The mortgage affordability paradox

Rob Thomas, Principal Researcher,
Intermediary Mortgage Lenders Association
(IMLA)

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Executive summary

- **Spurred by the strength of the housing market since 2020, in June 2021 the house price earnings ratio reached a record national high of 8.8 times,** surpassing its previous peak of 8.7 times in August 2007.

- **Yet low mortgage rates have ensured that affordability as measured by typical mortgage payments relative to income has been close to its all-time lows.** In 2020, interest and capital payments as a percentage of home buyer income reached a record low of 16.7%. This figure rose to 17.8% by September 2021 as a result of both rising house prices and slightly higher mortgage rates but this is still lower than in any year prior to 2016.

- **The paradox of high house prices but low mortgage costs relative to earnings is the product of falling interest rates, which have fueled house price rises since the 1990s.** The rise in house prices has forced buyers to borrow more (3.44 times income in 2020 against 2.25 times in 1992) but has not fully offset the affordability gains provided by lower mortgage rates.

- **The house price to earnings ratio was 11.0 in London in Q3 2021, more than twice that of the North East.** House price gains in London and the South East have far outstripped earnings gains over the past thirty years. Yet even in London homeownership would be affordable to the average single earner if they could surmount the barriers erected by large deposit requirements and regulations that limit the number of high loan-to-income (LTI) mortgages. Multiplying average first time buyer mortgage rates and house prices produced a mortgage user cost of housing of just 21.1% of average earnings in 2020.

- **Comparing the affordability of owning relative to renting, rents were 57% higher than the mortgage user cost for 95% LTV borrowers in September 2021 nationally** and higher in every region. In Scotland renting was 76% more expensive and even in London and South East it was 33% more.

- **There is another paradox:** despite record high affordability in terms of the burden of mortgage payments in recent years, first time buyer numbers have been well below that of earlier periods. Since 2007, a cumulative shortfall of 2.7 million first time buyers has arisen with 2020 seeing a shortfall of nearly 200,000 compared to the expected total based on previous propensities to buy. The tightened regulatory regime put in place after the financial crisis is a key driver of this shortfall as it limits the amount prospective first time buyers can borrow.

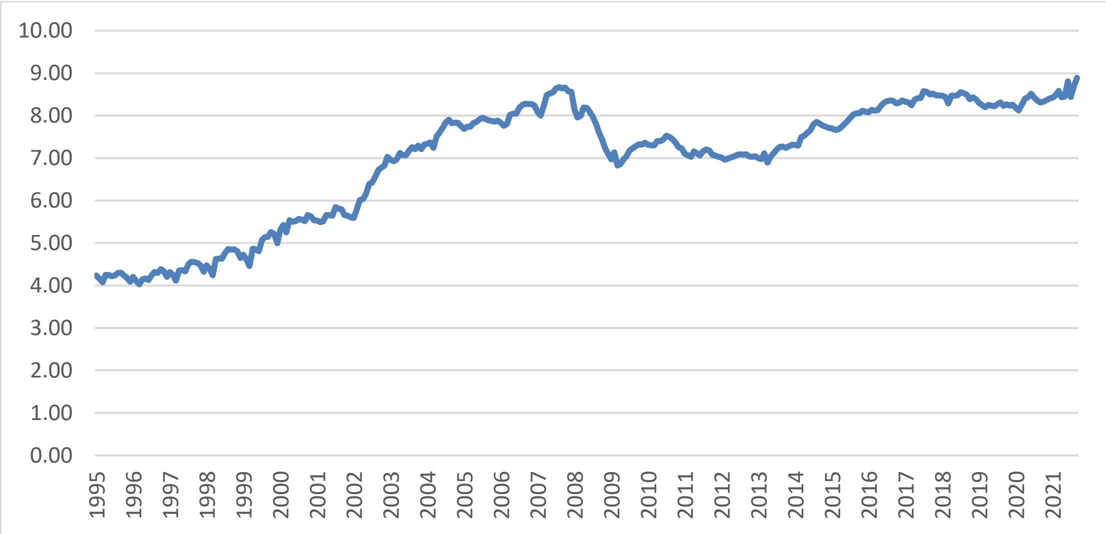
- **Mortgage affordability is likely to deteriorate in the coming months as higher inflation triggers interest rate rises.** CPI inflation was 4.2% in October with the Bank of England warning it could reach 5% in early 2022, driven by rising commodity prices and labour shortages., The Bank has already signaled that it is likely to put up interest rates in response, which will push up mortgage rates, weakening affordability. However, buyers can protect themselves from rising rates with a widening choice of 10-year fixed rate mortgages and even a mortgage fixed for the full term. Even though shorter term interest rates have risen on the expectation of higher Bank of England Bank Rate, long term interest rates have actually fallen over the past six months with 30-year government bonds now yielding less than 1.1%, so longer term fixed rate deals should remain reasonable value.

1. Measuring housing affordability

1.1 House price earnings ratio

Chart 1 shows the ratio of average UK house prices to average full time earnings. In the mid-1990s this ratio was little more than four times but the following decade saw house price gains consistently outstripping earnings growth until by 2007 the ratio reached a then record 8.7 times in August. Between the start of 1995 and August 2007 average earnings rose 67% while over the same period house prices leapt by 242%.

Chart 1 – UK house price to average earnings ratio



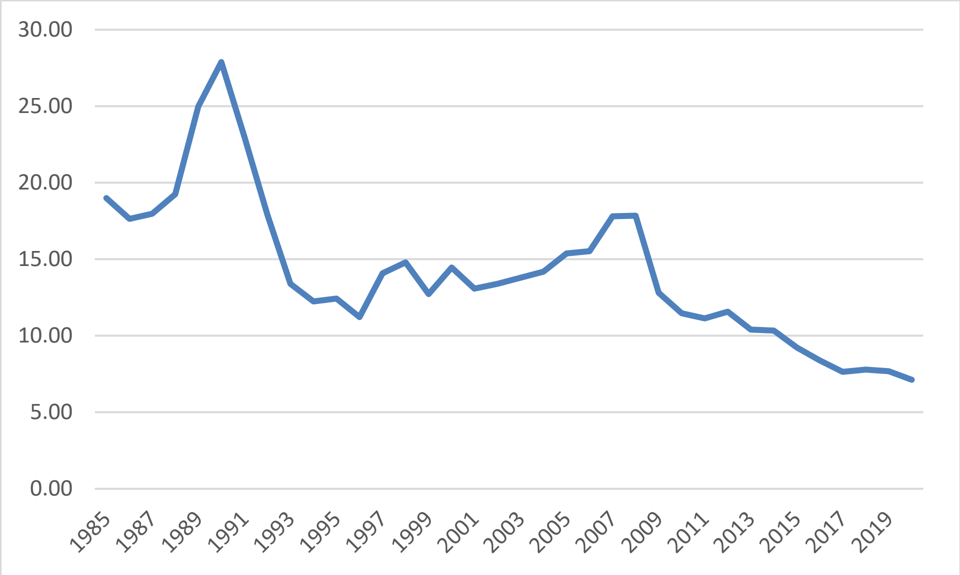
Source: ONS

The house price to earnings ratio is a widely used benchmark of housing affordability and its sustained rise in the 2000s led some economists to argue that house prices were substantially over-valued and set for a sharp correction. But how useful is this measure of housing affordability? The house price earnings ratio suffers from one clear deficiency: it compares an asset price to an income flow, failing to take account of the level of interest rates and the actually monthly cost of owner-occupation. Some economists have argued that this should not matter because in theory capital and income are interchangeable i.e. an environment of high interest rates and high house price inflation is equivalent to one with low interest rates and low inflation. But in practice, when interest rates are high, affordability constraints will impact what customers can afford to pay each month and offsetting capital gains are not immediately available to service a mortgage debt.

1.2 Interest payments as a percentage of income

To get a picture of the actual financial burden of homeownership we need to see the relationship between average incomes and mortgage payments as for most home buyers these form by far the largest share of the cost of buying a home. Chart 2 shows the proportion of average monthly income consumed by mortgage interest payments across all households buying a home. Because it measures the interest burden for those purchasing a home with a mortgage rather than the cost across existing homeowners, it is not distorted by the fact that many existing homeowners have already paid off their mortgage.

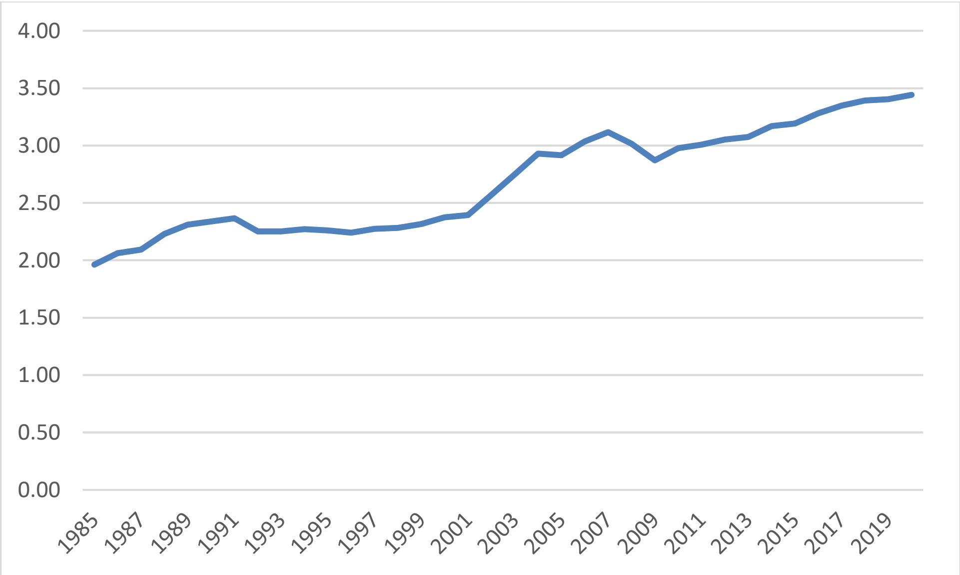
Chart 2 – Mortgage interest as % of income (all home purchasers)



Source: UK Finance

It is immediately clear that the trends in Charts 1 and 2 are heading in opposing directions. Even as house prices have outpaced income gains the burden of interest payments has fallen to record lows. What explains this paradox? The transition from high to low interest rates since the early 1990s is at the root of rising house prices as it has reduced the cost of mortgage borrowing but it also explains much of the gains in other asset markets where supply is fixed to some degree, including assets ranging from equities to art to classic cars.

Chart 3 – Ratio of mortgage loan to income (all home purchasers)



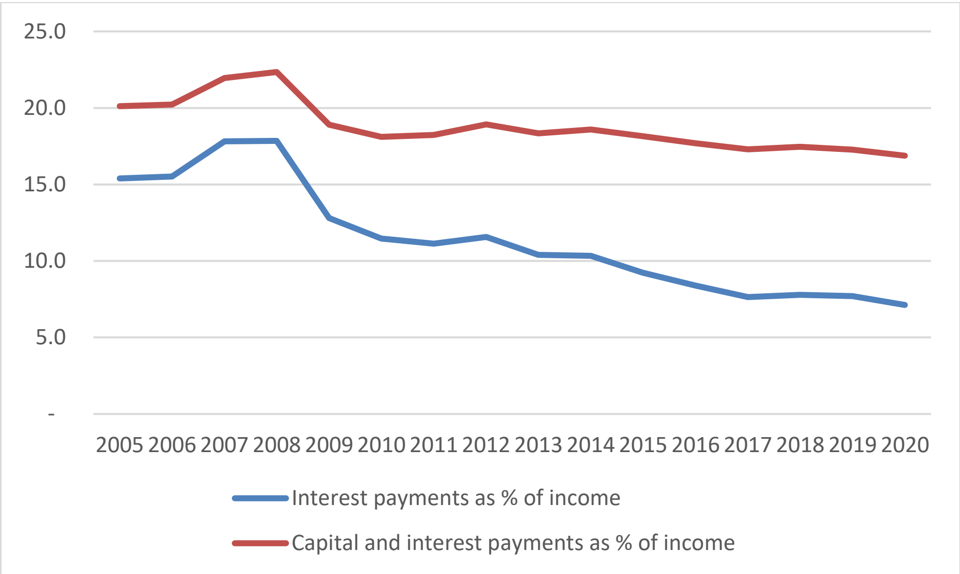
Source: UK Finance

Falling mortgage rates increase the amount people can borrow for any given monthly payment, increasing the potential spending power of house purchasers. In a market with limited supply such as housing, this increased spending power would be expected to push up prices, meaning that borrowers will be faced with having to borrow more to out-compete other interested buyers. Chart 3 illustrates how the average amount borrowed has indeed increased relative to incomes as house prices have risen since the mid-1990s, with the ratio of mortgage debt to income at purchase going from 2.25 times in 1992 to 3.44 by 2020, a 53% rise.

Yet as Chart 2 illustrated, despite this substantial increase in borrowing relative to income, mortgage payments for new home purchasers have dropped, indicating that the fall in mortgage rates has exceeded the rise in house prices. Indeed, the decline in mortgage rates has been so dramatic that the average first year payment of £4,600 in 2020 is substantially less than the £5,500 figure recorded in 1990, when mortgage rates peaked, despite house prices having risen 458% over the three decades.

The above discussion relates to all home purchasers but first time buyer data shows very similar trends. For example, between 1985 and 2020, interest payments as a percentage of income declined from 19.3% to 7.8% for first time buyers compared to 19.0% to 7.1% for all borrowers with loan to income also showing very similar trends for first time buyers and moving homeowners.

Chart 4 – Mortgage payments as % of income (all home purchasers)



Source: UK Finance

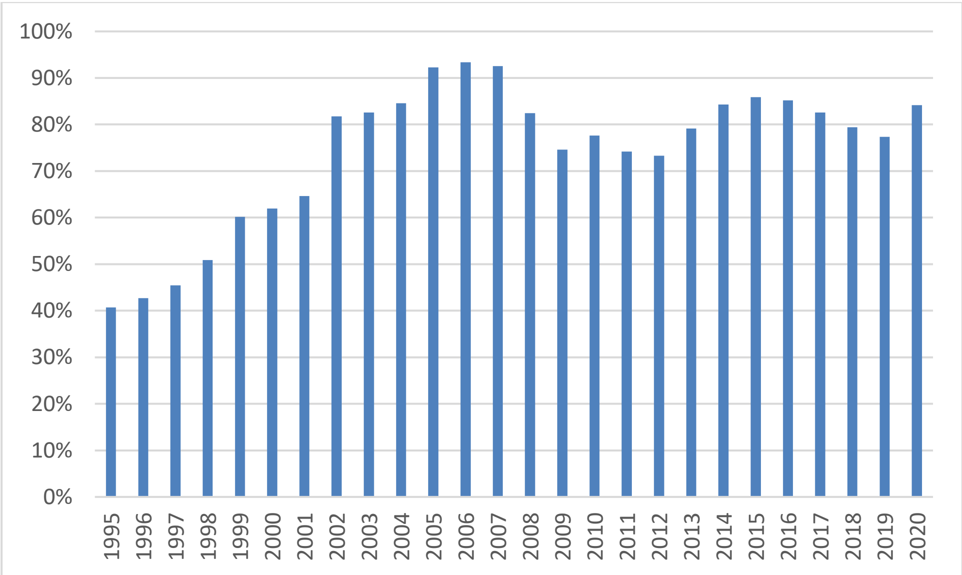
Of course, measuring affordability using interest payments alone does not give the full picture of the burden of monthly mortgage costs because most buyers have capital repayment mortgages. As mortgage rates decline the initial amount of capital repaid each month will rise, limiting the total reduction in monthly payments. Unfortunately, data on the ratio of total mortgage payments relative to income only go back to 2005 but we can see from Chart 4 that the fall in mortgage rates since the global financial crisis has resulted in a much sharper fall in interest payments than total mortgage payments. In 2005, capital repayments equaled 4.7% of income but by 2020 this had more than doubled to 9.8% and 58% of households' total mortgage payments was capital. In other words, these mortgaged homeowners were on average 'saving' nearly 10% of their gross income through ordinary monthly mortgage repayments.

Which measure is more appropriate? On the one hand, total mortgage payments capture the true burden of monthly costs but, on the other hand, the capital repayment element is not expenditure, it is a form of saving as it is reducing the outstanding mortgage balance. Therefore, it is appropriate to use interest payments as a guide to real housing affordability.

1.3 Adjusting for non-purchasers

Measures of affordability that relate to actual purchasers suffer from one major disadvantage: those that buy are a self-selected group that is not necessarily representative of the wider population. The profile of the average buyer has changed as house prices have risen and deposit requirements have increased. Today, a broader range of the populace lack the resources to buy their first home either because their income would be more stretched or because they need a larger deposit. Moreover, because buyers have been putting down proportionately higher deposits since the financial crisis this alone will reduce the cost burden of mortgage payments.

Chart 5 – Premium of first time buyer income to average UK earnings



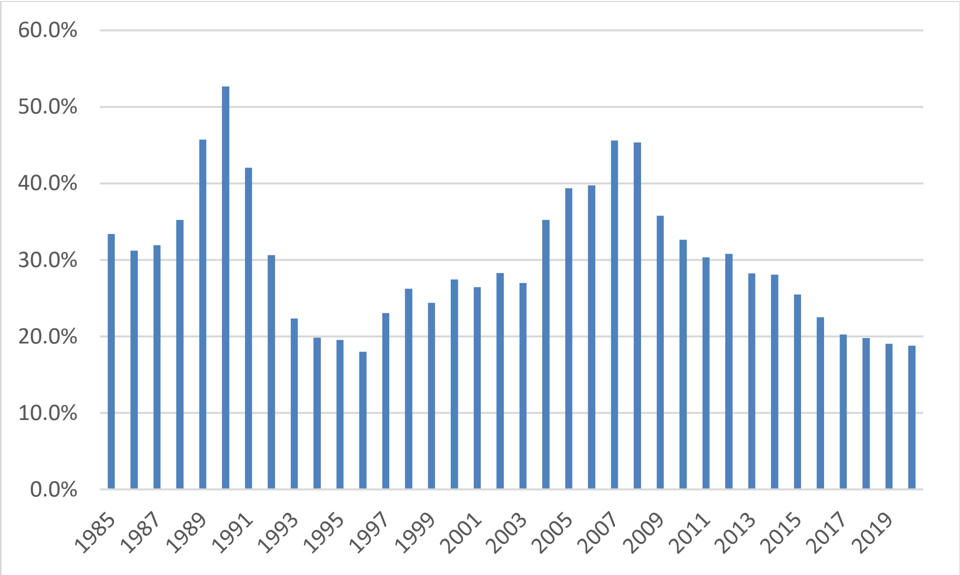
Source: ONS, UK Finance

Chart 5 compares the average income of first time buyers to average UK full time earnings. This shows that first time buyers have consistently had incomes that exceed the average UK full time wage, but this is partly the result of first time buyer data including the incomes of all of the mortgage applicants so where a couple is buying their incomes will be added together.

What is significant about the data shown in Chart 5 is the way that first time buyer incomes raced ahead of average UK wages between 1995 and 2005, suggesting that as house prices rose the breadth of the population who could afford to buy narrowed. This is supported by data on the number of first time buyers which fell from over 500,000 a year in the late 1990s to an average of only 370,000 a year between 2003 and 2007.

This distortion to measured affordability makes the burden of mortgage interest look lower than it would be for the average UK earner. Moreover, as the ratio of first time buyer income to average earnings has risen, it is going to obscure some of the deterioration in affordability since the 1990s. However, we can calculate how affordability has changed for the average earner looking to get on the property ladder by taking the average mortgage rate for first time buyers, multiplying it by the average first time buyer property price and comparing it to this typical person's earnings.

Chart 6 – Mortgage user cost of housing



Source: ONS, UK Finance

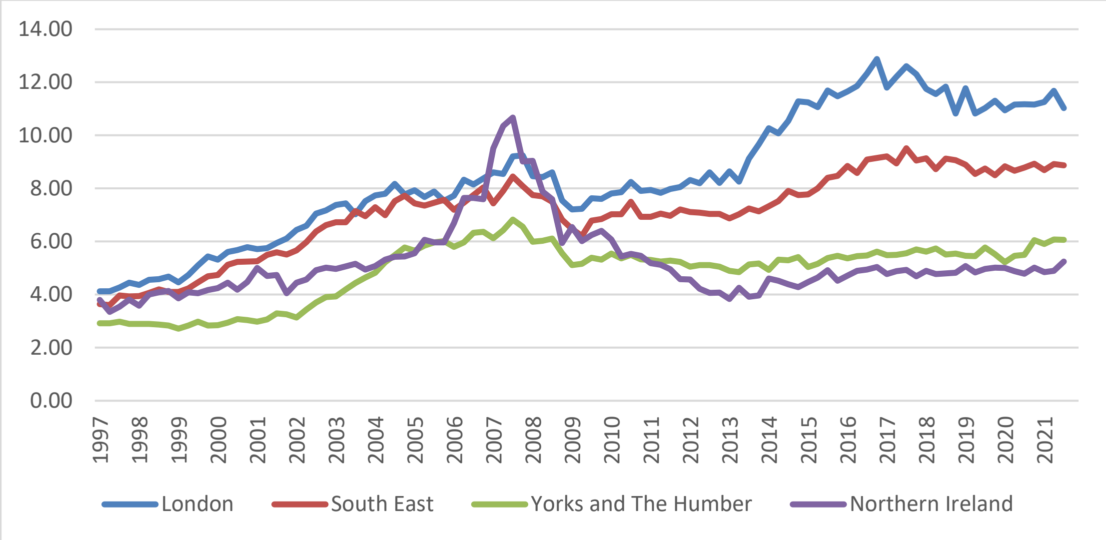
The results, which we term the mortgage user cost of housing, are shown in Chart 6. This shows that a rising house price to earnings ratio in the 1995-2007 period did substantially reduce affordability but that since then a combination of falling mortgage rates and earnings broadly keeping pace with house prices has delivered consistently improving affordability for the average earner up to 2020.

Why then has this period seen such a dearth of first time buyers, with their numbers averaging just 270,000 a year between 2008 and 2020? As affordability has been excellent the answer must lie in the higher deposit requirements seen since the global financial crisis and tighter regulatory requirements including the stress test and limit on the proportion of loans that lenders can make at or above 4.5 times income. So if we have an affordability crisis today it is around the affordability of the deposit, driven by the market's increased risk aversion and the regulatory requirements that cap the amount people can borrow, forcing them to save for a larger deposit.

2. Regional housing affordability

2.1 Regional disparities persist

Chart 7 – House price earnings ratio for selected regions



Source: ONS

While at the national level the story of the past three decades has been one of rising house prices relative to incomes but improving mortgage affordability, regionally it has been a story of widening disparities between London and the surrounding areas and the rest of Great Britain, as can be seen from Chart 7. This shows the gap that has opened up between London and the South East and Yorkshire and The Humber. The only region with a performance that has differed markedly from this pattern is Northern Ireland which was influenced by the extreme property boom and bust cycle in the Irish Republic before and after the global financial crisis.

Table 1 – House price to earnings ratios (Q3 of each year)

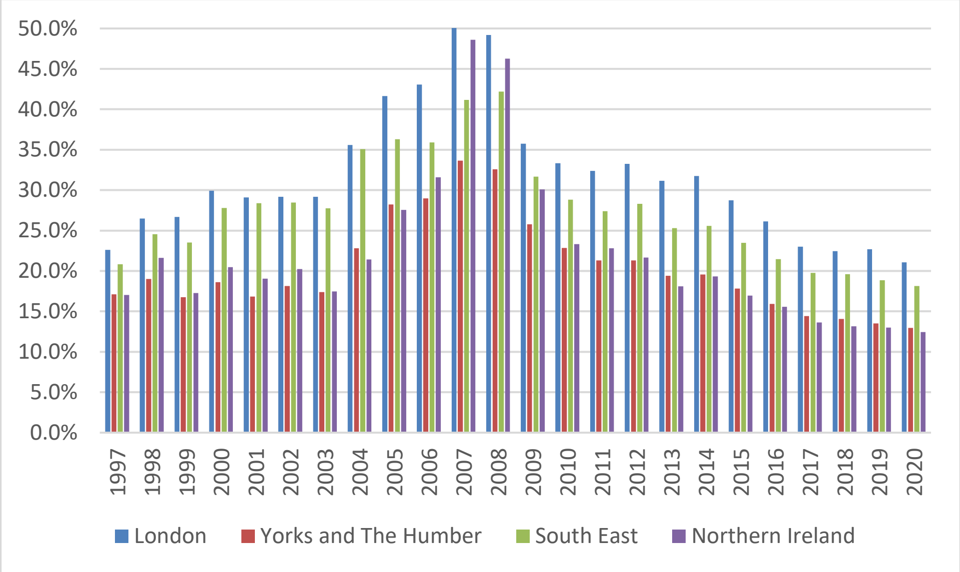
	2001	2011	2021	2011/2001	2021/2011
North East	3.00	4.40	4.78	47%	9%
North West	3.16	5.22	6.13	65%	17%
Yorks and The Humber	3.29	5.28	6.07	60%	15%
East Midlands	3.74	5.33	6.83	43%	28%
West Midlands	4.05	5.64	6.66	39%	18%
East of England	4.78	6.59	8.84	38%	34%
London	5.94	7.98	11.03	34%	38%
South East	5.59	6.96	8.88	25%	27%
South West	5.20	7.10	8.57	37%	21%
Wales	3.34	5.11	5.91	53%	16%
Scotland	2.87	5.06	5.11	76%	1%
Northern Ireland	4.73	4.96	5.24	5%	6%

Source: ONS

Table 1 shows the changes to house price earnings ratios between 2001 and 2021 for every UK region and country. As the table illustrates, the first decade of the twenty-first century saw some catching up in the regions away from London after its strong performance in the late 1990s, a classic ripple effect. But the post financial crisis recovery in the London housing market, which has powered the house price to earnings ratio to new highs in the capital, has been followed by a more muted ripple effect, leaving much of the rest of the country with lower house prices relative to earnings than in 2007.

2.2 Affordability improves across the country

Chart 8 – Mortgage user cost of housing (selected regions)



Source: ONS, UK Finance

Every region has seen mortgage interest payments declining sharply as a proportion of buyer incomes thanks to lower mortgage rates. But, as at the national level, this measure cannot be considered a good guide to true affordability across the whole population because those that buy are not representative of the wider population and as house prices have risen, home buyers' incomes have risen faster than those of the rest of the population.

But we can calculate a mortgage user cost of housing that multiplies house prices by average mortgage rates and compares this to average earnings in each region, as we did at the national level, as shown in Chart 6. This regional mortgage user cost of housing is shown for selected regions in Chart 8. All regions exhibited the same broad trend of declining affordability from the late 1990s to 2007 followed by improving affordability but, as Chart 8 illustrates, the level of affordability varies significantly, reflecting the large regional disparities in house prices relative to incomes mentioned above.

Chart 8 puts into stark relief the affordability challenge that had developed by the mid-2000s in the capital. In 2007, to buy the average priced first time buyer property of £257,000 at a then typical first time buyer mortgage rate of 6.3%, the average London full time wage earner on £32,300 would have had to spend just over 50% of their pre-tax income assuming they had no deposit. By 2020, the equivalent figure for London was just 21% despite first time buyer house prices reaching 10.9 times average earnings.

This illustrates the extent to which the 15% cap on mortgages at or above 4.5 times income constrains borrowers in the more expensive parts of the country. An average earner in London buying an average priced first time buyer property with a 50% deposit in 2020 would have spent a modest 10.5% of their income on mortgage interest yet would still have required a loan of 5.5 times income.

Although the mortgage user cost of housing is not a perfect measure of affordability it does confirm that the trend towards improved affordability amongst those actually buying does read across to the broader population. What it shows is that even in London owner-occupation ought to be affordable for the average single earner, again confirming that barriers to buying relate more to deposit requirements and regulatory rules that limit borrower advances.

3. Affordability of owning versus renting

3.1 The comparatively high cost of renting

An alternative way to measure the affordability of homeownership is by comparison with private renting. It is quite difficult to accurately measure the relative affordability of renting and owner-occupation at an aggregate level because there is no straightforward mechanism to adjust for differences in the quality of the stock of rented versus first time buyer properties. It cannot be assumed that the average rented property is of similar quality to the average first time buyer property.

Table 2 – Mortgage user cost versus average rent (September 2021)

	Average rent	First time buyer house price	Mortgage user cost	Rent premium to mortgage user cost
North East	6,936	151,578	4,866	43%
North West	9,960	188,203	6,041	65%
Yorks and The Humber	8,700	175,467	5,632	54%
East Midlands	8,820	202,344	6,495	36%
West Midlands	9,564	208,050	6,678	43%
East of England	12,252	252,544	8,107	51%
London	21,024	491,754	15,785	33%
South East	13,668	319,584	10,259	33%
South West	11,652	252,192	8,095	44%
Wales	8,808	172,179	5,527	59%
Scotland	9,060	160,214	5,143	76%
Northern Ireland	8,460	155,013	4,976	70%
UK	12,732	253,101	8,125	57%

Source: Bank of England, UK Finance, HomeLet

Nonetheless, we can make broad comparisons by comparing average rents and mortgage user costs for the average first time buyer home. Table 2 takes the average first time buyer property price for September 2021 and calculates the mortgage user cost by multiplying this price by the average 95% LTV mortgage rate, which was 3.21%. What Table 2 shows is that in every region of the country the average mortgage user cost, even using the relatively high rate of 3.21% (many first time buyers will be paying considerably less), is less than average rents. The rental premium varies from 76% in Scotland to 33% in London and the South East. A more detailed discussion on the relative costs of buying and renting can be found in the IMLA report of October 2019 *The intergenerational divide in the housing and mortgage markets*.

3.2 Barriers to first time buyers

The above comparison does not take account of the cash flow impact of capital repayments and these have a significant impact on the monthly outlays of first time buyers. For example, taking the average priced first time buyer property, while mortgage interest of 3.21% on a 95% LTV mortgage would result in interest costs of £643 a month, the full capital and interest payment would be £1,167 on a 25-year repayment term, above the average monthly UK rent of £1,061 according to HomeLet.

Many potential first time buyers do not appreciate that the capital repayments they are making amount to saving rather than expenditure so when they compare the monthly cost of buying versus renting they may perceive buying to be more expensive than it really is. But other key barriers preventing people from entering homeownership are deposit requirements, which typically are at least 5%, and the constraint imposed by affordability requirements, which results in customers being assessed on a much higher rate than they will actually be paying, limiting the amount they can borrow.

Chart 9 – Actual and expected first time buyers

Source: ONS, UK Finance

Whatever the causes, it is clear from Chart 9 that the number of people entering homeownership continues to fall well short of what would be expected based on previous propensities to buy. The UK's demographic profile suggests that just under 500,000 people should be buying for the first time each year, yet in 2020 the total was only just over 300,000 and even before Covid impacted the market the number of first time buyers was still nearly 150,000 a year below its expected level. The government recognizes the importance of expanding homeownership but clearly more needs to be done to ensure that young people can buy a home of their own.

4. Conclusion and outlook

Although house prices have never been higher relative to incomes, record low mortgage rates have ensured that monthly mortgage costs are affordable for new buyers. Indeed, the past couple of years has seen excellent housing affordability as measured by the proportion of income borrowers are devoting to their mortgage payments despite high house prices. With some lenders offering rates below 1% on lower LTV loans, there has never been a better time to be a borrower with substantial housing equity and even higher LTV lending rates have improved sharply following a Covid-induced tightening of criteria in 2020.

Yet despite low mortgage rates ensuring excellent affordability the number of first time buyers continues to fall short of what would be expected based on past buying propensities. Since 2007, a cumulative shortfall of 2.7 million first time buyers has arisen and homeownership rates amongst younger age groups is well below that which previous generations achieved at the same age. One key reason why affordable mortgages have not translated into healthy numbers of first time buyers is the regulatory regime put in place after the financial crisis, including the Mortgage Market Review, changes to the Basel capital requirements and new macro-prudential rules, which makes it harder for prospective buyers to get the size of mortgage they need to enter homeownership.

The rise in inflation we have started to see over recent months as the economy recovers from the Covid pandemic is starting to look like it will be more prolonged and intense than previously projected. Rising commodity prices and labour shortages are putting upward pressure on the price level. With consumer price inflation expected to remain well above the Bank of England's 2% target, Governor Andrew Bailey has signaled that interest rates will need to rise. Such a rise would be bound to feed into higher mortgage rates, reversing the trend towards improved housing affordability.

While it is unclear how long the rise in inflation will last, buyers would be right to be concerned about the risk of higher monthly mortgage costs. One answer would be for buyers to consider fixing their rate for longer and fortunately there is now a wide choice of loans fixed for 10 years and even loans fixed for the full term which, although common in some other countries, have been a rarity in the past in the UK. Interestingly, even though shorter term interest rates have risen on the expectation that the Bank of England will respond to higher inflation by increasing Bank Rate, long term interest rates have actually fallen over the past six months with 30-year government bonds now yielding less than 1.1%. This should ensure that longer term fixed rate deals remain reasonably priced.

Media contacts

For further information please contact:

- Rob Thomas, Director of Research, on 020 7427 1406
- Sophie Placido or Max Chason at Rostrum, on 020 3404 7700

imla@rostrum.agency

About IMLA

The Intermediary Mortgage Lenders Association (IMLA) is the trade association that represents mortgage lenders who lend to UK consumers and businesses via the broker channel. Its membership of 45 banks, building societies and specialist lenders include 18 of the 20 largest UK mortgage lenders (measured by gross lending) and account for approximately 93% of gross mortgage lending.

IMLA provides a unique, democratic forum where intermediary lenders can work together with industry, regulators and government on initiatives to support a stable and inclusive mortgage market.

Originally founded in 1988, IMLA has close working relationships with key stakeholders including the Association of Mortgage Intermediaries (AMI), UK Finance and the Financial Conduct Authority (FCA).

Visit www.imla.org.uk to view the full list of IMLA members and associate members and learn more about IMLA's work.

About the author

Rob Thomas is a Director of Research at Instinctif Partners. He previously served as an economist at the Bank of England (1989-1994), a high-profile analyst at the investment bank UBS (1994-2001) and as senior policy adviser to the Council of Mortgage Lenders (2005-12). He was also the project originator and manager at the European Mortgage Finance Agency project (2001-05) and created the blueprint for the government's NewBuy mortgage scheme.