



Time-To-Deposit Index

New Zealand | Q3 2023

Released October 2023



EXECUTIVE SUMMARY

The reality for first-home buyers: An impossible climb.

The Aera Time-To-Deposit Index aims to give first-home-buyers a more realistic picture of the time it takes to save for their house deposit. The index resolves the signature issue with other publicly available measures, which don't factor in income increases, interest earnings on savings and crucially, ongoing house price increases.

FINDINGS IN BRIEF

It's now technically impossible for most first home buyers to save a deposit on the average Kiwi home.

Using traditional savings assumptions, median-income first-home buyers starting savings from scratch today (without the bank of Mum and Dad or similar) will never be able to save enough for a 20% deposit for an average-valued house.

Other mainstream models don't paint a fair picture of the situation.

One major mainstream model predicts a person will reach a 20% house deposit for an average national valued house, in 9.6 years. While this optimistic figure may provide hope for the prospective saver, the hope is unfortunately false and based on unrealistic data.

New Zealand house prices have only dropped three times in the last thirty years.

Drawing on REINZ median house price data going back to 1993 shows that annual house prices have only dropped three times, in 2000, 2008 and the most recent downturn in 2022

Methodology

THE BASE DATA:

Aera's Time-To-Deposit Index draws on publicly available information about household income averages, expected interest earnings on savings, house price growth rates and median house prices. Our assumptions around factors such as deposit size and savings rate align with commonly cited measures.

HOW IS IT CALCULATED?

The index uses a starting point in line with the current mainstream measures, namely: how long does it take to save 20% deposit, for the median house price, based on an average household income level saving 15% of gross income.

We apply a savings rate to account for the fact that as the first home saver is saving for their deposit, it is earning interest. We have used the average 6 month term deposit rate over the period January 2000 to June 2023.

We apply a growth rate to their income to account for the fact that their earnings should rise over time. We have used the annual wage inflation rate using Statistics New Zealand's 'Labour Cost Index from January 2000, to June 2023.

As these savings grow, they build up the first home saver's deposit balance. At the same time, the 20% deposit goal is a moving target and also grows. To calculate this, we apply the historical house price growth rate from January 2000 to June 2023 to the starting price of the house.



This shows the dollar value of the 20% amount needed over the years as the deposit is being saved - as this figure is also something that is not fixed in time.

DISTINGUISHING AERA'S INDEX FROM MAINSTREAM MEASURES:

Other models of measuring housing affordability suggest home buyers in Auckland can expect to save a deposit in 10.7 years, nationally this drops to 9.6 years.

However, there are two major flaws in the incumbent economic models. The mainstream models fail to factor in any growth in household income and house prices, nor do they factor in any savings growth while a first home saver is building their deposit.

Aera's Time-To-Deposit Index seeks to give a more accurate reflection for first-home-buyers by accounting for all of these critical factors. The additional assumptions used are laid out in the sections below to illustrate the picture for Auckland and on a National basis.

Side by Side Comparison

	Mainstream Measure	Aera Time-to-Deposit Index
House value	Corelogic average house price index	Corelogic average house price index
Average annual household income	Infometrics household income series	Infometrics household income series
% of household income saved (before tax)	15%	15%
Growth rate of deposit savings	Not factored into model	Historical RBNZ 6 month term deposit rate (Jan 2000-Jun 2023)
Growth in household income	Not factored into model	Historical Statistics New Zealand Labour Cost Index' growth rate (Jan 2000-Jun 2023)
Annual house price growth	Not factored into model	Historical REINZ house price index growth rate (Jan 2000-Jun 2023)



One major mainstream model predicts a median-income person will reach a 20% house deposit for an average national valued house in 9.6 years. While this optimistic figure may provide hope for the prospective saver, the hope is patently unrealistic.

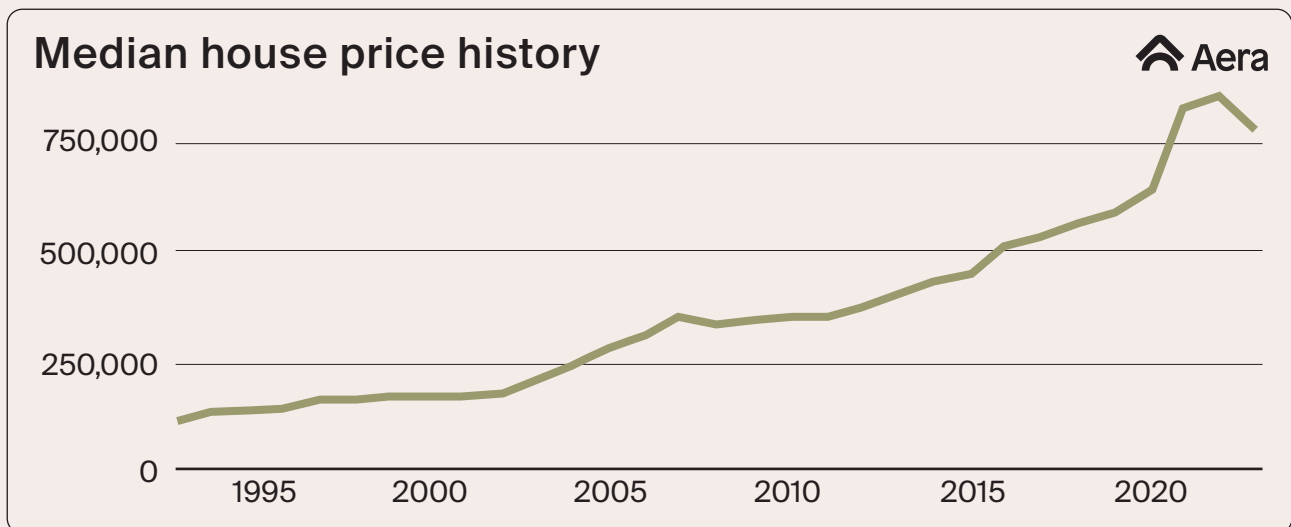
To illustrate the implausibility of saving for the average national home in just 9.6 years, Aera has applied the savings rates and earnings increases required to make the 9.6 year number true. The model shows that a saver must earn compound interest on savings of 9% per annum over the period, and see an 8% increase of household income year on year.

Relying on 9% annual savings returns and a consistent 8% annual income growth is not a realistic expectation for a population level economic model.

House price increases unrelenting

Despite recent downturns in the market, the data shows **median house prices almost never drop year-on-year**. Just three times since 1993 have year-on-year national prices dropped, and these dips in prices have done little to dent the long-term growth rate.

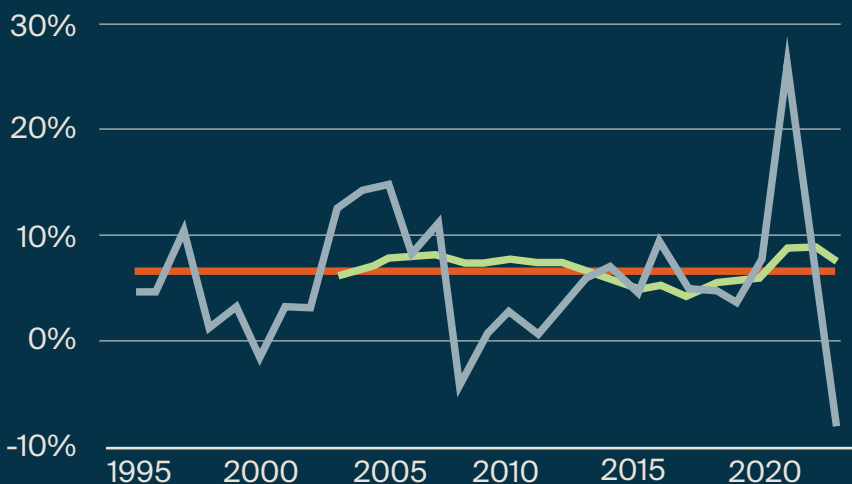
Over the last 30 and 20 years, the median national house price increased by 6.58% and 6.78%, respectively – and the last decade is showing a growth of 7.04%. This supports the accepted rule of thumb that the median house price doubles every 10 years.



Source Data: REINZ House Price Index

Property price annual growth rate

— Historical average: 6.58%
 — Annual growth rate
 — Discrete moving average (10yr)



Source Data: REINZ House Price Index



Median house prices (almost) never go down year-on-year

It's happened just three times since 1993.

+ 7.04%

increase in the median house price since 2013

Despite recent drops in house prices.

Time to deposit - Auckland

CALCULATIONS ASSUME FIRST HOME BUYERS:

Need a 20% deposit

Earn the Auckland median household income of \$157,019

Are saving 15% of pre-tax income

Will experience median household income growth of 2.33% pa

Are buying an average Auckland house priced at \$1,265,438

Have no other source of financing

Earn 4.5% pa on savings in term-deposit account

∞ years
to save

+/- % on previous quarter

6.40%pa

Assumed house-price growth

DISCUSSION:

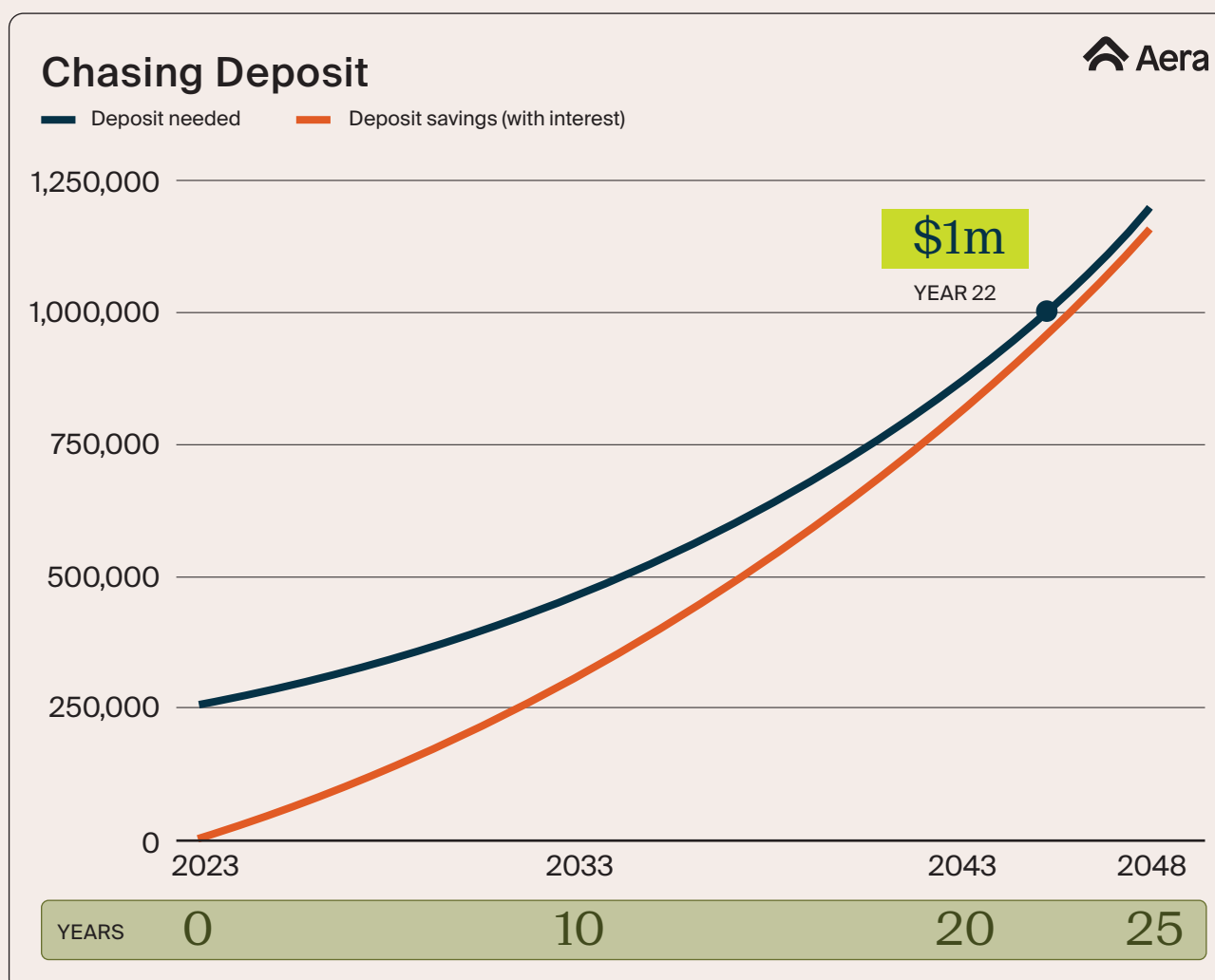
With no other sources of funding, from a standing start today Auckland home buyers' savings will never catch up on continual annual increases in the average house price driving the 20% deposit target ever higher.

In Auckland, the Time-To-Deposit Index factors in a 4.5% pa interest rate on savings, a 2.2% pa increase in household income, and a 6.4% annual increase in house prices.

Auckland Market Assumptions

ACTIVITY	MEASURE USED	FIGURE	SOURCE
Savings growth of first-home savers' deposit	Historical average of 6 months term deposit savings rate	4.5%* pa	Reserve Bank of New Zealand
House price growth rate	Real Estate Institute of New Zealand House Price Index (REINZ HPI)	6.4%* pa	REINZ
Household income growth	Labour Cost Index	2.33%* pa	Statistics New Zealand
Average house price	Average house prices from CoreLogic House Price Index	\$1,265,438	CoreLogic
Income	Average household income cited in CoreLogic Housing Affordability Reports Q2 2023	\$157,019	CoreLogic

*Period covering Jan 2000 to June 2023 # Median house price as at June 2023



Time to deposit - National

CALCULATIONS ASSUME FIRST HOME BUYERS:

Need a 20% deposit

Earn the national median household income of \$126,805

Are saving 15% of pre-tax income

Will experience median household income growth of 2.2% pa

Are buying an average national house priced at \$911,222

Have no other source of financing

Earn 4.5% pa on savings in term-deposit account

∞ years
to save

+/- % on previous quarter

6.85%pa

Assumed house-
price growth

DISCUSSION:

With no other sources of funding, from a standing start today National home buyers' savings will never catch up on continual annual increases in house prices driving the 20% deposit target ever higher.

Nationally, the Time-To-Deposit Index forecasts include a 4.5% pa interest rate on savings, a 2.33% pa increase in household income, and a 6.85% annual increase in house prices.

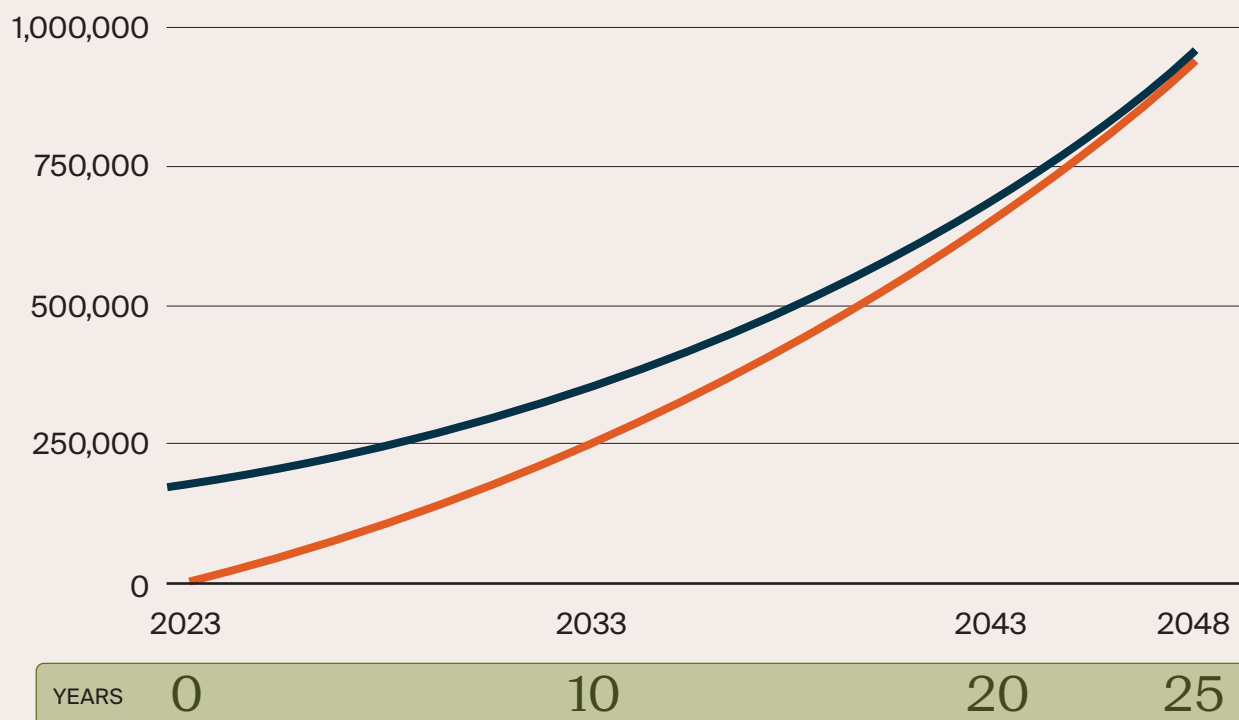
National Market Assumptions

ACTIVITY	MEASURE USED	FIGURE	SOURCE
Savings growth of first-home savers' deposit	Historical average of 6 months term deposit savings rate	4.5%* pa	Reserve Bank of New Zealand
House price growth rate	Real Estate Institute of New Zealand House Price Index (REINZ HPI)	6.85%* pa	REINZ
Household income growth	Labour Cost Index	2.33%* pa	Statistics New Zealand
Average house price	Average house prices from CoreLogic House Price Index	\$911,222	CoreLogic
Income	Average household income cited in CoreLogic Housing Affordability Reports Q2 2023	\$126,805	CoreLogic

*Period covering Jan 2000 to June 2023 # Median house price as at June 2023

Chasing Deposit

— Deposit needed — Deposit savings (with interest)



Aera insights and recommendations

With the flawed methodology behind other publicly available models, buyers could be forgiven for thinking all they needed to do was set and forget a savings plan. Our more realistic figures give first-home buyers the truth of what they're up against so they can make a plan with more chance of success.



1. The issues make entering the housing market incredibly difficult without additional outside support. Where possible, Kiwis should try to buy when younger, while the need for less space gives more flexibility in first home options before needing to upgrade for a larger family house over time.
2. Home buyers should also aim to enter the market as soon as possible to begin benefiting from the average 6.85% pa increase in their equity they can expect in the long term. They should be looking not for a dream house, but a first step into the market priced well below the average.
3. First-home buyers must ensure they get the highest possible rate of returns on their savings. Looking beyond traditional term bank accounts as a primary means of gathering a deposit should now be an essential part of any first home savers plan. They should also consider options that reduce the overall deposit requirements through considering new builds, co-ownership, co-investment arrangements, and the Aera Ownership Accelerator™.

NOTES

The LCI ("Labour Cost Index") has been chosen to model household income growth which is based on the growth in income in a similar role. Many people saving for a home may be at a stage in their career where they may be expecting a potentially higher income growth rate than the LCI.

Average house price has been used for the headline index measures, to retain comparability with the size of the deposit-target in the mainstream indices. The use of median or 'starter home price' examples, will produce a different time-to-deposit.

The thirty year historical house price growth rates may or may

not be similar in years to come. Changes in interest rate environments, migration levels, urban planning, inflation impacts on building supplies and other housing inputs may change future house price growth rates in either direction.

Deposit savings rates may grow faster, with other asset classes.

Infometrics model peer review

www.infometrics.co.nz

Aera's model has been reviewed by Infometrics, with the model's calculations and outputs verified as being mathematically correct based on the input variables provided. The primary input variables below have also been verified against the respective source data:

- Historical term deposit savings rates
- Historical house price growth rate
- Average house price data
- LCI growth rate
- Average household income levels

Infometrics expresses no view on any of the input assumptions used in the model

About Aera

www.aera.nz

Aera is the bank-alternative for first home savers. We are a financial services platform helping Kiwis with a great income get over the deposit hurdle and into their first home faster through two unique offerings –

- **Deposit Accelerator™** – savings accounts providing access to the most competitive targeted returns in New Zealand.
- **Ownership Accelerator™** – a breakthrough co-investment product, enabling first-home buyers to get into their first home starting with as little as 2.5% deposit.



Aera is backed by private investment firms Still and Icehouse Ventures and charitable trusts Whakatupu Aotearoa Foundation and Aera Foundation. Aera is built on banking software powering 15 million customers worldwide. Our services are delivered via access to major multi-billion dollar wealth management and financial institutions.



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