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BRANCH**



Housing Affordability in New Zealand: Results

Results for HAM version 1.0
10 May 2017

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Results of MBIE's new experimental Housing Affordability Measure is available up to June 2015

In August 2012, as part of a review of the Official Statistics System, Cabinet agreed that work should be undertaken towards the creation of a Tier 1 official statistic on housing affordability, so as to understand the state of housing affordability in more detail. For this reason, it was decided to develop the Housing Affordability Measure (HAM). The HAM is an experimental statistical series which consists of two indicators, each looking at a different population: the potential first home buying population and the renting population. Affordability is calculated based on actual housing costs for current renters, and potential housing costs for renters if they were to transition to home ownership by purchasing a modest home in the area in which they currently live.

As the lead government agency on housing policy, the Ministry of Business, Innovation and Employment (MBIE) assumed the responsibility for developing these two indicators. The HAM's most recent results (up to June 2015) are now available and are communicated within this paper. The paper presents key findings about housing affordability trends at a national level and for the three most populous regions of New Zealand. A first annex provides a snapshot of the most recent levels of housing affordability for all regions, and a second annex provides further context for the development of the indicators and an overview of the methodology used to calculate them.

Key to interpreting the results: measuring the share of households below the 2013 National Affordability Benchmark

The HAM indicators provide a picture of national and regional housing affordability trends. The indicators calculate how much money households have left over after paying for their housing costs – or, in the case of the first home buying population, how much money they would have left over if they were to transition from renting to home ownership by purchasing a modest home in the area in which they currently live.¹ The households are then classified as being either above or below the 2013 National Affordability Benchmark based on this 'residual income'.² A growing proportion of households below the benchmark indicates that housing is becoming less affordable, while a shrinking number indicates that it is becoming more affordable. In this regard, HAM is like other common affordability measures in that higher numbers mean less-affordable housing.

The residual incomes are adjusted ('equivalised') using a formula that makes a household's residual income equivalent to what a one-person household would need to earn to have a comparable standard of living. Any household with an equivalised weekly residual income (i.e. the money they have left over after paying for housing costs each week) of less than \$662 is below the 2013 National Affordability Benchmark. Because this threshold is based on affordability for current homeowners and renters, and homeowners typically have higher incomes relative to housing costs than renters, the proportion of renting households and potential first home buyers below the 2013 National Affordability Benchmark is generally more than 50 per cent.

For more details, see Annex 2.

¹ For the purposes of the HAM, a 'modest first home' is a one- or two-bedroom residential property in the lower quartile of property values for the territorial authority or Auckland ward area the household resides in.

² As a reference point, the 2013 National Affordability Benchmark is set as the median affordability for homeowners and renters, nation-wide, in June 2013.

KEY MESSAGES

Renting in New Zealand is consistently more affordable than buying a first home

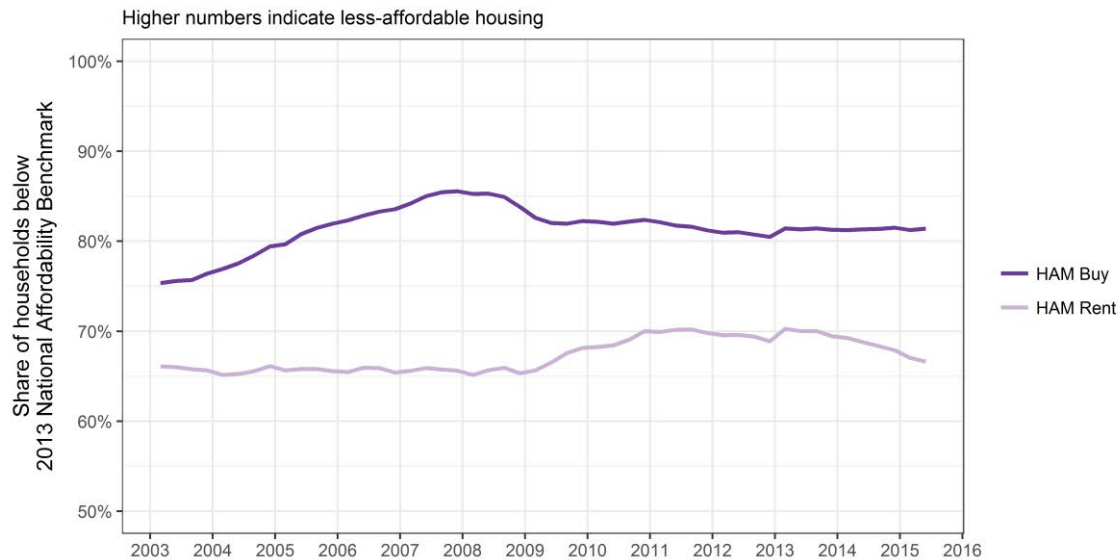


Figure 1: Share of first home buyer (HAM Buy) and renting (HAM Rent) households below the 2013 National Affordability Benchmark, national-level data (March 2003 to June 2015)

The global financial crisis in 2008-09 affected affordability for both the first home buying and the renting populations but in different ways. Aspiring first home buyers saw affordability stabilise almost immediately, and housing affordability for this population improved in 2009. By contrast, renting households experienced worsening affordability from 2009, which lasted until 2011. Housing affordability for renters is consistently better than for first home buyers – this trend is consistent nationwide.

At a national level, housing affordability for first home buyers worsened from 2003 to 2009, with affordability remaining more stable between 2009 and 2015.



Figure 2: Share of first home buyer households below the 2013 National Affordability Benchmark (HAM Buy), national-level data (March 2003 to June 2015)

The proportion of potential first home buyer households below the 2013 National Affordability Benchmark worsened from 75 per cent in March 2003, to 86 per cent in December 2007. Between December 2007 and June 2009, mortgage interest rates and house prices in many parts of New Zealand reduced as a result of the global financial crisis, making housing more affordable for first home buyers. Between 2009 and 2015, due largely to persistently low interest rates offsetting rising house prices, the proportion of first home buyer households below the 2013 National Affordability Benchmark remained relatively unchanged. In June 2015 it was 81 per cent.

At a national level, housing affordability for renters was worse in June 2015 than it was before the global financial crisis, but has been improving since 2013

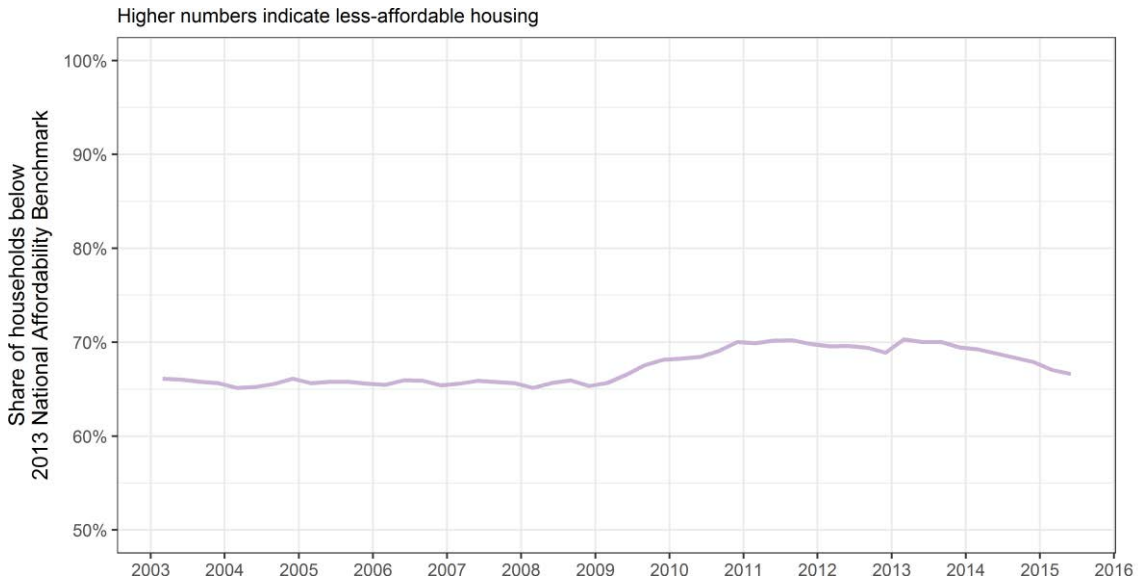


Figure 3: Share of renting households below the 2013 National Affordability Benchmark (HAM Rent), national-level data (March 2003 to June 2015)

At a national level, housing affordability for renting households was stable from 2003 to 2009, at which point it worsened until late 2011. However, affordability began improving again from 2013 to 2015. Compared to first home buyer affordability, housing affordability for renters has been fairly constant over time. A similar proportion of households were below the 2013 National Affordability Benchmark in June 2015 (67 per cent) as at the start of the time-series in March 2003 (66 per cent).

In June 2015, of the three most populous New Zealand regions, the region with the least-affordable housing for both first home buyers and renters was Auckland.

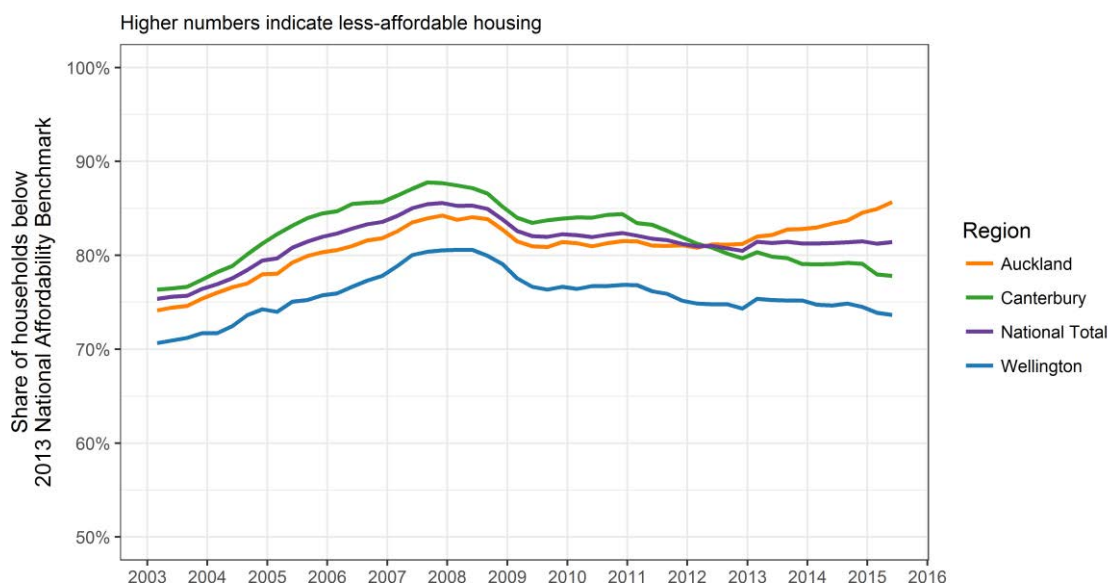


Figure 4: Share of first home buyer households below the 2013 National Affordability Benchmark (HAM Buy), nationally and for Auckland, Wellington Region, and Canterbury

For potential first home buyer households in Auckland, Wellington, and Canterbury, affordability followed the national trend until 2011, at which point housing affordability improved in Canterbury and worsened in Auckland. In comparison to these two regions, affordability in Wellington has been relatively stable and is consistently the most affordable of the three regions.

Between 2011 and 2015, house price growth in Auckland has been historically high and sustained. This has particularly affected first home buyers in Auckland: in June 2015, the proportion of potential first home buying households below the 2013 National Affordability Benchmark was 86 per cent.

In contrast to Auckland, housing affordability for potential first home buyer households in Canterbury improved significantly between 2011 and 2015. The proportion of these Canterbury households below the 2013 National Affordability Benchmark improved from 84 per cent in December 2010 to 78 per cent in June 2015. In September 2010 and February 2011, two major earthquakes hit Christchurch, causing widespread damage to the city’s infrastructure. In the period since the earthquakes, household incomes in Canterbury have increased faster than housing costs, improving housing affordability for both renters and potential first home buyers.

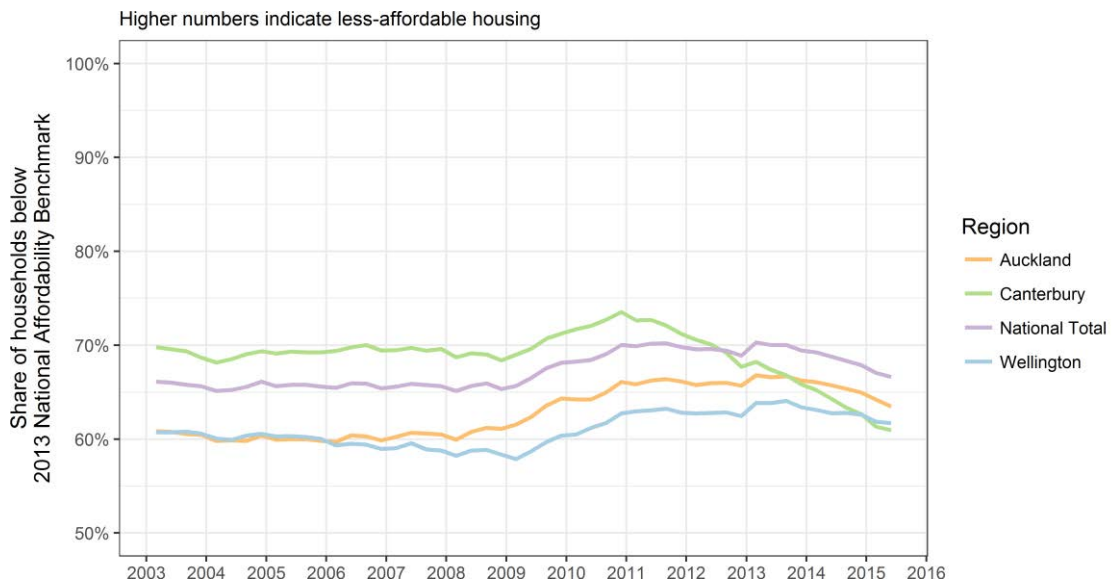


Figure 5: Share of renting households below the 2013 National Affordability Benchmark (HAM Rent), nationally and for Auckland, Wellington Region, and Canterbury

For renting households in Auckland and Wellington, housing affordability has followed the national trend across the time-series. In Canterbury, however, the proportion of households below the 2013 National Affordability Benchmark followed the national trend only until 2011, after which time housing affordability improved. The most recent data, from June 2015, shows that the proportion of Canterbury households below the 2013 National Affordability Benchmark reached 61 per cent, which means Canterbury is now more affordable for renters than Wellington. As discussed above, this improvement in affordability for renting households is due to average household incomes in Canterbury growing faster than average rents after the earthquakes.

Housing affordability for first home buyers in Canterbury has improved since 2008



Figure 6: Share of first home buyer households below the 2013 National Affordability Benchmark (HAM Buy) in Canterbury (March 2003 to June 2015)

Housing affordability for first home buyers in Canterbury worsened between 2003 and 2008, before improving again from 2009. The proportion of potential first home buyer households below the 2013 National Affordability Benchmark worsened from 76 per cent in March 2003 to 88 per cent in December 2007. The proportion then improved again, to 83 per cent in June 2009. The worsening affordability between 2003 and 2008 was caused by strong growth in house prices and interest rates, seen across New Zealand during that time; the improving affordability between 2008 and 2009 resulted from house price reductions and interest rate drops associated with the global financial crisis.

After 2009, housing affordability for potential first home buyers in Canterbury plateaued until 2011, and has been increasing steadily since. The proportion of these households below the 2013 National Affordability Benchmark improved from 84 per cent in December 2010 to 78 per cent in June 2015. This increasing affordability for first home buyers in Canterbury between 2011 and 2015 was due to average household incomes in Canterbury growing faster than housing costs after the 2010 and 2011 earthquakes.

Housing affordability for renters in Canterbury has improved since 2011

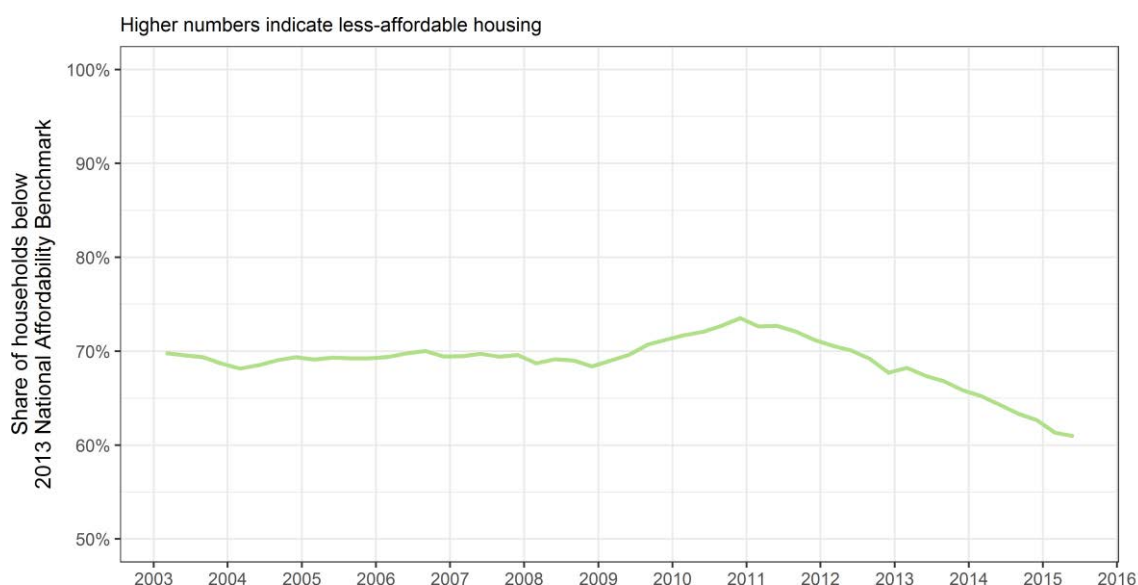


Figure 7: Share of renting households below the 2013 National Affordability Benchmark (HAM Rent) in Canterbury (March 2003 to June 2015)

Housing affordability for renting households in Canterbury remained constant between 2003 and 2009, before deteriorating slightly to 2011. The proportion of Canterbury renting households below the 2013 National Affordability Benchmark held steady at around 70 per cent between 2003 and March 2009, before worsening to 74 per cent in December 2010. This trend in affordability is consistent with other regions of New Zealand over the same period.

After the September 2010 and February 2011 earthquakes hit Christchurch city, housing affordability for renters in Canterbury greatly improved. The proportion of Canterbury renting households below the 2013 National Affordability Benchmark improved from 74 per cent in December 2010 to 61 per cent in June 2015.

The improvement in affordability for renting households in Canterbury after the Christchurch earthquakes is related to median household incomes growing faster than average rents: according to data from Statistics New Zealand, median household incomes in Canterbury grew by 25 per cent from June 2011 to June 2015, whereas average rents in Canterbury grew by 17 per cent over the same period.³

³ Sources: Statistics New Zealand's Household Labour Force Survey, median household income from all sources in Canterbury; Statistics New Zealand's Consumers Price Index, CPI component 'actual rents for housing' in Canterbury.

Between March 2013 and June 2015, housing affordability for first home buyers in Auckland has worsened

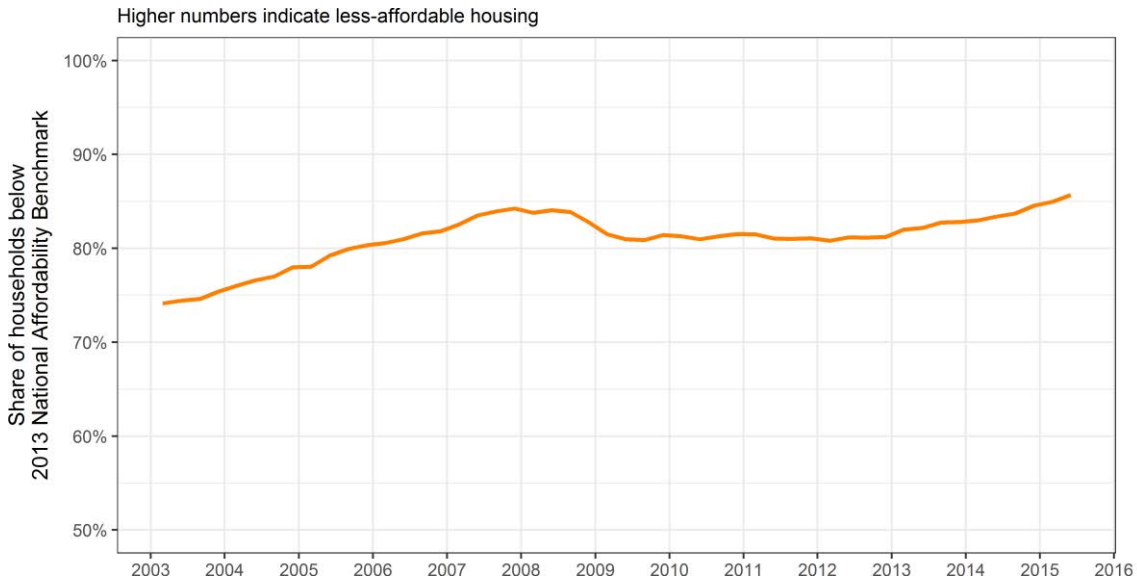


Figure 8: Share of first home buyer households below the 2013 National Affordability Benchmark (HAM Buy) in Auckland (March 2003 to June 2015)

Similar to the national trend, housing affordability for potential first home buyers in Auckland worsened between 2003 and 2008, before improving until 2009. The proportion of potential first home buyer households below the 2013 National Affordability Benchmark in March 2003 was 74 per cent; this proportion worsened to 84 per cent in December 2007, before improving again to 81 per cent in June 2009. The proportion of households below the 2013 National Affordability Benchmark then remained steady at that level until 2013.

From 2013 to 2015, housing affordability for potential first home buyer households in Auckland departed from the national trend, and then steadily worsened. The proportion of households below the 2013 National Affordability Benchmark worsened to 86 per cent in June 2015, the worst first home buying affordability in New Zealand at that time. Between 2011 and 2015, Auckland's house prices grew at historically high rates, making it more expensive to buy a first home.

Housing affordability for renters in Auckland was worse in 2015 than it was before the global financial crisis, but has improved since 2013

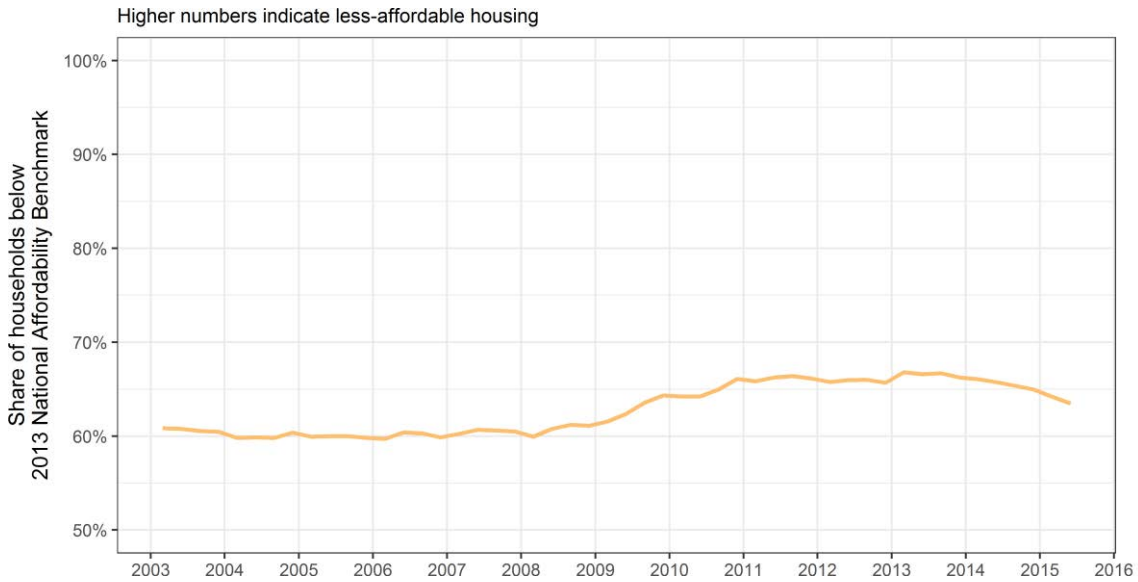


Figure 9: Share of renting households below the 2013 National Affordability Benchmark (HAM Rent) in Auckland (March 2003 to June 2015)

In contrast to affordability for first home buyers, housing affordability for renting households in Auckland followed the national trend across the time-series. The proportion of households below the 2013 National Affordability Benchmark held steady between 2003 and 2009 at about 60 per cent. The proportion of these households in Auckland worsened to 67 per cent in March 2013, and has since improved again, to reach 63 per cent in June 2015.

Housing affordability for first home buyers in the Wellington region has followed the national trend: it is worse than it was in 2003, but has improved since 2008

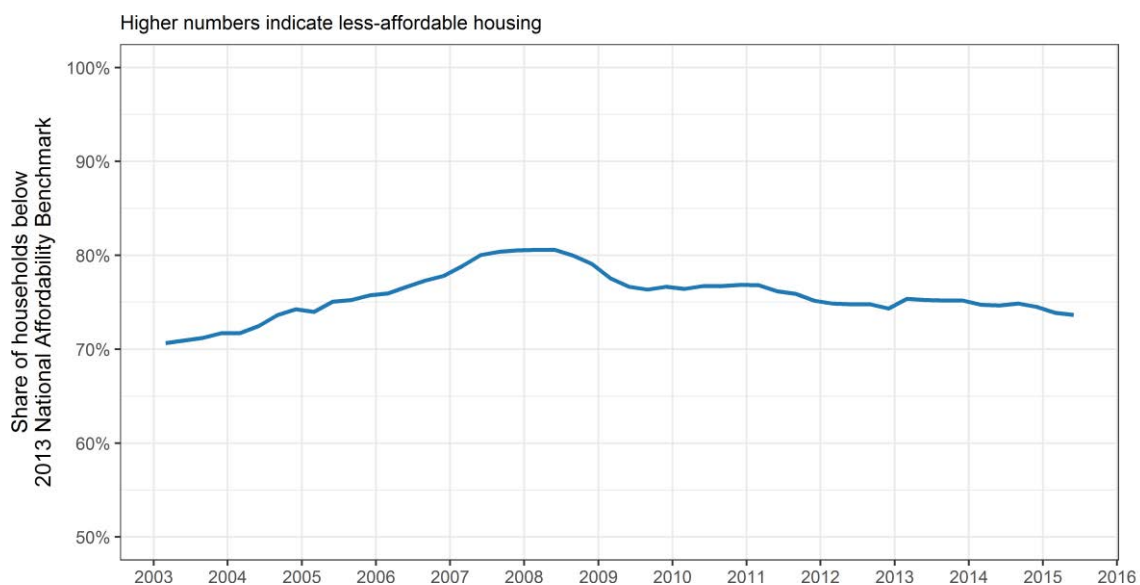


Figure 10: Share of potential first home buyer households below the 2013 National Affordability Benchmark (HAM Buy) in the Wellington region (March 2003 to June 2015)

Housing affordability for first home buyer households in Wellington has followed the national trend across the time series. The proportion of potential first home buyer households below the 2013 National Affordability Benchmark worsened from 71 per cent in March 2003 to 81 per cent in March 2008, and has since improved to 74 per cent in June 2015.

The proportion of first home buyer households in Wellington below the 2013 National Affordability Benchmark is consistently better than the national average, indicating that Wellington has consistently good housing affordability for first time home buyers relative to the rest of New Zealand.

Wellington’s first home buyer housing affordability is better than the national average because it has comparatively higher average household incomes. Between 2003 and 2011, the difference between the proportion of Wellington households below the 2013 National Affordability Benchmark and the national average was around 5 percentage points; this difference grew to 8 percentage points in June 2015. The growing gap is due to Auckland’s deteriorating first home buyer affordability, which has affected the national average in recent years.

Housing affordability for renters in the Wellington region is worse than it was before the global financial crisis, but has improving since 2013

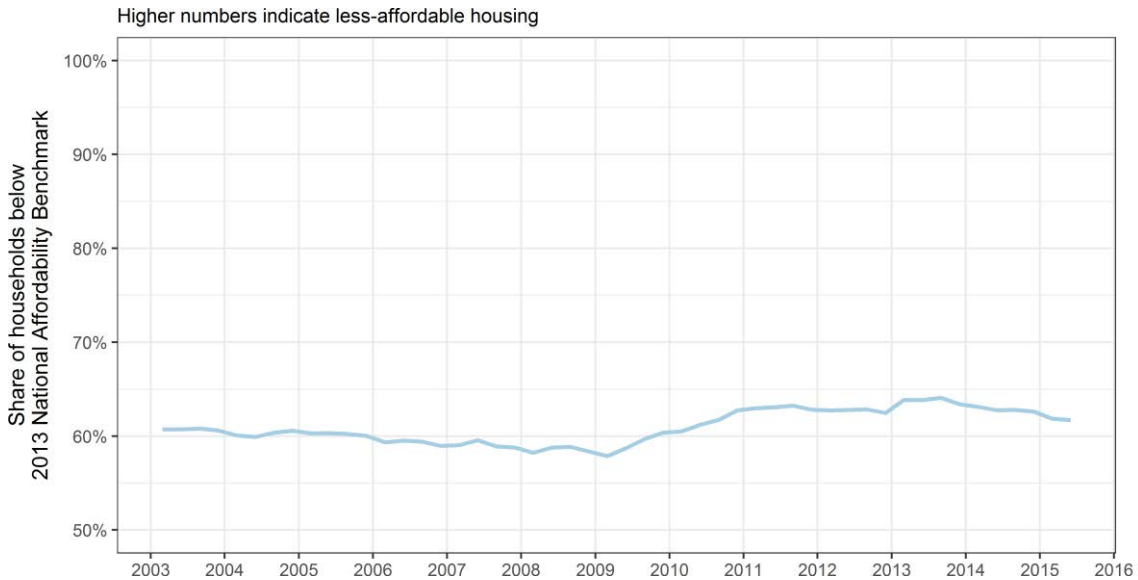


Figure 11: Share of renting households below the 2013 National Affordability Benchmark (HAM Rent) in Wellington (March 2003 to June 2015)

Housing affordability for renting households in Wellington has largely followed the national trend across the time series. The proportion of Wellington renting households below the 2013 National Affordability Benchmark held steady between 2003 and 2009 at around 60 per cent. Between 2009 and 2013 this proportion worsened to 64 per cent, before improving again to 62 per cent in June 2015.

Similar to Wellington's first home buyer housing affordability, rental affordability in Wellington is better than the national average, with the proportion of renting households below the 2013 National Affordability Benchmark generally holding at around 6 per cent better than the national average.

ANNEX 1: REGIONAL AFFORDABILITY BREAK-DOWNS

Table 1: Share of first home buyer and renting households below the 2013 National Affordability Benchmark by region in June 2015

Region	HAM Rent	HAM Buy
Auckland	63.5%	85.7%
Bay of Plenty	74.5%	83.5%
Canterbury	60.9%	77.8%
Gisborne	78.8%	84.1%
Hawke's Bay	80.0%	86.0%
Manawatu-Wanganui	77.3%	81.9%
Marlborough	67.9%	79.7%
Nelson	73.6%	85.1%
Northland	76.6%	84.1%
Otago	75.4%	83.4%
Southland	72.1%	77.1%
Taranaki	66.7%	74.9%
Tasman	69.6%	84.2%
Waikato	71.6%	81.7%
Wellington	61.7%	73.7%
West Coast	66.4%	70.9%
National Total	66.6%	81.4%

ANNEX 2: FURTHER DETAIL ON MBIE'S HOUSING AFFORDABILITY MEASURES

Q: Why do we need another way of measuring housing affordability? What's wrong with the ones we've already got?

A: Other housing affordability indexes that measure housing affordability in New Zealand are focused solely on the affordability of buying houses, whereas MBIE's Housing Affordability Measure (HAM) pays equal attention to housing affordability for those in rental tenure.

Furthermore, other indexes all have certain limitations that the HAM does not. In the Massey Affordability Index, housing affordability is calculated by comparing average weekly earnings with the median house price and the mortgage interest rate. The Interest.co.nz Home Loan Affordability Series calculates affordability by deducting mortgage repayments from the median income for a household with two working adults. The Annual Demographia International Housing Affordability Survey divides a region's median house price by median household income and subsequently calculates how many years' annual household income is necessary to buy a house.

Unlike these measures, the HAM takes account of the fact that not all potential first home buyers are earning the average or median income. It also, like the Interest.co.nz measure, acknowledges that a home valued at the median house price is not necessarily what first home buyers are looking for, but by equivalising household income (see below, 'How are MBIE's HAM indicators calculated?') the HAM also takes account of the fact that not all households are nuclear families.

The other key benefit of HAM is that measures such as the Massey Affordability Index are based on statistical aggregates, whereas the HAM is based on data at the household level. This means that researchers can drill down into the HAM data in order to gain a much more detailed view of affordability in certain areas and for certain groups of people.

Q: How are MBIE's HAM indicators calculated?

The HAM comprises two indicators:

1. **HAM Buy:** housing affordability for first home buyers. This indicator addresses whether a household that is currently renting can feasibly afford to own a home.
2. **HAM Rent:** housing affordability for renters. This indicator addresses whether a household that rents can feasibly afford to live in its current accommodation.

The HAM indicators calculate housing affordability based on the proportion of households that fall below the 2013 National Affordability Benchmark. The benchmark was calculated by looking at the income less housing costs (adjusting for household size) of all households in the Household Economic Survey in June 2013⁴:

1. **HAM Buy** measures the proportion of renting households who would fall below the 2013 National Affordability Benchmark if they bought a lower quartile-valued dwelling in their territorial authority,⁵ based on their income in that quarter and an estimate of what their housing costs would be on purchasing this dwelling.

⁴ The source of the income data used to calculate the thresholds is the equivalised household income from the June 2013 Household Economic Survey.

⁵ Or ward area, within Auckland.

2. **HAM Rent** measures the proportion of renting households who fall below the 2013 National Affordability Benchmark, based on their income and rent in their current home that quarter.

Note that as HAM reports the share of households below the 2013 National Affordability Benchmark, higher HAM values indicate worse housing affordability than lower values.

Q: What data is used to calculate the HAM?

The two HAM indicators are constructed using household-level data from Statistics New Zealand's Integrated Data Infrastructure (IDI). When the HAM (which is currently an experimental statistical series) becomes a Tier 1 official statistic, it will be the first such statistic to be produced using the IDI. Using the IDI means that the HAM data can be matched with other administrative data in the IDI, in order to establish (for instance) whether housing affordability category influences a household's health outcomes.

The main data sources that are used to create the HAM indicators are:

- income data sourced from the income data within the IDI (which originates from tax records collected by the Inland Revenue Department)
- rent data sourced from active bond records within MBIE's Tenancy Bond Database
- home ownership cost data calculated using property sales and value information collected by CoreLogic New Zealand Ltd, as well as interest rate data from the Reserve Bank of New Zealand
- housing service costs data (rates, insurance and body corporate fees) from Statistics New Zealand's Household Economic Survey
- address data from a number of different sources within the IDI, including tax data, social welfare data, health data, education data and accident compensation data.

All this data is linked together at the household level using the street address of the household's primary residence as a matching key. Because the data all comes from administrative data sources, it has high coverage of the New Zealand population.

It should be noted that, because of difficulties reconciling self-employed income, income amounts used in all aspects of the HAM calculations are for before-tax income, and (where relevant) before compulsory student loan repayments are deducted.

Q: When will further data become available?

A: The results of the HAM indicators currently cover the period from March 2003 to June 2015, incorporating new data at quarterly intervals. Updated results will thus be published on a quarterly basis, but the most recent results will always date from between 9 and 15 months prior to the present moment. This is because it takes that long for Statistics New Zealand to receive and process the source data and for it to be linked with the other data in the IDI. Options for reducing this time lag are currently being investigated as an enhancement of the HAM.

ANNEX 3: DISCLAIMERS

The results in this paper are an experimental series produced by the Ministry of Business Innovation and Employment. They are not a Tier One Official Statistic, nor have they been endorsed by Statistics New Zealand. They have been created for research purposes from the Integrated Data Infrastructure (IDI), managed by Statistics New Zealand.

The opinions, findings, recommendations, and conclusions expressed in this paper are those of the author(s), not Statistics NZ.

Access to the anonymised data used in this study was provided by Statistics NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business, or organisation, and the results in this paper have been confidentialised to protect these groups from identification.

Careful consideration has been given to the privacy, security, and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from www.stats.govt.nz.

The results are based in part on tax data supplied by Inland Revenue to Statistics NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes.

Any person who has had access to the unit record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.