housing starts⁷² (4.8 per cent) and private completions⁷³ (5.3 per cent). In contrast, the 8 per cent decline in real house prices from 2008 to 2009 was accompanied by a 17 per cent annual decline in private starts in the same year, and a subsequent 38 per cent fall in private completions in 2009/10.

Furthermore, in the five years since 2009, the numbers of new housing starts in London has remained below their pre-crisis peak in spite of the high price increases over the same period, while the levels of annual completions has fluctuated from year to year.

⁷² A new home (or dwelling) is counted as started on the date work begins on the laying of the foundation, but not including site preparation. Thus when foundation work commences on a block of flats all the dwellings in that block are counted as started.

⁷³ In principle, a dwelling is regarded as complete when it becomes ready for occupation or when a completion certificate is issued whether it is in fact occupied or not.

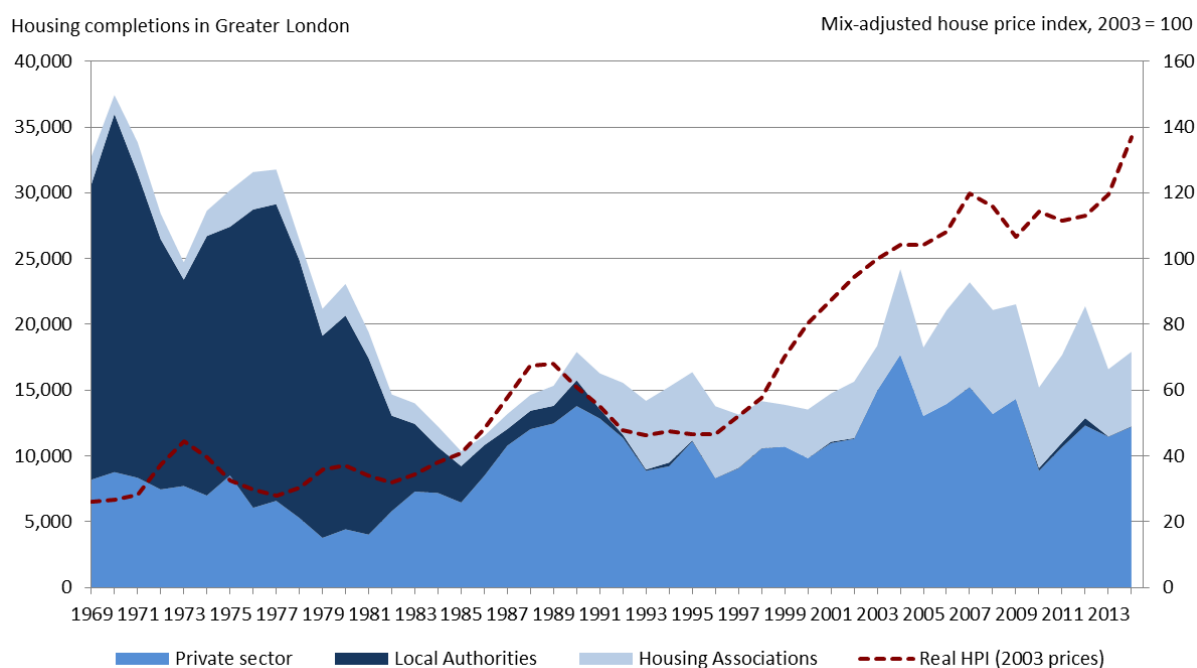
Figure 21: New house building and real house prices in London, 1990-2014



Source: DCLG house building statistics, tables 217 and 255a based on P2 returns from local authorities, National House-Building Council (NHBC) and approved inspector data returns. ONS mix-adjusted house price index reference table 33. Notes: The house-price index is deflated by retail prices and rebased at 100 to take account of the effects of inflation on purchasing power.

Historically, a similar pattern emerges. Figure 22 gives an indication of the responsiveness of the house building market to changes in house prices in London since 1969. While housing building has tended to fall following a drop in house prices, there is not always a corresponding increase during periods of rising prices. Although modest increases in the supply of private completed houses did however take place at the time of the previous two house price booms in the late 1980s and early 2000s, the levels of house-building in London have not kept pace with changes in house prices or the population. As a result, house building levels in London have remained stubbornly below the levels seen in the 1970s, at which time the majority of new builds were developed by the public sector (see Figure 22).

Figure 22: New house building and house prices in London, 1969-2014



Sources: 1969 to 1989 data provided to GLA by DCLG; 1990-2014: DCLG house building statistics tables 217 and 255a. ONS mix-adjusted house price index reference table 33. Notes: The house-price index is deflated by retail prices and rebased at 100 to take account of the effects of inflation on purchasing power.

This construction data however only applies to new buildings (in effect, a gross measure) and does not take account of other possible changes to the dwelling stock as a result of conversions, changes of use and/or demolitions. While the supply of housing in recent years has been largely driven by the completion of newly constructed dwellings, it is likely to slightly under-estimate the overall changes in dwelling stock at times of rising prices as the balance of net conversions and changes in use against demolitions are likely to be positive as individuals seek to benefit from the uplift in house prices.

In each of the last five years for which data are available, overall net changes were 6 to 11 per cent higher than the number of new builds in London alone, adding almost 10,000 additional dwellings to the overall housing stock. In 2013/14, for example, net conversions and changes of use increased London’s overall dwelling stock by 1,265 and 2,298 respectively, while 1,647 dwellings were demolished⁷⁴. Table 4 shows that this pattern of additional supply from conversions and changes of use, with few demolitions, has been relatively consistent over the past 10 years (albeit with slightly higher rates of activity in all areas prior to the financial crisis in 2007/08). This notwithstanding, new build remains the primary driver of an increasing housing stock and the additional 10 per cent increase realised from conversions and other changes is still far from being responsive to the levels that recent trends in house prices would suggest are necessary to meet demand.

⁷⁴ Source: London development database, extracted on 06/08/15.

Table 4: Net additions to London’s housing stock, 2004/05 – 2013/14

Financial year	New build	Demolitions	Conversions	Change of use	Net additions
2004/05	22,657	3,551	2,053	3,526	24,685
2005/06	23,178	3,084	2,494	3,043	25,631
2006/07	24,380	3,281	2,394	3,664	27,157
2007/08	24,746	2,008	2,626	2,882	28,242
2008/09	25,271	1,717	2,801	3,210	29,565
2009/10	22,076	2,130	1,978	2,807	24,736
2010/11	17,516	2,280	1,554	2,085	18,882
2011/12	20,024	1,942	1,431	2,779	22,292
2012/13	21,036	1,870	1,152	1,954	22,272
2013/14	22,399	1,647	1,265	2,298	24,315
All years	223,283	23,510	19,748	28,283	247,777

Source: London development database, extracted on 20/07/15. Notes: net additions measure the absolute increase in stock from one year to the next, including self-contained homes from new build as well as other losses and gains (such as demolitions, conversions and changes of use). Figures on new build will include those ‘affordable homes’ built for social rent and intermediate housing, though these cannot be directly compared to the Mayor of London’s target on affordable homes delivery which also include acquisitions.

In addition to the conventional measures in Table 4, the housing provision targets set out in the London Plan also account for further additions to housing supply from non-self-contained housing based on the number of bedrooms in student halls of residence and other types of communal accommodation. In 2013/14, based on the latest available estimates, these non-conventional completions totalled 4,385 bedrooms – the highest rate in the past 10 years. The London Plan also includes the year-on-year change in the number of long-term empty homes, where a decrease is considered an addition to supply and an increase is a subtraction. In 2013/14, 1,057 dwellings were no longer considered to be empty on this measure (see Table 5).

Table 5: Further net additions to London’s housing stock, 2004/05 – 2013/14

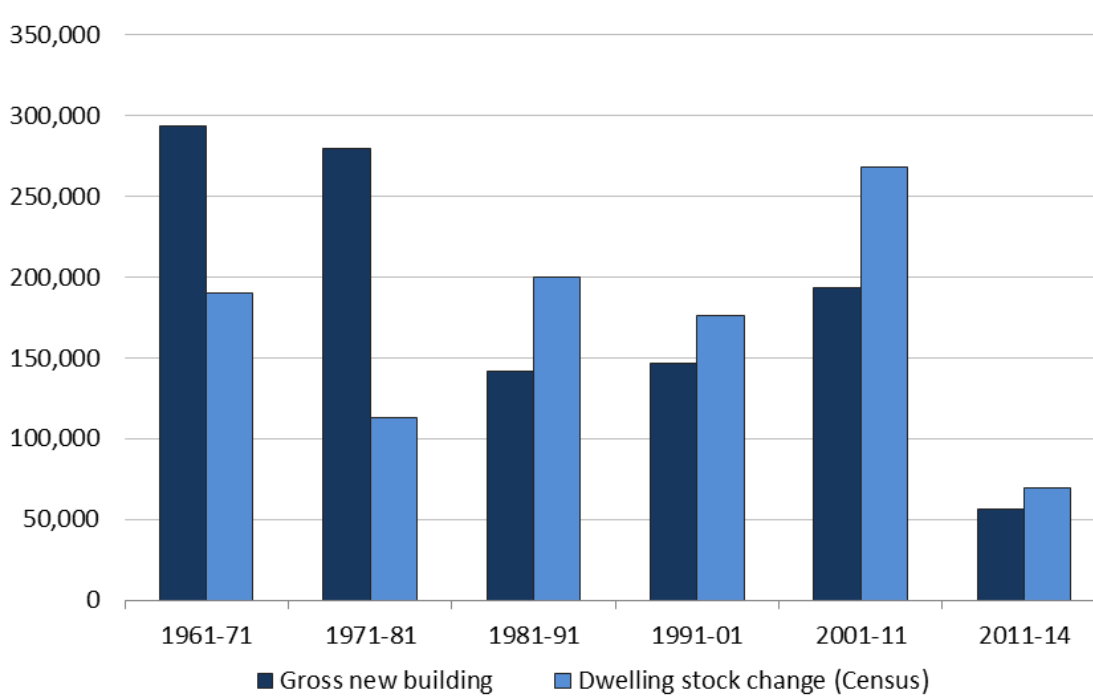
Financial year	Non-self-contained (communal) accommodation	Change in long-term empty homes
2004/05	4,164	2,519
2005/06	449	-61
2006/07	2,973	3,608
2007/08	1,284	287
2008/09	2,408	-398
2009/10	1,426	2,223
2010/11	1,922	5,125
2011/12	1,491	5,427
2012/13	2,639	2,018
2013/14	4,385	1,057
All years	23,141	21,805

Source: London development database, extracted on 20/07/15. Notes: non-self-contained housing includes bedrooms in hostels, student halls of residence, care homes and other non-contained units. Long-term empty homes are those which have been empty for more than six months.

Looking back over a longer time period, Census estimates on the number of dwellings allow us to infer the net change across each decade. Figure 23 suggests that in contrast to recent trends, net additions to the housing stock were considerably less than gross levels of new building in

the 1960s and 1970s. This is consistent with many of the new buildings at the time simply replacing existing stock following slum clearances and other demolitions.

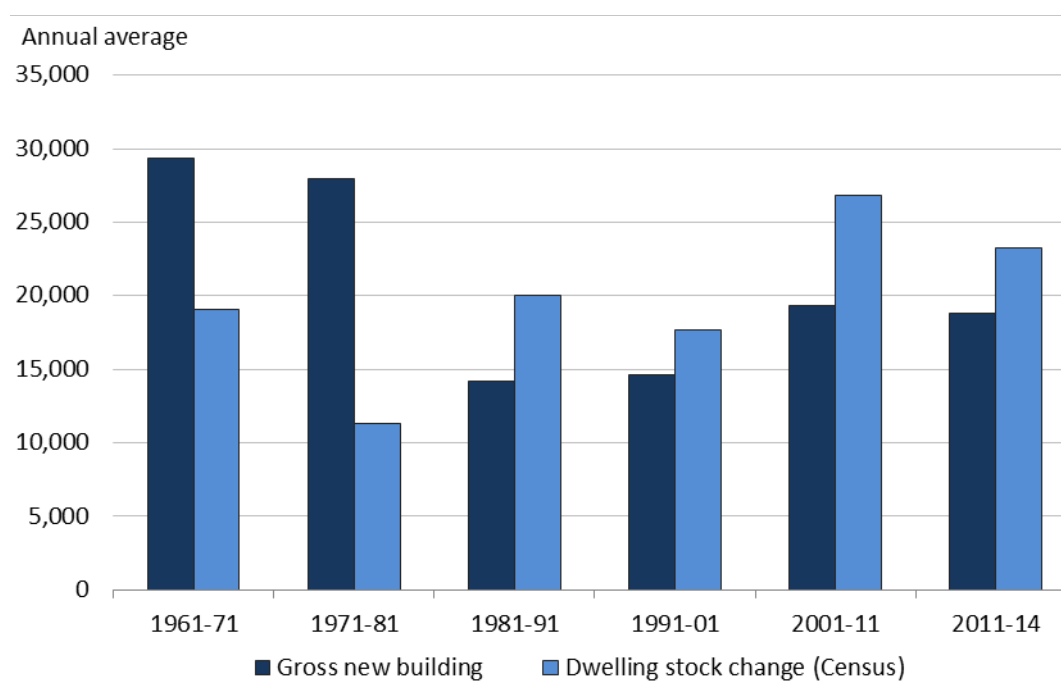
Figure 23: Gross new house building and change in dwelling stock in London by decade



Sources: DCLG house building statistics, and Census data from 1961 to 2011. Data on dwelling stock change for 2011-2014 are based on local authority estimates in DCLG table 125.

On an annual average basis, gross new builds and net additions to the housing stock have been slightly lower in the three years between 2011 and 2014 than in the previous decade, at a time of rising house prices. Estimates of the changes in the overall dwelling stock however suggest that rates of annual net additions remain above historic figures from 1960s to 1990s.

Figure 24: Gross new house building and change in dwelling stock in London, annual averages



Sources: DCLG house building statistics, and Census data from 1961 to 2011. Data on dwelling stock change for 2011-2014 are based on local authority estimates in DCLG table 125.

A number of factors may explain why housing supply in London has been relatively unresponsive to price signals to date. The most cited of these are the constraints of the planning system. In an assessment of the determinants of house prices in England, Hilber and Vermeulen⁷⁵ estimated that around 35 per cent of the price of a house in England is directly attributable to regulatory restrictions on land use planning, which the authors find are most severe in London and the South East.

The government has introduced a range of measures as a result, including new permitted development rights for conversions from commercial to residential uses under certain conditions, as well as automatic permissions on suitable brownfield sites⁷⁶. The extent to which these measures will speed up the response of housing supply to changes in the demand for housing in London is however yet to be seen.

Data on planning permission approvals however shows that it is not only a question of up-front planning restrictions. Typically, planning approvals are given for roughly 1.5 to 2 times the actual number of homes finally built, and this gap has been broadly consistent over the past 10 years (see Table 6) – so although the level of approvals indicate a capacity for more homes, something else is preventing these from actually being built.

⁷⁵ Hilber, C. and Vermeulen, W. ‘The impacts of restricting housing supply on house prices and affordability’, November 2010

⁷⁶ Further details of these regulatory changes are available at: <https://www.gov.uk/government/policies/planning-system>.

Table 6: Approvals for house building and completions, 2004/05 – 2013/14

Financial year	Net conventional housing approvals	Net conventional completions	Net conventional housing pipeline
2004/05	37,724	25,300	108,818
2005/06	39,462	25,084	124,862
2006/07	41,806	27,226	142,305
2007/08	63,114	28,215	173,464
2008/09	35,102	29,534	173,772
2009/10	34,496	24,732	173,702
2010/11	50,482	19,185	177,782
2011/12	78,316	21,988	211,200
2012/13	38,492	21,923	216,476
2013/14	54,828	23,986	240,983

Source: London development database. Notes: annual approvals include all units in planning permissions that are granted during the year unless they are superseded by a revision to the scheme within the same year, or a subsequent year. The spike in approvals in 2011/12 is most likely due to the introduction of the Mayoral Community Infrastructure Levy. Data on completions relates to three types of conventional housing supply: new build, conversions and changes of use. The ‘pipeline’ of housing supply comprises homes which have been granted planning permission but are not yet started or completed.

A number of possible market frictions and inefficiencies have been put forward by the literature to explain why housing is slow to respond to market signals⁷⁷. These include: difficulties for house-builders to access commercial finance; risk aversion or perverse incentives that lead to stock-piling of land, barriers to overcoming construction materials and skills shortages, as well as imperfect competition in the market for residential development (relative to other land uses). In a 2012 report, Molior⁷⁸ highlighted that 45 per cent of schemes of 20 or more private homes in the GLA area were in the control of firms that were not builders, while it also remains possible that planning restrictions after consent is granted may act as a further barrier to completion.

In the short-run, the inelastic supply of housing contributes to house price volatility and increases the likelihood of volatile house price increases and falls. However, it does not necessarily follow that increases in the housing stock, will be sufficient to entirely dampen the pace of house price rises in the capital if the demand for housing in London continues to increase.

⁷⁷ For a discussion, see HM Government (2006), ‘[Barker Review of Land Use Planning](#)’, December 2006.

⁷⁸ GLA, December 2012, ‘[Barriers to housing delivery: what are the market-perceived barriers to residential development in London?](#)’ Report by Molior London for the GLA.

5 Conclusions

House prices in London are high, and increasingly so. This is true relative to the rest of the country, London’s own historical standards, and prices elsewhere in the economy *i.e.* in real terms. There is however mixed evidence of whether these are overvalued or when considered based on other metrics.

Fundamental drivers such as a growing population, attracted by London’s amenities and access to employment, and higher incomes and earnings are able to explain part of the rise in demand for housing in the capital.

The demand for housing has however also been fuelled by greater financial liberalisation and historically low costs of borrowing. The evidence shows that while earnings are increasingly disconnected from house prices, this affordability gap has to date been sustained by a combination of cheap, accessible mortgage credit and increasing transfers of wealth between friends and family to meet the costs of high deposit requirements.

This raises concerns as the former might have led to rising levels of indebtedness and thereby increased the number of households which are vulnerable to subsequent changes in interest rates. This indebtedness in turn may reduce the ability of the economy to withstand further shocks. A gradual tightening of mortgage criteria and future rises in mortgage interest rates on the horizon may therefore slow the demand for housing and dampen the pressure on house prices. In terms of social affordability, the high rates of deposits and substantial gap between prices and incomes has limited access to home ownership for those without recourse to alternative funding sources such as from bonuses, gifts or inheritance for example.

Evidence on the changes in London’s housing supply in response to house price signals suggests that in the past, increases in the housing stock were more in line with the rates of growth in London’s population and number of households and that these coincided with a period of more moderate house price increases. Since 1999, however, at a time of rapidly increasing house prices, housing supply has not kept pace with the demand for housing in London. In this respect, further measures to overcome constraints in housing supply can be seen as an important step to address affordability in London’s housing market.

Appendix 1: House prices to rent ratios, alternative investment returns and the buy-to-let market

An alternative approach to contextualise the price of housing in the property market is to consider the case for investing in housing. An oft-used yardstick is based on the ratio of house prices to rents (or rather, what it would have cost to rent an equivalent property). The Economist likens this approach to how ‘stock-market investors look at the ratio of equity prices to earnings’⁷⁹.

The decision to invest in property is not only concerned with the yields (or rents) accrued, but also considers the potential returns or capital gains against the foregone income that one could have received if the capital invested into the house had been put into an alternative investment (such as shares). This section presents the London data on rents and alternative investment returns.

Rents and rental yields

In theory, house prices are related to rents of new contracts through what is effectively an arbitrage condition, i.e. the present discounted value of the rental contract should be equal to the present value of buying and keeping the dwelling over the same period. Ignoring transaction costs and financial constraints, this means that the average rent paid over the duration of the new contract will be approximately equal to the user cost of the housing assets⁸⁰.

However, since the dwellings in the price index are not the same as the dwellings in a rent index, several authors have referred to this as an “apples to oranges” comparison⁸¹. This is confirmed by research⁸² into London’s housing market which finds that different types of properties are associated with different price-to-rent ratios. This means that a higher ratio may be due to price rises for homes in desirable neighbourhoods being greater than the increase in rents of apartment buildings in a less desirable neighbourhood; or due to a change in the quality of the average home in either index.

In order to provide an illustration of the relationship between house prices and rents across London, this section uses data from the VOA to look at the geographical distribution of median monthly private rent by local authority for England. The method for producing these statistics provides a ‘snapshot’ of private monthly rent which does not enable comparisons over time, and so only data for 2013/14 have been presented in this analysis. Due to a lack of more suitable data on the purchase prices of rental properties in the VOA data, this is then compared to price paid data from the Land Registry.

Based on the VOA data, the median monthly private rent was highest in Westminster (£2,383) and Kensington and Chelsea (£2,275). These were the only two local authorities in England to have a median monthly private rent of more than £2,000 in 2013/14. These two London boroughs also had the highest house prices in 2014. Across London, the cost of private renting

⁷⁹ The Economist, ‘[Global house prices](#)’, April 2015.

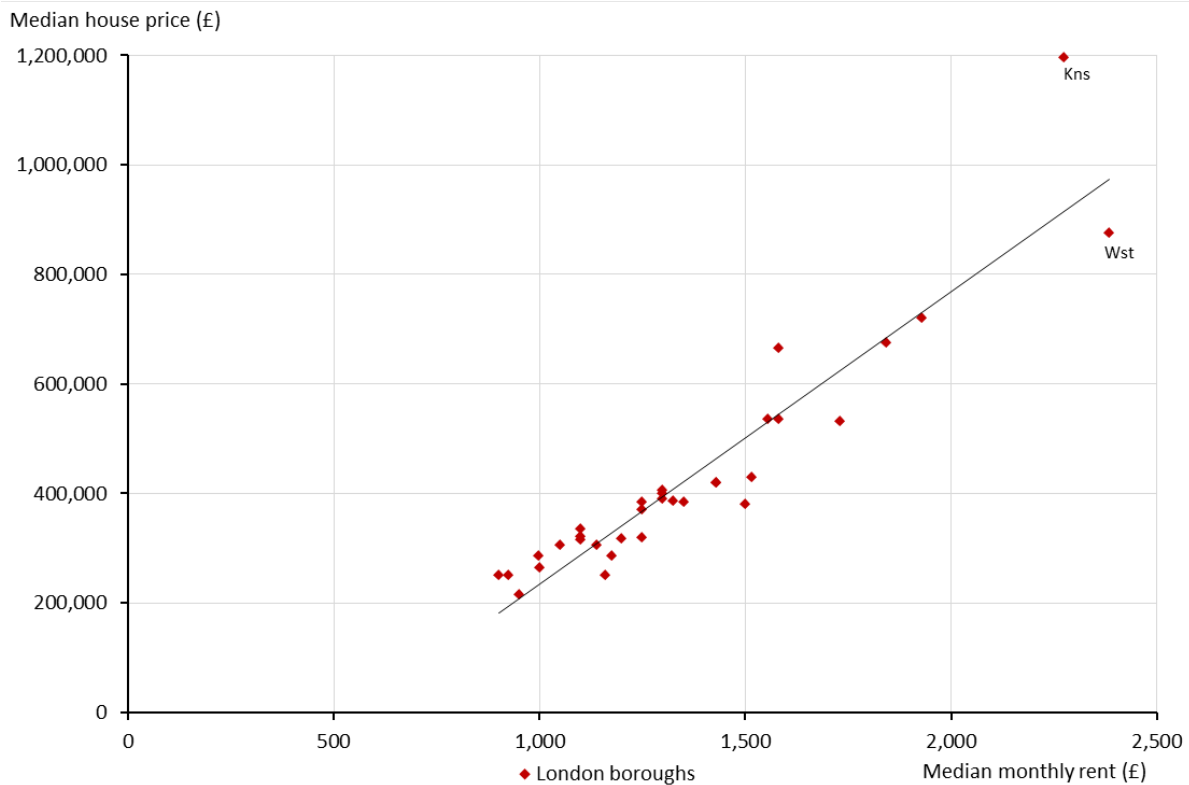
⁸⁰ European Central Bank, ‘[Structural factors in the EU housing markets](#)’, March 2003.

⁸¹ Smith, M. and Smith, G. ‘[Bubble, bubble, where’s the housing bubble](#)’, *Brooking papers on economic activity* 92(1); and Hill, R. and Syed, I. ‘[Hedonic price-rent ratios, user cost, and departures from equilibrium in the housing market](#)’, *Graz economics papers*, December 2012.

⁸² Bracke, P. (2013), ‘[House Prices and Rents: Micro Evidence from a Matched Dataset in Central London](#)’, SERC, LSE.

was very strongly correlated with average house prices overall, as shown in Figure A1.1. The scatter plot shows median monthly private rents against median house prices and it shows how strongly correlated the two indicators are.

Figure A1.1: Median house prices against median monthly rents by London borough, 2014



Sources: Land registry median house prices, 2014 and VOA median private monthly rents, 2013/14.

The rental yield is the amount of money a landlord receives in rent over one year, shown as a percentage of the amount of money invested in the property, also known as the return on investment. A common way of calculating rental yield is by taking the annual rental income from the property, and calculating this as a percentage of the property cost. While these are only averages, commentators may often point to areas where rental yields are relatively low as an indicator of a potential over-valuation *i.e.* where investors pay a disproportionate amount to receive a relatively small stream of income (either physically through a buy-to-let arrangement or in the form of ‘imputed rents’ in the case of owner-occupiers).

On this snapshot measure, the average rental yield in Kensington and Chelsea (2.3 per cent) is considerably lower than the London average yield of 4.3 per cent (see Table A1.1). In effect this means that for a homebuyer in Kensington to receive rental yields equivalent to the London average, this would require a price fall of 49 per cent, from the current median price of £1,195,000 back to £607,000, or for rents to rise by 97 per cent. It is highly likely however that the quality of the housing stock available for sale in Kensington differs substantially to that available on the rental market, and as such it is difficult to draw any meaningful conclusions from such analysis. Similar compositional effects may also explain why the estimated average rental yield is higher in England as a whole, than in many inner London boroughs.

Table A1.1: House price to rent ratio and rental yields by London borough, 2014

London borough	Median monthly rent (£)	Median house price (£)	House price: rent ratio	Average rental yield (gross, per cent)
Barking and Dagenham	950	215,000	226	5.3
Barnet	1,300	400,000	308	3.9
Bexley	900	250,000	278	4.3
Brent	1,350	385,000	285	4.2
Bromley	1,100	335,000	305	3.9
Camden	1,840	675,000	366	3.3
City of London	1,930	720,000	373	3.2
Croydon	1,000	265,000	265	4.5
Ealing	1,300	390,000	300	4.0
Enfield	1,180	285,000	243	4.9
Greenwich	1,200	318,000	265	4.5
Hackney	1,520	430,000	283	4.2
Hammersmith and Fulham	1,580	665,000	420	2.9
Haringey	1,300	405,000	312	3.8
Harrow	1,250	371,000	296	4.0
Havering	930	250,000	270	4.4
Hillingdon	1,140	306,000	269	4.5
Hounslow	1,250	320,000	256	4.7
Islington	1,730	532,500	308	3.9
Kensington and Chelsea	2,280	1,195,000	525	2.3
Kingston upon Thames	1,250	385,000	308	3.9
Lambeth	1,430	420,000	294	4.1
Lewisham	1,100	315,000	286	4.2
Merton	1,330	386,000	291	4.1
Newham	1,160	250,000	216	5.6
Redbridge	1,050	305,000	290	4.1
Richmond upon Thames	1,560	535,000	344	3.5
Southwark	1,430	420,000	294	4.1
Sutton	1,000	285,000	286	4.2
Tower Hamlets	1,500	380,000	253	4.7
Waltham Forest	1,100	322,000	292	4.1
Wandsworth	1,580	535,000	338	3.5
Westminster	2,380	875,000	367	3.3
London	1,350	364,000	280	4.3
England	595	195,000	328	3.7

Sources: GLA Economics calculations based on Land Registry price paid data 2014, and VOA private rents 2013/14.

Notes: Rents are rounded to the nearest 10, house prices to the nearest 1,000. Variations across areas may be influenced by differences in the sample composition rather than true differences in the rents.

It should also be noted that this gross measure does not take into account the ongoing expenses, such as maintenance work, agency fees, advertising, mortgage repayments and refurbishing, which should be deducted to give an estimate of net rental income. Nonetheless, research by Savills⁸³ notes that relative to cash returns averaging less than 2 per cent, income

⁸³ Savills, ‘Higher yields attracts investors’, May 2012.

streams from investments in the private rental sector in London may offer some investors an attractive yield.

Alternative investments and capital gains

Investments in a durable asset such as housing may also yield profits, or capital gains, at the point of sale of a property. Ultimately an investor would be looking to make gains from both the rent and from increases in the price of the house. When combined, the rental yield and capital growth gives the total return on investment.

The decision to invest in property is not only concerned with the yields (or rents) accrued, but also considers the potential returns or capital gains against the foregone income that one could have received if the capital invested into the house had been put into an alternative investment (such as shares). In addition, investment decisions may also take into account the transaction costs associated with the sale of different asset classes. Unlike alternative investments such as bonds and equities, property is relatively illiquid and can take a significant amount of time and cost to trade.

Disregarding the issue of liquidity and transaction costs, it is possible to derive a crude measure to compare the long-term returns to investments in different assets in previous periods. Looking firstly at performance of house prices against shares, gold, and cash (bank base rates) over the past three decades, table A1.2 shows that a £100,000 investment in equities would have delivered the highest levels of return – particularly if dividends had been reinvested. The FTSE all share total-return index, which accounts for the reinvestment of all dividends, saw a 1,400 per cent increase since 1985, equivalent to an annual rate of return of 9.8 per cent.

This was higher than the average returns to house prices over the period based on ONS data, which shows that the same sum invested, brought in a nominal 7.8 per cent annual return. This compares to a 5.7 per cent return from putting it all in a cash savings account, and 4.6 per cent from investments in gold. The total returns to housing would however also include the net rental income (or ‘use value’ for owner-occupiers). Since the average gross rental yield for London for 2014 is estimated at about 4.3 per cent per annum, this suggests that the performance of long-term investments in housing over the period are at least comparable, if not better than equity investments.

Table A1.2: Returns to long-term investment in different asset classes, 1985-2014

1985-2014	Return in 2015 (£'000s)	Sum invested (£'000s)	Per cent change	CAGR (%)
ONS mix-adjusted HPI (London)	889	100	789	7.8
UK equities (FTSE all-share, total return)	1,500	100	1,400	9.8
UK equities (FTSE all-share, capital only)	517	100	417	5.8
UK equities (FTSE 100, total return)	1,391	100	1,291	9.5
UK equities (FTSE 100, capital only)	465	100	365	5.4
Gold, London bullion market	369	100	269	4.6
Base rate (average interest)	498	100	80	5.7

Source: GLA Economics calculations using data from Macrobond and the Bank of England. Notes: CAGR is the the year-on-year rate of growth able to account for the change in value from the first year to the last year of the period.

In the past 15 years, average returns to investments in London housing have been considerably higher than investments in shares which were particularly affected by the economic downturn, and higher also than the returns to cash holdings given the historically low levels of Bank base rates. Based on GLA Economics estimates of the annual average growth, house price increases have however been lower than those experienced by certain precious metals, such as gold bullion⁸⁴ (see Table A1.3).

Table A1.3: Returns to long-term investment in different asset classes, 2000-2014

2000-2014	Return in 2015 (£'000s)	Sum invested (£'000s)	Per cent change	CAGR (%)
ONS mix-adjusted HPI (London)	285	100	185	7.2
UK equities (FTSE all-share, total return)	179	100	79	3.9
UK equities (FTSE all-share, capital only)	109	100	9	0.6
UK equities (FTSE 100, total return)	158	100	58	3.1
UK equities (FTSE 100, capital only)	95	100	5	0.4
Gold, London bullion market	416	100	316	10.0
Base rate (average interest)	157	100	36	3.1

Source: GLA Economics calculations using data from Macrobond and the Bank of England. Notes: CAGR is the the year-on-year rate of growth able to account for the change in value from the first year to the last year of the period.

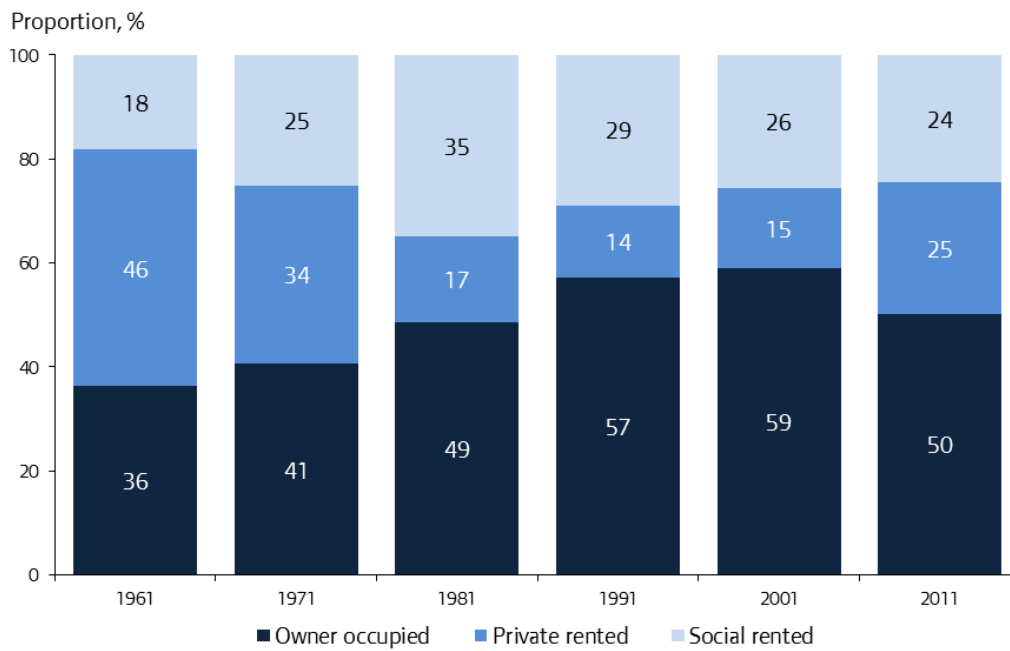
The past strength of investments in the London housing market, and the relative resilience of prices to the economic downturn may have contributed to London’s housing stock being increasingly seen as a vehicle in which to hold money, acting as a possible further incentive towards owner-occupation as well as stimulating the buy-to-let market. To the extent that individuals compete to buy the same pool of properties, looser lending standards in the buy-to-let sector could contribute to general house price increases, and this group of investors may also be particularly vulnerable to rising interest rates (see Section 4.2).

While regional data on the buy-to-let segment of the housing market is not available, evidence at the UK level from the Bank of England⁸⁵ suggests that the market has grown rapidly since buy-to-let mortgages were introduced in July 1996. In the year to the first quarter of 2015, the stock of buy-to-let lending expanded by 8 per cent, such that buy-to-let lending accounted for 15 per cent of the stock of outstanding mortgages (up from 2 per cent in 2000). This is consistent with a structural trend towards a larger private rental sector. In London, the private rental sector accounted for 25 per cent of households in 2011, compared with 15 per cent in 2001. This however remains below the levels of private renting in the 1960s and 1970s, when private renting accounted for more than 1 in 3 households (see Figure A1.2).

⁸⁴ Halifax reports that the strong returns to precious metals such as gold, largely reflect the increased demand from China and India for industrial uses and jewellery, with gold prices also boosted by safe-haven investment flows into gold, in particular, during the financial market crisis. Source: Halifax, ‘[Precious metals were the top performing asset class of the 2000s](#)’, March 2010.

⁸⁵ Bank of England, ‘[Financial stability report](#)’, July 2015.

Figure A1.2: Long term trend in London household tenure, 1961 to 2011



Sources: GLA analysis of historical Census data. Notes: households renting from housing associations were included with private renting in 1961 and 1971.

Appendix 2: Demand from foreign and overseas investors

While international investment in the UK economy is typically highly prized, such investment in residential property is sometimes regarded with suspicion and concern. London is however a global city, attracting people from across the world to work, study, settle, and enjoy the economic, social and cultural opportunities that the capital offers. Londoners themselves are also international in their origins, and may purchase housing using international sources of funding.

As well as purchases from foreign residents in London, foreign ownership of housing in London is also a product of investment in second homes by non-UK nationals who continue to reside overseas, as well as real estate investments by overseas investors, including corporations. This section looks at the role and impacts of international, non-resident investors in residential property.

How has foreign investment in London housing changed over time?

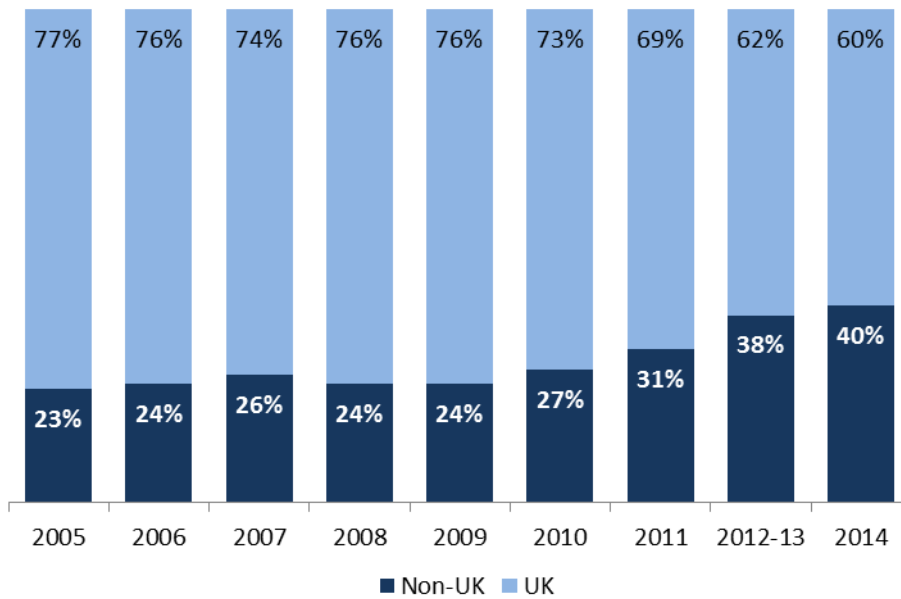
There is no accurate or timely data that tracks foreign investment in residential property in England. It is therefore not possible to know for certain how much foreign investment there is in residential real estate, nor where that investment comes from. Regional statistics that are available on the role of foreign-born and international investors in residential property instead tend to come from the major estate agents and concentrate on ‘prime locations’ in central London.

One issue in understanding these statistics is that the definition of ‘prime’ changes over time so longer-term comparisons are difficult to interpret. It is also not clear how the agents distinguish between sales to foreign investors, UK expatriates, non-domiciled residents and/or Londoners who happen to have overseas origins, when completing the surveys.

Looking at the trends over time, research by Savills⁸⁶ finds that, irrespective of residency, international buyers as a proportion of sales of existing homes in ‘prime’ London have increased from 23 per cent in 2005 to 40 per cent in 2014 (Figure A2.1). Savills report that international buyers for existing properties are concentrated in prime central London and the Canary Wharf area to the East (Figure A2.2).

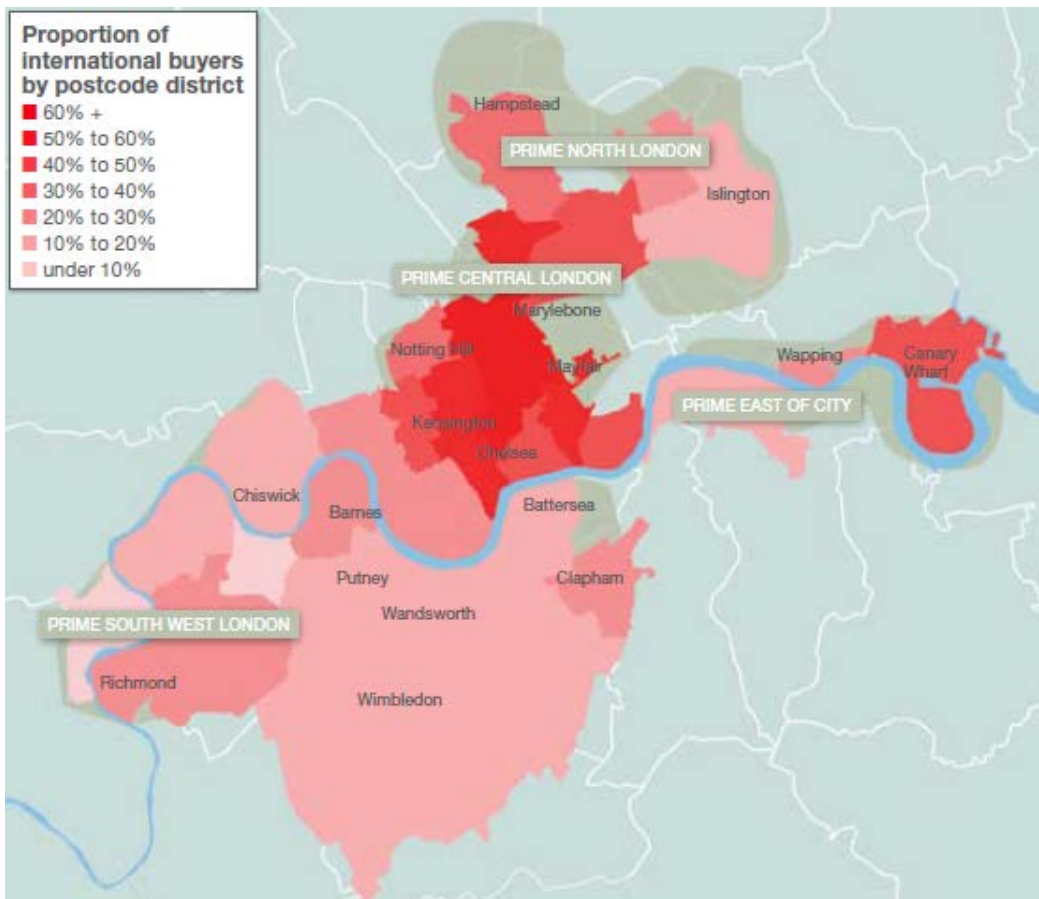
⁸⁶ Savills, July 2013, [‘World in London 2013: capital appreciation’](#).

Figure A2.1: Trends in international buyers (re-sales), 2005 – 2014



Source: Savills, *World in London 2013* and *World in London 2015*

Figure A2.2: Map of international buyers in prime London (resale market)



Source: Savills, *World in London 2012*, July 2013.

International buyers in London reflect the city’s diversity

These increases are however broadly in line with Census data on London’s changing proportion of foreign-born population. At the time of the 2011 Census, more than one in three London residents (37 per cent) were born outside the UK, up from 27 per cent in 2001.

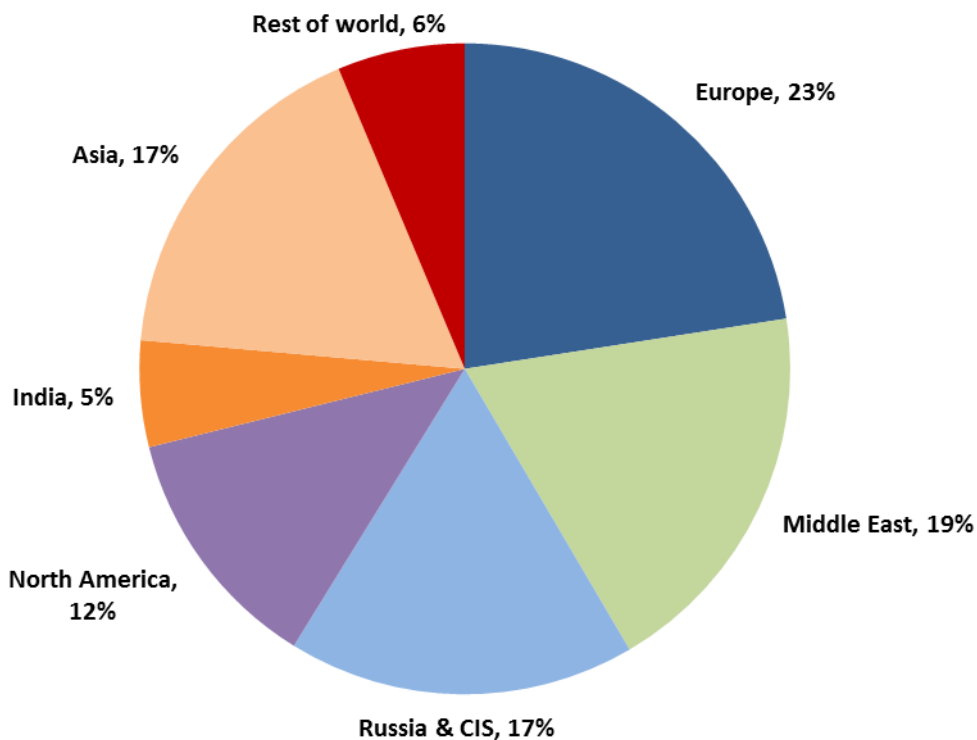
ONS census analysis for England and Wales also shows that the proportion of non-UK born residents living in owner occupied accommodation increases with the length of residence⁸⁷. As international migrants settle and seek a longer-term future, they (or their families) have increasingly taken up house ownership as a result. It therefore follows that long-term residency of non-UK nationals is likely to be a primary driver of observed patterns of international ownership of housing in London.

Overseas investors represent a small share of overall transactions

Considering only the role of non-UK residents, Knight Frank research⁸⁸ found that overseas residents represented 28 per cent of buyers of prime central London homes in the 12 months to June 2013, rising to 49 per cent when considering only those properties that were new build developments.

Analysis of the prime London property purchases by non-residents shows that Europe and the Middle East are the main source of non-resident purchasers of London property, though this may include investments made by UK nationals based overseas (see Figure A2.3).

Figure A2.3: Prime central London overseas sales by world region of buyer, 2012/13



Source: Knight Frank research, 2013. Notes: Sales includes new build developments and second hand sales of existing properties. Rest of world includes Africa, Australasia and South America.

⁸⁷ While 18 per cent of recent arrivals (2007–2011) lived in owner-occupied accommodation, this figure rises to 78 per cent among those who had lived in the UK for more than 30 years. Source: ONS, ‘[2011 Census analysis: social and economic characteristics by length of residence of migrant populations in England and Wales](#)’, November 2014

⁸⁸ Source: Knight Frank, ‘[International buyers in London](#)’, October 2013.

While the overall figures for non-UK resident purchases may appear substantial, the ‘prime’ London area considered accounts for only a small share (8 per cent) of private housing stock in London⁸⁹, and new builds represent an even smaller share of the overall market. Across London as a whole in the two years to June 2013, Knight Frank estimate that between 10 to 15 per cent of sales of new build sales in London were made to buyers normally resident overseas (ranging from 20 per cent in Inner London to less than 7 per cent in outer London). It also found no indication of a shift towards higher non-resident purchases in the two years to mid-2013⁹⁰.

Putting this in the context of all property transactions, the Bank of England estimated that while foreign inflows are concentrated in certain sub-markets, overall they have accounted for around only 3 per cent of total residential property transactions in London⁹¹.

The impact of international buyers on housing demand and prices in London

The price for housing should, in theory, reflect the balance between the supply of houses and the demand for living in them. Other things being equal, increased foreign demand to invest and live in London housing will therefore increase prices in the short term. Given what is known about the magnitude of foreign investment on London housing markets, this price effect is likely to be strongest in prime London areas where foreign demand is greatest. If inflows are not offset by a corresponding reduction in demand among UK residents, then this will increase the overall demand for (and price of) housing. As a result there are also likely to be wider ‘knock-on’ or ‘ripple’ effects as, for example, those who would previously have bought in prime areas, move further out and increase demand elsewhere. In the long term, if the housing market is able to fully adapt, the increase in demand should drive further construction of housing and an overall increase in housing supply.

There is however conflicting evidence that the more recent settlement experience of international migrants has had much effect on London house prices. For example, in an analysis of the impact of international migration on house prices from 2003–2008, Meen (2012) finds that price effects are only modest. This is due to lower demand for housing among migrants, as well as the offsetting effects of prices on rates of household formation, and outflows of domestic residents which lead to a dispersion of the price effects across regions⁹².

On the other hand, research by the Said Business School in Oxford⁹³ suggests that there is a direct correlation between London house prices in areas with a higher share of certain migrants, and political and economic uncertainty in the country of origin. The paper highlights however

⁸⁹ Savills research estimate in 2014 that prime London as a whole accounts for only 8 per cent of London’s private housing stock. This includes, for example, prime areas in central London such as Kensington and the West End, as well as those near Canary Wharf in the East, Hampstead and Islington in the North and Richmond, Wimbledon and Barnes in South West London). Source: Savills, July 2014, [‘World in London 2014: Dynamics of a global city’](#).

⁹⁰ This estimate is based on a sample of 3,500 new build properties in London purchased in the 24 months to June 2013. The sample includes developments in all Greater London boroughs, with sales ranging from £200,000 to £5,000,000. The residence of ownership is based on the proprietor record from Land Registry, and assumes that ‘non-natural’ owners (companies, trusts, etc.) represent international purchases, unless otherwise known. Source: Knight Frank, October 2013, ‘International buyers in London’.

⁹¹ The Bank’s 3 per cent estimate is based on estimates by Knight Frank and Savills of the size and scale of foreign purchases, and assumptions about the scale of foreign purchases in the secondary market outside of ‘prime’ London. Source: Bank of England, November 2014, [‘Financial Stability Report’](#).

⁹² Meen, G., November 2012, ‘The adjustment of housing markets to migration change: lessons from modern history’, *Scottish Journal of Political Economy*, Vol. 59, No. 5.

⁹³ Badarinar, C., & Ramadorai, T., October 2013, [‘Home away from home: Safe haven effects and London house prices’](#). SAID Business School.

that this observed relationship may be partly driven by migrants leaving their country of origin to join their compatriots in London, but also result from capital outflows and investments by high-net worth individuals seeking a safe haven.

The direction of international investments is also likely to be affected by exchange rate movements. The appreciation of Sterling against a number of currencies over the last two years⁹⁴ means that the price of London housing has increased for many overseas buyers, perhaps reducing the attractiveness of London property as compared to the past few years. At the same time, those overseas buyers holding London property may stand to gain more from the recent house price increases as a result of foreign exchange movements, which may increase the incentive to sell up.

The impact of overseas investors on house prices

Perhaps the main concern expressed about overseas purchases of flats and houses in London is however that some of this may represent speculative demand, over and above the physical need for a home, which can inflate property prices. It is also argued that foreign investment may also increase the volatility of housing markets if, for example, international money suddenly enters (or leaves) in response to changing economic conditions and/or exchange rates.

Considering the role of overseas investors, evidence from Paris suggests that overseas buyers were responsible for only 2 per cent of the observed increase in Paris house prices between 1993 and 2008 (3 per cent of an overall increase in prices of 150 per cent)⁹⁵. In other words, 98 per cent of the house price rises were attributed to domestic factors and increased demand from resident buyers. Despite an increase in the share of overseas buyers as a total of all transactions (from 4 to 8 per cent), and a tendency for them to pay over 20 per cent more on average, the research concluded that there was an insufficient number of overseas investors, concentrated in niche, high-end property markets that had little bearing on the rest of the Paris housing market *i.e.* there was limited evidence of a ripple effect resulting from foreign demand that economic theory may suggest.

While the origins and likely patterns of foreign investment in Paris are likely to differ somewhat to those in London, non-resident foreign investors in both cities are similarly concentrated in niche markets, representing a small proportion of the overall housing market. It remains possible however that a ‘ripple effect’ may be more pronounced in London if, for example, the housing stock available for purchase in areas neighbouring prime locations are close substitutes. For this reason, the ONS economic review in June 2014 cited ‘an increase in the level of foreign demand’ as a possible driver of house price rises in London, in addition to the likely role played by increasing employment, mortgage finance and consumer confidence⁹⁶.

The overall impact on the housing market depends not only on purchases, but also on their subsequent use.

Foreign ownership of housing in London may have knock-on distortionary effects if investors choose to leave their investment units empty, and thereby directly reduce the supply of available housing in a given area. There is however little evidence that vacancy rates of property are higher as a result of overseas investment. Instead the number of properties recorded as

⁹⁴ GLA Economics, ‘[London’s economic outlook: Spring 2015](#)’, May 2015.

⁹⁵ Sotura, A., ‘[Les étrangers font-ils monter les prix de l’immobilier? Estimation à partir de la base de la chambre des Notaires de Paris, 1993-2008](#)’, thesis directed by Piketty, T. December 2011.

⁹⁶ ONS, ‘[Economic Review](#)’, June 2014.

empty or vacant has been decreasing in London in recent years⁹⁷, as has the number of dwellings recorded as second homes⁹⁸, although it remains possible that investors, whether domestic or from overseas, may not report property as empty or second homes, but still only occupy their properties for only part of the time.

The survey evidence available from property advisers suggests that the vast majority of homes purchased with overseas finance are however occupied, either directly as the primary residence of a foreign national (or their family), or as investments intended for the private rental market, while their use as a second home for short-term stays is reportedly less prevalent. For example, Savills estimate that few prime area new build sales were to international second home buyers⁹⁹, although occupation of these residences is still expected to be lower than 100 per cent. Similarly, a 2014 Jones Lang LaSalle (JLL) transaction survey of Asian buyers found that around 85 per cent intended to rent out the property, with the balance being a mix of main residencies for children in higher education, or for use as a second home¹⁰⁰.

It remains possible however that demand from foreign investors can transform a traditionally non-traded good, housing, into a tradable one. If such purchases are significant, this can have a subsequent distorting effect not only on prices, but also on the types of properties built (size, layout, location, style) if the preferences of overseas investors systematically differ from those of permanent residents. Since housing is a durable good, this in turn may lock-in and lead to mismatches in the types of housing supplied and the needs of London residents.

Overseas investments in new build developments may increase housing supply

At the margin, the potential price effects of foreign demand for investment properties and second homes in particular wards, may also be offset by the impact of foreign investment on construction activity. Since overseas buyers invest disproportionately in new build London properties, and often purchase property ‘off-plan’ (*i.e.* prior to completion), it is arguable that construction activity of new buildings in London is higher than it otherwise would have been in the absence of overseas investment. It would be difficult, however, to determine the magnitude of any such impact, or determine the number of properties in London purchased by non-residents which add to the housing stock.

Based on a series of interviews with 26 private developers, in a 2012 assessment of the barriers to housing delivery in London, Molior concluded that ‘in the absence of an export market, many London residential schemes simply would not commence construction’¹⁰¹. Off-plan purchases in this regard, may have helped de-risk developments (which can be very costly to stop) by providing cash for construction and thereby guarantee finance supply of market housing. This may be particularly important for London’s high-density, capital intensive projects with relatively longer lead-in times. Ongoing research at the LSE¹⁰² supports this view, contesting

⁹⁷ Based on Council Tax data, the number of recorded empty homes in London was at a historical low of 56,270 empty homes in 2014, equivalent to 1.7 per cent of total stock. Of these, there were 20,800 homes in London that had been empty for more than six months, equal to 0.6% of the stock and also a record low. These figures may however under-count empty homes since the removal of empty property discounts from Council Tax in many areas has reduced the incentive for owners to report homes as empty. Source: DCLG, Housing live table 615.

⁹⁸ In 2014 there were an estimated 48,390 second homes in London, down from 53,150 in 2012 and representing around 1.4 per cent of the total housing stock and . Source: DCLG, Council tax base.

⁹⁹ An estimated 750 of the 97,000 Greater London sales in 2012 were for use as second homes. Source: Savills, ‘[World in London 2013: capital appreciation](#)’, 2013

¹⁰⁰ Source: JLL, ‘International investment in London residential: understanding the benefits’, March 2014.

¹⁰¹ GLA, ‘[Barriers to housing delivery: what are the market-perceived barriers to residential development in London?](#)’, December 2012. Report by Molior London for the GLA.

¹⁰² LSE, ‘[Housing in London: addressing the supply crisis](#)’, February 2013.

that since UK funders may be credit constrained or risk averse, inward overseas investments were particularly important to initiate and/or speed up the construction of new developments during the financial crisis. JLL residential argue that foreign investment at this time provided a much needed stimulus to the local residential construction industry and local suppliers¹⁰³.

To the extent that this construction feeds into supply housing to London residents, either by renting them out, or by opening up further units for sale directly to domestic buyers, foreign inflows of finance may increase the overall housing stock that is available in London.

Through planning agreements and the Community Infrastructure Levy, foreign investment may have also contributed to the delivery of affordable homes in London. For example, Savills estimate that off-plan sales of new builds to international buyers helped to ‘finance 3,000 new affordable homes that may otherwise not have been built’¹⁰⁴. It remains difficult, however, to determine the extent to which these investments have been truly additional. In the case of large-scale private rented developments (such as student halls), offshore financing may also bring institutional experience of professional property management, and has the potential to raise to status of the private rented sector to being tenure of choice for an increasingly flexible workforce.

Smoothing or exacerbating the economic cycle

In the aftermath of the 2008/09 recession, weaknesses in the domestic market combined with funding restrictions meant that investors based in countries less affected by the shock, may have served to dampen the effects of the recession on London’s housing and construction markets. Based on a 2014 assessment of who buys new homes in London, the British Property Federation concluded that such overseas investors were ‘instrumental’ in maintaining a level of housing development in London, which would otherwise have stalled due to a lack of cash or credit¹⁰⁵.

While the limited evidence available suggests that foreign investment in housing may have helped to smooth out the full impact of the downturn, the risk remains that demand from overseas may serve to amplify the business cycle in an upturn, and thereby exacerbate house price volatility.

A further risk may be that, since in the case of non-UK residents, the ongoing revenues derived from rental incomes and capital gains from future sales may subsequently flow out of the UK. In the absence of offsetting inflows resulting from non-resident home ownership (if for example, foreign buyers decide to visit the UK more regularly on business or holiday than they otherwise would), such outflows will count as a negative entry in terms of London’s balance of payments

¹⁰³ JLL, ‘[International investment in London residential: understanding the benefits](#)’, March 2014.

¹⁰⁴ Savills, ‘[World in London 2013: capital appreciation](#)’, July 2013.

¹⁰⁵ British Property Federation, ‘[Who buys new homes in London and why?](#)’, November 2014. Prepared by Molior London.

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