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Who can buy Auckland's houses?

- We know that housing affordability has declined considerably since 2012 for all income groups.
- But the impact has been varied across income groups – with middle-income groups facing the largest declines in affordability of late.
- At the cap price of \$650,000, even Kiwibuild homes would only be affordable to the top 40% of Auckland households.

Auckland's housing challenges are well documented and the various demand, supply, tax and regulatory factors that have led to rapid price escalation over the last few years have been widely discussed. But what do they mean to Aucklanders across income bands in terms of what they can afford?

Auckland house sales data shows that the median dwelling price increased from \$494,000 in 2012 to \$847,000 in 2017 – an increase of 71%.

During this period, the median household income increased from \$78,100 to \$97,300 – or just 25%.

How do we measure affordability?

There are different ways in which housing affordability can be measured. In this paper, **housing affordability is measured by the highest percentile of house price that is affordable to a household.** We are measuring the housing options households can access and matching buyers across income groups with what they can afford.

Our focus is on the affordability of home ownership – as against being able to rent – although renting is an increasingly important part of the market.

Housing affordability is not as simple as comparing house prices to incomes, as we have discussed in a [previous Insights paper](#). Although useful as an indicator of the demand and supply forces in the housing market, it ignores the impact of interest rates on the ability to meet mortgage repayment obligations. Our analysis looks at mortgage serviceability instead.

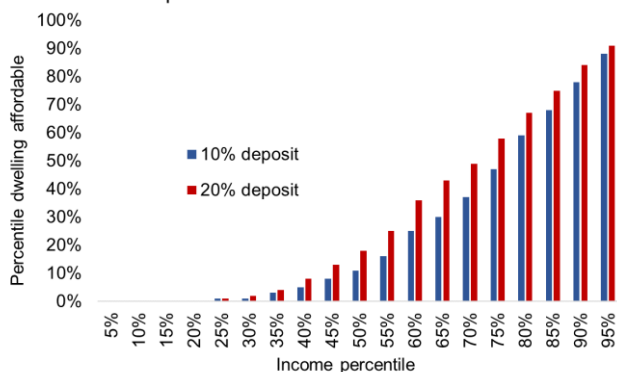
Interestingly, the mortgage interest rate that we have used (the floating first mortgage new customer housing rate) was almost identical in 2012 and 2017, which means that differences in affordability were driven purely by changes in house prices and household incomes. The floating rate is much higher than the weighted average borrowing rate across borrowers, which provides a de facto “stress test” on the ability to meet repayment obligations.

As an aside, one of the other big challenges in affordability is saving for a deposit. We acknowledge that even saving a deposit of \$85,000 to \$170,000 for a median house is an unrealistic challenge for many, which is why the Chief Economist Unit has developed a [Serviceability Affordability Model](#) that takes this into account as well. But for the purposes of this report, we assume people can gather the deposit required, which is an important caveat to the analysis that follows.

What we found

In 2017, a household on Auckland’s median household income (50th percentile income) could afford only the 11th percentile house with a 10% deposit and the 18th percentile house with a 20% deposit. Households with incomes below the 35th percentile had practically no likelihood of being able to purchase a freehold home (whether a stand-alone house, townhouse or apartment) with even a 20% deposit. Households that earned more than 95% of other Auckland households could afford houses in the 88th to 91st percentile, depending on their deposit size.

Affordable house percentiles in 2017

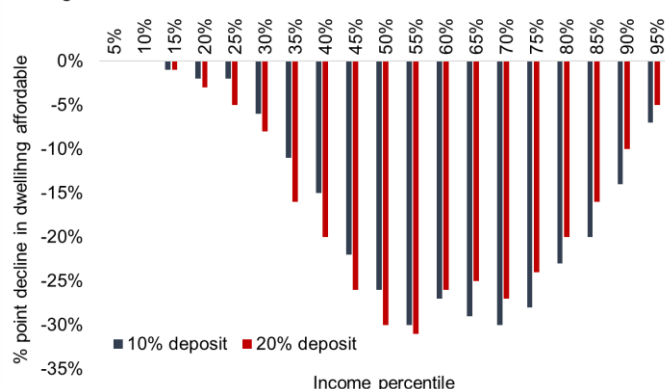


Source: Chief Economist Unit, Auckland Council; Stats NZ

We also examined how affordability by income percentile has changed over the five years since 2012. Practically every household income group

saw the range of houses they could afford fall sharply. But the biggest declines were for households in the 50th to 75th percentiles. These middle-income groups have been increasingly locked out of home ownership.

Change from 2012 to 2017



Source: Chief Economist Unit, Auckland Council; Stats NZ

What does this mean?

First, the graphs point out that affordability has fallen sharply across all income groups.

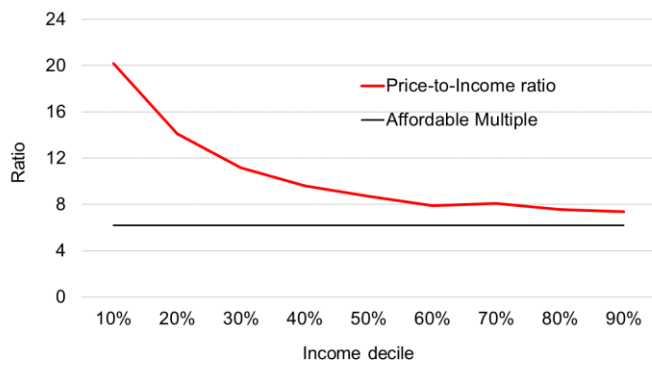
Second, households in the bottom 35% of incomes are unlikely to be able to buy anything.

Third, looking at the underlying data, we can determine that a household would need to be in approximately the 55th percentile of household income (\$105,200) with a 20% deposit to afford a house at the Kiwibuild “affordable home” price cap of \$650,000. With a 10% deposit, this price point would only be affordable to a household on the 60th percentile income (\$118,300 a year). Kiwibuild is a laudable initiative and does aim to deliver some houses below this price cap. But our analysis shows that a considerable share of Kiwibuild houses would need to be delivered for far less than the cap to meet the housing needs of even households above median incomes.

Another way of looking at affordability across income deciles is to ask how many years’ income a household would require to buy a house from a corresponding decile. In 2017, using the same assumptions as we have above, households could afford to a home that was up to 6.2 times their household income, assuming a 20% deposit.

But in reality, we found that households across all income deciles could not afford houses within the same decile of the housing stock.

Price-to-Income ratios by decile



Source: Chief Economist Unit, Auckland Council; Stats NZ

Put another way, there is a large mismatch between your income decile, and whether you can afford a house in the same decile.

To illustrate what this means, households on the 60th percentile household income, can only afford houses in the 36th percentile of housing stock. A 60th percentile house costs 8.2 times their household income, rather than the 6.2 times they can afford.

To summarise

Housing affordability has deteriorated considerably in Auckland over the five years from 2012 to 2017, and its impacts have been felt to varying degrees by different income bands. The highest declines in affordability were felt at income levels between the 50th and the 75th percentiles. Even the Government's affordable housing programme will face challenges in delivering housing to a wide income band, given the constraints on delivering housing that more households can actually afford.

How we did it:

House prices come from District Valuation Roll (DVR) sales records. We included all arms-length sales of non-vacant freehold residential properties. Records were excluded if the sales price was below \$100,000 as these are highly likely to be non-market transactions. However, we tested the results without this exclusion and found that it has a negligible impact on the overall distribution.

Income deciles are from customised Statistics NZ's Household Economic Survey data. The income data is for year ended June while house price data is for calendar years. We evaluated affordability using 10% and 20% deposits.

We assumed that households dedicate 35% of their income towards mortgage repayments. In reality, how much a household can spend on housing costs will vary substantially.

The assumed mortgage term is 30 years. The mortgage rate used is the RBNZ's "first mortgage new customer housing rate". The average of this rate for the 2012 calendar year was 5.86%. The average for 2017 was 5.81%.

The analysis can be easily replicated for different parameter values than the ones used here.

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