



Australian Institute for Progress

# Housing Affordability Index

December Quarter, 2019

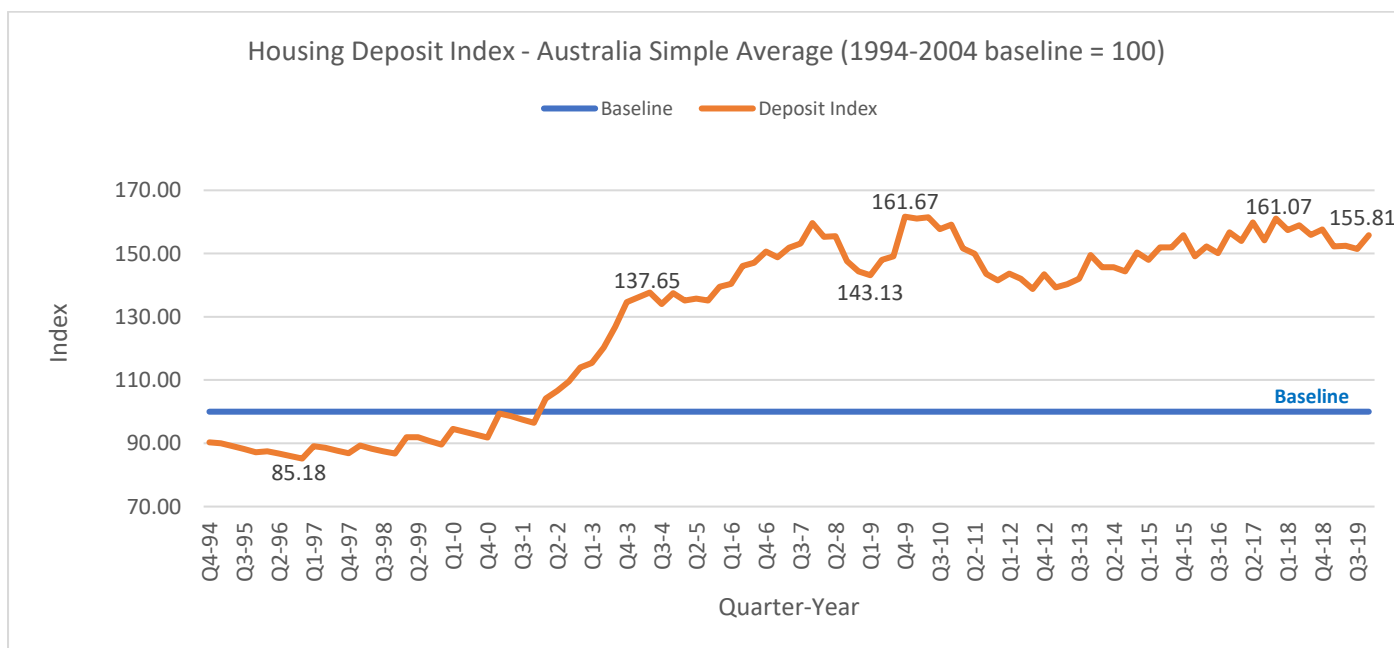
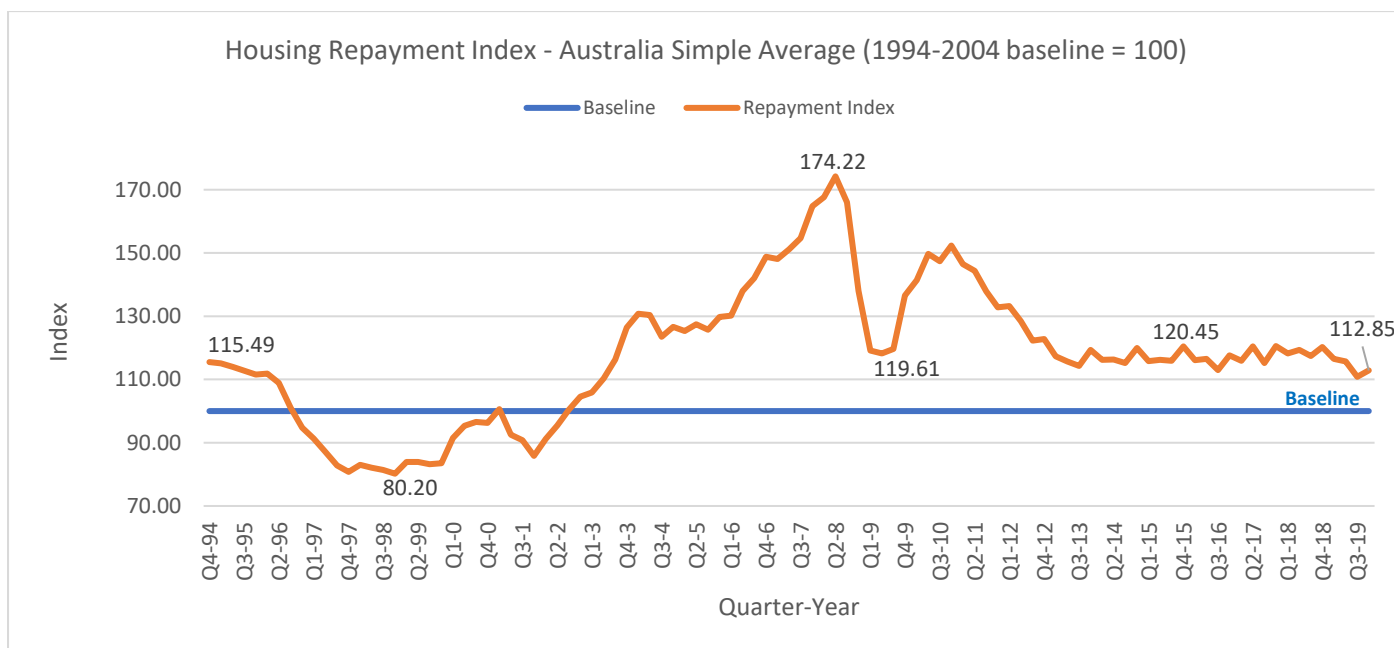
A Quarterly Review of Housing Affordability

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### Highlights

- Average repayment costs have increased over the 4th quarter of 2019, with the repayment index increasing from 110.84 to 112.85. The cost of average repayments is now at 2016 Q3 levels.
- Deposits costs have also increased over the 4th quarter. The deposit index increased from 151.45 to 155.81 over 2019 Q3.
- The increase in deposit costs is attributable to an increase in median house prices of \$25,525 across Australia, which is in part offset by an increase in average wages of \$20.6 per week (\$1072 per year).
- While a decrease in variable owner-occupier interest rates from 4.25% to 4.15% has limited the increase in repayment costs, the 4.3% rise in median house prices has led to an overall decrease in affordability
- The gap between repayment and deposit costs has widened, with the relatively high increase in deposit costs being bad news for first home buyers looking to enter the housing market



## Summary

The 2019 Quarter 4 Australian housing market saw a decrease in the affordability of both housing deposits and repayments – with the housing repayment-deposit gap widening. While housing repayments are still relatively low compared to the 2003 to 2012 period, the recent increase in repayment costs is cause for concern when considering the significant increase in average home loan sizes across Australia. The below table highlights the fragility of the housing market in Australia, with each State at least doubling its average loan size between 1994 and 2018.

<i>Avg. Loan Size</i>	<i>2018</i>	<i>1994 (CPI Adj.)</i>	<i>\$ Increase</i>	<i>% Increase</i>
<i>NSW</i>	\$448,600	\$192,130	\$256,470	%133.5
<i>VIC</i>	\$391,200	\$154,797	\$236,403	%152.7
<i>QLD</i>	\$343,300	\$162,263	\$181,037	%111.6
<i>SA</i>	\$298,900	\$144,963	\$153,937	%106.2
<i>WA</i>	\$337,500	\$154,068	\$183,432	%119.1
<i>TAS</i>	\$273,600	\$114,185	\$159,415	%139.6
<i>NT</i>	\$303,700	\$169,912	\$133,788	%78.7
<i>ACT</i>	\$384,700	\$173,008	\$211,692	%122.4

We measure repayment affordability by using ABS statistics for median house prices and calculating the ratio of repayments to average weekly earnings and expressing it as a percentage of the average for the first 10 years of the series to produce an index figure. We measure deposit affordability by calculating the ratio of an average 20% deposit to average weekly earnings and expressing it as a percentage of the average figure for the first 10 years of the series to produce an index figure.

	<i>Deposit Index</i>	<i>Repayment Index</i>
<i>Sydney</i>	155.4 (+7.1)	113.4 (+4.1)
<i>Melbourne</i>	182 (+4.2)	132.7 (+1.7)
<i>Brisbane</i>	138.6 (-0.4)	99.9 (-1.3)
<i>Adelaide</i>	170 (+0.5)	116.7 (-0.9)
<i>Hobart</i>	192.5 (+6.8)	138.5 (+3.5)
<i>Darwin</i>	117.5 (-2.3)	84.2 (-2.5)
<i>Canberra</i>	173.1 (+12.5)	125.6 (+7.8)
<i>Perth</i>	133.5 (+5.3)	96.6 (+2.9)
<i>Average</i>	155.8 (+4.4)	112.8 (+2)



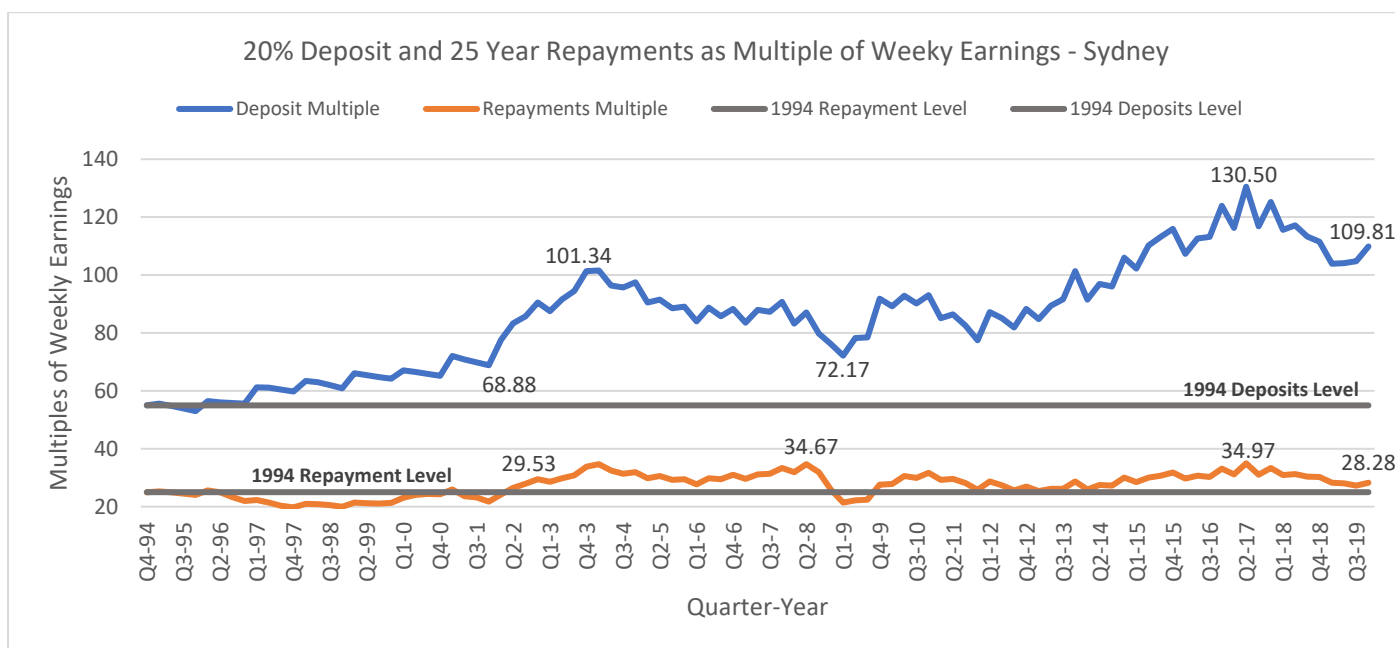
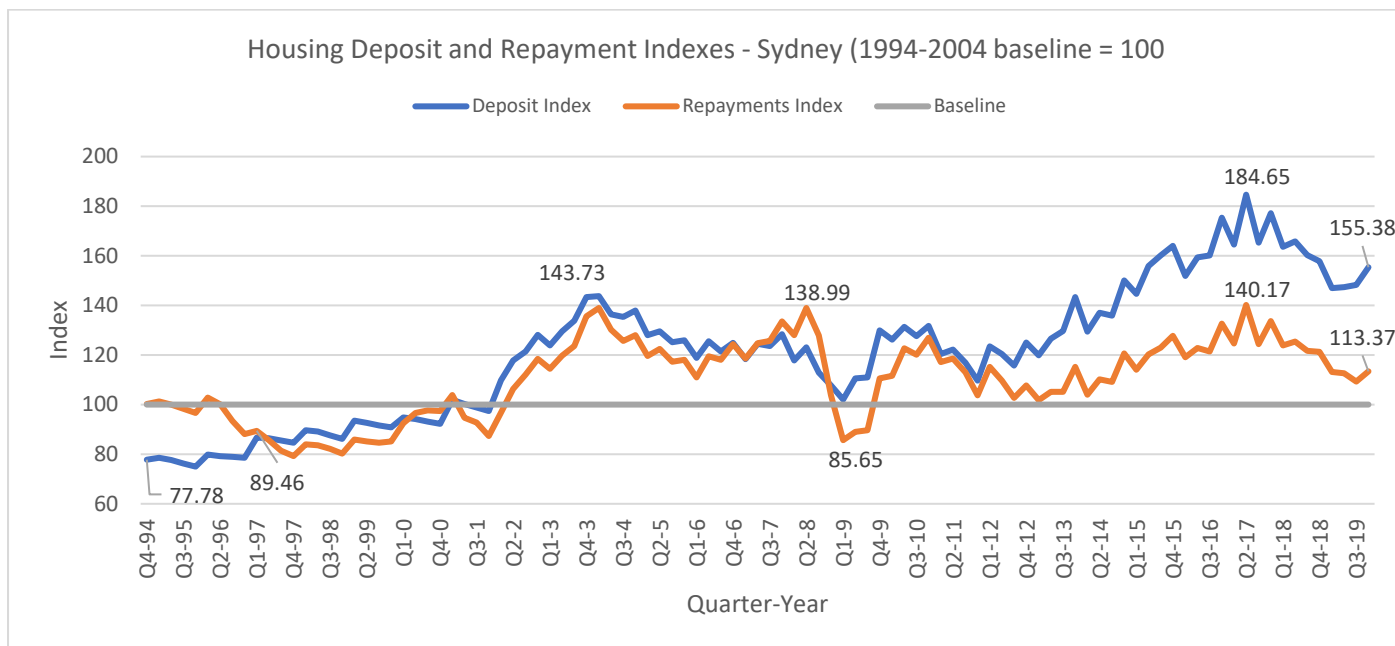
Graham Young  
Executive Director  
Australian Institute for Progress



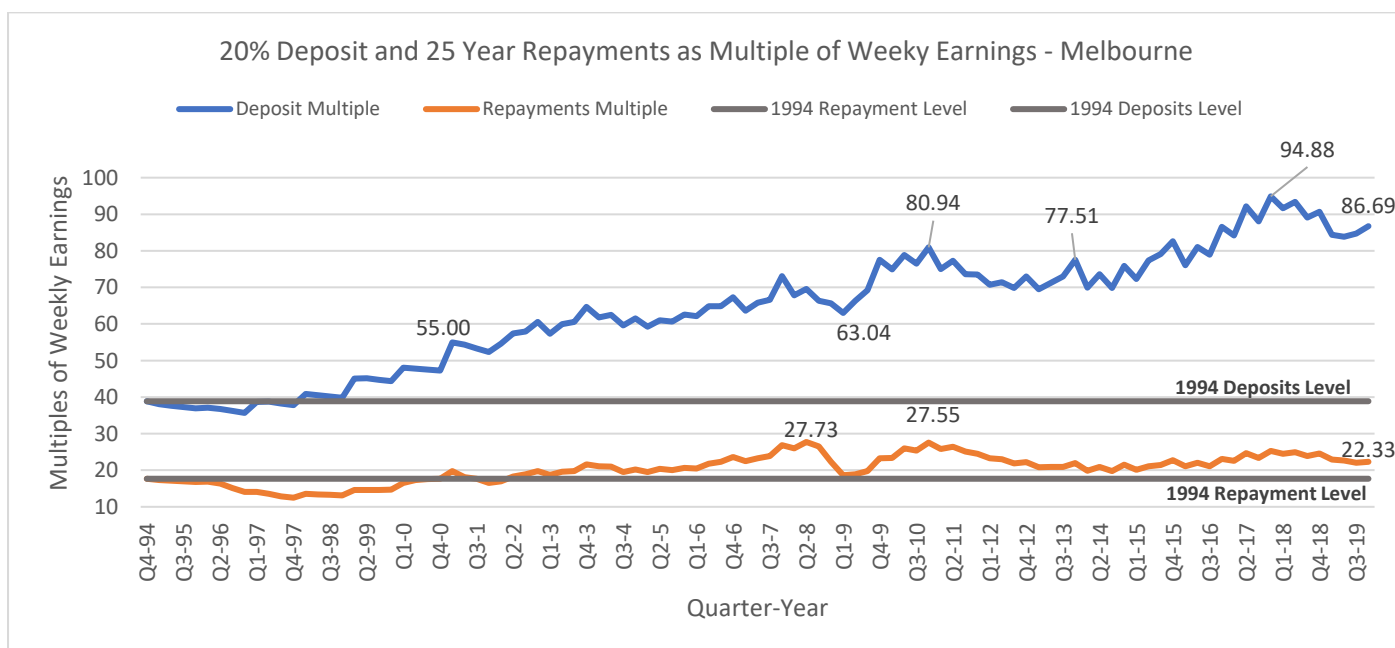
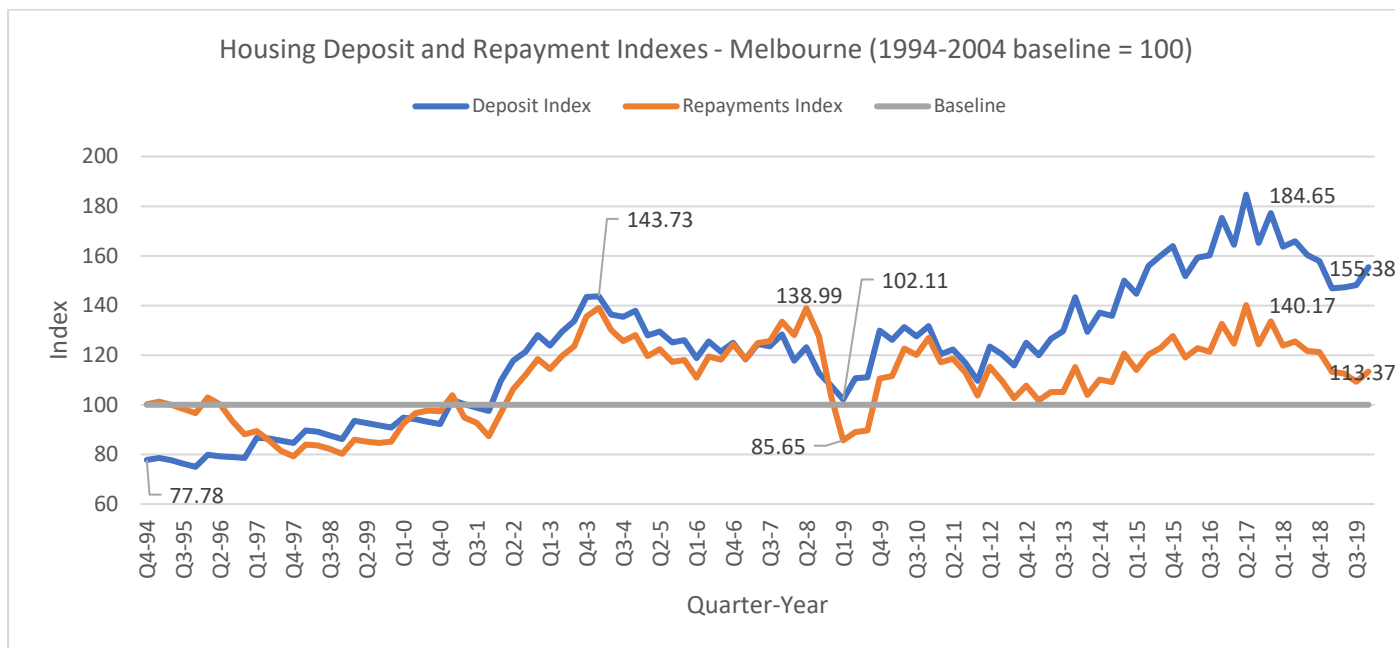
Nicholas Umashev  
Economic Researcher  
Australian Institute for Progress

Deposit and Repayment Costs by State

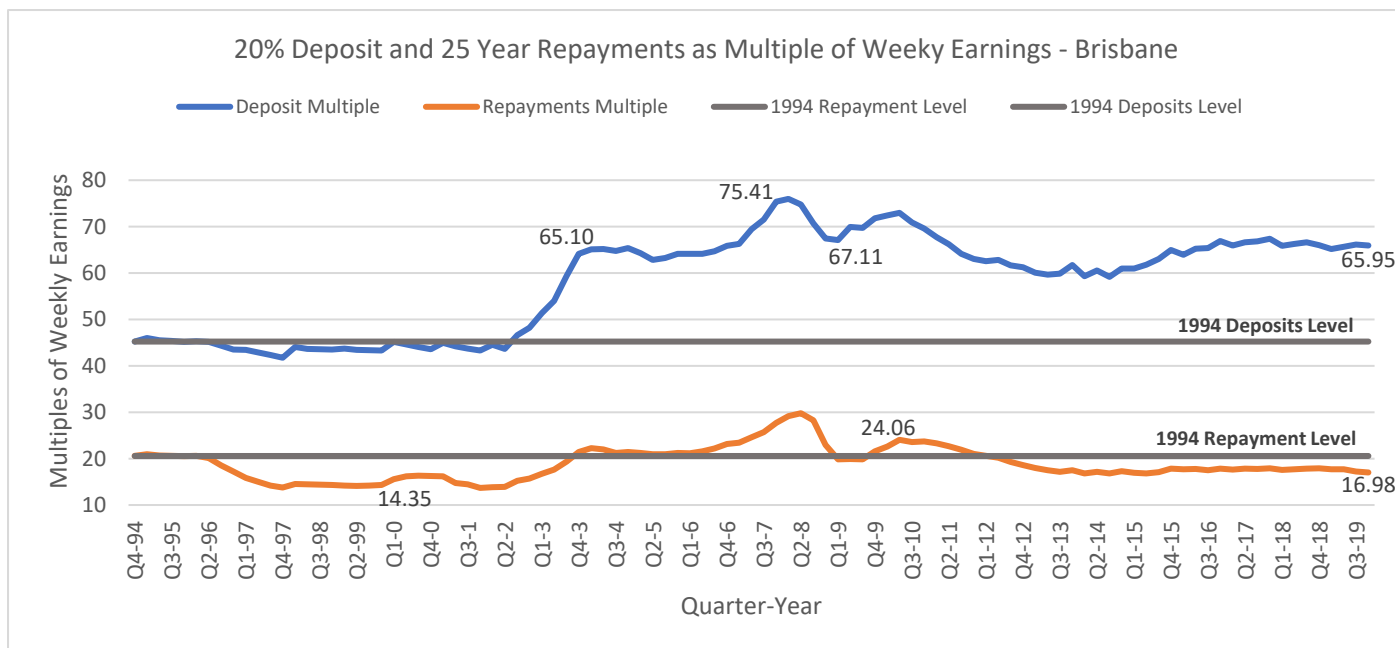
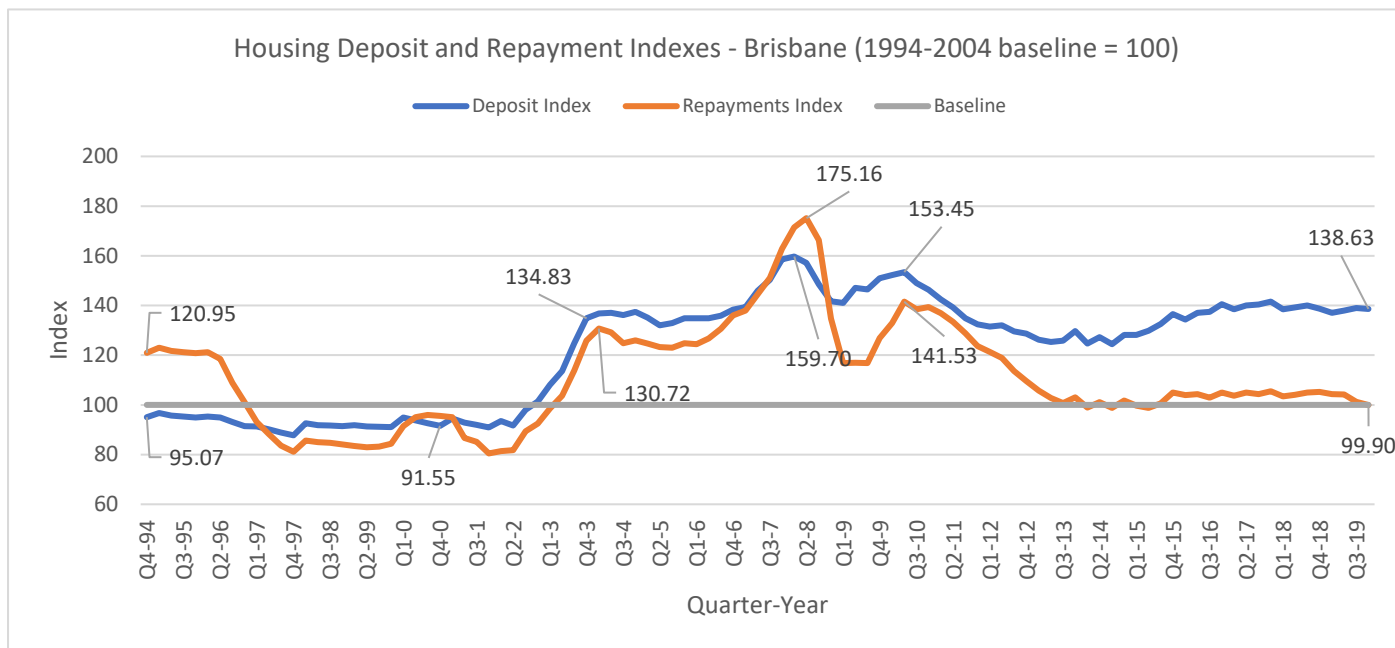
Sydney



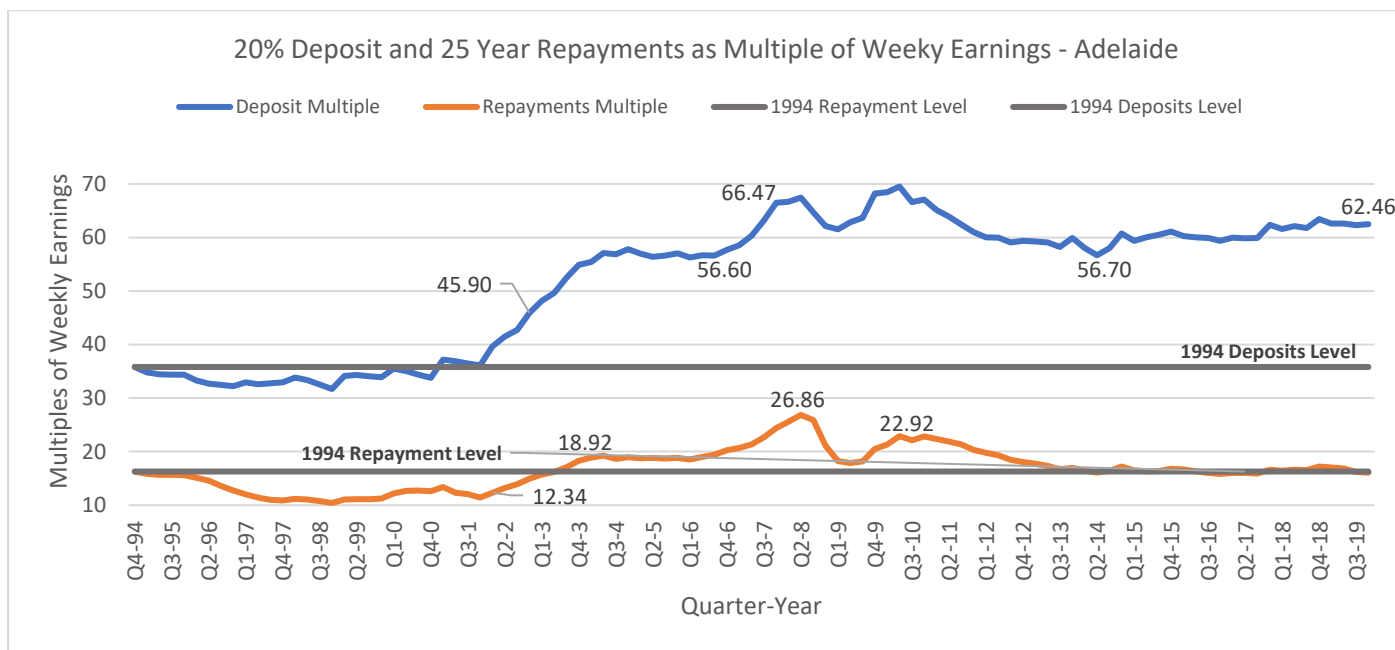
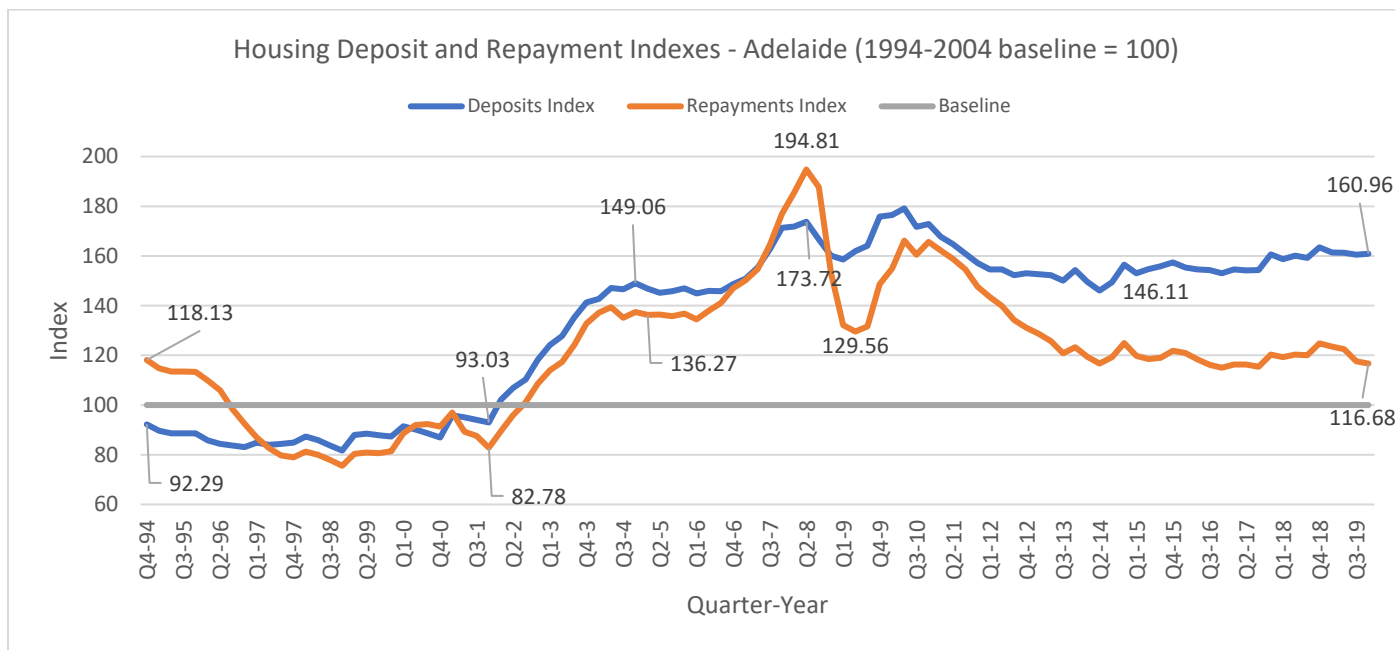
Melbourne



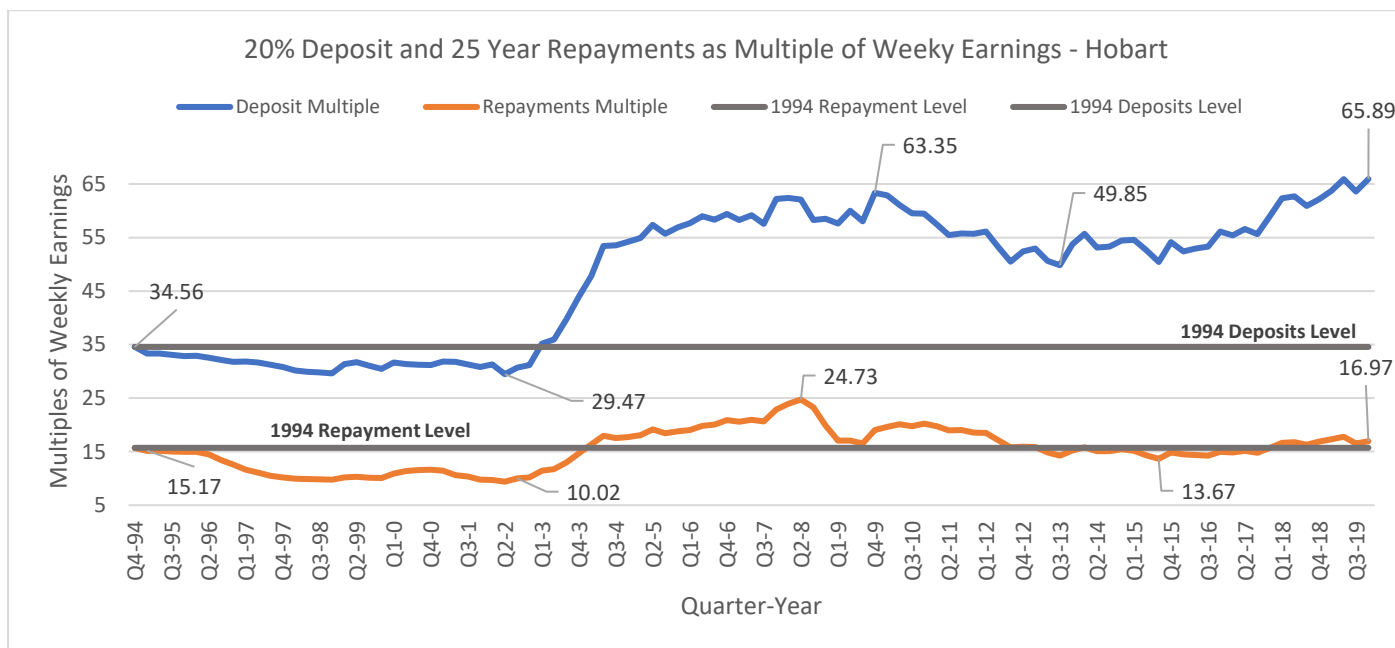
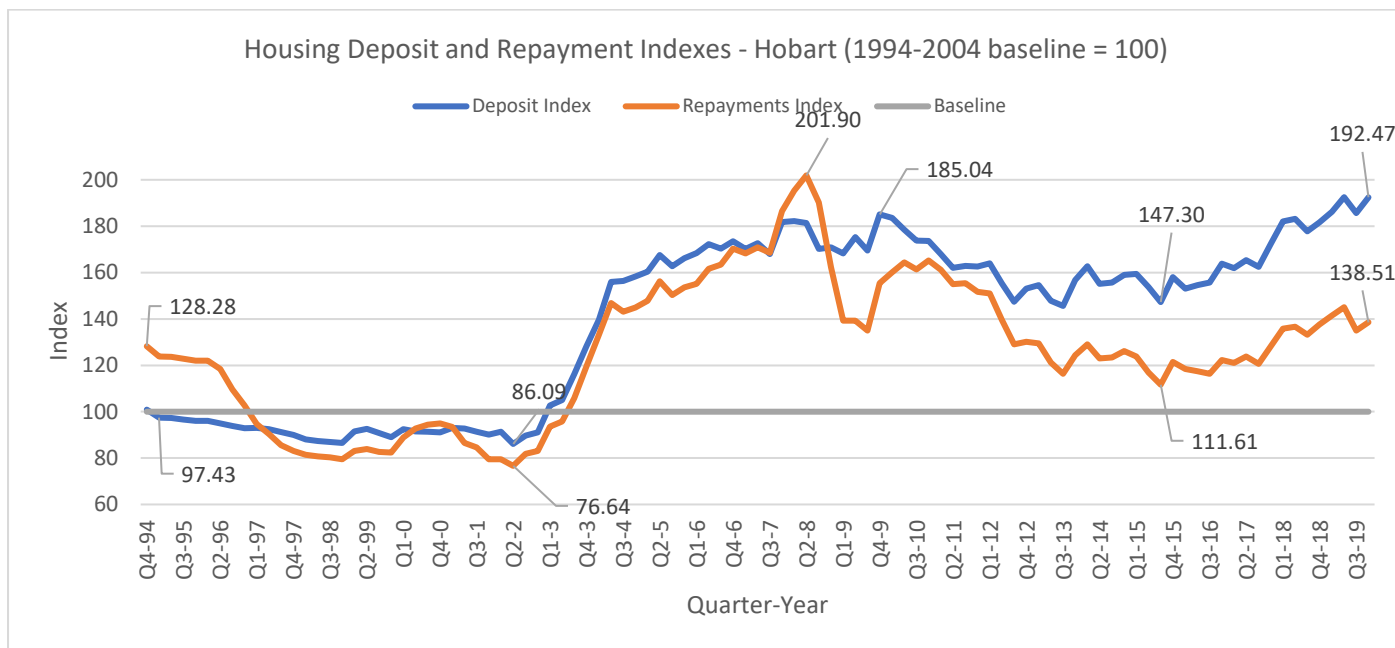
Brisbane



Adelaide

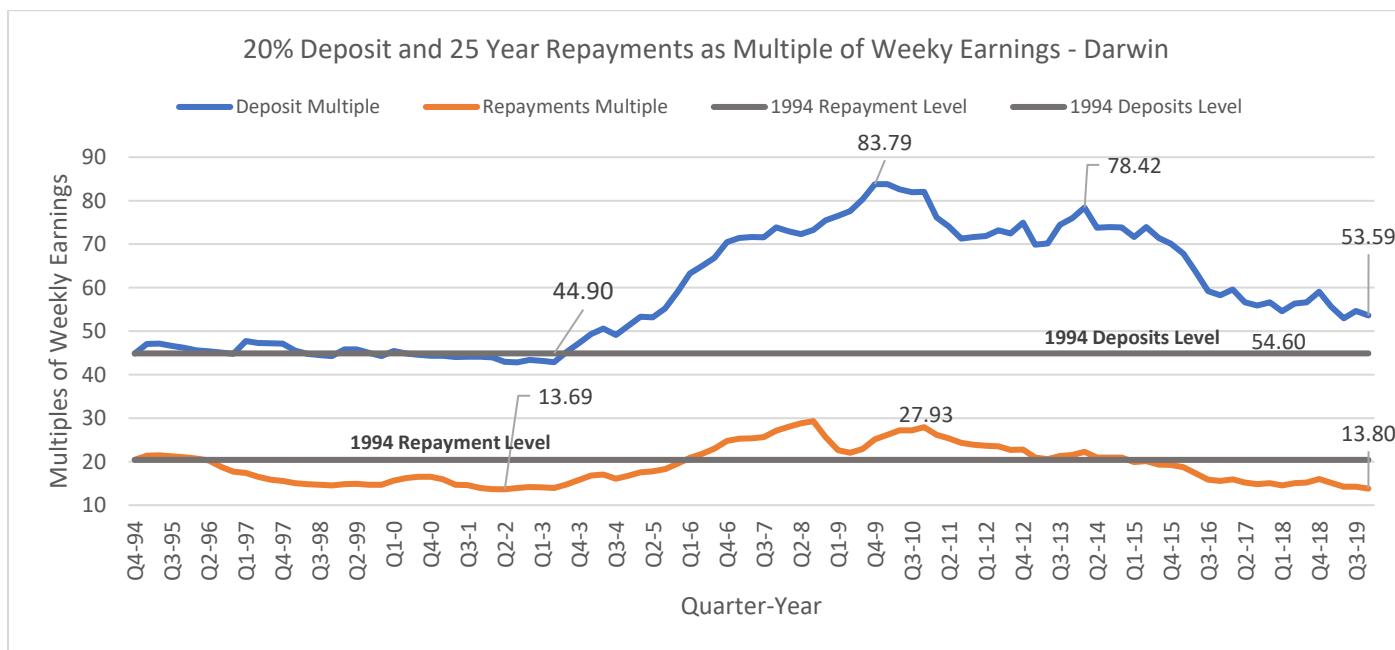
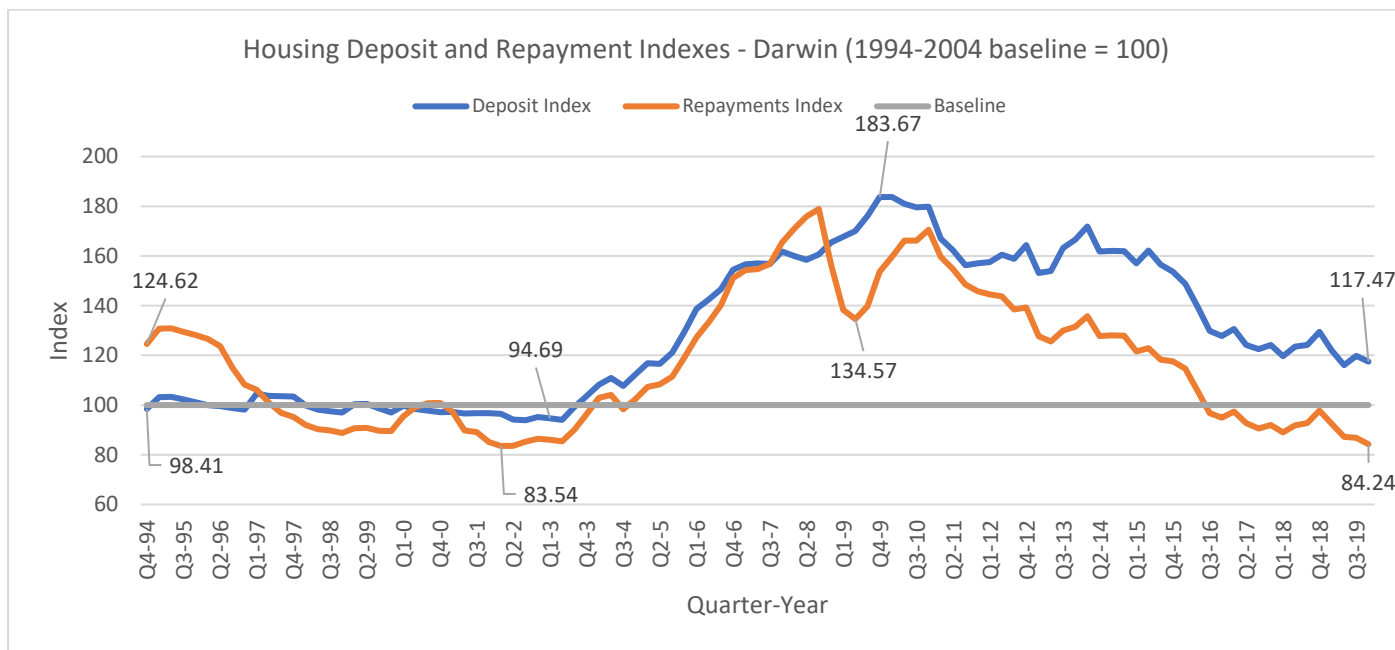


Hobart

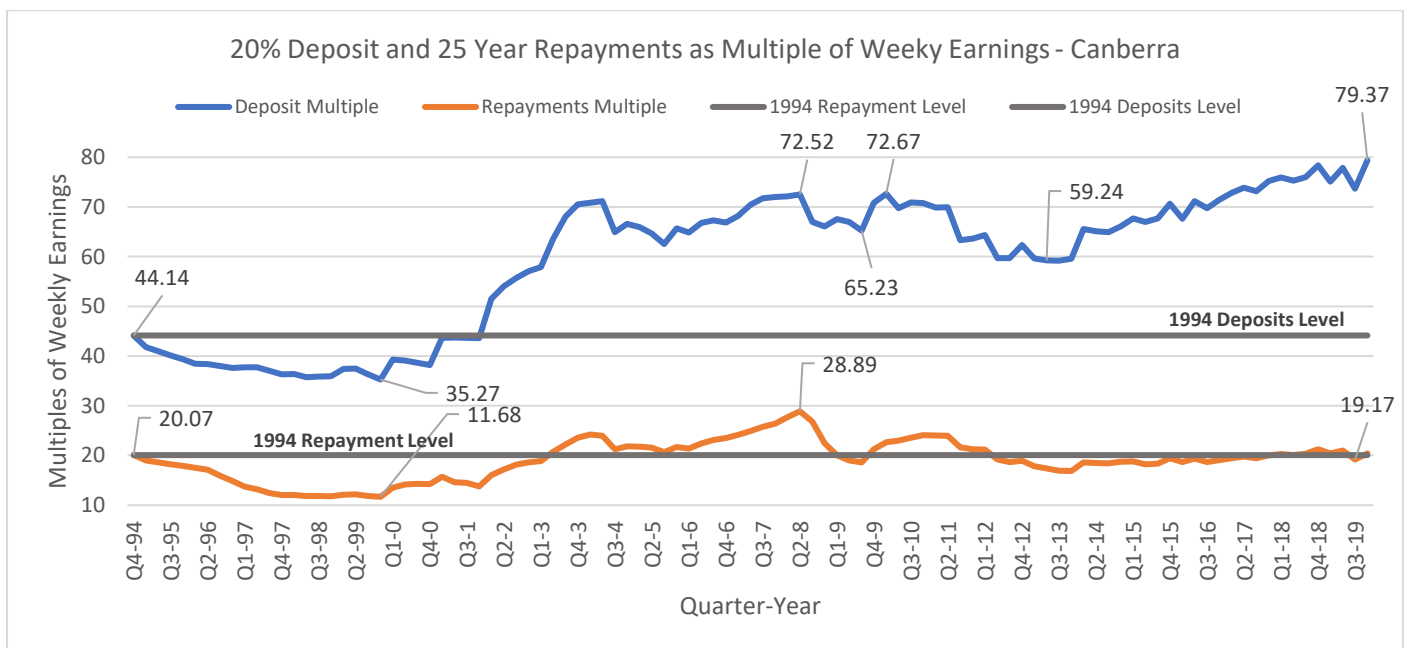
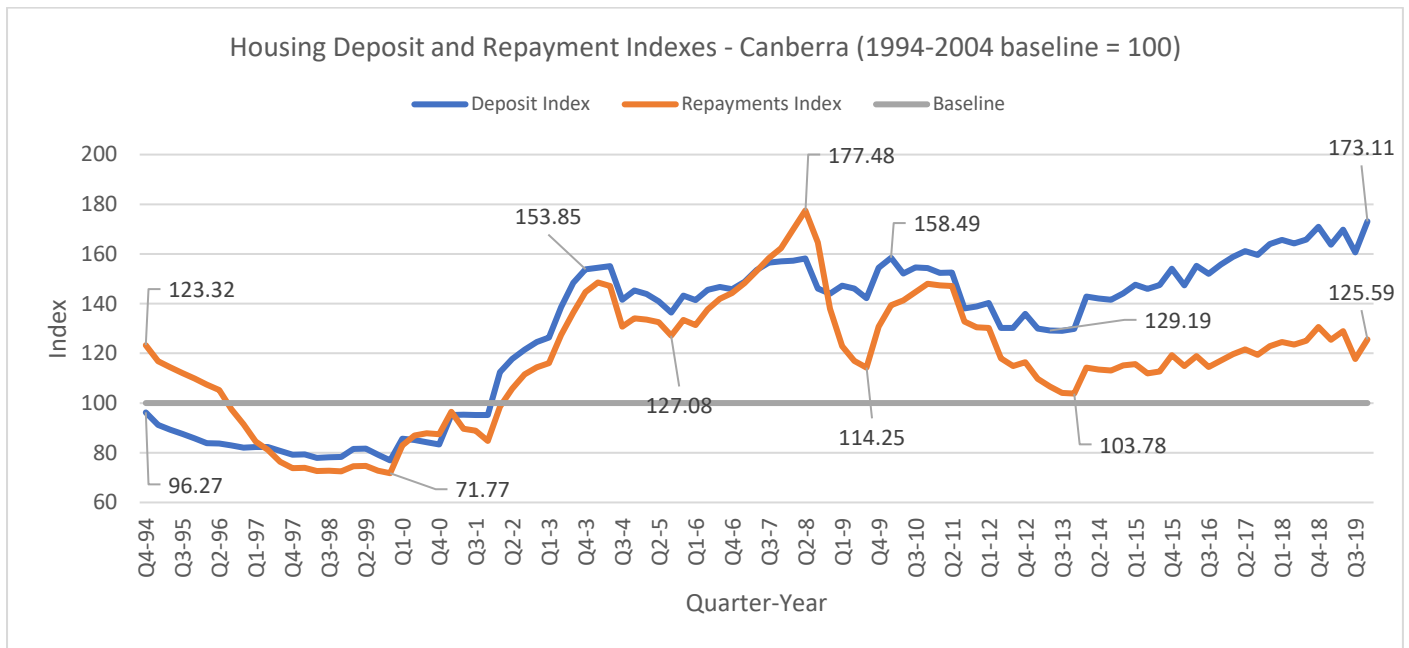




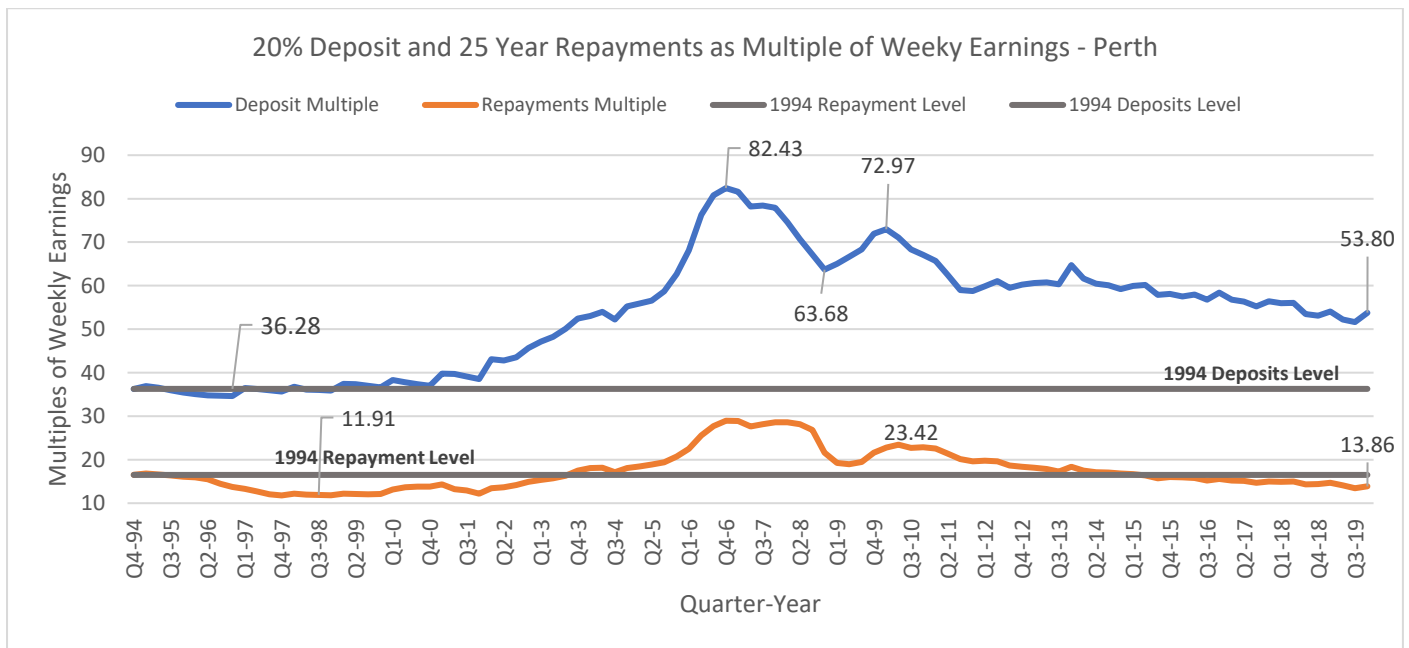
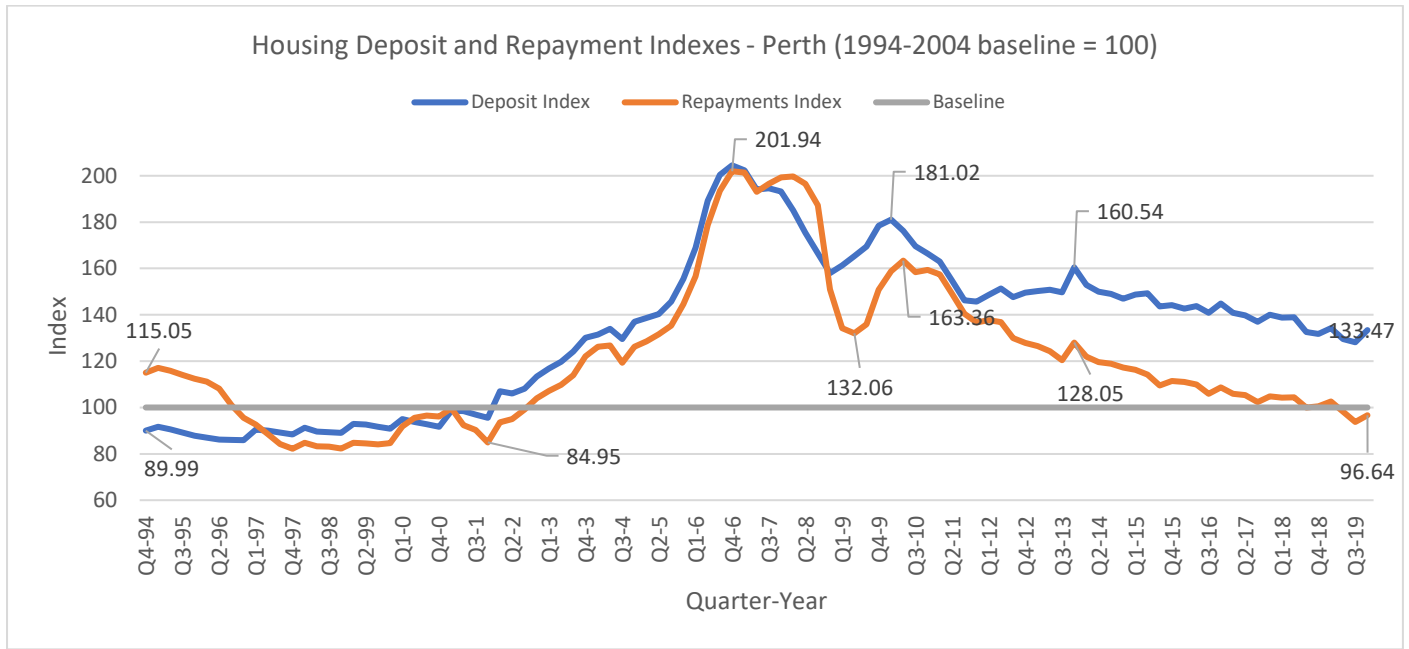
Darwin



Canberra



Perth



## Methodology

Since the majority of Australian's rely on a mixture of debt and equity to purchase real estate, it is necessary to analyse housing affordability based on the cost of deposits and repayments. To reflect the real experience of home buyers, rather than just the increase in capital values, we model the cost of notional deposits and house repayments between Q4:1994 and Q4:2019 across Australia's eight most populous cities.

For the mortgage structure, we assume a 20% home deposit as well as monthly payments and daily compounding over a 25-year mortgage period. We calculate the average owner-occupier home loan rate over a given quarter, providing us with an estimate for the mortgage rate over the following 25-year loan period. In addition to using the median residential price for a given capital city, we also use average weekly earnings reported on the state level.

To calculate the repayment multiplier, we take the total yearly payment for a principal interest loan divided by the average weekly earnings for a given city and quarter. To calculate the deposit multiplier, we instead divide the cost of a deposit by average weekly earnings. Note that due to the limited housing data available, we take the national average to be the simple average of the deposit/repayment weekly multiplier for Australia's 8 most populous cities. Using the deposit/repayment weekly multiplier values, we use a city's average deposit/repayment weekly multiplier over the period Q4:1994 to Q4:2004 as the baseline for that city's index (with the baseline indexed to 100).

The datasets used within this model include: ABS 6302 Average Weekly Earnings, ABS 6412 Residential Property Prices Indexes for post-2002 median capital city house prices, table 1 of Abelson 2003 for pre-2002 median house prices, and RBA F5 Indicator Lending Rates for owner-occupier variable discounted housing loan rates.

## References

1. Abelson, Peter; Chung, Demi. (2004). *Housing Prices in Australia: 1970 to 2003*. Published by The University of Sydney. Obtained via: [https://www.researchgate.net/publication/5165791\\_Housing\\_Prices\\_in\\_Australia\\_-\\_1970\\_to\\_2003](https://www.researchgate.net/publication/5165791_Housing_Prices_in_Australia_-_1970_to_2003)
2. ABS 6416. (December 2019 series). *Residential Property Price Indexes: Eight Capital Cities*. Obtained via: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6416.0Dec%202019?OpenDocument>
3. ABS 6302. (November 2019 series). *Average Weekly Earnings: Australia*. Obtained via: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6302.0Main+Features1Nov%202019?OpenDocument>
4. RBA F05. (March 2019 series). *Indicator Lending Rates*. Obtained via: <https://www.rba.gov.au/statistics/tables/xls/f05hist.xls>
5. ABS 5609. (November 2018 series). *Housing Finance, Australia*. Obtained via: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5609.0November%202018?OpenDocument>