

## FIRST TIME BUYER AFFORDABILITY

### The Most Complex Affordability Chart Ever

The issue of affordability is at the centre of the debate around our dysfunctional housing market. For many (31% of existing households and 55% of new purchasers) that affordability is determined by their capacity to borrow in the mortgage market. With limited interest-only mortgages available, most prospective borrowers will be assessed for their capacity to afford the regular repayments of a capital repayment mortgage.

The regular cost of a capital repayment mortgage is determined by three variables: the principal borrowed (P), the term of the loan (T), and the mortgage rate (r) as shown by the formulae opposite. The chart below attempts to show how the relationship between these variables has changed for actual first time buyers over time (the term is fixed at 25 years).

The variables are normalised by gross household income so the principal borrowed is represented by the loan-to-income ratio on the X-axis, the mortgage rate (net of MIRAS\*) is shown on the Y-axis, and the grey curved trend lines show repayment affordability as a percentage of income. The coloured curved lines show the actual trend in first-time buyer affordability with each arrow representing the change over a three month period.

Starting at the top left of the chart in the early 1980s, mortgage rates were high so buyers could only borrow low multiples of their income (1.7 rising to 2.3). Higher rates and the withdrawal of MIRAS pooling in the late 1980s then stretched repayment affordability to 30% of income until the price crash of the early 1990s hit. Mortgage rates then fell and loan-to-income levels remained relatively static through the 1990s, hovering at around 2.4 times income with mortgage repayment affordability around 16-20% of gross household income.

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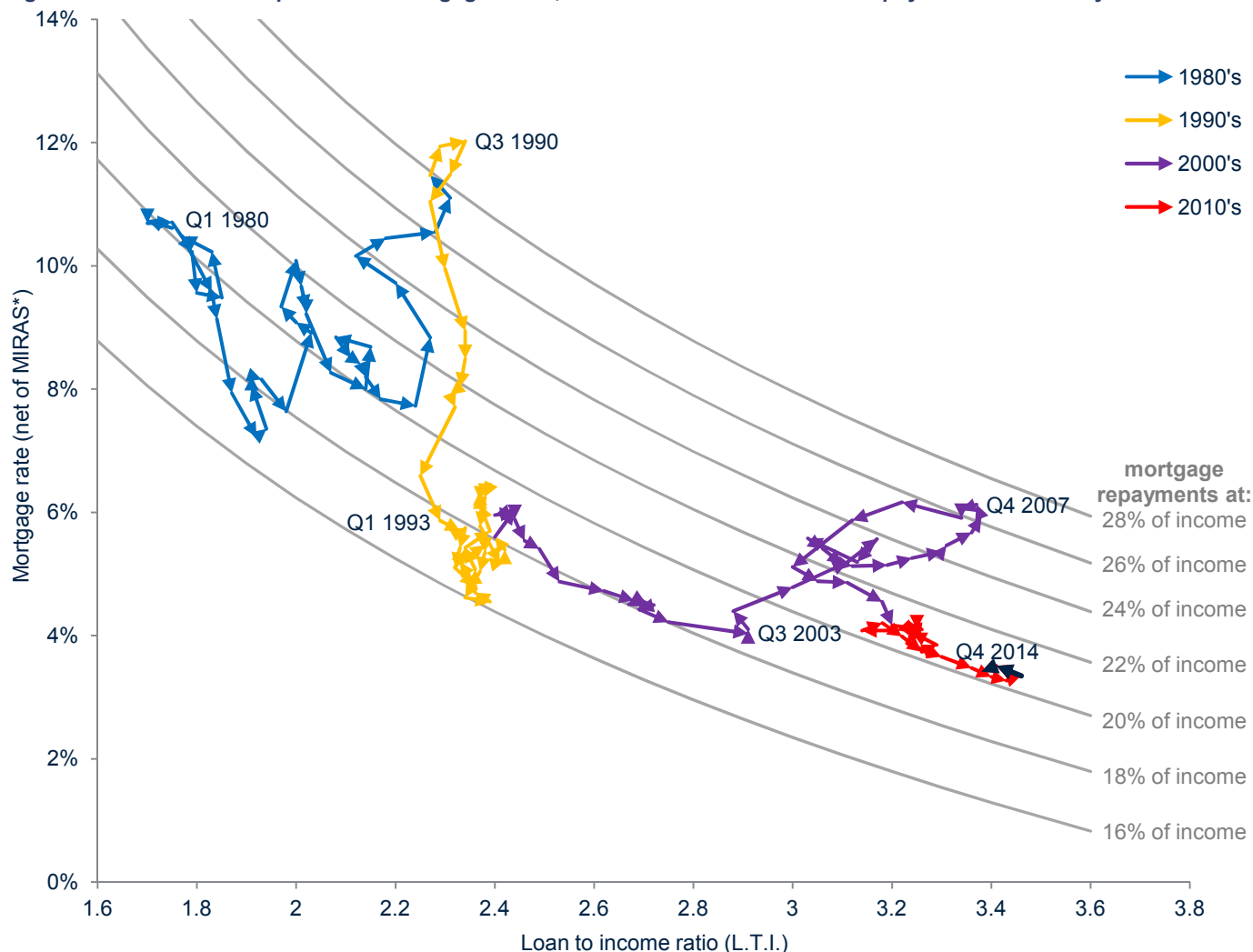


Mortgage Repayments

$$= \frac{Pr}{1 - (1 + r)^{-T}}$$

$$= \frac{Pr(1 + r)^T}{(1 + r)^T - 1}$$

Figure 1 – The Relationship Between Mortgage Rates, Loan-to-Income Ratios and Repayment Affordability



Source: Savills using CML data

\*Mortgage Interest Relief At Source



During the early 2000s, a number of factors combined to enable lenders to offer ever higher loan-to-income mortgages while falling rates preserved repayment affordability at 18% of income. That continued until late 2003 when mortgage rates bottomed out. However the availability and demand for higher loan-to-income mortgages continued and so affordability became increasingly stretched during a period of rising mortgage rates. The effects of this were partially obscured by increasing loan terms, rising loan-to-value ratios and other factors such as self-certification mortgages.

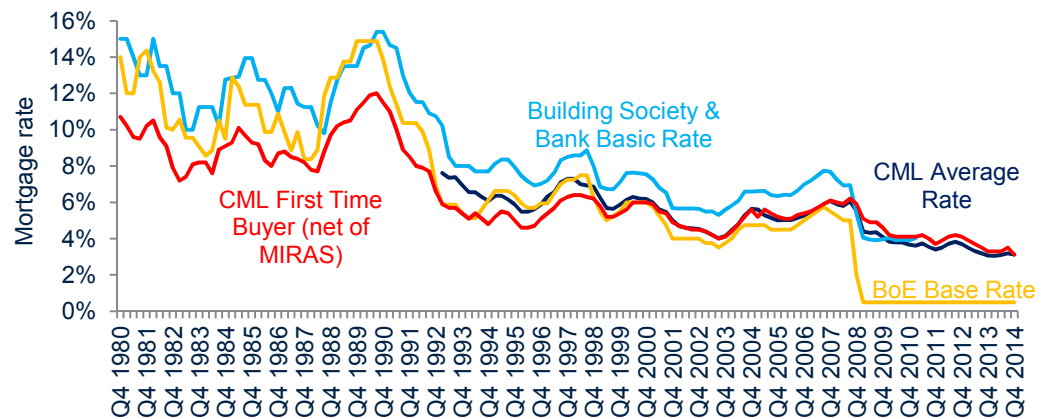
By 2007 repayment affordability for first time buyers was looking very stretched at 27% of income, although this was still below 1990 levels. Falling mortgage rates and loan-to-income ratios during the recession then brought affordability back down towards the long term trend (20-22%).

Since then we have seen rising loan-to-income ratios but within affordable repayment levels (20% of income) due to falling mortgage rates. However, that trend has left the market in a corner if rates were to rise as loan-to-income ratios have been at a high of 3.4 times income. Recently, loan-to-income ratios have fallen slightly to 3.38 as the effects of increased regulation have hit but the next couple of quarters will prove a real test as mortgage rates appear to be heading lower again.

The decline in mortgage rates since the early 1990s has been a key driver of house price growth by enabling buyers to borrow ever larger multiples of income.

The large fall in mortgage rates post credit-crunch was welcomed by many households and helped to minimise the effect of the recession on the housing market with repossessions well below levels seen during the early 1990s.

Figure 2 – Mortgage Rates

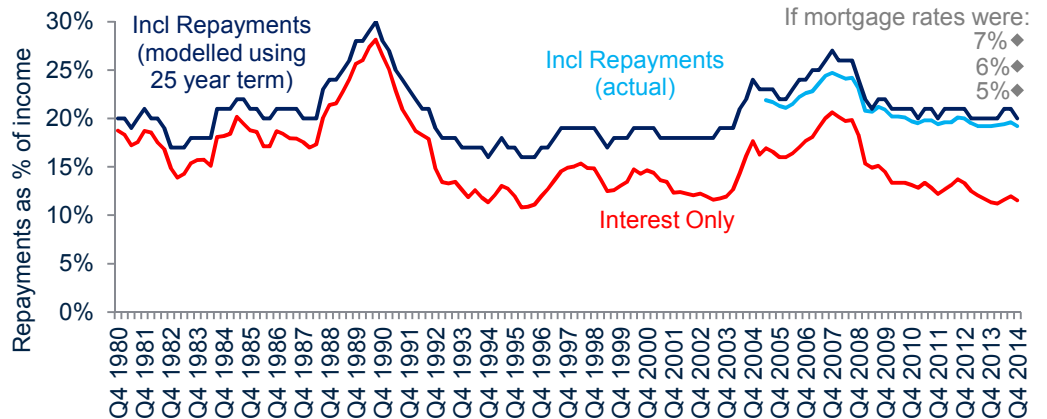


Source: CML, Bank of England

Repayment affordability is currently well within affordable levels but there are significant risks at current loan-to-income levels in the event of any increase in mortgage rates (as demonstrated by the grey markers).

Our published house price forecasts allow for an increase in mortgage rates but the chart shows the risks associated with any rise faster/greater than currently expected.

Figure 3 – Repayment Affordability

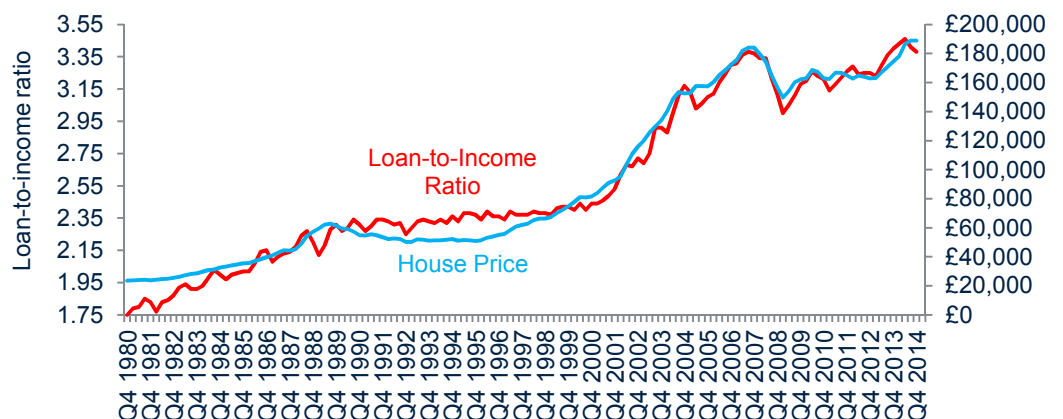


Source: CML

Although correlation ≠ causation, the chart opposite highlights the important relationship between how much people can borrow (loan-to-income ratios) and actual house prices.

If the loan-to-income ratio were to fall in the face of rising mortgage rates then that raises important questions around the future trajectory of house prices.

Figure 4 – Loan-to-Income Ratios and House Prices



Source: CML, Nationwide

## Cheap to Own, Expensive to Buy

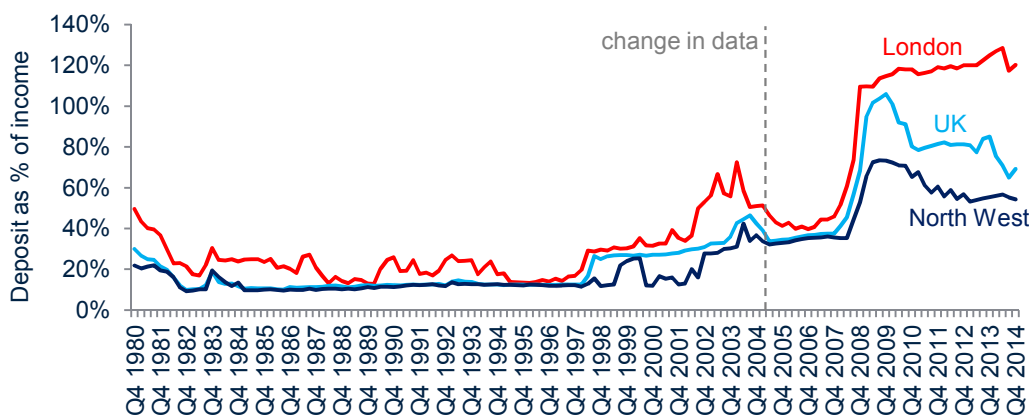
As the previous analysis shows, current mortgage repayment affordability is well within affordable levels and so it is currently relatively cheap to own a home thanks to low rates. However, a mortgage is only one part (currently 83% on average) of the funds a prospective first-time buyer needs to buy a home. The remaining part is the deposit and access to sufficient savings has become one of the defining features of the current housing market.

The chart below highlights the large deposit relative to their income that current first-time buyers need to save. Although it has recently fallen at a UK level thanks to the greater availability of higher loan-to-value mortgages via Help to Buy, it remains well above historic levels. That means many first time buyers are dependent on help from the 'bank of mum and dad' to raise a deposit and so home-ownership will increasingly be determined by virtue of birth.

Unlike the UK, deposit affordability in London has barely changed since the beginning of the credit crunch. This is because house prices are so much higher relative to incomes in the capital and so the repayments on a higher LTV mortgage are unaffordable for all but the most income rich, equity poor buyers.

Figure 5 – First Time Buyer Deposit Affordability

Although the withdrawal of higher LTV mortgage products during the credit crunch had a significant impact on deposit affordability, an upwards trend was already clear in the early 2000s as house prices rocketed. It's no surprise that this period also saw a fall in first-time buyer numbers and rise in private renting.



Source: Savills using CML data

## Now A Marathon, No Longer A Sprint

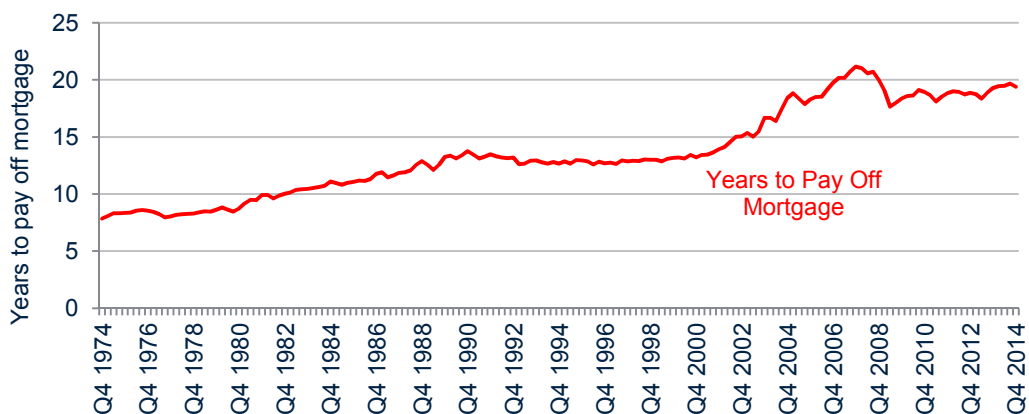
Borrowing the above phrase from Tim Harford, it's also important to recognise the longer term costs of home ownership. Historically, with high rates and low loan-to-income ratios, many buyers would have endured a relatively short period of financial stress thanks to high mortgage repayments. However, the value of that debt was quickly eroded by rising inflation enabling previous generations to either quickly reduce the proportion of their income spent on repayments, quickly pay off their entire mortgage or borrow more and move up the housing ladder.

Today's low inflation and high debt environment means home ownership has become a marathon. Many current first time buyers could still be spending large proportions of their income on repayments for almost the entirety of their mortgage term. That will lead to fundamental changes in how the market works with the housing ladder broken in all but the highest demand markets.

Figure 6 – Years to Pay Off Mortgage (Variable Rate & Average Repayments)

This simplistic chart shows the modelled time taken to pay off the average mortgage if repayments were held at a constant 20% of income, income grew by the national average and the borrower had a variable rate mortgage.

It appears to broadly reflect the change in loan-to-income ratios over the same period.



Source: Savills (using simple projection of current mortgage rates & 2% income growth)