HIA-CBA Affordability Index and Report

Methodology and Data Sources

There are numerous measures of housing affordability (or housing access), with differences in concept and estimation. In general, constraints on data availability prevent any measure of affordability from being ideal, nevertheless the HIA-CBA index has a sound theoretical base. In order to correctly interpret the HIA-CBA Housing Affordability Index it is important to understand what it aims to measure and how this is achieved.

Affordability in the HIA-CBA Report is defined in accordance with the long standing premise that housing costs should not consume more than 30 per cent of a household's income. At a proportion any higher than this housing may be considered to be unaffordable. The 30 per cent level is used in the index as mortgage lenders commonly consider this when assessing mortgage credit applications and determining a lending limit.[1] The index describes the relationship between household income and the mortgage costs associated with home ownership in the context of this definition of affordability.

The HIA-CBA index measures this relationship by quantifying the impact that changes in the key variables that influence mortgage costs have on affordability as income levels change over time. In calculating the index, only the major costs of ownership are considered, namely the house price and monthly mortgage payments. Costs such as council rates, repairs and maintenance and acquisition costs (stamp duty, real estate agents fees etc) are not included. Similarly, as the index measures affordability, it does not include capital gains.

The index essentially considers whether a buyer with an average income could purchase a median priced dwelling[2] and do so affordably. We assume the buyer is providing a 10 per cent deposit and financing the remaining 90 per cent of the purchase price with a 25 year variable rate mortgage with principal and interest repayments paid on a monthly basis throughout the term of the loan. This is a common situation for many home buyers and could be representative of any type of home buyer – a first home buyer, an upgrade buyer, or an investor.

1.1 Calculation of the index

The index is calculated by the ratio of the average full time wage to the qualifying income. The index is based to 100 which means that when the index equals 100 an individual earning an average income could service a mortgage on a median priced property with mortgage costs taking up 30 per cent of their income. An increase in the ratio represents an improvement in affordability while a decline represents deterioration in affordability.

The Affordability Index (I_t) is calculated from:

$$I_t = Y_t / Y^*_t \times 100$$

where: I_t = HIA-CBA Affordability Index

Y_t = Average full time earnings of an individual

Y^*_t = Qualifying income. This represents the minimum income required to be able to affordably service a loan based on the current median housing price at the prevailing interest rate.

[1] The level of income required to affordably service a loan of a given size is referred to as the qualifying income.

[2] We consider the median value of all dwelling types (detached houses, units, apartments etc.) as distinct from measures which only consider detached houses.

1.2 Data Sources

1.2.1 House Price

For each capital city and rest of state region, the median price of established dwellings is obtained from home loans financed by the Commonwealth Bank of Australia during the quarter. This is a simple median which does not take account of changes in the mix of size, location and quality of dwellings financed. Month-to-month variations therefore may reflect any changes in the composition of housing financed as well as changes in the price of a house of given size, location and quality.

The median price reflects the relative contribution of houses and dwelling units to CBA's total loan approval figures for each region (capital city and rest of state). Post codes are used to allocate data on house prices between capital city and rest of state regions.

National capital city and national rest of state median price levels are obtained by weighting respective median price levels for each region by the number of housing loans made by all lenders in each state adjusted to reflect the allocation of Commonwealth Bank loan approvals in each state between capital city and rest of state regions.

1.2.2 Housing Loan Interest Rate

Housing loan rates are those quoted for loans to owner-occupiers; in some cases, the same rates apply to investment housing loans from the same lenders.

The series used is taken from the Indicator lending rates published in the *Reserve Bank Bulletin*. Data in this table are compiled on the last working day of the month.

The discounted variable rate of all banks is used as the applicable interest rate. Rates for banks are the predominate rates of those banks which are large home lenders.

1.2.3 Income

The income measure used in the report is the key change in the updated report. The previous method provided a robust estimation of household disposable income at a national level, however it did not provide adequate information about the variation in income levels between regions. The new measure of income allows for differentiation between states, as well as between capital cities and the rest of the state.

The new measure of income relates to the income of an individual whereas previously a measure of income at a household level was employed. This is an important point to note as social trends suggest that household income is actually greater than the average earnings of an individual which indicates that the average household is likely to be more than one income earner. While the approach adopted in the report could be misconstrued as being designed to underestimate affordability, individual income is assessed to be a more accurate measure and can provide more information about the affordability situation in specific regions.

An example of the more detailed information in the new report is the addition of the *Affordability Multiple* which shows the number of full time average incomes required to reach the qualifying income to service a loan on a median priced home in each region (capital city or rest of state). This provides a more transparent insight into the social impact of changing housing affordability.

The data used is sourced from the Average Weekly Earnings Report (ABS 6302.0) which provides an estimate of the Average Full Time (ordinary time) Weekly Earnings for an adult (age 21 and over). The data series is collected from the ATO based on PAYG tax receipts and is reported on a state by state basis each quarter. To differentiate between income levels in capital cities and the rest of each state we interpolate the deviation of the income level in the cities and regions from the state average which is reported bi-annually in the Household Income and Income Distribution Survey (ABS 6523.0).