

NZ – New Zealand

The Reserve Bank of New Zealand publishes a nationwide house price index for new and existing, detached houses.³⁵ The index is produced using data provided by Quotable Value Limited (QV), a state-owned enterprise that collects all data based on territorial authorities' recorded sales prices and property valuations. The Reserve Bank of New Zealand uses this data to construct a house price index following the sales price appraisal ratio (SPAR) method.

The collective sales price of all dwellings sold during a period is divided by their collective appraisal value, which is equivalent to weighting the individual ratios by the value of dwelling stock. The current base period is the fourth quarter of 2003. The methodology for calculating the index changed in the third quarter of 2004. Prior to this date, the aggregated sales price appraisal ratio was weighted by a moving average of sales price data from previous periods. Now the weights correspond to those of the base period, the fourth quarter of 2003.

The transaction data obtained from QV is available from the 1980s onwards, but data that complies with the current standards of the Reserve Bank of New Zealand is only available since 1995. Therefore, to extend the QV series the Reserve Bank of New Zealand performs backdating estimations to produce data prior to the third quarter of 1995. The house price index is reported at a quarterly frequency.

The house price series is not seasonally-adjusted by the source. We seasonally-adjust the series using the BSTS model and re-base it to 2005=100. We deflate this house price series using the Personal Consumption Expenditure (PCE) deflator obtained from the OECD Economic Outlook database.

We complete the New Zealand data by including Personal disposable income (PDI) reported on a *per capita* basis. An annual household disposable income series is obtained through Statistics New Zealand. This series is available starting in 1978. To extend the series we use historical data on household disposable income obtained from the OECD Economic Outlook 71 database. The extended annual series is interpolated using the quadratic-match average method. Statistics New Zealand began publishing household disposable income data at a quarterly frequency since 2013. This is incorporated in the release for the first quarter of 2013 and all subsequent updates. The quarterly series begins in the fourth quarter of 1998 and is seasonally adjusted by the source. We use the spliced and interpolated annual series to extend the current series back to the first quarter of 1975.

To create nominal PDI *per capita*, we divide the resulting PDI series by the quarterly working-age population series. We obtained working age population from the OECD Economic Outlook database before. The source of the working age population data has changed, affecting the PDI *per capita* series in the 2012 first quarter update and all subsequent updates. Current working age population data is now obtained from the OECD Main Economic Indicators database. It is reported at a quarterly frequency and begins in the first quarter of 1986. We use the quarterly growth rates of the discontinued working age population series from the OECD Outlook 90

³⁵ The Reserve Bank of New Zealand uses the term detached house to differentiate these single-family dwellings from apartments and flats.

database to extend the series to the first quarter of 1975. We use the PCE deflator to report PDI *per capita* in real terms. Both nominal and real PDI measures are re-based to 2005=100.

Information resources:

Reserve Bank of New Zealand Data

<http://www.rbnz.govt.nz/keygraphs/Fig4.html>

Reserve Bank of New Zealand – Methodology on old and new house price index

<http://www.rbnz.govt.nz/keygraphs/1697975.html>

Reserve Bank of New Zealand – Description of backdating estimation method

<http://www.rbnz.govt.nz/keygraphs/1689413.html>

Statistics New Zealand PDI data

<http://rbnz.govt.nz/statistics/az/2989610.html>