

Statistical bulletin

# Housing Purchase Affordability, Great Britain: 2021

House price decile to equivalised household disposable income decile ratios. Part of our additional measures of housing affordability series.

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# 1 . Main points

- In the financial year ending 31 March 2021, the average home sold in England cost the equivalent of 8.7 times the average annual disposable household income, while in Wales the ratio was 6.0, and in Scotland it was 5.5.
- While purchase affordability ratios for the average home are below their peaks in Wales (2007) and Scotland (2008), affordability ratios in England are worse than at any point since the series began in 1999.
- Across English regions, an average-priced home in the North East cost the equivalent of almost 12 years of income for a low-income household (10th percentile) compared with 40 years in London.
- In the most affordable English region, the North East, low-price homes (10th percentile) are available at around five times a 10th percentile or higher disposable household income.
- In London, low-priced homes (10th percentile) are available at five times an 80th percentile or higher disposable household income.

## 2 . Purchase affordability: ratio of house price deciles to disposable household income deciles

By looking at the distributions of house prices and household income, this release indicates how affordable, on average, a range of homes are across Great Britain.

This bulletin uses the median when it refers to “average” incomes or house prices; this is because the distributions of both income and house prices are skewed with some extreme high values.

We use measures of house prices from the HM Land Registry (for England and Wales) and Registers of Scotland (for Scotland). We use estimates of nominal equivalised annual disposable household income (referred to in this bulletin as “household income”) from the Living Costs and Food Survey (up to 2017) and Household Finances Survey (from 2018 onwards).

Equivalised disposable household income is defined in the [glossary](#). More information about the data sources and terminology can be found in the [Additional measures of housing affordability Quality and Methodology Information \(QMI\) report](#).

For this publication, we generally use the term affordability to refer to a ratio of house prices over household incomes, which can also be described as the equivalent number of “years of income”. This publication generalises across whole populations, so actual affordability for a particular household could be affected by a number of other factors. These include the availability of and eligibility for a number of affordable ownership schemes supporting home purchasing that are available in [England](#), [Scotland](#) and [Wales](#).

This analysis is the second in a series of additional measures of housing affordability (after [private rental affordability](#)), designed to complement the Office for National Statistics (ONS) [annual housing affordability statistics](#). It builds on the previous research in [additional measures of affordability](#), but figures are not directly comparable because of improvements in methodology. The previous research also included information on upfront costs, mortgage repayment affordability and purchase affordability for small areas, some of which will be released as stand-alone bulletins in future.

## 3 . Affordability of the average home in England, Wales and Scotland

This bulletin uses financial years, that is, the year ending 31 March. In the financial year ending 31 March 2021, estimates of the median (average) household income and median house price for each country were:

- in England, £275,000 for median house price and £31,800 for median income, which is equivalent to a ratio of 8.7 years of income
- in Wales, £176,000 for median house price and £29,400 for median income, which is a ratio of 6.0 years of income
- in Scotland, £166,000 for median house price and £30,300 for median income, which is a ratio of 5.5 years of income

In England and Wales, these affordability ratios increased (worsened) compared with the financial year ending 31 March 2020. However, confidence intervals for these data are not available, so we cannot say if these changes were statistically significant.

In 2021, income estimates were affected by the coronavirus (COVID-19) pandemic, as discussed in our [Interpreting changes in UK income estimates during the coronavirus pandemic: financial year ending 2021](#) article. As such, estimates for 2021 are more uncertain than usual.

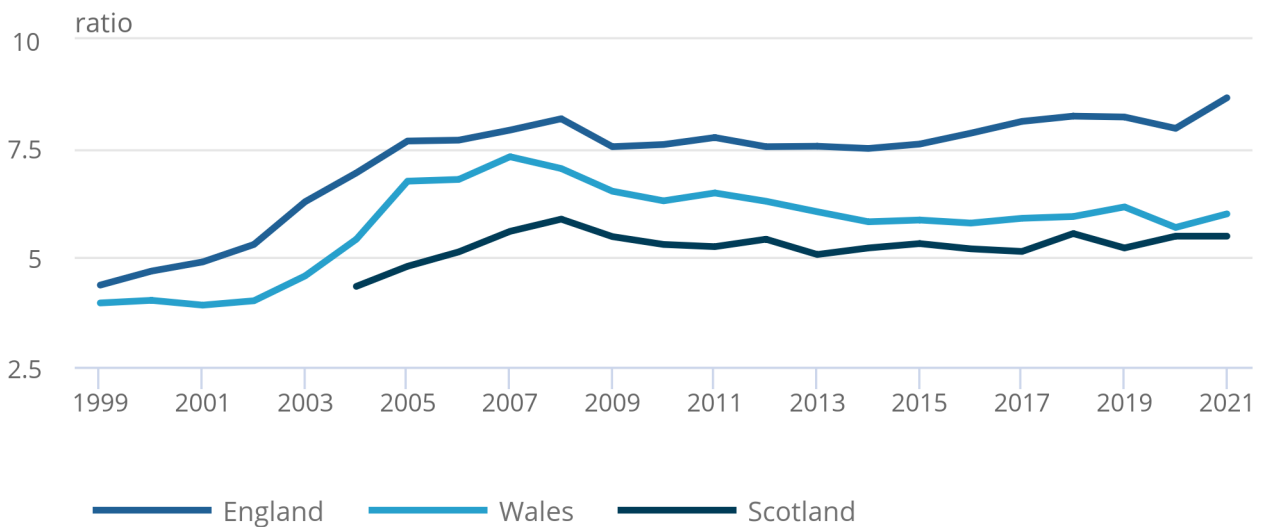
It can be useful to look at housing affordability over a longer period of time. Figure 1 shows the affordability ratio of median house price to median income for all three countries for the available period of data.

**Figure 1: Housing affordability trends have diverged across the countries of Great Britain**

Housing affordability ratio for median household income and median house prices, England, Wales and Scotland, 1999 to 2021

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Housing affordability ratio for median household income and median house prices, England, Wales and Scotland, 1999 to 2021



Source: HM Land Registry – Price paid data, Registers of Scotland, Office for National Statistics – Living Costs and Food Survey, Household Finances Survey

Figure 1 shows a variety of patterns for average-income households and for average-priced homes over the available series. These patterns include that:

- housing affordability generally worsened from the start of the series up to 2007 or 2008 in all three countries
- following the 2008 financial crisis and up to around 2013, affordability improved modestly in all three countries
- since 2014, ratios in England have increased and are now beyond their 2008 peak, resulting in an increased affordability gap between England and the other two countries
- England has seen a bigger increase in the housing affordability ratio over the longer term – nearly doubling since 1999 (when it was 4.4)

## 4 . Affordability across corresponding points of the house price and household income distributions in England, Wales and Scotland

This release provides a range of household income estimates and house price figures to allow affordability to be measured in different ways. For example, for England, the 10th percentile of income was an estimated £14,500 in 2021 and is known to include many pensioners; the 90th percentile was £64,000. This allows us to show the affordability ratio for households looking to purchase a home at a similar point in the distribution.

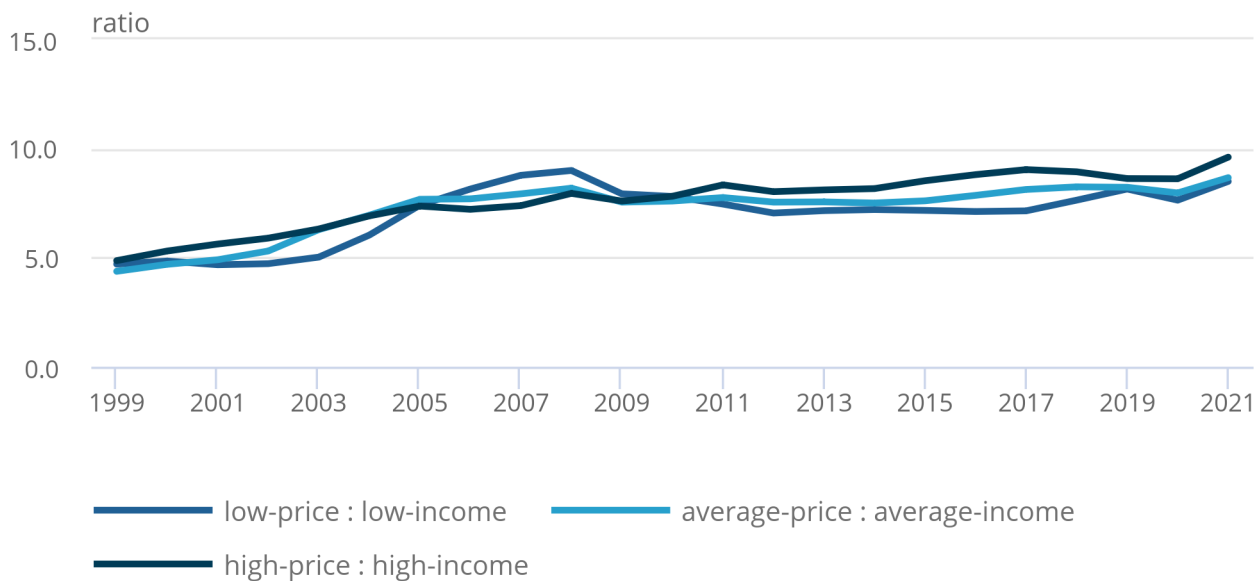
Figures 2, 3 and 4 compare the cost of low-priced houses (10th percentile) with the incomes of low-income households (10th percentile) to show the affordability of households looking at a home at the same point in the distribution. It also shows average-income households (50th percentile) and those with high incomes (90th percentile) alongside the same percentile of house price for each country.

**Figure 2: Affordability ratios in England for the same point on the income and house price distributions have typically followed similar trends since the 2008 financial crisis**

Housing affordability ratio 90th, 50th and 10th percentile incomes and house prices, England, 1999 to 2021

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Housing affordability ratio 90th, 50th and 10th percentile incomes and house prices, England, 1999 to 2021



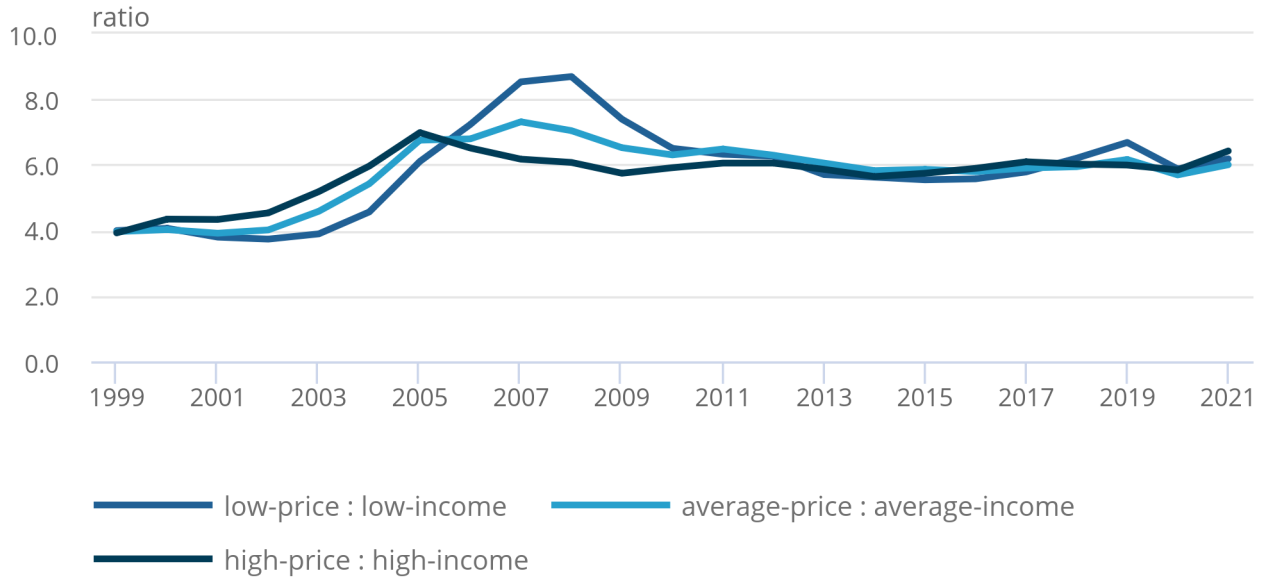
Source: HM Land Registry – Price paid data, Office for National Statistics – Living Costs and Food Survey, Household Finances Survey

**Figure 3: Affordability ratios for the same point on the income and housing distributions are similar in Wales, but low-income households experienced more volatility around the 2008 financial crisis**

Housing affordability ratio 90th, 50th and 10th percentile incomes and house prices, Wales, 1999 to 2021

Figure 3: Affordability ratios for the same point on the income and housing distributions are similar in Wales, but low-income households experienced more volatility around the 2008 financial crisis

Housing affordability ratio 90th, 50th and 10th percentile incomes and house prices, Wales, 1999 to 2021



Source: HM Land Registry – Price paid data, Office for National Statistics – Living Costs and Food Survey, Household Finances Survey

**Figure 4: Affordability for lower-priced housing is typically better than at the average when comparing equivalent house price and household income deciles in Scotland**

Housing affordability ratio 90th, 50th and 10th percentile incomes and house prices, Scotland, 1999 to 2021

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Housing affordability ratio 90th, 50th and 10th percentile incomes and house prices, Scotland, 1999 to 2021



Source: Registers of Scotland, Office for National Statistics – Living Costs and Food Survey, Household Finances Survey

Figures 2, 3 and 4 show that in 2021:

- in all three countries, the affordability of low-income (10th percentile) households has varied more over time than that of average or high-income households
- in England, since 2017, the affordability ratio at the 10th percentile has increased to a similar level as the median, using this equivalent percentile measure (Figure 2)
- in Wales, since 2011, affordability ratios for this equivalent percentile measure (Figure 3) have been similar for 10th, 50th and 90th percentiles
- in Scotland, Figure 4 suggests that low-price housing is more affordable for low-income households than mid-priced housing is for mid-income households or high-priced housing is for high-income households, using the equivalent percentile affordability ratios

The next section shows how affordability changes when comparing different income deciles with average-priced homes. For example, a 50th percentile home costs 11.5 times a 10th percentile income in Scotland, or 12.1 times a 10th percentile income in Wales.

## 5 . Affordability of the average home by country and English region

There is a wide variation in both household income estimates and house prices by area. Figure 5 shows the affordability ratio at the median house price for each country and each English region, at varying levels of the income distribution.

### Figure 5: An average-priced home in the North East cost the equivalent of almost 12 years of income for a low-income household (10th percentile) compared with 40 years in London

Number of years income equivalent cost of a median-priced house, by income decile, country and English region, 2021

#### Notes:

1. The points reflect the affordability ratio of a median (50th percentile) home in each region or country at each decile of household income in that region or country.

#### Download the data

[.xlsx](#)

Figure 5 shows that:

- Wales and Scotland have a similar distribution of affordability for average-priced homes to each other, and to some English regions (the North East, the North West, and Yorkshire and The Humber), with the average home costing around six years of average income
- four regions have generally worse affordability than the average for England – the South West, the South East and the East of England, which are similar to each other – while London shows a different pattern from everywhere else
- in the North East and Scotland, an average home is the equivalent of less than five times a 60th percentile income; in London, it is above five times at every income decile – for example, an average home is 6.1 times a 90th percentile income

While it is not possible to replicate the incomes used for mortgage lending, a factor of five is a useful test (in 2017, [the Financial Conduct Authority issued guidance \(PDF, 361 KB\)](#) that only a limited number of a lender's mortgages should be 4.5 times a borrower's income or more).



## 6 . Affordability of the least expensive homes, by region and country

The full range of house price and household income decile estimates by country and English region are available in [Section 7](#) of this release.

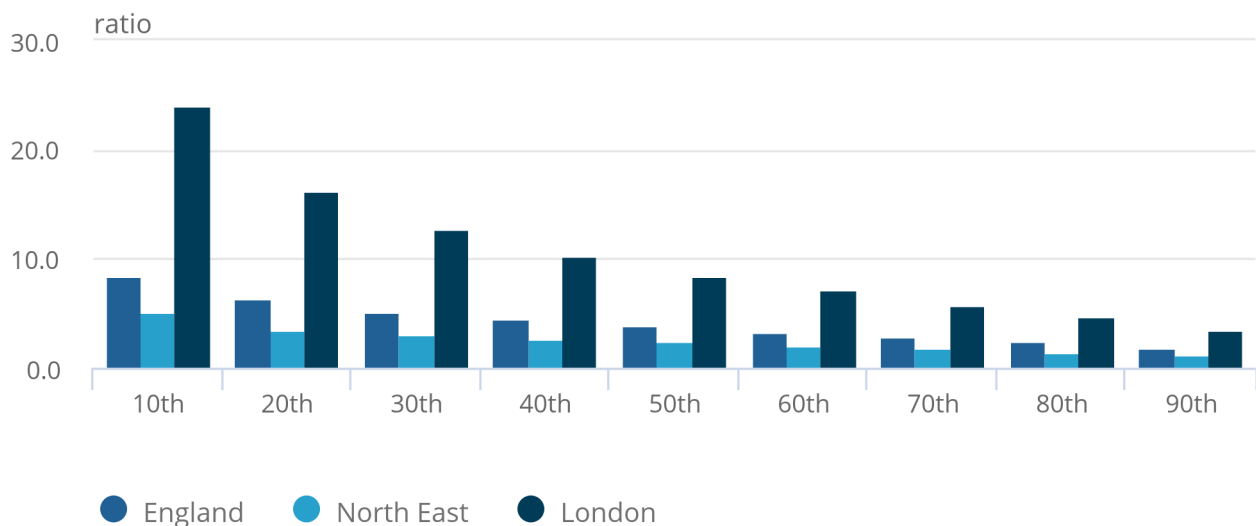
The data in this release can also be used to show the differences by region. Figure 6 shows the number of years of income that some of the cheapest (10th percentile) homes in England, the North East, and London are equivalent to. A line represents five years of income.

### Figure 6: Lower-priced housing in London is equivalent to more than eight times yearly income for a median income household

Years of income equivalent for 10th percentile home, by income decile, England, London, North East, 2021

#### Figure 6: Lower-priced housing in London is equivalent to more than eight times yearly income for a median income household

Years of income equivalent for 10th percentile home, by income decile, England, London, North East, 2021



Source: HM Land Registry – Price paid data, Office for National Statistics – Household Finances Survey

Using an affordability ratio of five years of income:

- in England overall, some of the cheapest (10th percentile) homes are equivalent to around five times a 30th percentile household income (5.2)
- in the North East, some of the cheapest (10th percentile) homes are equivalent to around five times a 10th percentile household income (5.1)
- in London, some of the cheapest (10th percentile) homes are equivalent to around five times an 80th percentile household income (4.8)
- in Wales, a 20th percentile home is less than five times a 10th percentile household income (4.7)
- in Scotland, a 10th percentile home is less than five times that of a 10th percentile household income (4.8)

## 7 . Housing purchase affordability data

[Housing purchase affordability in Great Britain](#)

Dataset | Released 28 July 2022

Tables of house price decile to equivalised household disposable income decile ratios, Great Britain.

## 8 . Glossary

### 10th percentile

A point at the lower end of a distribution – the income or house price at which 10% of household incomes or properties fall below (or 90% fall above). Table 15 of [The effects of taxes and benefits on household income, disposable income estimate](#) shows, for example, that lower-income households have fewer economically active people and are more likely to be lone-parent households.

### 50th percentile or the median

A point at the middle of a distribution – the income or house price at which half fall below and half fall above. This is a more useful measure of an average than the mean where a distribution is skewed, as is the case with both income and house prices.

### 90th percentile

A point at the upper end of a distribution – the income or house price at which 90% of household incomes or properties fall below (or 10% fall above).

### Affordability ratio

The affordability ratio is a measure of the relationship between house price to household income in an area. It can be used to compare affordability over time and between geographies. The ratio gives the number of years of income that is equivalent to the price of a home in an area. A larger number reflects a less affordable area. By using a ratio, it allows us to compare over time without the need to adjust for inflation.

### Disposable household income

Also known as net income, this is the combined earnings (employed and self-employed), state support (benefits and pensions) and other income (such as investment income) of a household, less the effect of direct taxes such as income tax, national insurance contributions, and council tax. Disposable income is arguably the most widely used household income measure.

## Equivalised income

Equivalised income is used in this release, which is income that has been adjusted to take account of household mix. Income data have been equivalised using the modified Organisation for Economic Co-operation and Development (OECD) scale with the reference point of a household consisting of two adults and no children.

## 9 . Measuring the data

Housing affordability estimates are calculated by dividing house prices by estimated incomes to create a ratio. Further details are available in our [Additional measures of housing affordability Quality and Methodology Information \(QMI\) report](#).

House prices for England and Wales are calculated using open data from HM Land Registry. This is a source of comprehensive record-level administrative data on residential properties that have been sold over a given period of time. The methods used to do this are consistent with the production of the [House price statistics for small areas \(HPSSA\) bulletins](#) for England and Wales. This release uses the same HM Land Registry Price Paid data downloaded and used to create the HPSSA data published in March 2022.

For Scotland, house price deciles are calculated by Registers of Scotland (RoS) based on data extracted from their database on 23 February 2022. The data are calculated consistently with [their own publications](#), although the numbers may differ slightly as a result of differing dates of extraction. RoS's [revision policy](#) explains this in more detail.

For all three countries, income data are estimated from the Living Costs and Food Survey (LCF) (up to 2017) or the Household Finances Survey (HFS) (from 2018 onwards). Prior to 2018, income data are from the LCF only, because of sample-size restrictions, and three-year rolling averages are used, so 2017 results include responses from 2016, 2017 and 2018.

From 2018 onwards, harmonised income questions on the Survey of Living Conditions (SLC) meant that it could be combined with the LCF to make the Household Finances Survey (HFS), as described in [Improving the measurement of household income](#). This increased the sample size from 5,000 to 17,000 households, and so single-year estimates from the HFS are used for 2018 onwards.

A wide range of financial support measures were introduced to alleviate the potential financial pressure of the coronavirus (COVID-19) pandemic; as such, [income estimates are subject to greater uncertainty](#) in the financial year 2021, and we recommend users exercise caution when interpreting rates of growth, particularly at the decile level.

The distribution of income estimates is calculated by looking at the household incomes of individuals. Lower-income households are, on average, moderately smaller, and this way of calculating income is consistent with other Government Statistical Service (GSS) income releases. Another way in which these income estimates are consistent and follow best practice is that they are "equivalised" or adjusted to account for household composition.

Neither house prices nor income estimates for previous years are adjusted for inflation. This ensures that both parts of the affordability equation are balanced on a nominal basis. Neither data source includes the population in communal establishments.

## 10 . Strengths and limitations

These statistics are a good indicator of changes in housing affordability on average, over time and across Great Britain. However, they do not necessarily reflect the experience of individual households. This is because of a number of factors such as schemes to support home purchasing, mortgage availability and other (non-tax) household costs.

House prices are not adjusted to represent a typical mix of what is available in an average period. If different mixes of dwelling sizes or types came on to the market in any given year, this is likely to alter the house price distribution.

While house prices are drawn from records of house sales, incomes are estimated through sample surveys. This means that there is statistical uncertainty in these income and affordability estimates, with [additional uncertainty from the effects of the coronavirus \(COVID-19\) pandemic](#). This article does not comment on which changes over time, or differences between areas, are statistically significant.

Household income surveys are known to suffer from under-reporting at the top and bottom of the income distribution. An adjustment to address survey under-coverage of the richest people has been introduced for statistics covering the financial year ending (FYE) 2002 onwards, which is reported in more detail in our [Top income adjustment in effects of taxes and benefits data: methodology](#). However, measurement issues at the bottom of the distribution remain. See [the Effects of taxes and benefits on household income QMI](#) for further details of the potential sources of error.

Disposable household income is generally considered a better reflection of the finances available for purchasing a home than individual earnings (which are used in the [Housing affordability in England and Wales: 2021](#) bulletin). This is because housing is often purchased as a household rather than by an individual within the household.

Household income estimates, which are used in this release, are a better reflection of the mortgage a household could obtain than individual earnings are (which are used in the [Housing affordability in England and Wales: 2021](#) bulletin). The availability and size of mortgages offered are typically based on household income; however, they are not an exact match, with different providers having different definitions of eligible income, and incomes of people outside a certain age range being typically excluded. Multipliers apply differently for single-earning and dual-earning households. Furthermore, households seeking mortgages are skewed towards the middle of the age distribution as reported by the [English Housing Survey \(PDF, 2.19 MB\)](#), while our household income measure cannot remove households not eligible for a mortgage (for example, those close to pension age). Depending on how the data are used, these composition effects may be more or less representative.

Affordability based on earnings, which is used in our [Housing affordability in England and Wales: 2021](#) bulletin, is a good reflection of what an individual can afford and is the established official measure required for monitoring at the local authority level. The earnings source can provide estimates at the local authority level, while currently these statistics are unable to go below the regional level.

Both the earnings and the income approach do not take account of upfront costs such as fees and surveys, or deposits.

## 11 . Related links

### [Research Output: Alternative measures of housing affordability: financial year ending 2018](#)

Article | Released 19 March 2020

Alternative measures of housing affordability in England, including affordability in relation to varying household income and house price distributions, upfront costs, mortgage repayments, and private rental affordability.

### [Housing affordability in England and Wales: 2021](#)

Statistical bulletin | Released 23 March 2022

Uses annual data on house prices and annual earnings to calculate affordability ratios for national and subnational geographies in England and Wales.

### [Private rental affordability, England: 2012 to 2020](#)

Statistical bulletin | Released 6 October 2021

Private rent prices in England expressed as a percentage of gross monthly household income. Part of our additional measures of housing affordability series.

### [Income and earnings statistics guide](#)

Methodology | Revised 2 March 2022

Explains the relationship between income and earnings data and outlines the statistics produced by the Office for National Statistics, Department for Work and Pensions and HM Revenue and Customs.

### [House price statistics for small areas in England and Wales: year ending September 2021](#)

Bulletin | Released 23 March 2022

House prices and number of transactions for property sales in England and Wales, on an annual basis, updated quarterly.

### [Understanding towns in England and Wales: house price analysis](#)

Article | Released 18 October 2021

Data and analysis on house prices in towns in England and Wales. Looks at house price trends in towns up to 2020, and changes over the pandemic period from Jan 2020 to April 2021.