Resolution Foundation

BRIEFING

Stakes and ladders

The costs and benefits of buying a first home over the generations

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June 2021

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Summary

Today's young people often point bitterly to the lower house prices their parents and grandparents paid, while those from older generations look jealously at the low interest rates that first-time buyers now enjoy. So, who has really had the better deal? In this briefing note we assess the costs and benefits of buying one's first home over the generations. We do this through a thought experiment, estimating the fortunes of the typical first-time buyer purchasing in each year between 1974 and 2020 over the course of the entire mortgage term. We recognise that in reality many first-time buyers move on and up before the end of their first mortgage, but make this assumption to compare consistently over time. Likewise, all cash figures given throughout are in 2020 nominal wages.

We begin by estimating how the interest payments made by the typical first-time buyer have changed over the past five decades. In the first instance, those who got on the housing ladder between 1974 and the early 1990s incurred significantly more interest in real terms over the course of their first mortgage than those purchasing in the years thereafter – unsurprising given a standard variable rate mortgage charged over 10 per cent during the whole of this period (peaking at 15.3 per cent in 1980). Moreover, the interest burden was front-loaded for many from the baby boomer generation, with high payments required in the early years of the mortgage when buyers are most vulnerable to default. However, older generations rapidly saw their interest payments fall in real terms, and benefited from Mortgage Interest Relief at Source (MIRAS) which materially reduced interest costs in the years 1974 to 1983. As a result, first-time buyers purchasing in the years running up to the financial crisis look set to experience the highest real net interest burden of any birth cohort over the course of the mortgage (a function less of high interest rates, of course, and more of the higher value loans they had to take out as real house prices rose).

First-time buyers from older generations have clearly also been the winners when it comes to the amount of capital required to buy a home. We show that the cash needed by the typical first-time buyer in 1974 to cover the deposit and principal in full was just shy of £87,000, bringing the total lifetime cost of buying their first home to £154,000 (interest plus capital). In contrast, the equivalent family purchasing in 2020 looks set to pay more than double that capital amount (£190,000), and a total of £250,000 when interest is brought into the picture. However, despite the chatter about the plight of millennial first-time buyers, the total cost of buying a home was hard-felt by later Generation-X birth cohorts too. The most dramatic cohort-to-cohort jump in the total cost of buying one's first home is observed between a typical first-time buyer born 1966-1970 (who had to spend on average a total of £132,000 getting on the housing ladder), and one born

1976-1980 (who faced an average total cost of £238,000 over the lifetime of their first mortgage).

These UK averages obscure a wide range of first-time buyer experiences across the regions however. We estimate that the typical London first-time buyer in 2020 will spend £500,000-plus over the course of their mortgage to purchase their first home, two-and-a-half times as much as they would have in 1974. In contrast, their equivalent in the North East will incur a cost of £150,000, just 9 per cent higher than the typical first-time buyer in that region in 1974. This finding has two implications. First, intergenerational differences when it comes to the cost of buying one's first home vary considerably within regions (the vagaries of the initial year of purchase are even more pronounced in regions such as Northern Ireland which have experienced considerable house-price volatility over the period). Second, intragenerational differences between regions when it comes to the cost of one's first home have widened dramatically, with implications for mobility between areas.

Formally, however, we can look at some of these costs from a more positive perspective and view the capital required to buy one's first home as an asset which may appreciate over time. Assuming house prices continue to grow in line with average earnings, the typical first-time buyer in 2020 can expect to hold close to £300,000 of housing wealth by the end of their mortgage term. But although the effect of rising house prices is that recent typical first-time buyers will hold more housing wealth in absolute terms at the end of their mortgage than previous cohorts, they will have to work far harder to accumulate than older generations. At least half of the housing wealth held by a typical baby boomer first-time buyer by the end of their first mortgage resulted from real house price appreciation over the period. In contrast, our most recent first-time buyer cohort born between 1986-1990 can expect just over one-third (37 per cent) of their property wealth to be 'passively' rather than 'actively' achieved by the point they are mortgage-free.

The significant cash burden that first-time buyers face today can be obscured when we measure the pure economic costs of home ownership. When we estimate the user cost of buying one's first home (an approach often favoured by economists as it factors in the opportunity costs of investing one's money elsewhere), we show the typical first-time buyer in our two millennial birth cohorts (those born 1981-1985 and 1986-1990) look set to experience a not dissimilar cost burden over the course of their first mortgage term as large parts of previous generations. Put simply, young people today do not appear to be significantly disadvantaged compared to older generations on a user cost basis; on a cash-flow basis, they clearly do. As a result, we take the view that although the user cost measure serves a purpose, failing to foreground the required deposit, and indeed the

requirement to make much larger capital repayments over the course of the mortgage, means it misses a key living standards aspect of the intergenerational story.

And therein lies the intergenerational rub. Young people today are far less likely to be home owners than previous generations: 55 per cent of those born between 1956-1960 were homeowners by the age of 30, for example, compared to just 27 per cent for those born 1981-1985. While some of this fall can be ascribed to later life events for younger generations (leaving education, having children and the like), rising cash costs play by far the dominant role. Although home ownership democratised considerably between 1974 and the mid-1990s, the tenure has increasingly become the preserve of the better off. In 1996, for example, the typical first-time buyer family had an income that put them at the 38th percentile of the income distribution of their age group; by 2020 this stood at the 48th percentile. Absent a family gift or inheritance, first-time buyers today must save for longer in order to accumulate the necessary deposit to get on the housing ladder. A family headed by someone born in 1974 would typically have saved enough to get on the housing ladder by the age of 22; the equivalent family headed by a millennial born in 1984 would need to save at the same rate until the age of 34.

Comparing consistently across the generations as our thought experiment allows us to do shows why home ownership remains very attractive: not only does it provide a stable home but it also is an excellent vehicle for wealth accumulation. But looking at the costs and gains of buying one's first home in the round shows today's prospective first-time buyers must work far harder than previous generations to achieve this end. They need to save more and for longer to access home ownership; require a higher income to service their mortgage over time; and are unlikely to experience the windfall gains their parents' and grandparents' generations enjoyed.

The costs and benefits of buying a home have changed over the generations

Owning one's home is an enduring ambition for many families in the UK today.[1] The English Housing Survey 2019-2020 suggests, for example, that 60 per cent of private renter households 'expect' to buy their own home at some point in time, alongside 28 per cent of those living in social rent.[2] The appetite for home ownership is unsurprising given the tenure's many virtues: it usually provides a stable shelter;[3] can bring with it a sense

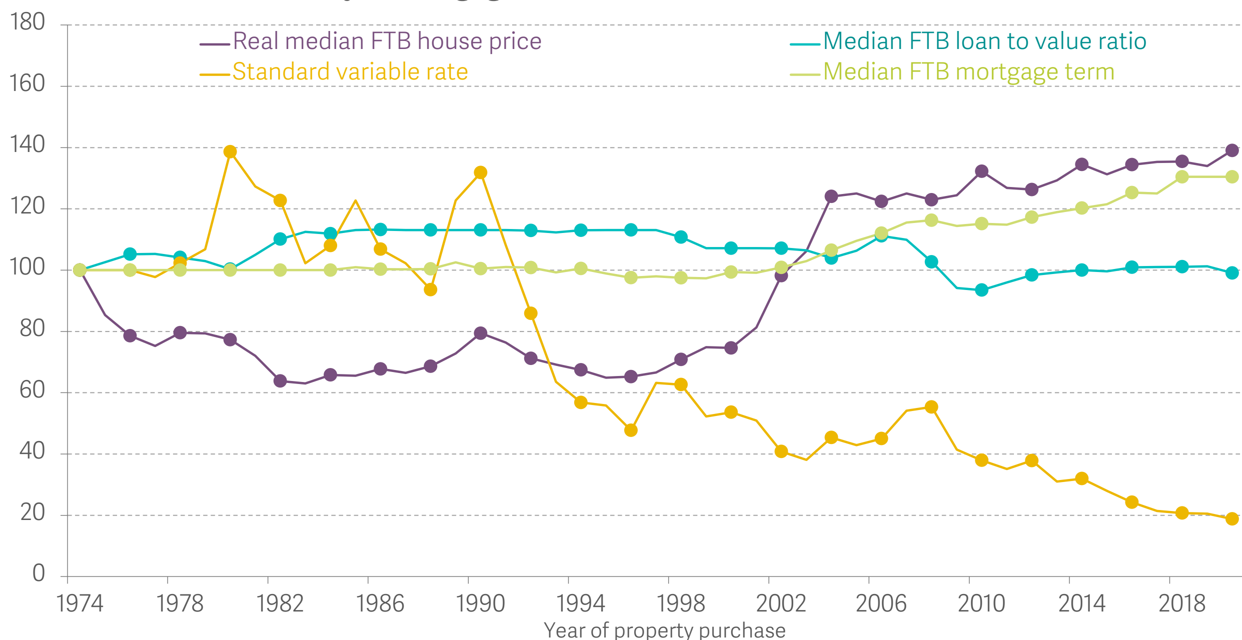
1 For a discussion of the distinction between housing aspirations, expectations and choices, and the multiple determinants of each, see: J Preece et al., Understanding changing housing aspirations: A review of the evidence, Housing Studies 35(1), 2020.
2 Ministry of Housing, Communities and Local Government, English Housing Survey: Headline Report 2019-2020, Annex Table 1.20, December 2020.
3 In 2018, for example, we estimate 9 in 10,000 mortgaged home owners were repossessed compared to 35 in every 10,000 renter families. Source: RF analysis of MHCLG, Mortgage and Landlord Possession Statistics Quarterly - Statistical Tables; ONS, Labour Force Survey.

of belonging and connection to a community;[4] and for many, it is an important signal of identity and achievement.[5] But beyond these benefits, home ownership is also valued as a means of accumulating wealth: buying a home enforces saving, and during periods of house price inflation can also be the source of considerable capital gains.

Housing is a key way in which wealth is held in the UK, especially compared to similar European countries.[6] But home ownership is costly. Alongside maintenance, insurance and the like, the majority of families need to take out a mortgage in order to purchase a home. The cost of buying that home over the mortgage depends on four key determinants: the price at the point of purchase; the loan-to-value (LTV) ratio which will determine the size of the deposit required; interest rates that prevail over the course of the mortgage; and the length of the mortgage term. Likewise, the passive returns on home ownership depend on house price appreciation over the mortgage period.

FIGURE 1: **The determinants of the typical cost of buying a home have shifted significantly over time**

Index of first-time buyer mortgage cost determinants (1974=100): UK



NOTES: First-time buyer house price deflated using average earnings to 2020 nominal wage values.[7] For further information on data, see Box 1.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

4 See, for example: L Gardiner, VoteyMcVoteface: Understanding the growing turnout gap between the generations, Resolution Foundation, September 2016, which shows renters of all generations vote in lesser numbers than their homeowner counterparts of the same age.

5 See, for example: A McDonnell & C Ibbetson, What are the signs of being a grown-up?, YouGov, March 2021, which suggests the public view owning one's own home as the most important signifier of adulthood.

6 See, for example: M Gustafsson et al., Aftershocks: Financial resilience before and during the Covid-19 crisis, Resolution Foundation, April 2021, which shows that housing wealth is both higher and more evenly distributed in the UK compared with France and Germany.

7 Throughout this paper we analyse housing costs relative to wages – references to deflation are short hand for measuring prices relative to an index of average UK nominal wages.

Yet as Figure 1 shows, each of these factors has shifted considerably over time (there are, of course, non-trivial interdependencies between all four).[8] As a result, it is not obvious ex-ante whether the costs and benefits of purchasing a home for a typical first-time buyer have risen or fallen over the generations.

But how can we best make sense of all these shifting determinants and produce a consistent measure that enables us to compare experiences across the generations? We tackle this challenge in this briefing note via a thought experiment which tracks the fortunes of a typical family purchasing their first home in each of the years between from 1974 to 2020.[9] For simplicity's sake, we estimate the costs and benefits over the entirety of this hypothetical first mortgage, although we recognise that, in reality, large numbers of first-time buyers trade up (or down) before they reach that point.[10] Put differently, our thought experiment tells us how the typical first-time buyer in each of the years between 1974 and 2020 stood – or would stand – at the end of their first mortgage (we use a plausible set of future assumptions to project forward for more recent first-time buyers). Finally, to compare over time, we adjust for changes in affordability by putting all figures into 2020 average wages values.[11] Box 1 provides more details on the data and the primary method we employ throughout.

8 For example, for an excellent discussion of the role that easier and cheaper credit has played in driving up house prices over time, see: The Redfern Review into the decline in home ownership, November 2016.

9 We assume that our typical first-time buyer takes out a standard repayment mortgage. However, it is important to note that some birth cohorts had a far wider range of mortgage options available. Most obviously, interest-only mortgages were much more commonplace in the run-up to the financial crisis. See, for example: S Galaiya, The rise and fall of interest-only mortgages, Bank Underground, February 2018.

10 That said, the notion of the property ladder up which families rapidly shin is perhaps overstated. The English Housing Survey suggests that in 2017, the median length of residence of a first-time buyer family was between 10 and 19 years (source: RF analysis of MHCLG, English Housing Survey 2017). For a discussion of the decline in second-steppers and other home movers in recent years, see also: N Hudson, Missing movers: A long-term decline in housing transactions?, Council of Mortgage Lenders, June 2017.

11 We view earnings as a better deflator than consumer prices for this exercise for two key reasons. First, all else equal, house prices should move in line with wages meaning that, had no other inputs in our analysis changed, our estimate of housing costs over the mortgage period would have remained constant (if we compared to the slower growth in consumer prices they would have risen despite no fundamental changes in housing cost). Second, the ability to save for a deposit will largely be dependent on wages and so this measure of housing cost will better track the real experience of prospective first-time buyers. Naturally, income and wages are not identical, but over a long horizon and for the typical first-time buyer, wage growth will be the dominant factor in determining income.

BOX 1: A cashflow measure of first-time buyer housing costs

In this note we largely estimate the cash-flow cost of buying one's first home. On this basis, the typical cost will be the sum of the deposit, payments towards the mortgage principal (i.e. the value of the home minus the deposit) and net interest payments on the mortgage.[12] In order to produce an estimate of the cashflow measure of buying one's first home – which is, crucially, comparable over time – we:

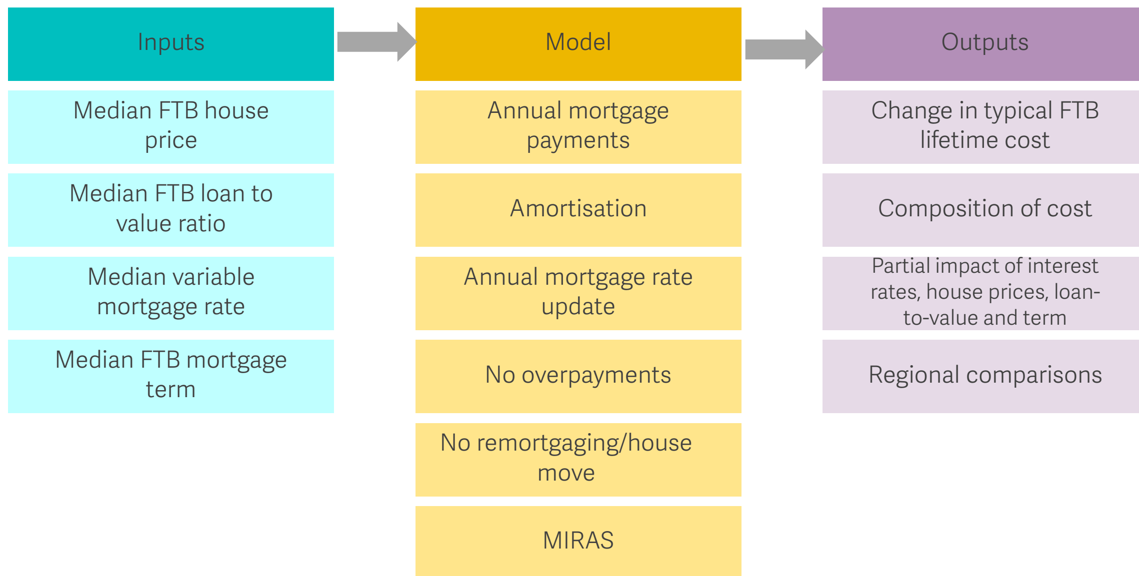
- Take the price of the median property purchased by a first-time buyer in a given year;
- This is combined with the median loan-to-value ratio (LTV) for a mortgage in that year, giving us an estimate of the deposit payment;
- We model annual mortgage interest and principal payments over the life of the mortgage based on the median first-time buyer mortgage standard variable interest rate and the median term of a first-time buyer mortgage in each year;
- Gross mortgage interest payments are reduced, where applicable, as a result of Mortgage Interest Relief at Source (MIRAS). We calculate that value based on median salaries for a couple household, the mortgage value cap in place at the time and the median marginal income tax rate;
- Mortgage payments are transformed into present value by applying the annual average interest rate for savings accounts. Specifically, we use the sight deposit account rate from the Bank of England's measure of historic interest rates;
- We put our figures into real terms using average wages;
- Finally, we make two further assumptions in order to estimate the present lifetime value of mortgages which are yet to have reached the end of their term. First, the average mortgage rate will stay low in line with its current value and second, annual wage growth is 3 per cent in the future. [13]

Figure 2 provides a simplified graphical summary of our model.

12 We exclude some costs and benefits associated with purchasing a home from our analysis. For example, we do not take account of Stamp Duty or Help to Buy equity loans and ISAs at the point of purchase. Moreover, we exclude mortgage fees due to insufficient data.

13 The experience of future generations (or indeed individuals who are yet to become first-time buyers) could differ as a result of different outcomes for wages, interest rates and house prices than we assume – for example higher wage growth, low interest rates and falling house prices would reduce the costs that first-time buyers face. However, these inputs to the model are interconnected and not determined independently; if wage growth were to be lower in future we should expect, all else equal, lower interest rates and slower house price growth. This means that our results should be robust to changes in the pace of economic growth in the future but we recognise that should there be a structural change in the relationship between these variables, our model could under- or over-estimate first-time buyer housing costs.

FIGURE 2: **Stylised representation of cashflow-based model of first-time buyer housing costs**



It is important to note, however, that there is no unified data source which provides long-run annual estimates of that we can use as inputs to our model. We largely construct our dataset using historic data from the Council of Mortgage Lenders (CML), the Office for National Statistics (ONS) and the Financial Conduct Authority (FCA). While we have attempted tow match consistent data, an important caveat is that each dataset covers a slightly different section of the housing market. The CML data – which runs back to 1974 (but is no longer produced) – covers a subsection, albeit the majority, of the mortgage market; the FCA data is based on their Product Sales Data and represents an almost complete coverage of the mortgage market; and the ONS data covers the entire housing market, not just purchases with mortgages. Finally, we estimate the average mortgage term of a first-time buyer using the Family Resources Survey, which gives us figures for the period 1985-2017. We assume the 1985 value (23 years) for the years 1974-1984, and the 2017 value (30 years) for the years 2018-2020.[14]

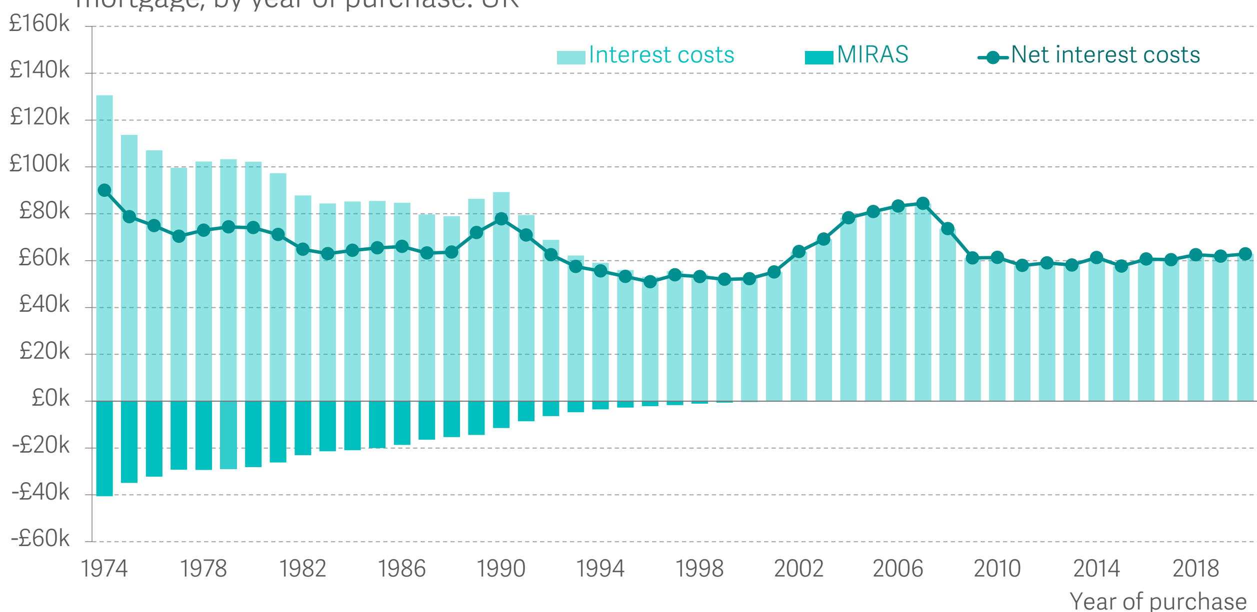
14 We note that a first-time buyer may not always fit the profile we typically assume: some datasets count anyone who buys a home as a renter as a first-time buyer regardless of whether they have owned at some point prior. As a result, the data we use may not perfectly capture whether someone is a true first-time buyer, but as we focus on median values, this should have a limited effect on our results.

Older generations were at the sharp end of high interest rates, but that effect was blunted by policy

We begin our investigation, then, by considering how the interest a typical first-time buyer would have paid over the life course of their first mortgage would have changed over the years (see Figure 3). In the first instance, those who purchased their first home in the 1970s, 1980s and very early 1990s paid significantly more interest in real terms than those purchasing in the years thereafter. This is unsurprising given the interest rate on a standard variable rate mortgage was consistently above 10 per cent over the whole of this period (it hit a peak of 15.3 per cent in 1980) and rates were also higher in real terms (so even when accounting for higher inflation and wage growth at the time). But Figure 3 also shows that mortgaged home owners in those high interest rate years also received considerable policy support. Mortgage Interest Relief At Source (MIRAS), a tax relief applied directly by the lender, reduced the lifetime interest paid by the typical first-time buyer purchasing in the years 1974 to 1984 by at least one-quarter, and continued to provide material help to others for some years to come.[15]

FIGURE 3: **Those purchasing their first home in the run-up to the financial crisis look set to have the highest real interest costs of any generation**

Estimated real present value of lifetime interest cost of a typical first-time buyer mortgage, by year of purchase: UK



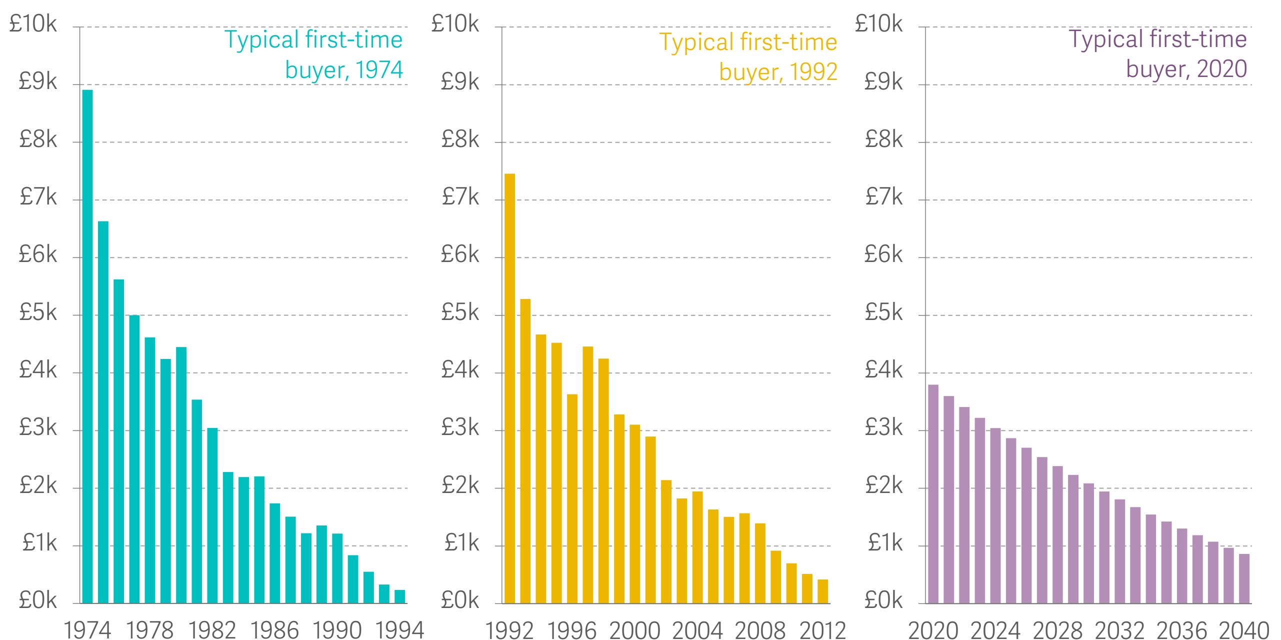
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

15 MIRAS was reduced from 1988 and finally abolished in 2000. For further information on the tax relief, see: B Pannell, Mortgage Interest Relief, Housing Finance No. 20, November 1993.

As a result, typical first-time buyers in the years preceding the financial crisis had equally if not higher real lifetime interest costs compared with those from previous generations (a function not of high interest rates, of course, but also the higher value loans they have had to take out as real house prices began to rise). That is not to say, however, that the interest burden was not acutely felt by first-time buyers from older generations. In Figure 4, we show the interest payment trajectory over the course of the mortgage for a typical first-time buyer family purchasing in the years 1974, 1992 and 2000. As this makes clear, real interest costs were far more front-loaded for the average purchaser in 1974 than in 1992 and 2000. In the first five years of the mortgage (a period when home owners are most likely to feel the strain and when the majority of repossessions occur), our typical 1974 first-time buyer had to pay over £30,000 in interest (in 2020 nominal wage values), compared to £22,000 for those buying in 1992 and £17,000 for our 2020 purchaser. But conversely, as the chart also makes plain, the typical first-time buyer purchasing in 1974 had an easier ride at the back-end, spending less in real terms on annual interest payments in the latter half of their mortgage term than those purchasing in 1992 and 2020.

FIGURE 4: **Interest costs were front-loaded for first-time buyers from older generations**

Estimated real present value of outstanding interest costs of a typical first-time buyer property, over lifetime of mortgage taken out in select years: UK



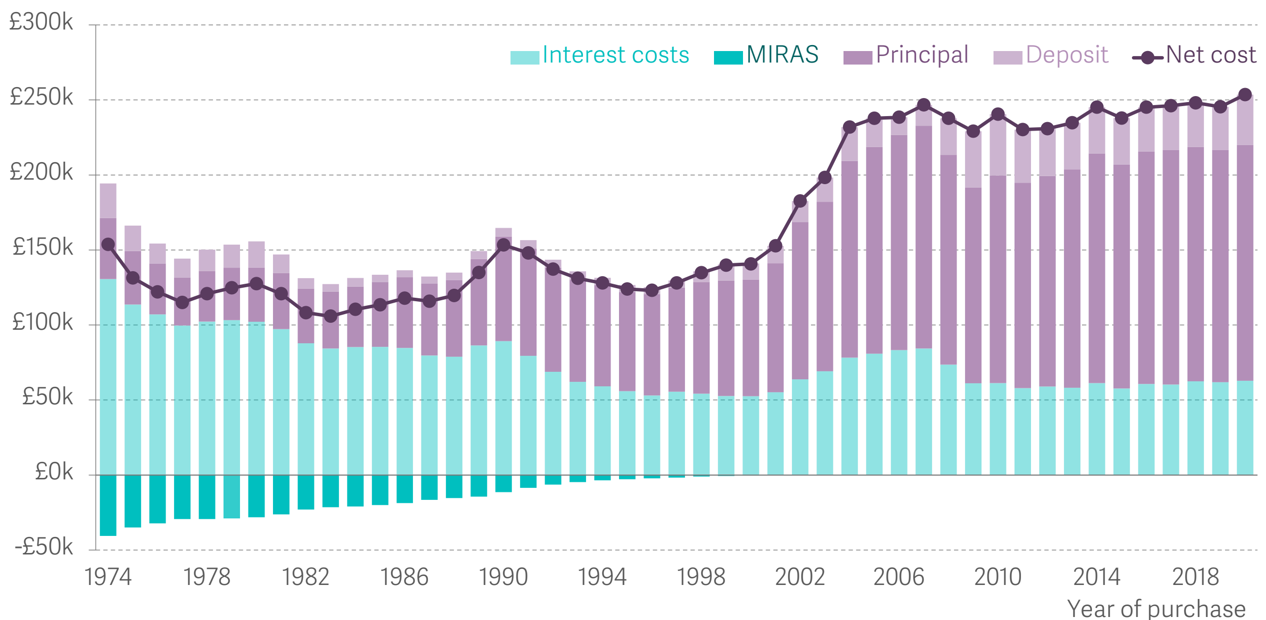
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

The rapid rise of real house prices in the 2000s has driven up the cost of buying a home

Although older generations had to contend with high interest rates which often stretched them thin in the early years of ownership, in recent years first-time buyers have faced significantly higher real house prices. We factor in this cost element into Figure 5, which starkly illustrates how different the capital costs of home ownership have been across the generations. Simply comparing the start and end points of our time series makes the point: the capital required to purchase a home for the typical first-time buyer in 1974 was just shy of £87,000 (all figures in 2020 nominal wage terms), bringing the total lifetime cost to £154,000 (interest plus capital). In contrast, the equivalent family purchasing in 2020 looks set to pay more than double that amount in capital (£190,000), and a total of £250,000 when we bring interest into the picture as well.

FIGURE 5: **The total cash cost of purchasing a home has increased by two-thirds over the last five decades**

Estimated real present value lifetime cost of a typical first-time buyer property, by year of purchase: UK



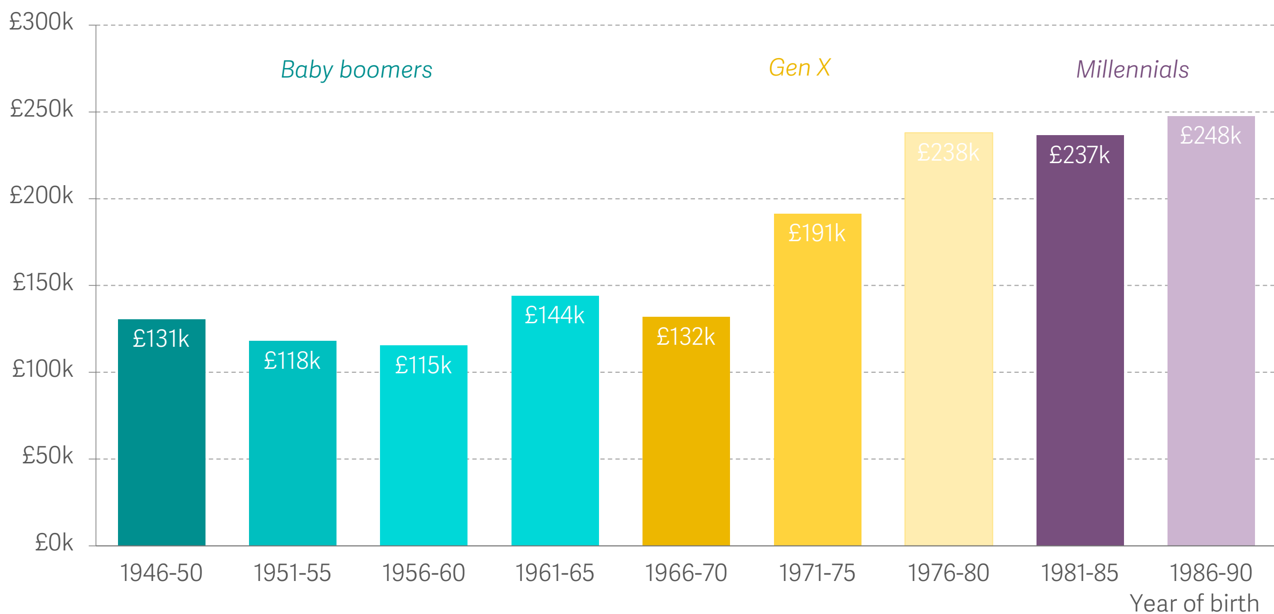
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

But as Figure 5 makes clear, these high costs faced by millennial first-time buyers in recent years are not a new phenomenon. It is not just the most recent generation of young people who have faced high costs over the life course of the mortgage; first-

time buyers have had to pay substantially more than their parents and grandparents to purchase their home from the early 2000s onwards. Figure 6 makes the point in a different way. Here, we show the total (capital plus interest) cost of buying one's first home averaged for five-year birth cohorts, a presentation that makes the intergenerational disparities abundantly clear. The millennial experience does not differ significantly from that of the later Gen-X birth cohorts. Instead, what is most striking is the very rapid escalation of costs between the baby boomers and Gen-Xers: while the typical first-time buyer born between 1966-1970 spent on average £132,000 purchasing their first home, those born just ten years later between 1976-1980 faced an average cost of £238,000.

FIGURE 6: **Older generations had to spend considerably less purchasing their first home than later Gen-Xers or millennials**

Estimated real lifetime cost of a typical first-time buyer property, by year of birth: UK, 1974-2020



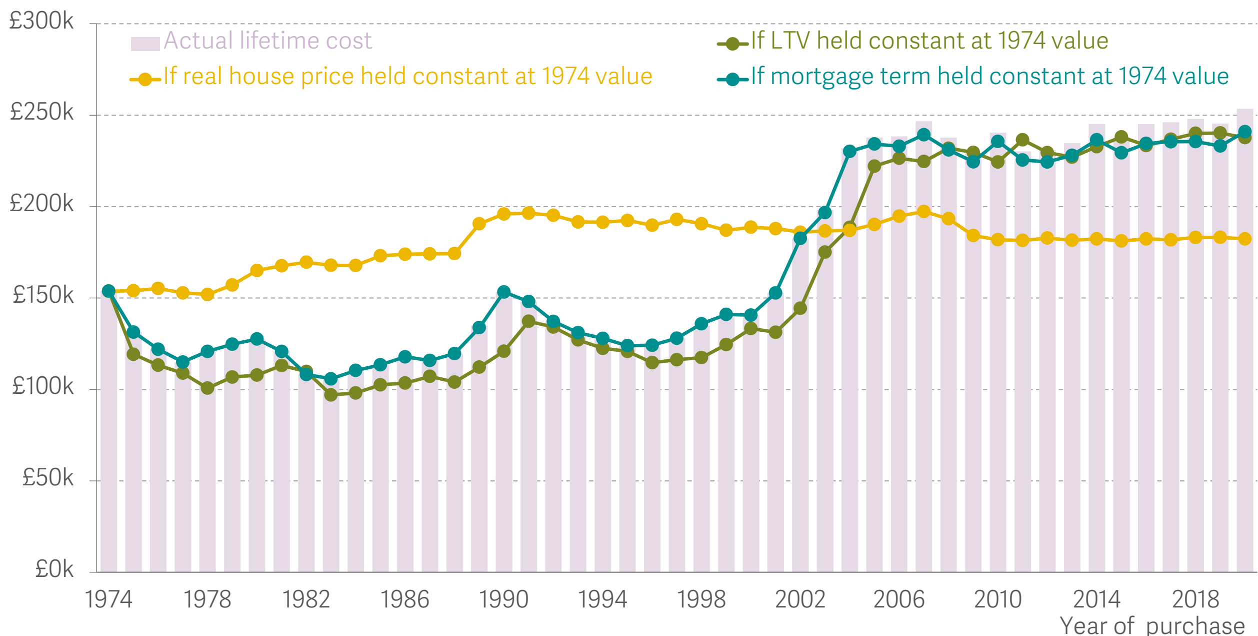
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology. Values for birth cohorts are based on the median age at which those born in a given year bought a house – so people buying houses before or after the median age for their birth cohort may have faced different housing costs to those shown in this chart.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

But is the intergenerational pattern we observe here driven solely by rising real house prices? Figure 7 suggest this is the case. Here, we isolate the effect of the various determinants of the lifetime cost of buying a home (as noted above, in reality a change in one could have knock-on effects on the others). If house prices had remained constant

in real terms at 1974 levels the estimated lifetime cost of buying one's first home in 2020 would be considerably lower than it is in actuality (£182,000 compared to £253,000).[16] Moreover, this house price effect dwarfs other changes we have observed over the period. If mortgage terms were the same in 2020 as they were in 1974 (23 years as opposed to the actual 30 years), the lifetime costs of ownership would only be slightly lower for more recent first-time buyers. And for those who took out their first mortgage when credit was more readily available (in 1986, for example, the median first-time buyer LTV was over 95 per cent) have seen their lifetime costs somewhat inflated as a result. This is because they will have paid more interest on a larger principal. But given the typical first-time buyer LTV in 2020 barely differs from 1974 (83 per cent compared to 84 per cent), there is little net effect from this source in recent years.

FIGURE 7: **Real house price increases largely explain intergenerational changes in the lifetime cost of buying one's first home**

Estimated real present value lifetime cost of a typical first-time buyer property and counterfactuals, by year of purchase: UK



NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

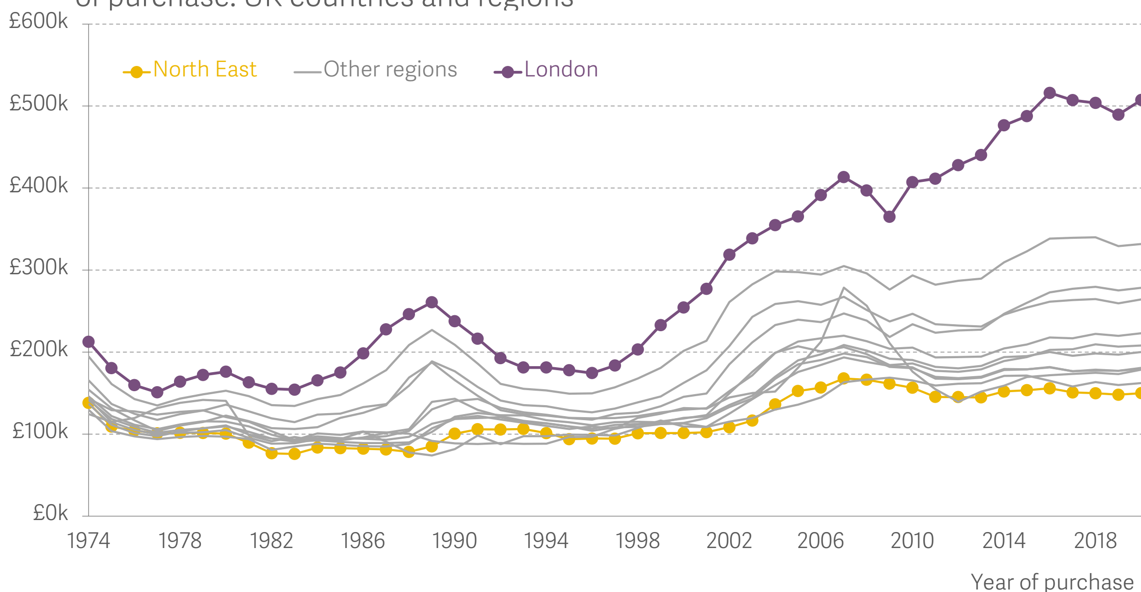
16 Assumes no change in interest rates over the period. However, as previously noted, in reality there is a strong relationship between lower interest rates and rising house prices over the period. See footnote 7.

When it comes to the cost of buying a home, intergenerational differences are acute in some regions, but more muted in others

So far we have presented the UK typical cost of buying one's first home. So how does the picture differ when we split out our results by region? As Figure 8 shows, at the start of our time series there was some difference between the various geographies when it came to the total costs of buying one's first home: in 1974, it cost the typical buyer in the North East £138,000 over the lifetime compared to £212,000 for the same purchaser in London (just over 50 per cent higher). But scroll forward five decades and the differential between regions has become far more pronounced. We estimate that the typical first-time buyer in the capital in 2020 will need to spend £500,000-plus over the course of the mortgage lifetime to purchase their first home, two-and-a-half times as much as they did in 1974. In contrast, their equivalent in the North East will incur a cost of £150,000, just 9 per cent higher than the typical first-time buyer in that region in 1974. As a result, intragenerational differences between regions when it comes to buying one's first home have become much more pronounced over time, making it harder potentially for young people today to move from one area to another.[17]

FIGURE 8: **The typical London first-time buyer will pay two-and-a-half times as much for their home in 2020 as they did in 1974**

Estimated real present value lifetime cost of a typical first-time buyer property, by year of purchase: UK countries and regions



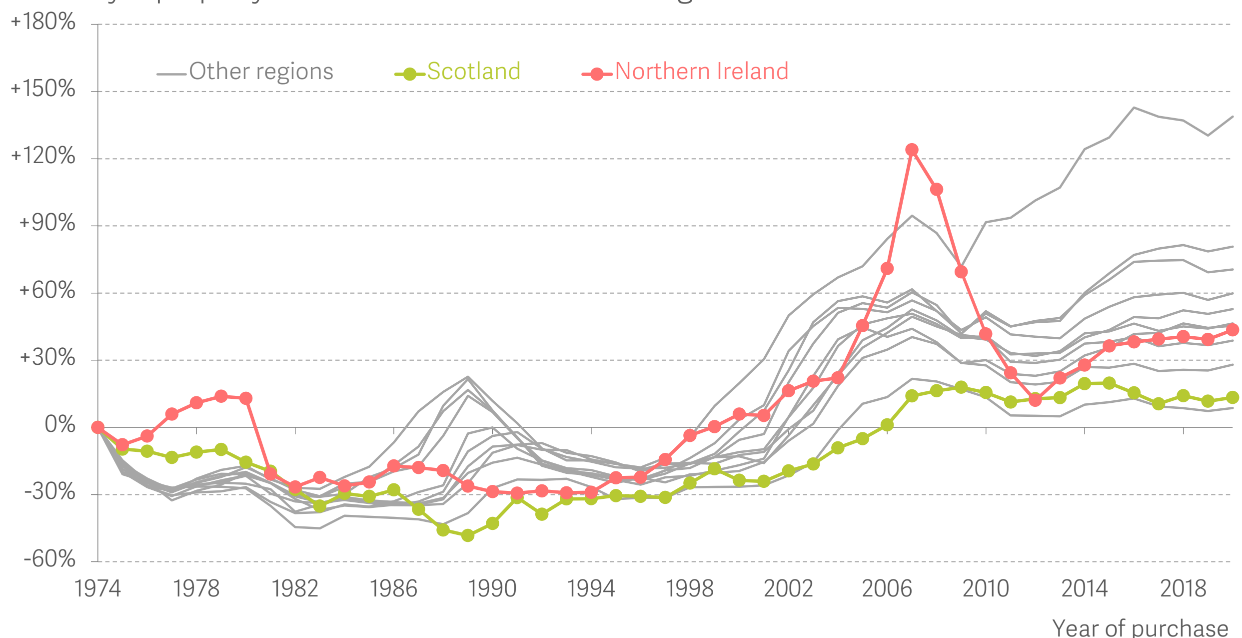
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

17 For further discussion of the impact of housing cost gaps on job mobility, see: L Judge, Moving matters: Housing costs and labour market mobility, Resolution Foundation, June 2016.

Moreover, it has become much costlier to buy a home in some regions over time but in others, the intergenerational difference is more muted. These vagaries between generations become even more apparent when we look at how the cost of buying one's first home has changed in percentage terms, rather than absolute terms, since 1974. In Figure 9, for example, we compare the experience of the typical first-time buyer in Scotland and in Northern Ireland. As the chart makes clear, the cost of buying one's first home in Scotland has remained fairly stable over the period (although the cohort purchasing in the late 1980s did so at something of a discount). As a result, intergenerational differences for first-time buyers in Scotland are relatively stable. In contrast, first-time buyers in Northern Ireland have experienced a much more volatile set of costs over the course of the generations (a result of the Northern Irish housing market being bound quite closely to swings in the Irish market). The cohort purchasing their first home at or around the 2008 financial crisis will have especially high lifetime costs over the course of their first mortgage, even compared to first-time buyers in Northern Ireland in 2020.

FIGURE 9: **Volatility in the cost of buying one's first home creates sharper intergenerational inequalities within regions**

Percentage change in estimated real present value lifetime cost of a typical first-time buyer property since 1974: UK countries and regions



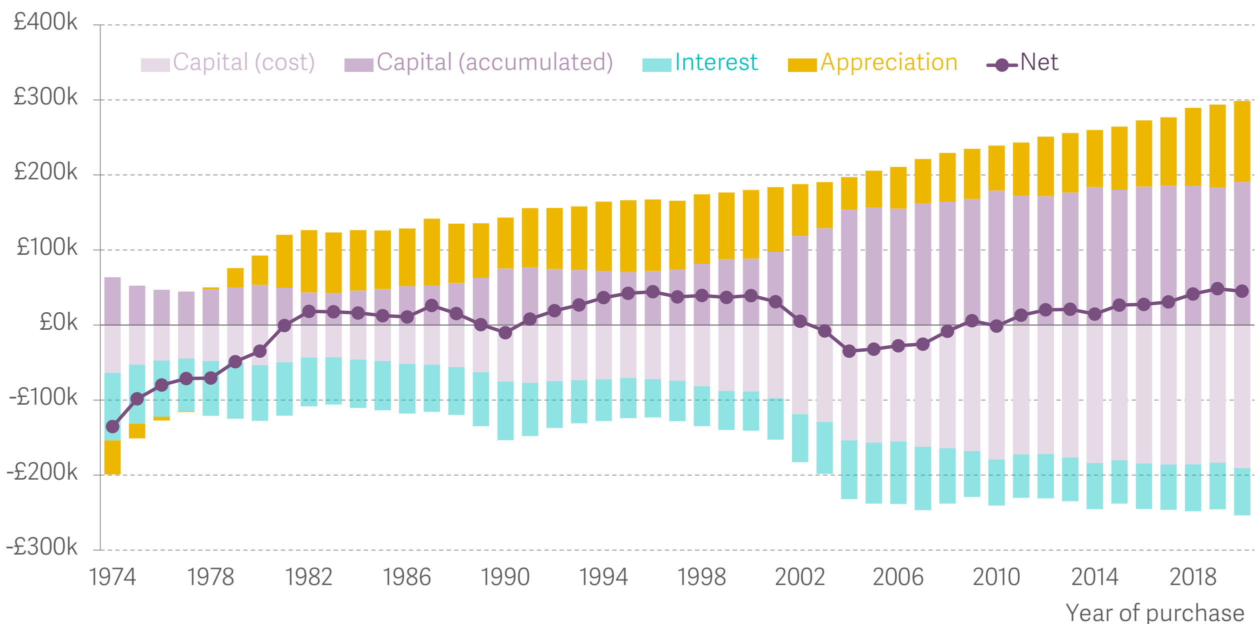
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

Today's young people have to work harder to build up housing wealth compared to previous generations

Although we have treated them as such, the upfront deposit and principal repayment on any mortgage are, of course, technically not net costs (even though from a lived experience perspective they feel like that). Indeed, another way to look at home ownership is that it enforces saving on a regular basis and allows one to build up an asset via the deposit and mortgage repayments. So, what do our results look like if we analyse them through a wealth, rather than a housing-cost, lens?

FIGURE 10: **Buying one's first home has become an increasingly onerous way of building up wealth**

Estimated real financial position at the end of typical first-time buyer mortgage term, by year of purchase: UK



NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

In Figure 10 we put our cost estimates below the line, but also chart the gains from home ownership over the course of the first mortgage (capital accumulated and appreciation). In its simplest terms, this shows that getting on the housing ladder has become an increasingly effective means of wealth accumulation over the generations: the typical first-time buyer in 2020 can expect to hold close to £300,000 of housing

wealth by the end of their mortgage.[18] In contrast, the typical first-time buyer family in 1974 actually found itself worse off in real terms at the end of its mortgage term by virtue of high interest costs and real house price depreciation over the period (that is not to say, of course, that they did not then go on to benefit from the house price boom in the following years). But, critically, today's more recent first-time buyers have had to pay in far more than previous generations to accumulate this wealth, and will have had to forgo other consumption opportunities over the course of their mortgage as a result.

Moreover, Figure 10 also makes plain another key intergenerational difference and that is the extent to which housing wealth over the course of the first mortgage term has been 'actively' versus 'passively' acquired.[19] We explore this further in Figure 11 which shows the total typical first-time buyer's housing wealth at the end of the mortgage term (the bars above the line in the previous chart), but now split out into active (i.e. the deposit and capital repayments) and passive – that is, gains made by virtue of real house price appreciation. When we look across the generations, the baby boomers were the clear winners when it comes to windfall gains (the sole exception to this rule is the cohort born 1946-1950 who actually saw no real house price appreciation over their first mortgage term – although of course subsequently would have gone on to enjoy gains). 60 per cent of the housing wealth held by the typical first-time buyer born between 1951-1955 at the end of their mortgage term was the result of the real value of their property increasing over time, for example. In fact, at least half of the housing wealth accumulated by typical baby boomer first-time buyers over the course of their mortgages was passive. In contrast, more recent typical first-time buyers look set to end their mortgages with more housing wealth in absolute terms, but they will have had to work harder to accumulate this. Looking at our most recent birth cohort (1986-1990), for example, based on the assumption that house prices continue to grow in line with earnings, 36 per cent of housing wealth will have been passively acquired by the end of the typical first-time buyer family's mortgage.[20]

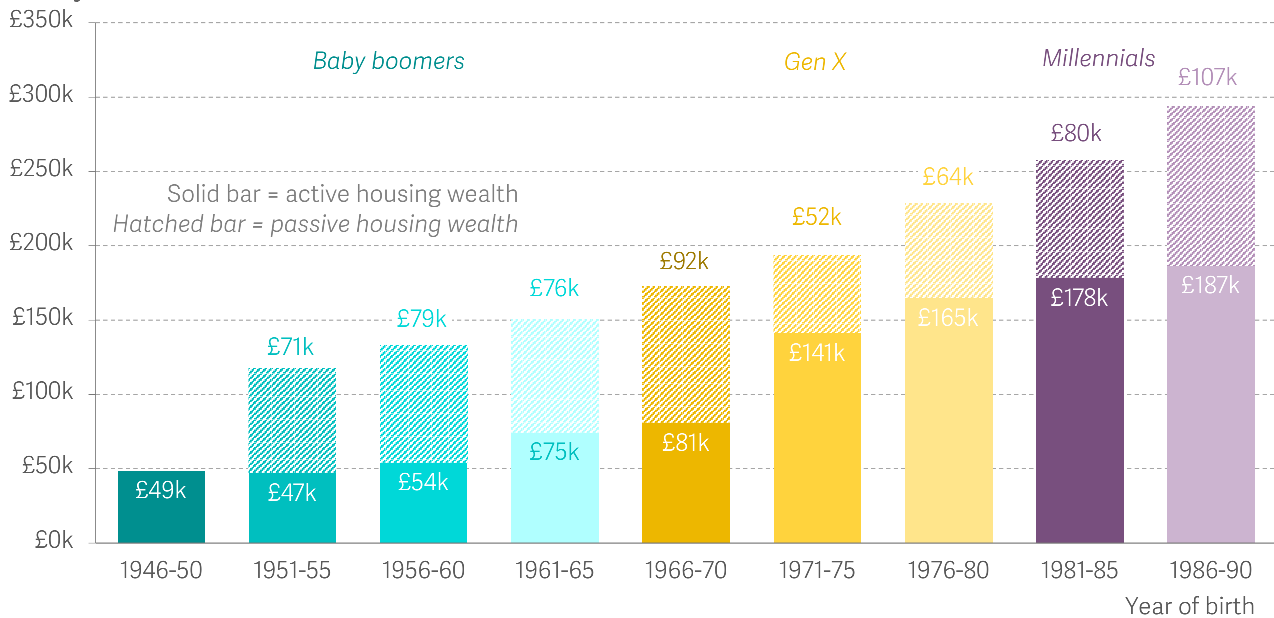
18 Assumes future house prices grow in line with average earnings at 3 per cent per annum, which is the long-run average in our data.

19 The distinction between active and passive wealth accumulation i.e. active savings versus windfall gains, is discussed in further detail in C D'Arcy and L Gardiner, The generation of wealth: Asset accumulation across and within cohorts, Resolution Foundation, July 2017.

20 It is worth noting that large passive gains from one's first home can be leveraged to invest in further properties. For a detailed discussion of the way in which additional properties exaggerates intergenerational wealth inequalities, see: G Bangham, Game of homes: The rise of multiple property ownership in the UK, Resolution Foundation, June 2019.

FIGURE 11: **At least half of the housing wealth the baby boomers built up over the course of their first mortgage was from passive gains**

Estimated real housing wealth at the end of typical first-time buyer mortgage term, by year of birth: UK



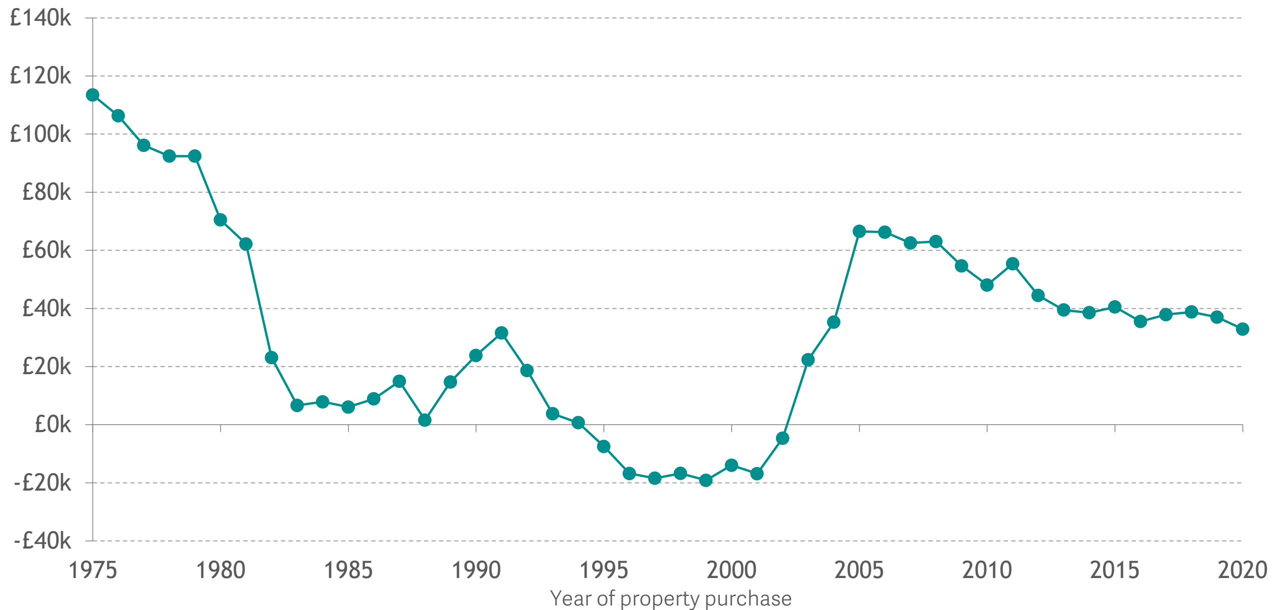
NOTES: Figures deflated using average earnings to 2020 nominal wage values. See Box 1 for details on methodology. Values for birth cohorts are based on the median age at which those born in a given year bought a house – so people buying houses before or after the median age for their birth cohort may have faced different house price at the outset and appreciation to those shown in this chart.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; ONS, Labour Market Statistics; Bank of England, Bankstats; Financial Conduct Authority, Product Sales Data; DWP, Family Resources Survey.

Buying a first home still makes good economic sense, but today's first-time buyers will have to give up more to make it happen

Finally, it is worth considering how the cash-flow analysis we have presented thus far compares with the user cost of home ownership measure that is generally preferred by economists (see Box 2 for more details of the method and data sources used to construct this measure). We present the results of this exercise in Figure 12, which adds further nuance to the intergenerational home ownership story. To begin, this shows that typical first-time buyers in the 1970s and early 1990s had to incur quite a considerable pure economic cost in order to become a home owner. From 1994 to 2004, however, the headwind of rising real house prices made it excellent economic sense to buy one's first home, with the returns during this period often substantially outweighing the costs. In the period running up to the financial crisis this picture inverted once again but since 2012, the pure economic costs of home ownership have gradually drifted down once again.

FIGURE 12: **The economic costs of home ownership have waxed and waned over the generations**

Estimated real user cost of home ownership over lifetime of a typical first-time buyer's mortgage, by year of purchase: UK



NOTES: Figures deflated using average earnings to 2018 nominal wage values. See Box 2 for details on methodology.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; Financial Conduct Authority, Product Sales Data; Bank of England, Bankstats; ONS, Labour Market Statistics.

BOX 2: **The user cost of home ownership**

The most complete measure of the economic cost of becoming a home-owner is based, not on actual payments made (as in the case of our cashflow measure), but rather an estimate of the economic cost. From an economic perspective, the principal and deposit paid on a mortgage are not truly a 'cost' as the first-time buyer receives the equivalent capital value of the property. Instead, the cost is the foregone interest that the purchaser could have received from investing elsewhere. Equally, the purchaser can make capital gains (or losses) on the value of the home, which can be realised by selling the property.

We construct a measure of the annual user cost of home ownership by adding the mortgage interest costs, foregone interest on the house deposit value (measured using median mortgage rates and median sight deposit account saving rates respectively) and

depreciation of the housing asset.[21] This is then combined with the annual return on house prices to produce a net user cost of home ownership. We project into the future to estimate the user cost of first-time buyers where they are yet to reach the end of their mortgage term. This is done similarly to the cashflow measure, and in addition house prices are projected to grow at an average rate of 3 per cent, in line with assumed wage growth. Finally, we put this figure into real terms using average wages, and sum the annual user cost over mortgage period of the typical first-time buyer in each year to provide a consistent estimate for a typical first-time buyer's user cost of home ownership over time.

The formula for the user cost measure in a given as follows: User cost = FTB house deposit x Savings rate + Mortgage value x Mortgage rate + Depreciation of housing asset – House price appreciation [22]

In Figure 13 we draw out the generational implications more clearly by showing the user cost of home ownership over the term of the first mortgage averaged for birth cohorts. The luck of one's birth year could not be more apparent. For the median first-time buyer born in the years 1946-1950, home ownership over the term of the first mortgage was a particularly costly business (an average of 85,000 in real terms). In stark contrast, the equivalent purchaser born between 1966-1970 benefited on average to the tune of £16,000 as a result of buying their first home. But perhaps most tellingly, on this measure the typical first-time buyer in our two millennial birth cohorts (those born 1981-85 and 1986-1990) actually look set to incur not significantly higher costs purchasing their first home than large parts of the baby boomer generation. However, setting the user cost measure against our cash-flow measure is highly revealing: the former suggests young people today are not significantly disadvantaged compared to previous generations when it comes to buying their first home, while the latter suggests they are. While both measures serve a purpose, in our view the latter is a more honest representation of the lived experience of first-time buyers, and a failure to foreground the required deposit, and

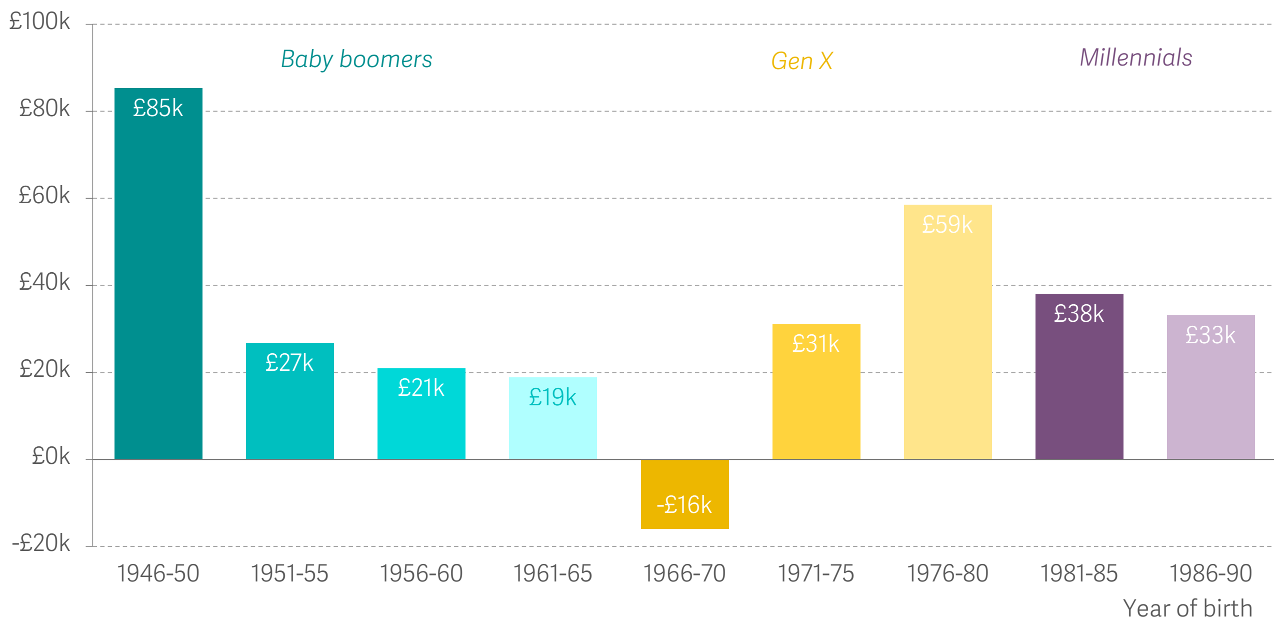
21 Data sources for the user cost measure of housing costs are the same as in the cashflow measure. For more detail see Box 1. Depreciation of housing asset value is assumed to be 2 per cent of the property value per year, which includes building maintenance and building insurance costs. This is consistent with the values found by other researchers (albeit towards the lower end of the range), for example D Miles & V Monro, UK house prices and three decades of decline in the riskfree real interest rate, Bank of England Staff Working Paper 837, December 2019. In practise, the value assumed for depreciation does not affect the dynamics of our estimates as we are aware of no evidence that depreciation has changed over time. Rather, a different value for depreciation would largely just result in a levels-shift in our estimate of the user cost of housing.

22 This formula is presented in a simplified format but equivalent to that in other research such as the Miles & Monro (2019) paper – see footnote above. Other versions of this measure split out risk-free interest rates and the risk premium for housing investments; this is captured in our framing as the weighted average between the sight deposit saving rate and the actual mortgage rate (which will naturally include the risk premium). In addition, user cost measures typically include expected asset price returns rather than actual – here we use observed asset price returns as we are aware of no consistent measure of UK expected first time buyer median house price growth.

indeed the additional capital repayments required during the mortgage life, to purchase one's first home misses a key living standards part of the intergenerational story.

FIGURE 13: **The pure economic cost of buying one's home is as high for the typical millennial first-time buyer as many a baby boomer**

Estimated average real user cost of home ownership over lifetime of a typical first-time buyer's mortgage, by year of birth: UK



NOTES: Figures deflated using average earnings to 2018 nominal wage values. See Box 2 for details on methodology. Values for birth cohorts are based on the median age at which those born in a given year bought a house – so people buying houses before or after the median age for their birth cohort may have faced different user cost of home ownership to those shown in this chart.
SOURCE: RF analysis of Council for Mortgage Lenders; ONS, House Price Index; Financial Conduct Authority, Product Sales Data; Bank of England, Bankstats; ONS, Labour Market Statistics.

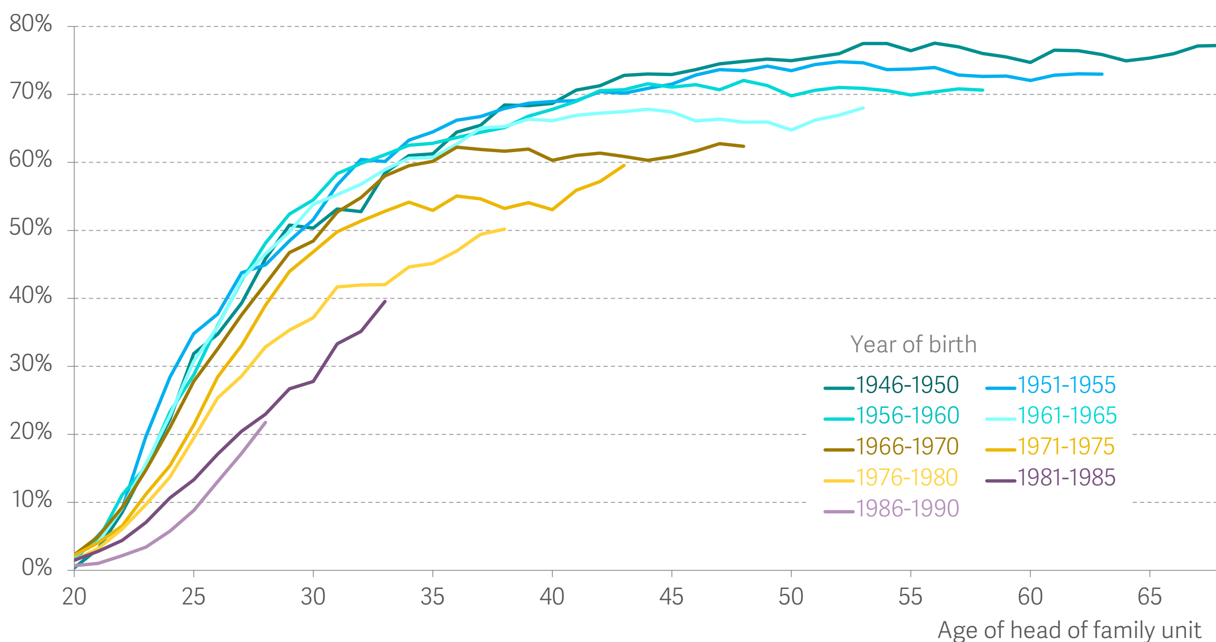
Rising costs exclude an increasing share of young people from the benefits of home ownership

Our analysis of the experiences of the typical first-time buyer between 1974 and 2020 leads to a clear conclusion. Despite home ownership still being a very good deal for those that manage to get on the housing ladder, millennials need to expend a significantly higher amount compared with previous generations to purchase their first home. Small surprise, then, that the probability that young people today can do just this is significantly lower than it was for previous birth cohorts (see Figure 13). Just 27 per cent of those born 1981-1985 had started the process of building up property wealth by the age of 30, for example, half the rate observed for those born 1951-55 and 1956-60 at the same age (54 per cent and 55 per cent respectively). It is plausible that some of this difference is explained by the younger generation's later entry into the labour market, alongside delays

in forming stable partnerships and having children compared to previous generations. However, previous Resolution Foundation work has shown that this provides only a partial explanation of the lower home ownership rates we observe in young people today.[23] Clearly, the rising costs of home ownership on a cash-flow basis is where we need to look instead.

FIGURE 14: **Young people today are only half as likely to be buying a home at the age of 30 compared to some baby boomer birth cohorts**

Proportion of family units owning a home, by age and birth cohort: UK, 1961-2019



NOTES: Figures for each cohort are derived from a weighted average of estimates by single year of age; cohorts are included if at least five birth years are present in the data.
SOURCE: RF analysis of ONS, Family Expenditure Survey; ONS, Labour Force Survey

Figure 15 makes this point clear. Here, we take the median first-time buyer's gross family income and identify where that family sat in the 25-34-year old income distribution in each year. It shows how from the 1970s until the mid-1990s, home ownership democratised as it increasingly came into reach of those lower down the income distribution.[24] In 1975, for example, the typical first-time buyer family had an income that put them at the 48th percentile in the income distribution of their age group; by 1996 this had fallen to the 38th percentile. However, as costs began to escalate, accessing home

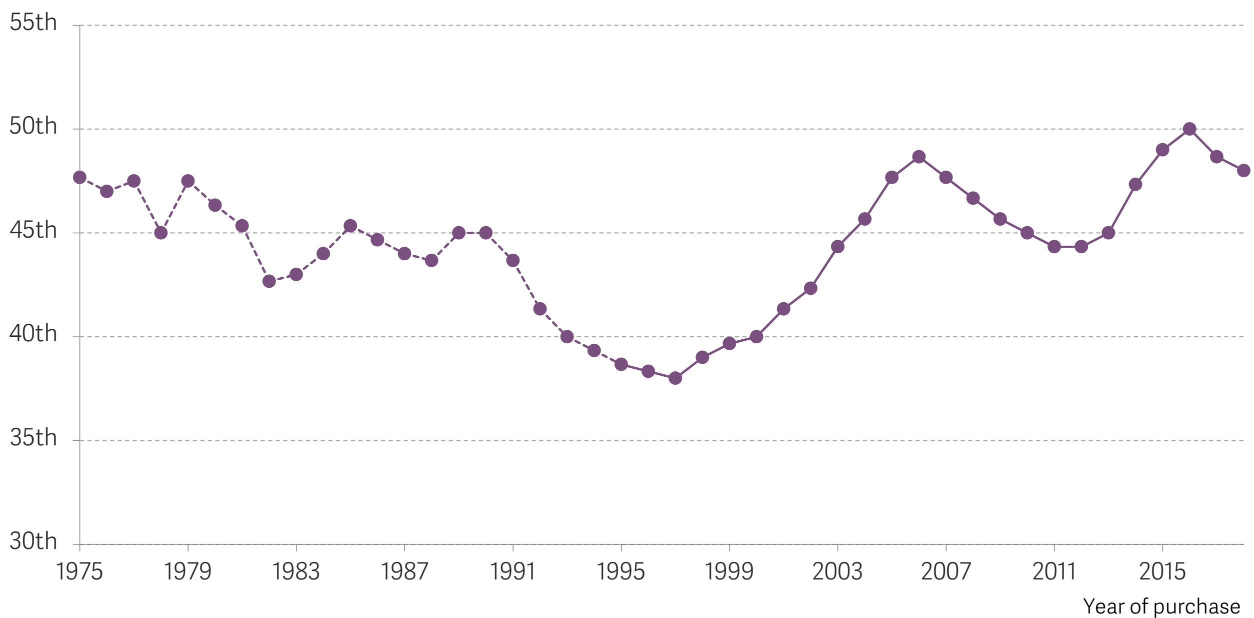
23 A Corlett & L Judge, Home affront: Housing across the generations, Resolution Foundation, September 2017 suggested that around one-third of the gap in the home ownership rates observed between those aged 30-32 years in 1984 and in 2016 can be explained by later entry to the labour market, partnering and becoming a parent.

24 The Right to Buy scheme under which social renters could purchase their council housing at often considerable discounts commenced in 1980, enabling many who might previous have been locked out of home ownership to purchase their homes. Between 1980 and 1999, 2.2 million homes had been sold via the scheme in England and Scotland. For further information on Right to Buy, see: W Wilson, The right to buy, House of Commons Library, March 1999.

ownership became increasingly difficult for those on lower incomes. As a result, by 2016 the typical first-time buyer's family income stood at the 50th percentile, and by 2020 stood at the same level observed back in 1975 when credit was highly rationed and home ownership was not the majority tenure.

FIGURE 15: **Today's young people need higher incomes to access home ownership than previous generations**

Income percentile of typical first-time buyer family, 25-34-year-olds only, three-year rolling average: UK



NOTES: Years from 1994 onwards are financial years i.e. 1994=1994-95. Income percentiles are based on gross income and are calculated at the benefit unit level. There is a structural break between FES and FRS data, in order to calculate a consistent series we project the FRS backwards using FES growth rates for each percentile of the income distribution (projected data is denoted with dashed lines). The data series is smoothed using a three-year rolling average, centred on the year shown on the x-axis.
SOURCE: RF analysis of IFS HBAI (FES) 1961-1991; DWP HBAI (FRS) 1994-95-2018-19; UK Finance Industry Tables; FCA, Product sales data.

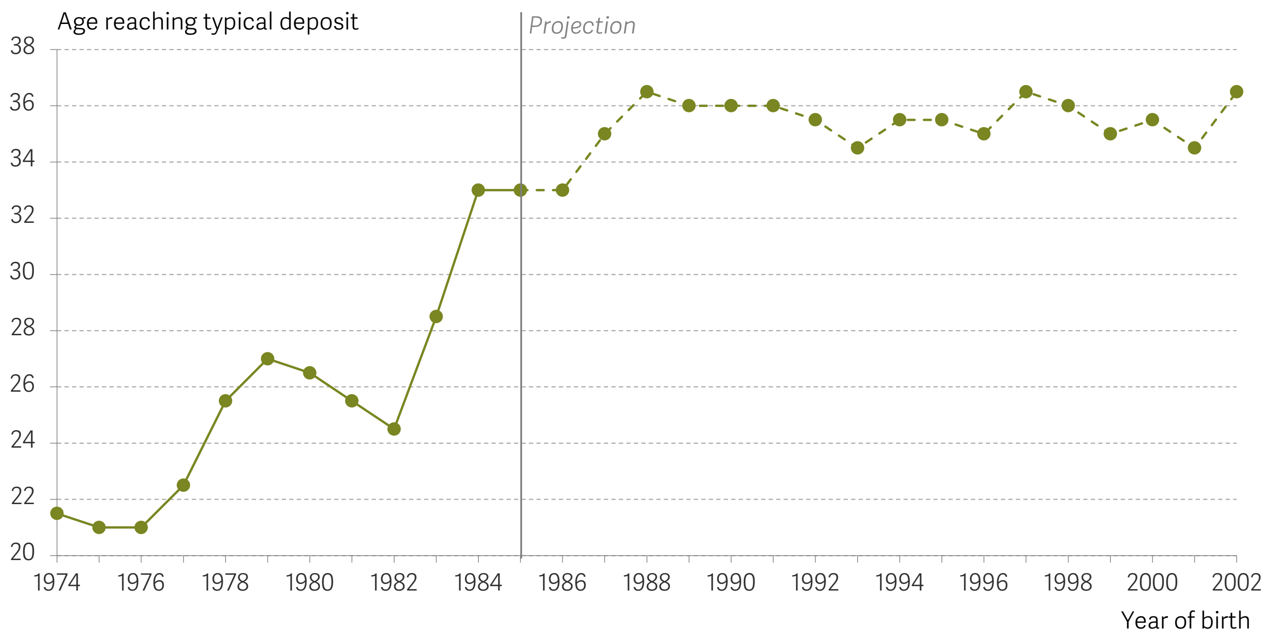
However, not only do today's aspiring first-time buyers need a larger income relative compared to previous generations, they also require more savings upfront in order to begin to build up property wealth. Since the tightening of credit in the wake of the financial crisis, the typical first-time buyer has been required to provide a far larger deposit than in previous years in order to access a mortgage (Figure 5 alludes to this fact: the typical first-time buyer in 2000 needed to find just shy of £11,000 in real terms for a deposit, for example, while that figure stood at over £35,000 in 2020).[25] In the absence of a windfall such as a family gift or inheritance, first-time buyers must save for longer in

[25] One positive upshot of the larger deposits required by lenders post-financial crisis is that repossessions are far rarer than they were in the past. In 2018, for example, there were just 6,750 repossessions by lenders compared to 22,900 in 2000 (source: MHCLG, Mortgage and Landlord Possession Statistics Quarterly - Statistical Tables).

order to accumulate the necessary deposit, a fact confirmed in Figure 16. Here, we show the age at which an individual will have saved sufficient for the typically priced first-time buyer home, by year of birth. The chart is stark: an aspiring Gen-X first-time buyer born in 1974 would have saved enough to get on the housing ladder by the age of 22; in contrast, a millennial born in 1984 needs to save at the same rate until the age of 34 in order to access home ownership and the multiple benefits the tenure brings (and our projection for younger people today suggests the age at which home ownership becomes accessible will remain elevated).

FIGURE 16: **It takes far longer for aspiring first-time buyers today to save for the deposit than it did in the past**

Age at which typical first-time buyer family will have saved required deposit, by year of birth of head, two-year rolling average: UK



NOTES: Assumes saving begins at age 20. Projection assumes real wage growth in line with average for each age group since 1962, inflation of 2 per cent, house price growth of 3 per cent (in line with nominal wage growth and assumptions made in earlier analysis), current sight deposit rates continue, and 2020 FTB LTVs continue.
SOURCE: RF analysis of IFS HBAI (FES) 1961-1991; DWP HBAI (FRS) 1994-95-2018-19; UK Finance Industry Tables; FCA, Product sales data; Bank of England, Bankstats.

Conclusion

Taken together, our findings suggest that the intergenerational home ownership story can only be appreciated fully by looking at cost and benefits in the round, and in real terms over time. While it is true that the typical first-time buyer from older generations contended with often very high interest rates, policy in the form of MIRAS softened this blow. In contrast, today's first-time buyers have to stump up more cash than ever before over the course of their mortgage in order to purchase their first home. Although this will leave them at the end of the process with more housing wealth than previous generations, less of this will stem from passive gains as a result of house price appreciation (assuming as we do that future house prices grow in line with wages).

As a result, it is far harder for those lower down the income distribution to build up property wealth in the first place, a function of both the higher deposit required to enter home ownership and the need for a significant income to service the mortgage over time. So, what should policy do to tackle this issue? The current Government approach of stimulating housing supply is clearly part of the solution, although questions abound about the realism of the 300,000 homes a year target post-recession,[26] as well as the speed at which new supply feeds through to prices.[27] But if the Government is truly serious about helping prospective first-time buyers, it must rebalance demand between existing owners and aspiring purchasers, rather than stoke up a housing market that already excludes many.[28]

26 For a recent discussion of the countercyclicality of housing supply, see L Judge & C Pacitti, Housing Outlook Q1 2021: The impact of Coivd-19 on housing supply, Resolution Foundation, January 2021.
27 See, for example, The Barker review on housing supply, March 2004.
28 For a comprehensive overview of policy solutions that can rebalance demand, see: L Judge & D Tomlinson, Home improvements: Action to address the housing challenges of young people, Resolution Foundation, April 2018.

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