

Housing purchase affordability, UK, QMI

Quality and Methodology Information for the set of individual releases that form the additional measures of housing affordability, detailing the strengths, limitations, methods, and data uses and users.

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1 . Output information

- Title: [Housing purchase affordability, UK](#)
- National Statistic: no
- Data sources: [Land Registry Price Paid Data](#); [Registers of Scotland](#) – custom dataset – decile price of residential property sales; [Land and Property Services \(LPS\)](#), Northern Ireland – custom dataset – decile price of residential property sales; [Living Costs and Food Survey \(LCF\) and Household Finances Survey \(HFS\)](#)
- Frequency: annual
- How compiled: administrative and survey data
- Geographic coverage: countries in the UK and regions in England
- Related publications: [Housing affordability in England and Wales](#), [Private rental affordability in England, Wales and Northern Ireland](#), [Additional measures of housing affordability](#)
- Last revised: 27 July 2023

2 . About this Quality and Methodology Information

This quality and methodology information report contains information on the quality characteristics of the data, as well as the methods used to create it.

The information in this report will help you to:

- understand the strengths and limitations of the data
- learn about existing uses and users of the data
- understand the methods used to create the data
- help you to decide suitable uses for the data
- reduce the risk of misusing data

3 . Important points

Our [Housing purchase affordability statistical bulletin](#) along with our [Private rental affordability statistical bulletin](#) are intended as a series of additional measures of affordability. We intend to develop and publish more measures over time.

This quality and methodology report provides users with further measures in addition to our [Housing affordability in England and Wales statistical bulletin](#). Income measures provide a more relevant indicator of the homes a household can afford than earning based measures and cover the whole UK. This report provides values for the full range of deciles of house prices and household income.

These statistics include a measure of affordability estimated from the ratio of house prices to household disposable income in an area, at a country or region of England level; but we are unable to match individual household incomes and house prices.

They use unadjusted, annual house price data collected by Land Registry, Northern Ireland Land and Property Services, and Registers of Scotland, and household income from the Family Resources Survey and the Living Costs and Food Survey.

This methodology uses five times disposable household income (five years' worth of income) as a general indicator of an affordable property price. Income multiples are discussed further in the relevance section, of [Section 5: Quality characteristics of the additional housing affordability estimates](#).

4 . Quality summary

In this methodology we calculate affordability ratios of house prices and household income. We compare house prices with equivalised disposable household income estimates, for a given time period and region or country, for England, Wales, Scotland and Northern Ireland.

The price paid for housing in England and Wales are taken from the Land Registry Price Paid Data published on their website and for Scotland from a custom dataset produced by the Registers of Scotland Land and Property team. For Northern Ireland, a custom dataset of Land and Property Services has been used. These are all administrative data sources recording the price paid for residential property.

Household income estimates are taken from social surveys: the Living Costs and Food Survey (LCF) up to 2017 and the Household Finances Survey (HFS) from 2018 onwards. These can produce estimates down to the regional level.

We use the LCF as three-year averages until 2017. These were labelled by the middle year, that is, the 2017 data are made of LCF collected in 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 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.

The resulting statistics provide household incomes and house prices by decile. This allows not just comparisons of average incomes and house prices, but a range of incomes and house prices to be combined to produce affordability ratios.

Both house prices and incomes for previous years are not adjusted for inflation (a nominal basis). This ensures that both parts of the affordability equation are balanced. Neither data source includes the population in communal establishments.

Uses and users

These measures of affordability are in addition to our main release, where users have been identified as the following.

- Central government: monitoring housing trends, supply and demand, policy-making such as schemes for first-time buyers.
- Devolved administrations: supporting policy-making and monitoring changes at the country level, similar to those requirements of central government; also used for comparisons with wider UK policies.
- Local government: monitoring and developing housing policies and affordability of housing to meet the current and future needs of their areas and to understand how changes and policies at the national level affect housing at the local authority level; determine the need of what type or price of property is required in the area so people can better afford housing.
- Other private sector organisations: property investors and financial management companies may also use these data to assess affordability of investments.
- Banks and building societies: house price and affordability statistics are used for mortgage lending to make decisions on whether to lend, how much to lend and setting interest rates; earnings data are also useful to inform mortgage lending to see how much of people's earnings are needed to spend on mortgages and how long is needed to pay them off.
- House builders: these users are interested in whether and where demand for new housing exists, how much people are likely to be able to afford to spend on a property in a given area and the returns received on homes built and converted.
- Housing industry specialists: these include organisations such as larger estate agents seeking information on subnational housing affordability trends.
- Housing bodies: these include organisations such as the Home Builders Federation and charities that carry out secondary analyses of official housing statistics.
- General public: interest in the affordability of housing in their local area across the UK.

Strengths and limitations

The following points are in addition to those described in Section 10: Strengths and limitations of our [Housing Purchase Affordability, UK: 2022 bulletin](#) and the relevance subsection in Section 5: Quality characteristics of the additional housing affordability estimates.

A limitation of the affordability calculation is that we do not adjust for property or household size. For example, while a one-bedroom flat in a region may be affordable for a family, it may not be suitable. When we look at different parts of the housing distribution, the mix of properties represented will be different over the distribution, that is, smaller properties are likely to be more represented at the cheaper end, larger properties at the larger end.

We are aware that by averaging over regional areas, this can hide differences within each region, where affordable properties may be in a different place to the households with the appropriate incomes.

Housing sales 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.

Household incomes, used in this release, are generally a better reflection of the mortgage a household could obtain than individual earnings are. Individual earnings are used in our [Housing affordability in England and Wales bulletin](#), which provides the established official measure required for monitoring at the local authority level. The HFS is designed to provide results at the regional level, so in this publication we only publish at that level.

A separate approach is required in order to estimate the extent to which people can afford their mortgages, once they have been obtained. This was explored in the mortgage repayment part of our [Research Output: Alternative measures of housing affordability: financial year ending 2018 article](#).

5 . Quality characteristics of the additional housing affordability estimates

This section provides a range of information that describes the quality of the data and details any points that should be noted when using these statistics.

Relevance

Housing affordability is an important issue as it affects almost everyone in the country. There are a number of different aspects to housing affordability dependent on the situation for each individual or household. This can be if someone is renting, looking to buy a property or currently paying a mortgage. This set of publications look at a range of different affordability measures to provide evidence for the public debate and policy decision-makers.

The values of the homes sold is the most relevant measure of homes that people could move into. Mix-adjusted prices, like those in the House Price Index (HPI), are not as representative of the coming year's housing market. The value of all dwellings is not an established release, but we have recently published our [Regional house price level estimates, England and Wales: 1995 to 2021 article](#).

The income estimates we use will not be a perfect match for the incomes considered by landlords, letting agents and mortgage providers. A variety of factors will affect the affordability for individuals or households. For example:

- several [affordable home ownership schemes](#) exist, with different availability in England, Wales, Scotland and Northern Ireland, such as shared ownership, making homes more affordable, but not reducing the price as it appears in these house price sources
- mortgage providers do not apply a simple one-number income multiplier, for example, they apply different multipliers to the income of a first earner and an additional earner in a household seeking a mortgage, and may also use credit checks and monthly outgoings, as well as local market conditions
- the incomes in this publication have been equivalised -- adjusted to take account of household mix -- which is likely to differ from the approach taken by mortgage providers

Incomes and House Prices are presented on a nominal basis; this means they have not been adjusted for the effects of inflation over time, and are comparable with each other.

Household equivalised disposable income considers income and deductions from the following sources:

- wages and salaries
- self-employment income
- pensions
- investment income
- direct benefits in cash
- direct taxes and employees' National Insurance contributions

Income multiples

This methodology uses five times disposable household income (five years' worth of income) as a general indicator of an affordable property price. This reflects two conventions: mortgages have traditionally been offered at multiples of four to five times income (typically gross income); and that since 2014 the [Bank of England have instructed the Financial Conduct Authority \(FCA\)](#) to "ensure that mortgage lenders do not extend more than 15% of their total number of new residential mortgages at loan to income ratios at or greater than 4.5".

While income multiples are not capped at five the [FCA mortgage lending statistics', Mortgage Lending and Administration Return \(MLAR\) statistics: detailed tables](#) shows that only a minority of lending goes above multiples of four.

A multiple of five times income therefore broadly fits with both traditional expectations and current mortgage market practices. Conversely mortgage lenders may be lending based on multiples of gross income, and therefore a multiple of five times disposable incomes is a conservative estimate of affordability. Furthermore it makes the release consistent with our earnings-based [Housing affordability in England and Wales statistical bulletins](#).

Earnings or incomes

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 statistical bulletin](#). This is because housing is often purchased as a household rather than by an individual within the household.

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 statistical 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 using the income approach we are unable to go below the regional level.

Both the earnings and the income approach do not take account of upfront costs, or other costs associated with buying a home, such as fees and surveys, or deposits.

Accuracy and reliability

While house prices are drawn from records of residential property transactions, incomes are measured through sample surveys. This means that there is statistical uncertainty in these income and affordability estimates. This article does not comment on which changes over time or differences between areas are statistically significant. Furthermore in 2021, income estimates were affected by the coronavirus (COVID-19) pandemic, as explained in our article [Interpreting changes in UK income estimates during the coronavirus pandemic: financial year ending 2021](#).

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 2002 onwards, reported in more detail in our [Top income adjustment in effects of taxes and benefits data: methodology](#). However, measurement issues at the bottom remain. See our [Effects of taxes and benefits on household income QMI](#) for further details of the sources of error.

The house price data for England and Wales are based on the price paid for residential property, from Land Registry Price Paid Data. It is a statutory requirement for all relevant details to be sent to the Land Registry whenever a person transfers ownership of a property or takes a mortgage out against it. This change must be registered with the Land Registry to make it legally effective, which means this is comprehensive of the price paid for residential properties. For more information on this source please see Sections 5 and 6 of the [Housing affordability in England and Wales QMI](#).

For Scotland, house price deciles are calculated by [Registers of Scotland \(RoS\)](#). The information for each stated time period aims to cover all sales of residential properties, where applications are received for registration with RoS in the period (by date of registration). RoS take steps to exclude sales relating to small partial ownership rights or large transactions of blocks of multiple properties. Transactions where the stated consideration is between £20,000 and £1 million are excluded.

In Northern Ireland there isn't a direct equivalent source, however the Land and Property Services Northern Ireland team have created a similar output. This uses sales data from His Majesty's Revenue and Customs (HMRC) and from the Northern Ireland Valuation List, which adds classification information and is used to ensure valid residential transactions only are recorded.

Coherence and comparability

The household income estimates used in this release are comparable across the countries of the UK, because they come from the same survey source.

The household income estimates are largely consistent with the main estimates of income published from the Household Finances Survey (HFS) in our [The effects of taxes and benefits on household income, disposable income estimate dataset](#). These are typically published at the UK level, but are consistent with UK figures in the housing purchase affordability release, across the income distribution. Like the data in the HFS release, these income estimates are distributed by all the individuals in households (individually weighted) so that a one-person household does not have the same impact as a multi-person household. The income estimates in this housing purchase affordability release are presented at decile points (we do not use the mid-points of deciles) and are nominal (not adjusted for inflation).

This is not the only source of official income estimates, or the only type of income measure. Further details on both sources and measures are available in our [Income and earnings statistics guide](#).

House price data are broadly comparable between England, Wales, and Scotland. There are only minor methodological differences - for example, the Scottish data have outliers removed (sales below £20,000 or above £1 million). There is currently no comparable source of house price deciles published for Northern Ireland.

The methods used to calculate house prices for housing purchase affordability are consistent with the production of our [House price statistics for small areas \(HPSSA\) bulletins](#) for England and Wales. This release uses the same Land Registry Price Paid Data downloaded and used to create the HPSSA data published in March 2022.

For Scotland, house price deciles are calculated consistently with ROS's own [House price statistics publications](#), although the numbers may differ slightly because of differing dates of extraction. For more detail see [ROS's revision policy](#).

In Northern Ireland there is not an equivalent source of residential transactions, however it is possible to construct something similar using HMRC data by linking it to the Northern Ireland Valuation List.

Timeliness and punctuality

We intend this output to be published in the summer, lagged by between a year and a year and a half. Household Finances Survey data are published in March each year for the previous financial year. While Land Registry data have a smaller lag, using a later release allows us to benefit from the first set of revisions that have occurred and is consistent with the HPSSA and Housing affordability in England and Wales practices.

6 . Methods used to produce the additional measures of housing affordability estimates

Housing purchase affordability

The methodology uses the following data supplies:

- [Land Registry Price Paid Data](#)
- [Registers of Scotland data](#), obtained as a custom request
- Northern Ireland Land and Property Services statistics, obtained as a custom request
- [Living Costs and Food Survey and Household Finances Survey data](#), obtained as a custom request

As the figures are obtained on a comparable basis (for example, for the same time periods, geographies and in nominal terms), no further transformation or manipulation is required. Affordability ratios are then calculated by comparing the price figures with the income estimates.

The income estimates obtained are decile points of annual disposable equivalised household income. This reflects the money available to a household taking into account the effects of earnings, benefits, other sources of income and taxes. The income estimates are distributed by looking at the household incomes of individuals (individual weighting), are on a nominal basis (not adjusted for inflation), but are adjusted for household composition (equivalised).

Equivalised income estimates are used to calculate purchase affordability, that 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 a reference point of a two-adult household with no children.

7 . Useful links

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

Bulletin | Released annually (usually March)

Data on house prices and annual earnings to calculate affordability ratios for national and subnational geographies in England and Wales, on an annual basis.

[House price statistics for small areas in England and Wales](#)

Bulletin | Released quarterly

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

[Average household income, UK](#)

Bulletin | Released annually

Final estimates of average household income in the UK, with analysis of how these measures have changed over time, accounting for inflation and household composition.

[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.

[Income and earnings statistics guide](#)

Methodology | Revised 2 March 2022

Outlines the different data sources and outputs that feed into the analysis of income and earnings within the UK.

[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 January 2020 to April 2021.

8 . Cite this QMI

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