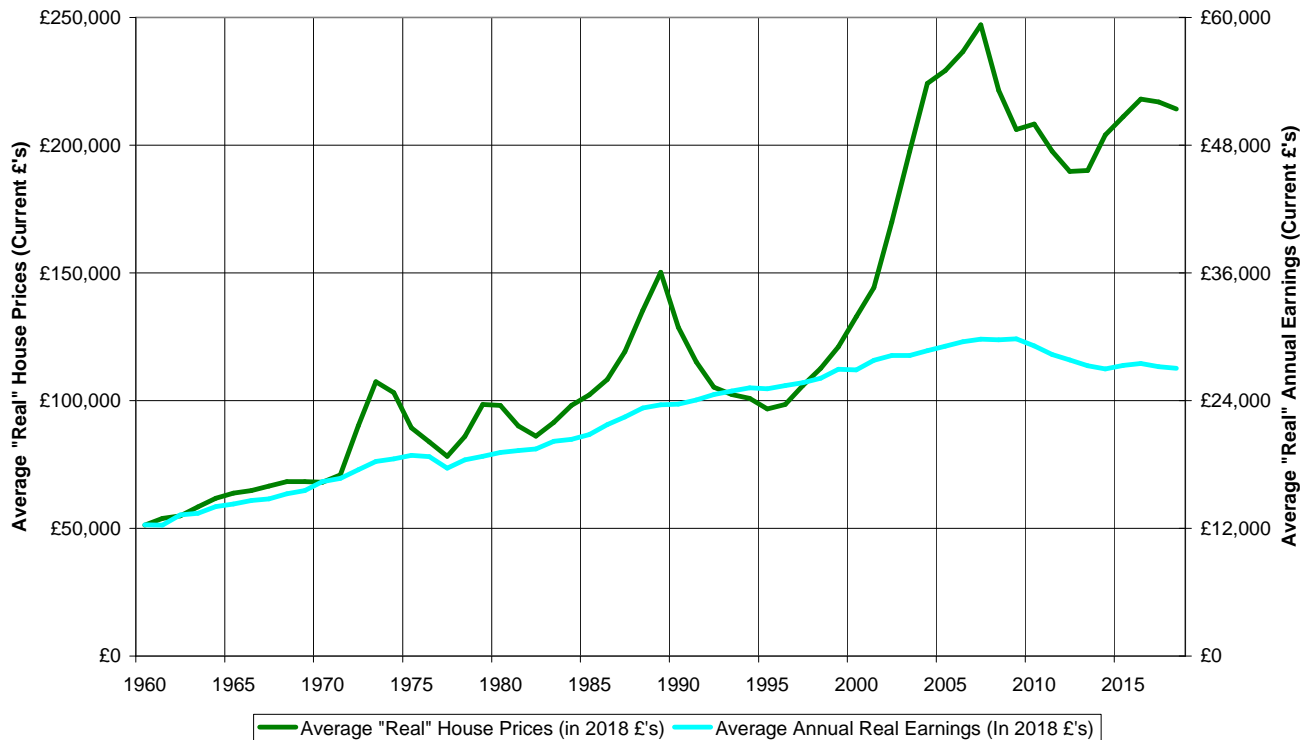


UK Cost of Housing

The long-term view

More than two generations

Average "Real" House Prices (In Current £'s) against Average Annual Real Earnings (In Current £'s)



The data presented in this chart reveals:

- UK average house prices (reported by the Nationwide Building Society)
- UK average gross earnings for tax payers (reported by <https://measuringworth.com/>)

Both are normalised to current values (2017 £'s), using the RPI from Measuring Worth

From this it can clearly be seen that since 1960 (a life/house purchase midpoint for the so called "*silent generation*") the "real" price of houses against the "real" earning power of potential buyers has changed dramatically. Since the turn of the current century house prices are now clearly, consistently, relatively, much higher than peoples gross earnings.

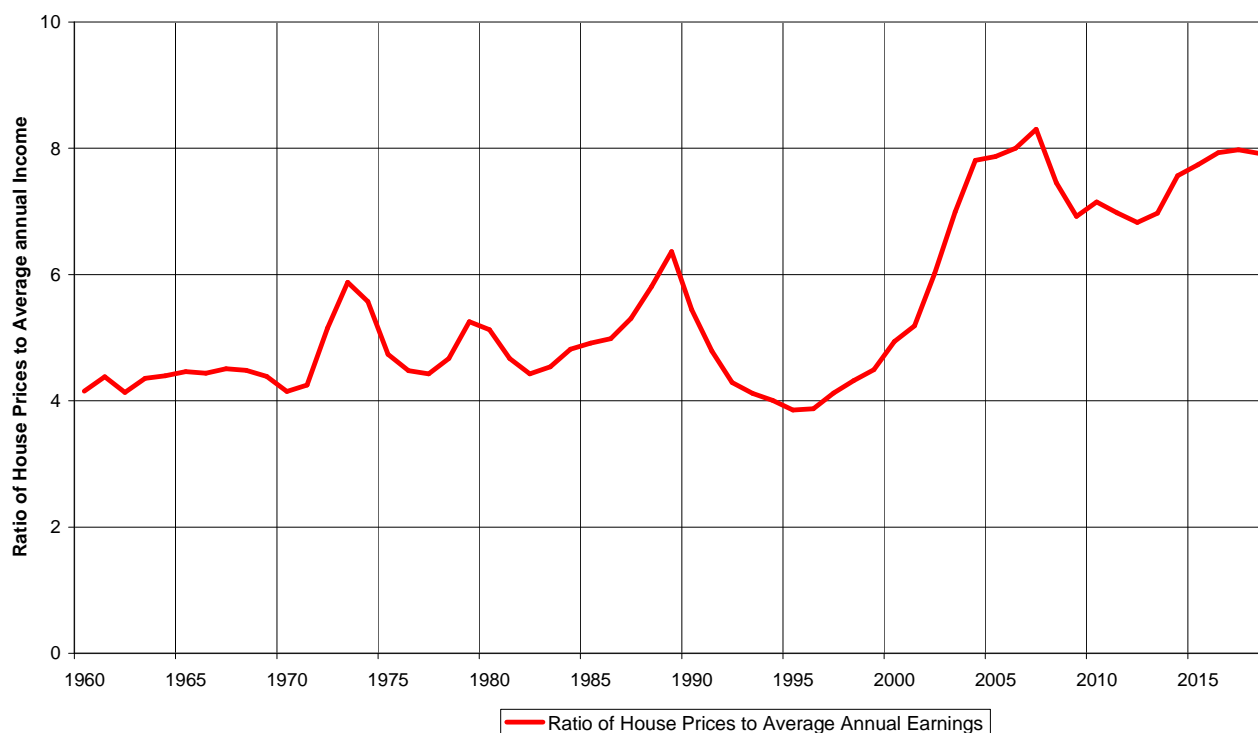
Several factors will have affected this relationship, including some underlying social changes over the 6 decades.

One such change, in both perception and reality, is of the family/home occupier unit and work/earning capability of the individuals in that unit; namely more women are part of the direct income earning population than was the case in the early years after the Second World War. And their incomes are now happily factored in to the loan decision by the lender

Another change over those decades is the greater willingness of capital rich institutions to lend money to individuals and families to help them buy.

The most recent change, however, has seen the most dramatic phase of runaway house purchase speculation (international investment and buy-to-let) that has unquestionably fuelled that recent shift in the relationship of relative value of house prices to earnings.

Ratio of Average House Prices to Average Gross Earnings



Following from the previous chart, by dividing average house prices by annual average incomes we are able to calculate the ratio of one to the other.

This has proven to be a useful indicator of the accessibility to the housing market over the decades since the Second World War.

The ratio of approximately 4/1, evidenced in the above chart and underlying data from 1960 to early 1970's was, and is still seen as, the "norm" to indicate "affordability" of the owner-occupier housing market to the majority of potential buyers.

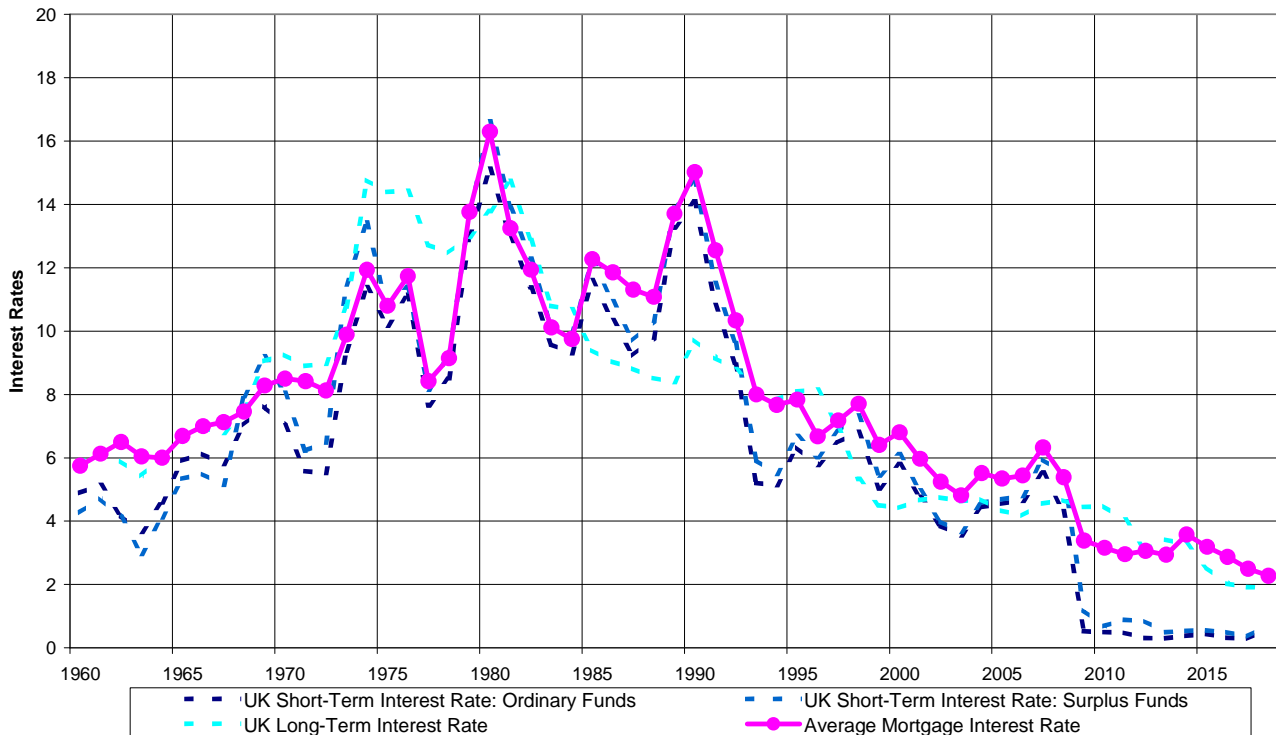
Thus the 21st century's ratio of about 7 or 8/1 introduces greater challenges to each generation of potential owner-occupiers starting families and joining the housing market.

It should be very clearly understood by all that, until the end of the Second World War and the faltering slow recovery from effective bankruptcy of the UK economy, the overwhelming majority of people in the UK never had any realistic prospect of becoming homeowner occupiers.

This only started to change noticeably from the 1950's onwards (43% in 1961, peaking at 68% in 2008 as documented by the Halifax), and has declined since the mid-2000's

Following the global economic collapse in 2008, brought about by overheated speculation and particularly triggered by unrealistic lending in the so-called sub-prime market (extreme in the US but also present in other economies), a second factor has mitigated some of the worst aspects of this "affordability" index.

Comparing Interest Rates and in particular Mortgage Interest Rates over Time

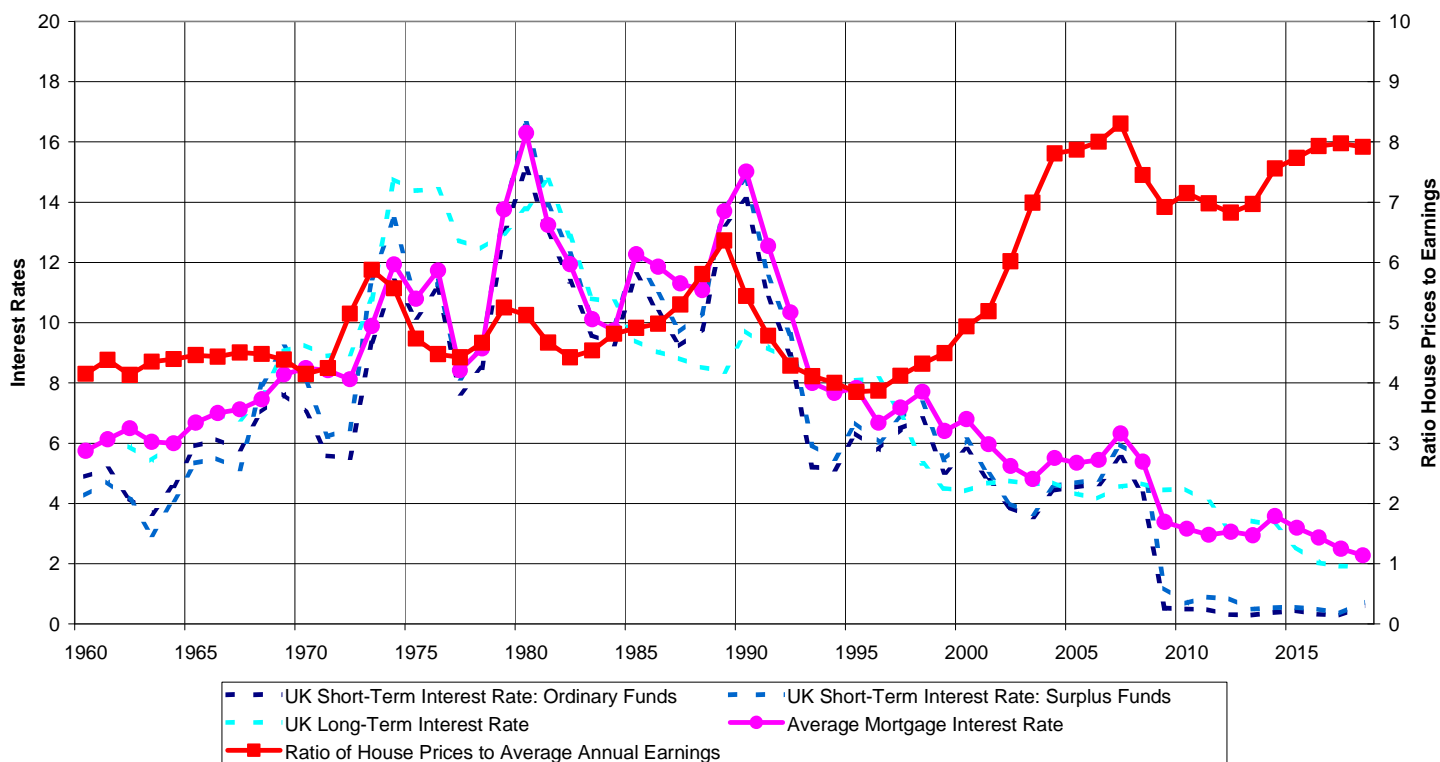


Since almost the whole of the non-rental housing market is funded initially by lending, it follows that the price of borrowing by potential homeowners is the other dimension that needs to be factored into the “affordability” of home ownership.

By analysing and presenting the range of interest rates (and in turn mortgage interest rates) extant over the same time period of incomes and house prices, the pattern emerges of a period of “unusually” and “exceptionally” low mortgage interest rates, thanks to the Government/Bank of England “low interest” rate policy introduced to mitigate the worst effects of the 2008 crisis.

The above chart is an attempt to represent a mid-point “typical” mortgage interest rate pattern over time, derived from the published historical figures from the Building Societies Association (<https://www.bsa.org.uk/>).

Ratio of Average House Prices to Average Gross Earnings

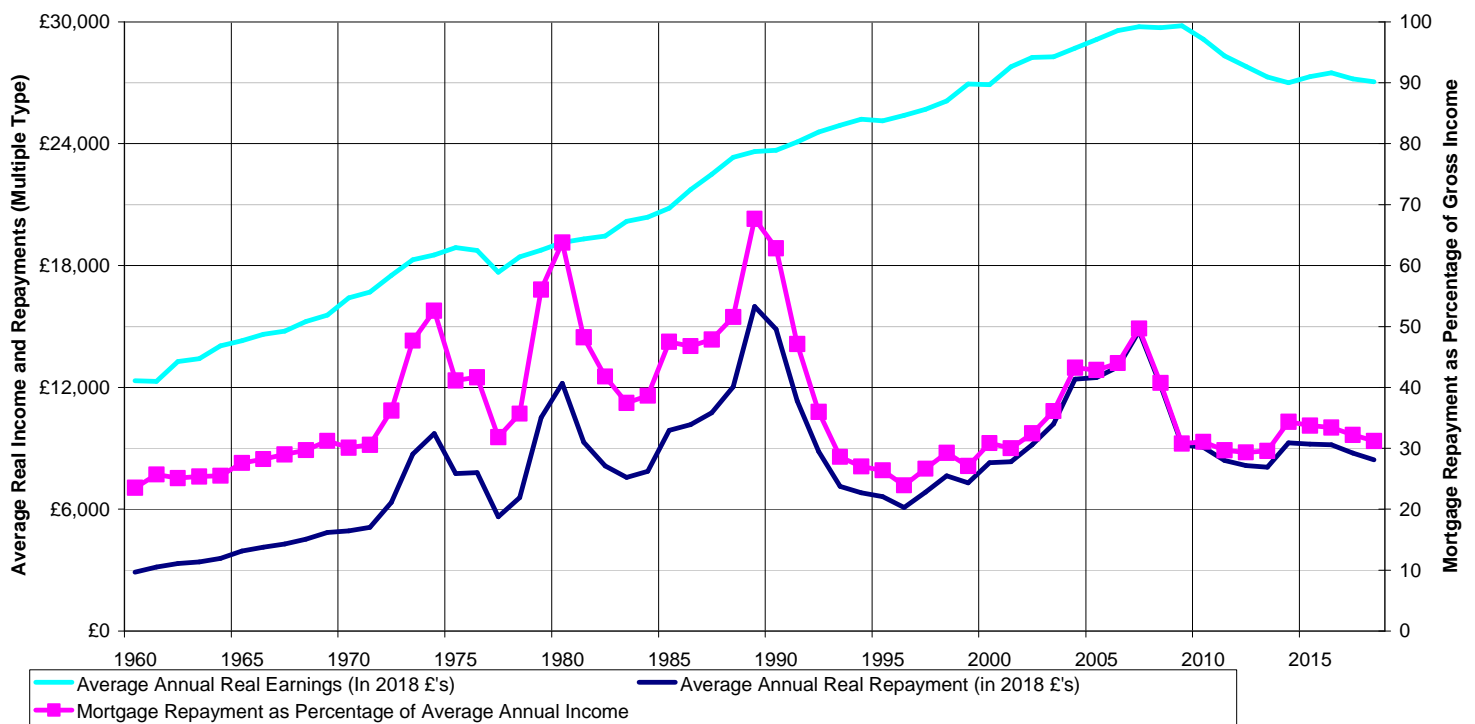


By graphically charting the house price to earnings ratio over time (in red), against typical interest rates at that same time (mortgage rates in pink), it starts to become clear that there have been many times (often relatively short lived) where the ability of homeowners, in the early stages of buying their own property, to afford the repayments for their home has been stretched, sometimes severely, and thus they struggle to meet repayment commitments, sometimes more than others (as happened in the early 1990's).

After a few years of ownership, the impact of these other economic trends generally ease as relative capital ownership to loan proportion increases in favour of the former.

As such it then becomes necessary to estimate the typical repayments that might be faced by early stage homeowners who are disproportionately buffeted by the vagaries of other economic trends.

Average Annual Real Earnings and Mortgage Repayments (In Current £'s) for new Mortgage



To achieve a consistent, typical representation of the relative cost for prospective/new homeowners of buying their own home over the past 6 decades, a Loan to Value proportion of 75% is assumed, and “real” house value repayments calculated from the typical extant interest rates at those times for “real” prices at that same time.

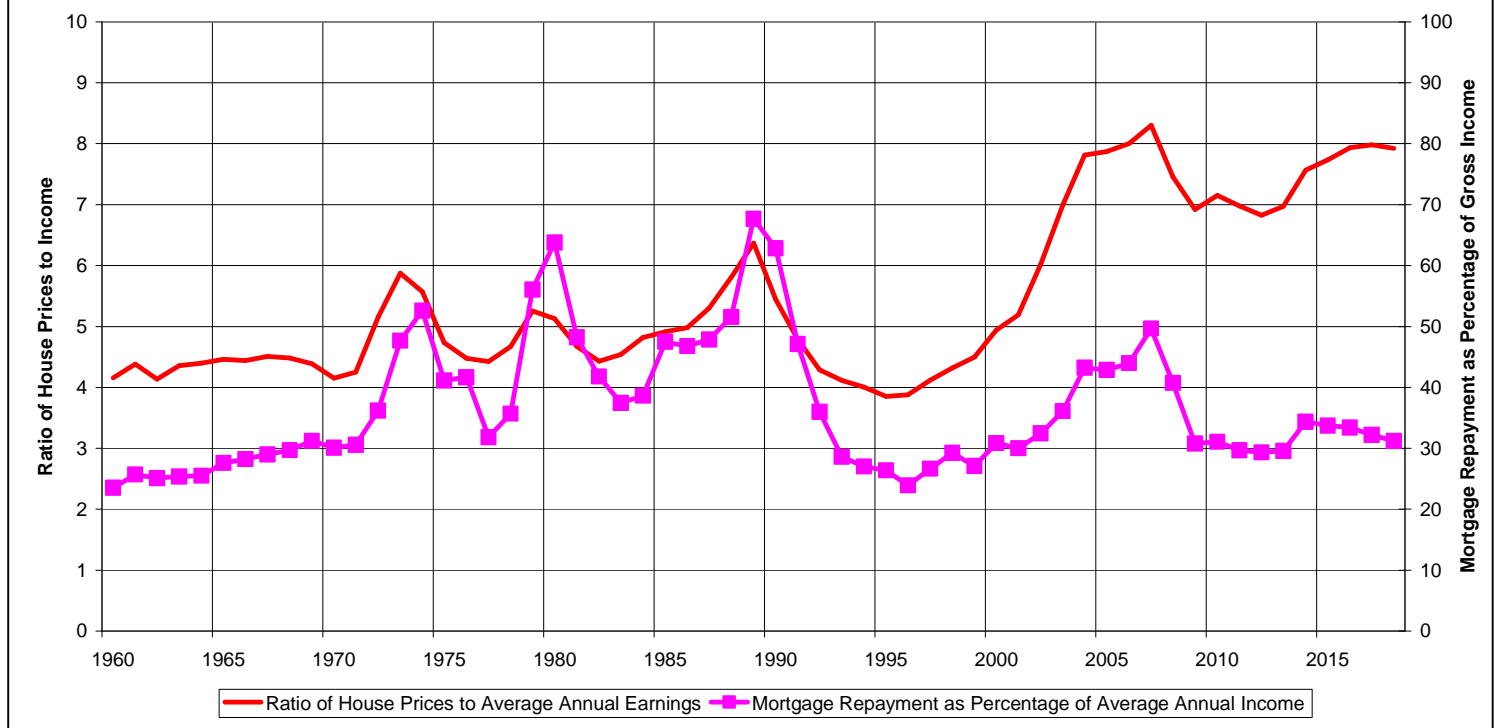
Note that this is a calculated value, rather than measured/reported. The latter information is kept by the lenders, but to my knowledge never published.

The proportion of this annual repayment amount to average annual income is calculated to form an “affordability” index that actually factors in the typical repayments faced by borrowers from the average incomes, rather than simply the house price to income ratio.

This index reveals quite a different picture of affordability over time, as plotted in the pink line in this chart.

It becomes abundantly clear that the real percentage of new homeowner’s income that would be required to be paid in repayments, has actually not substantially changed over the last 6 decades, since the growth in owner-occupation of homes in the UK; albeit with several quite notable periods of high “bubbles” (mid-70’s, early 80’s, late 80’s then mid 2000’s, the least damaging, though longest lived “bubble”).

Ratio of House Prices to Income against "ability to pay" for new Mortgage



Hidden in this trend though is the fact that, since the 2008 crisis and related interest rate policy, borrowing has become correspondingly more difficult for new prospective owners.

This more closely resembles the challenges faced by those same prospective new homeowners in the 1960's and 1970's, than became the "*norm*" in the 1980's and 1990's.

This may be thought of as the greater challenge of joining the home-ownership market now, finding the deposit and meeting the more stringent criteria of lenders, than was the case in the 1980', 1990's and 2000's. This challenge has now reduced the proportion of prospective new homeowners being able to actually acquire their own home (Falling from 45% in 1990 to only 30% in 2010, for those aged in their mid-20s. Reported by the Institute of Fiscal Studies in <https://www.ifs.org.uk/uploads/publications/bns/BN161.pdf>).

There is a further, possibly more serious, threat hidden in this affordability "*index*" of housing, and the current state of the housing market, namely the ever present possibility of a return to higher or more "*normal*" interest rates.

When interest rates are increased (and subsequently mortgage interest rates), as they will be, given the size of many mortgages and the constrained annual incomes, there is likely to be a serious problem of repossessions, as happened during the 1990's, again leading to many experiencing "negative equity".

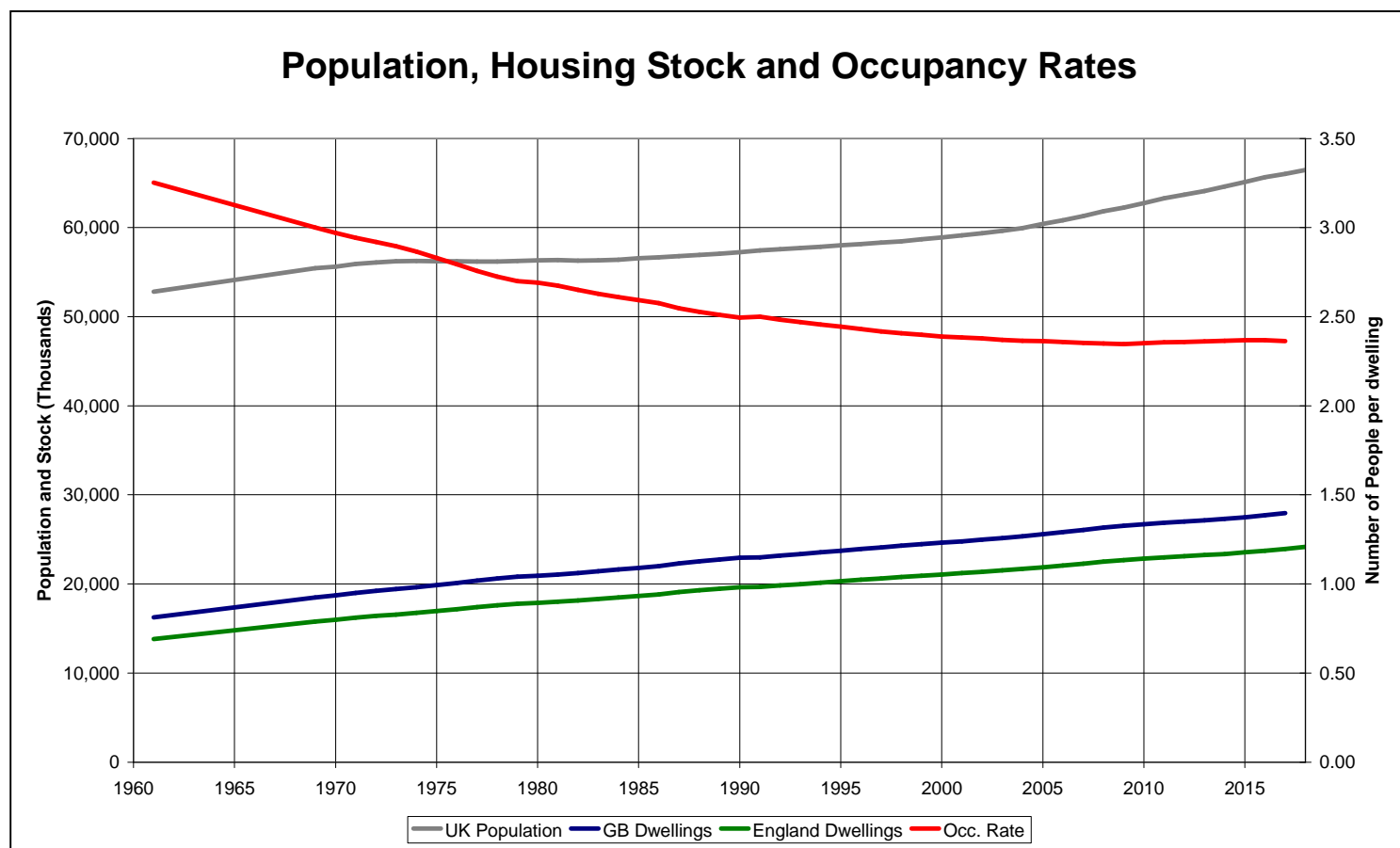
Whilst that may drive a "correction" to the house prices to earnings ratio, it will come at a very high and widespread economic and personal cost.

Viewing availability of housing

Or

History of Housing Stock

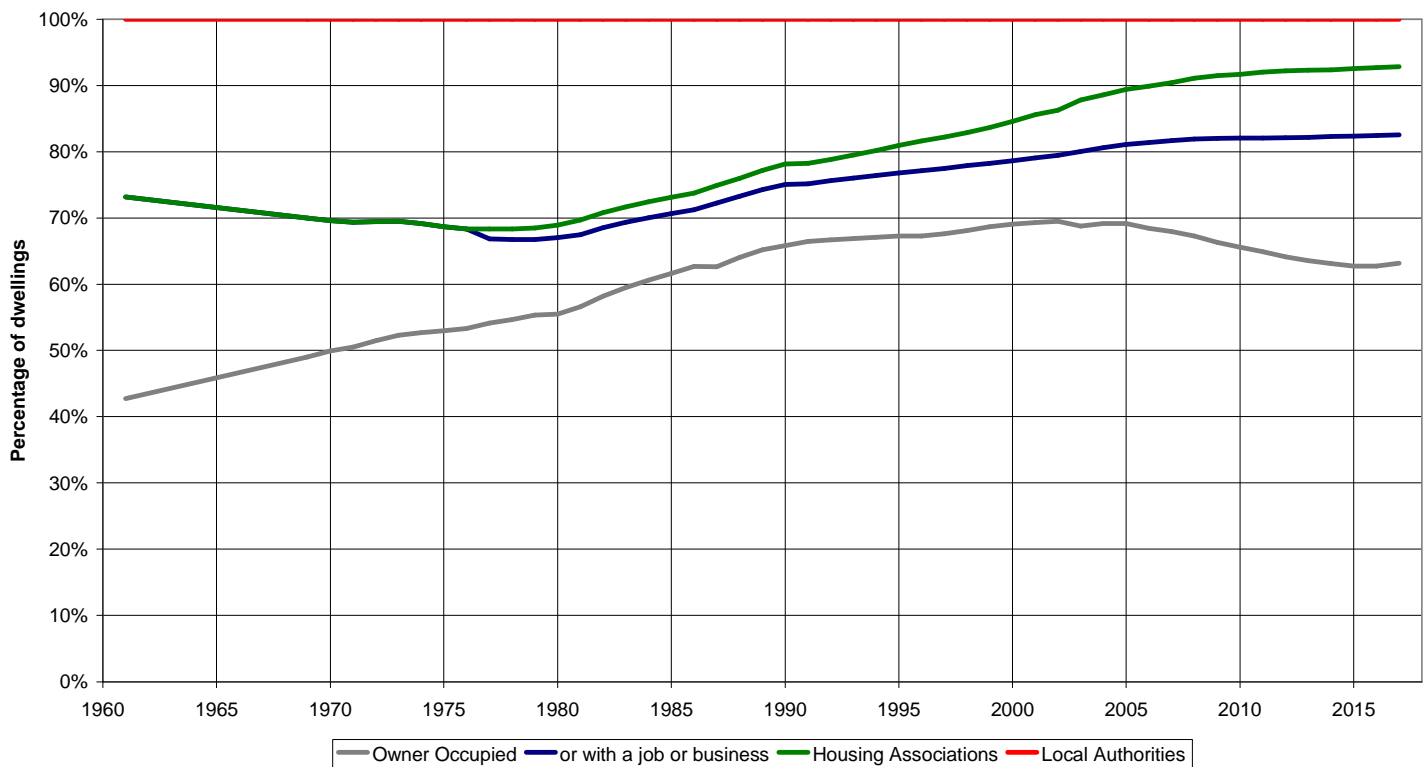
Population, Housing Stock and Occupancy Rates



Sustained and uncorrected over-inflation of relative house prices has been caused not by lack of housing, but lack of so-called “affordable” housing. This latter caused entirely by the profligate and careless policies and behaviour of the governments, markets and general popular purchaser of the late 1990’s.

We clearly see that housing stock, per person in the population has remained consistent and in fact housing occupancy has generally reduced in line with relative wealth in society resulting in lower occupancy rates.

Housing Stock by Tenure (Percentage of Stock)



The results of the over-inflation of relative house prices in the late 1990's and early 2000's, caused by gross oversupply of credit, followed by the crash of 2007/2008, has then resulted in the contraction of available credit and challenge for many to join the home-owners housing market and can be seen in the drop in the percentage of home-owners in the occupancy tenure figures.

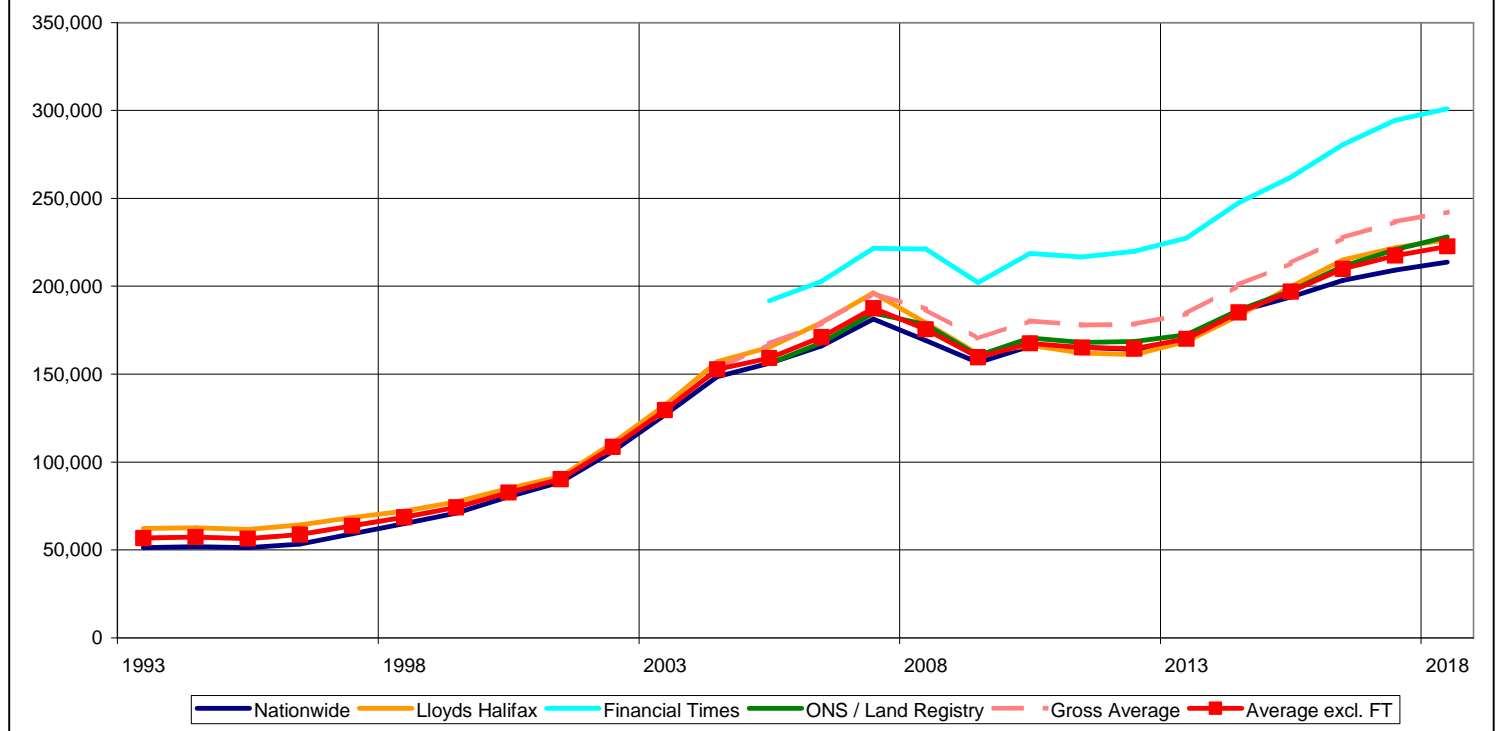
Whilst in previous over-inflationary booms governments allowed market corrections to take effect, the fact that no correction has been allowed or encouraged for over two decades, either nationally or internationally now places the world economy itself and the housing market in particular in an ever more invidious and risky position.

Comparing house price sources

And

Price to earnings ratios

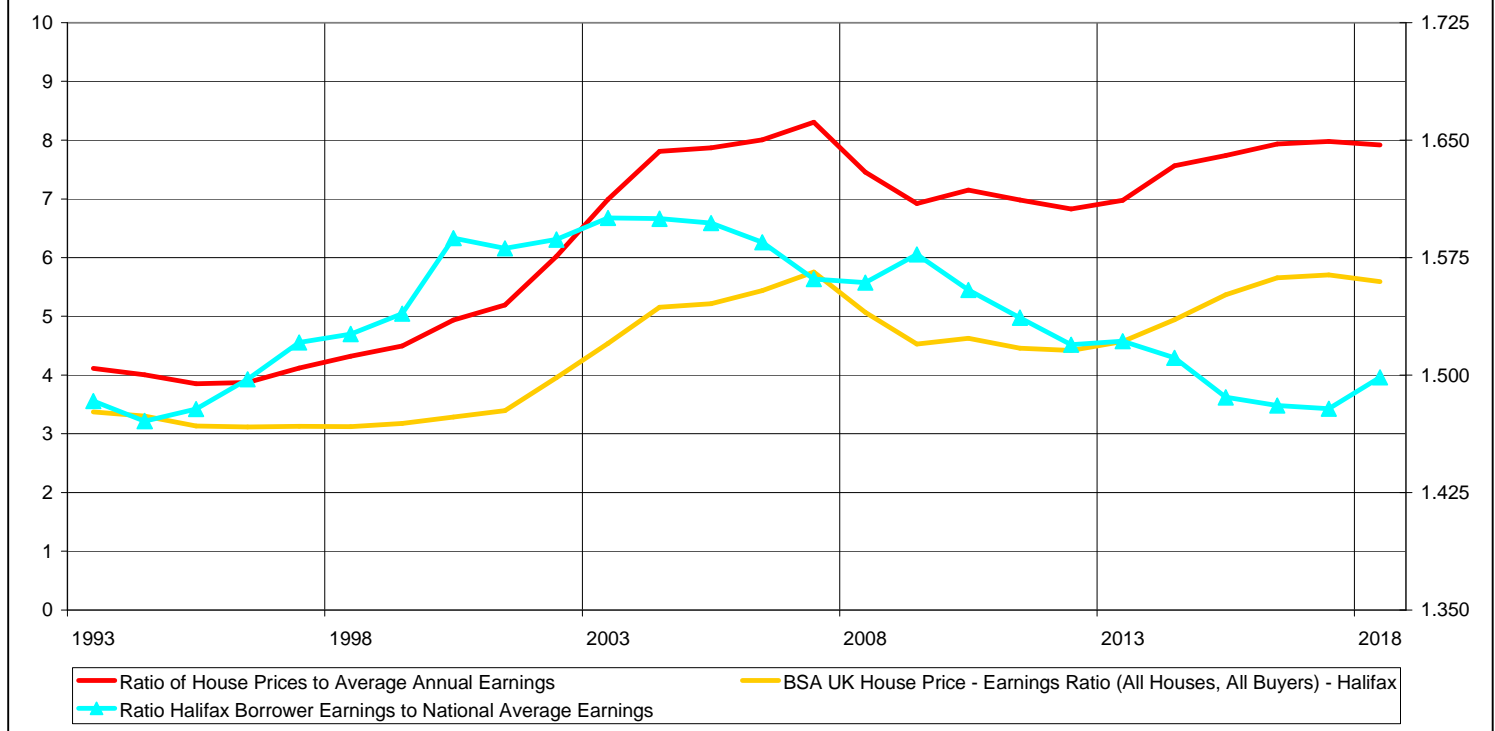
Comparing BSA Reported Average Annual Nominal House Price Sources



Returning to the Building Societies Association figures for reported average house prices collated from the Nationwide, the Halifax, and more recently the Financial Times (FT) and ONS/Land Registry, we can verify that the average house price indicator used in this analysis is realistic.

By plotting these over the last 2½ decades it shows clearly that at least three of those reported averages are within a tiny percentage variation of each other and that even the FT average, whilst showing a substantially higher average price than the other three, follow the same trends over time, and thus we can be confident that the indexes chosen from the Nationwide and Halifax, which date back to early post war years, are to be confidently relied upon as representative of the challenges faced by prospective homeowners over the decades.

Comparing Halifax Borrower Earnings to Value Ratio to National Earnings to Value Ratio



In comparing Nationwide to Halifax averages and the Halifax published House Price to Borrowers Income ratio, an interesting appendix to the analysis was found.

On the whole, over the last 2½ decades, the Halifax average house prices are slightly higher than for the Nationwide. However, also notable, is that the ratio of average house prices to average national income (4/1, 7/1 and 8/1) is substantially higher than the Halifax average house prices to borrowers average income (3/1, 4.5/1 and nearly 6/1). The two however, track each other very closely, though, over time, in the red and yellow lines in this chart.

This does indicate though, that the average income of borrowers, joining the home ownership market (as reported by the Halifax), is of course higher than the overall national average.

By plotting the ratio of Halifax borrowers income to UK average income, the trend of the ratio over time can be clearly seen in the cyan line of this chart.

It again shows that this gap has been gradually reduced again after the 2008 downturn, returning again to the pre-speculative bubble levels of the last major downturn of the mid-90's of about 1.4 to 1.