

What's happened in the intermediate housing market since 2015?

Livingston and Associates Ltd

Project LR11136

Funded by the Building Research Levy





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RESEARCH REPORT

What's happened in the intermediate housing market since 2015

Research Funded by BRANZ
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1. Executive summary

The objective of this report is to present an update on the trend relating to the size of the intermediate housing market since 2015. This report should be read in conjunction with BRANZ research report [ER5 Can Work, Cannot Afford to Buy – The Intermediate Housing Market](#) (Livingstone and Associates, 2015) and ER35 Alternative Tenure Markets (Livingstone and Associates, 2019).

The intermediate housing market

The intermediate housing market is a relative measure of the affordability of housing for first home buyers. The intermediate housing market is defined as those households:

- Currently in the private rental market;
- That have at least one member of the household in paid employment; and
- That cannot afford¹ to buy a house at the lower quartile house price under standard bank lending criteria.

The intermediate housing market forms an important part of the housing market continuum. They represent working households unable to affordably buy a dwelling at the lower quartile house sale price. Figure 1.1 presents a more detailed view of the housing continuum.

Figure 1.1: The housing continuum & the intermediate market sub-group

Social Renters	Private Renters							Owner Occupiers
	Not in-work	In-work						
		Unable to affordably					Able to affordably	
		Pay rent at the			Buy at			
		lower quartile	median	upper quartile	lower quartile house sale price	median house sale price		
Social Renters	Not in-work	The Intermediate Housing Market				Relatively Well Off		Owner Occupiers
	Private renters					Private Sector Renters		

NB: Note that this diagram is not to scale and does not represent the relative size of each sub group or that groups will move all the continuum. In fact, unless their incomes increase faster than housing costs they may remain in one sub group for extended periods of time.

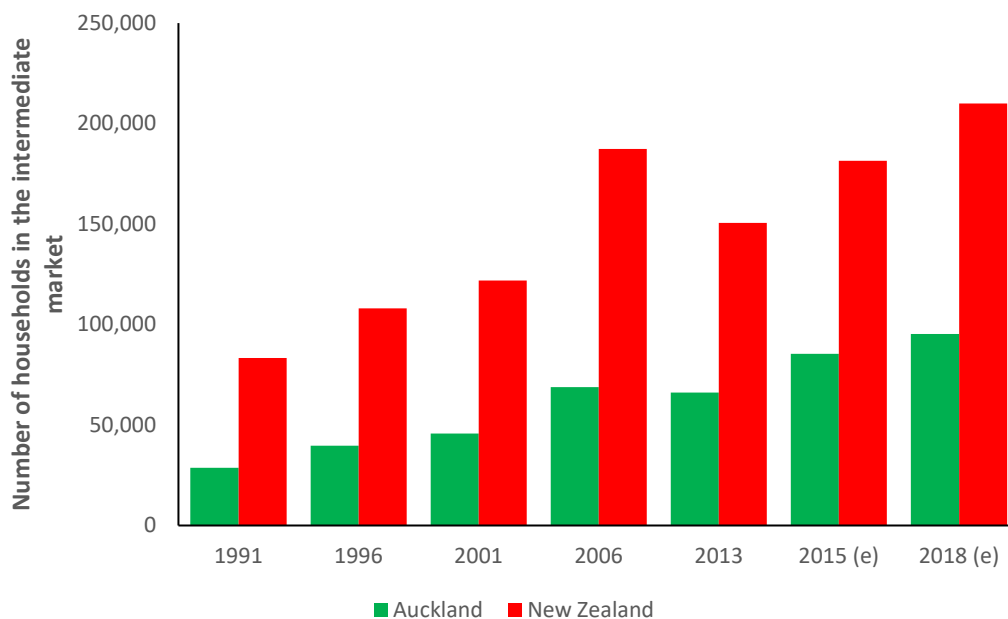
¹ Housing costs are defined as unaffordable when they exceed 30% of gross household income.



The number of households in the intermediate housing market has increased over the past 27 years by approximately 152% nationally and 231% in the Auckland region. There are now 210,000 intermediate households² nationally and 95,400 of these are located in Auckland.

Figure 1.2 presents the trend in the size of the intermediate housing market in Auckland and nationally between 1991 and 2018.

Figure 1.2: Intermediate housing market 1991 to 2018



Source: Modelled from data sourced from Corelogic, RBNZ, and Statistics New Zealand

One of the key drivers of the growth in the intermediate housing market over the last 27 years has been house price growth exceeding the growth households incomes. For example, lower quartile house prices in Auckland are estimated to have increased by 540% between 1991 and 2018 while median household incomes increased by 150%.

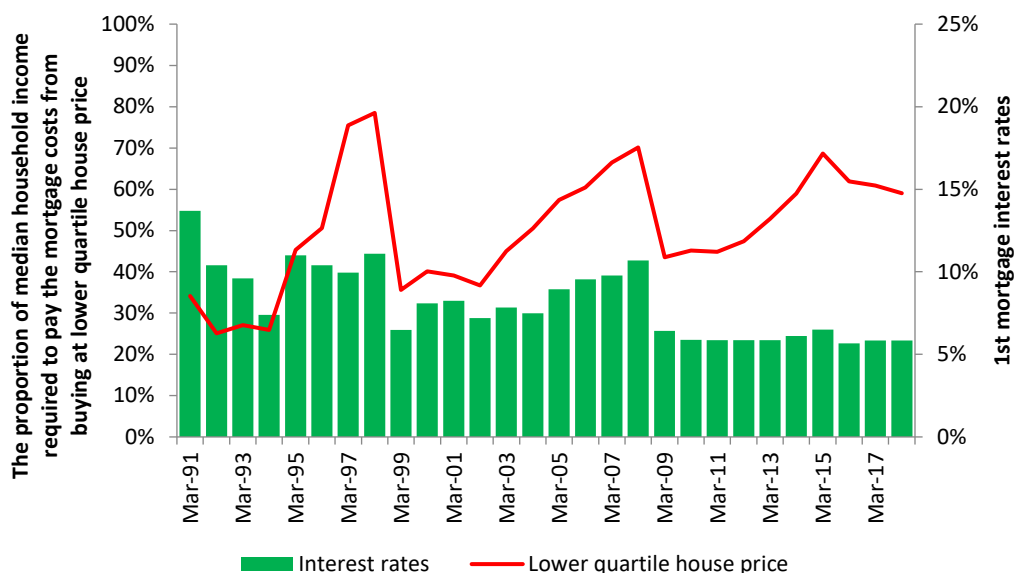
Trends in housing affordability

The volatility of mortgage interest rates also have had a significant impact on the size of the intermediate market. Variations in interest rates have a significant impact on the relative affordability of a dwelling for first home buyers. Figure 1.3 presents the costs associated with servicing a mortgage (using Auckland's lower quartile house sale price as the purchase price) as a percentage of median household income in Auckland City between 1991 and 2018.

² As at 30th June 2018



Figure 1.3: Auckland – Percentage of median household income required to affordably buy at the lower quartile house price and the trend in mortgage interest rates.



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

Prior to 2010 a large proportion of the volatility in the affordability of buying a dwelling at the lower quartile house price reflected changes in mortgage interest rates. Since 2010, interest rates have been relatively stable and the majority of the growth in the intermediate market has been driven by house prices increasing at a faster pace than household incomes.

Rental market affordability has also declined as well. Table 1.1 presents the income required in Auckland region to affordably pay the lower quartile rent, median rent or the mortgage costs associated with buying a dwelling at the lower quartile house sale price.



Table 1.1: Auckland Region – Household incomes required to affordably pay housing costs

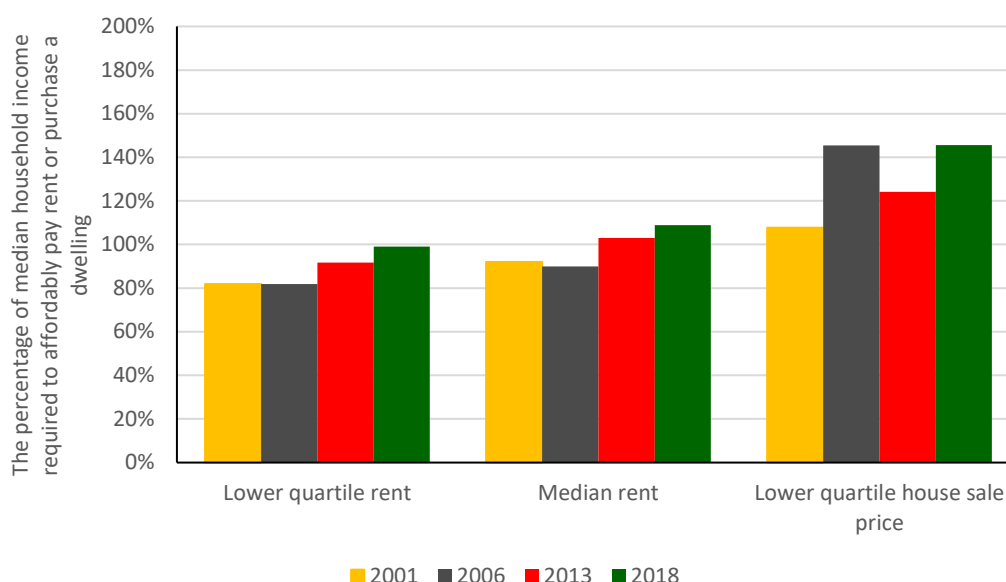
June	Income required to affordably pay rent or buy at:						Median household income ³	
	Lower quartile rent		Median rent		Lower quartile house sale price			
	\$	Change	\$	Change	\$	Change	\$	Change
2001	\$40,100		\$45,100		\$52,800		\$49,000	
2006	\$51,900	29%	\$57,000	26%	\$92,200	75%	\$63,400	29%
2013	\$70,200	35%	\$78,800	38%	\$95,000	3%	\$76,500	21%
2018	\$90,000	28%	\$99,000	26%	\$132,300	39%	\$90,900	19%
Change 01 to 18	\$49,900	124%	\$53,900	120%	\$79,500	151%	\$41,900	86%

Source: Modelled from data sourced from MBIE, Corelogic, Headway Systems and Statistics New Zealand

Housing affordability is poor even for households earning more than the median household income. Auckland's median household income is estimated at \$90,900⁴ per annum. This is just sufficient to affordably pay Auckland's lower quartile rent.

Figure 1.4 presents the percentage of Auckland's median household income required to affordably pay the lower quartile rent, median rent, or buy at the lower quartile house sale price between 2001 and 2018.

Figure 1.4: The percentage of median household income required to affordably pay rent or buy a dwelling in Auckland.



Source: Modelled from data sourced from MBIE, Headway Systems and Statistics New Zealand

³ Assumes median household incomes increased by 3.5% per annum between 2013 and 2018

⁴ This assumes the median household income has increased at 3.5% per annum since the 2013 census,



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Housing affordability has deteriorated. In 2001, households had to earn 84% of median household income to affordably pay the lower quartile rent, 92% to pay the median market rent, and 108% to buy at the lower quartile house price. In 2018, Auckland households now almost need to be earning the median household income to be able to affordably pay the city's lower quartile rent. They need to earn 108% of median household income to affordably pay the median rent and 146% of median household income to affordably buy a dwelling at the lower quartile house sale price. This trend is not unique to Auckland and has also occurred to a greater or lesser extent in other urban areas around the country.

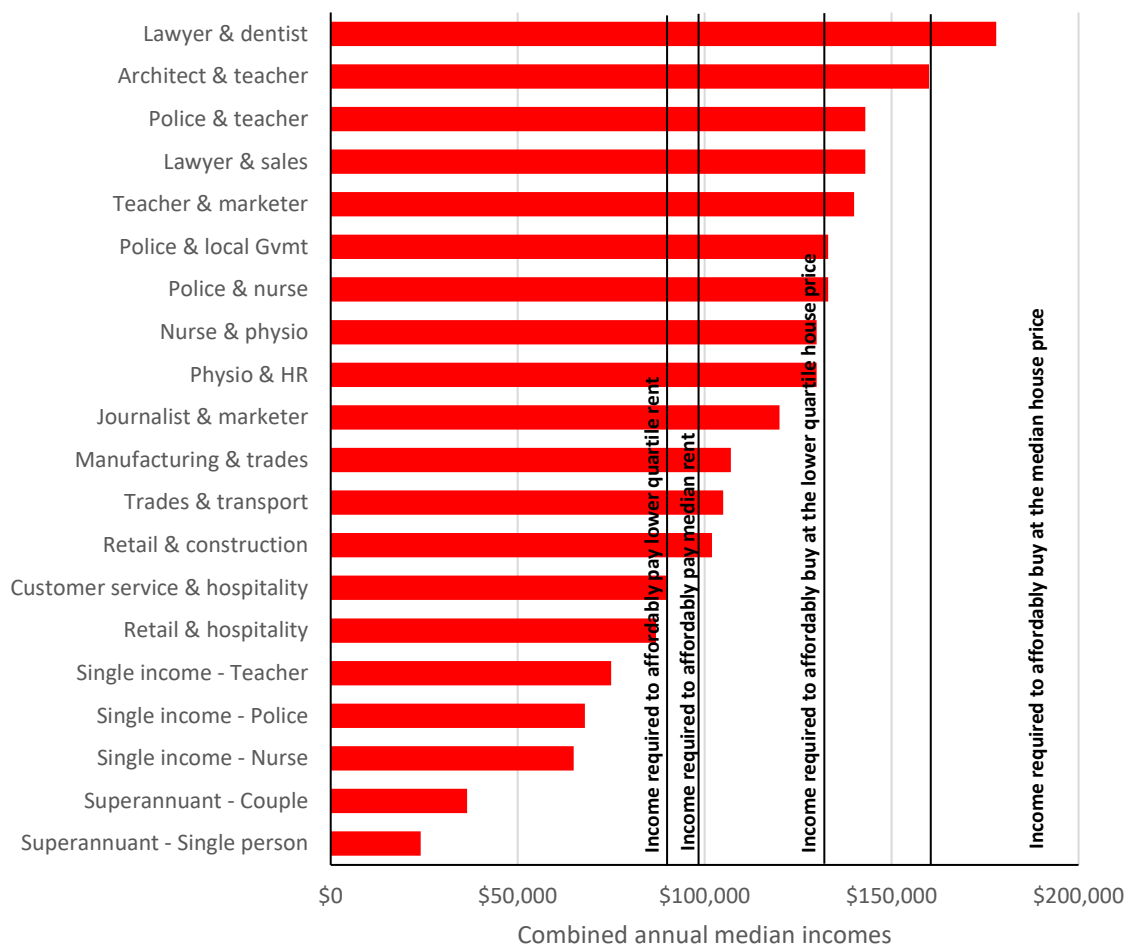
Household's ability to pay by occupation

Figure 1.5 presents households ability to affordably pay the housing costs associated with the lower quartile rent, median rent, buy at the lower quartile house price and buy at the median house price. The income levels⁵ assume one or two full time incomes for the different occupations presented.

⁵ Incomes are based on the 2018 median incomes by occupation published by www.careers.govt.nz



Figure 1.5: Auckland – Relative housing affordability by occupation⁶.



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

All of the two household incomes by occupations presented are higher than Auckland's median household income. In addition, all households with two incomes (two full time occupations) are higher than Auckland's median household income. The key trend is the inability of nearly all the different combinations of occupations to affordably buy a dwelling at the median house price and how unaffordable the housing costs are at the lower quartile house price as well. Households with single incomes struggle to affordably pay the lower quartile market rent.

Housing affordability has become a key issue for a range of essential worker households. Effectively they need two full time incomes to affordably pay market rents. These housing costs have the potential to impact on the region's ability to attract essential workers and for staff retention.

⁶ A summary of the incomes used is presented in appendix 3.



Discussion – The implication of these trends

New Zealanders' experience with declining housing affordability for both renting and first home buyers is not unique and a number of other countries have experienced similar market outcomes. Large, rapidly growing cities around the world have struggled to build sufficient affordable housing to retain key workers close to where they work. The housing market outcomes experienced by different communities around the country reflect the changing economic and institutional environment in which they operate.

Increasingly households earning less than the median household income for their market are struggling to affordably pay their housing costs whether renting or buying a dwelling. To some extent the longer term decline in affordability for first home buyers has been masked by lower than average interest rates. If and when mortgage interest rates increase to nearer their long term average is beyond the scope of this project.

One of the consequences of the growth in the intermediate market has been renters have become a more diverse group incorporating more households consisting of proportionally more couples-with-children and older renters. Declining rates of owner occupation across cohorts aged less than 55 years of age suggest the increase in older renters will accelerate over the next two decades as these cohorts age and subsequently retire.

If house prices continue to increase at rates significantly higher than the growth in household incomes very few renter households will be able to afford to buy a dwelling in Auckland. Owner occupation will be limited to households who inherit significant capital, those earning well above the median household income, or those lucky enough to qualify for a subsidised form of ownership.

A range of alternative tenure models have been used overseas to try and address the decline in housing affordability and provide key worker and older person housing. These solutions range from rental cooperatives for low income households, community land trusts, and shared equity products which assist higher household income (within 80% to 120% of median household income) into shared ownership solutions. All have their own merits and issues to be resolved and are more or less appropriate at different points of the housing continuum. The unfortunate truth about all these solutions is they all require significant amounts of low cost patient capital. Policies such as inclusion zoning have been promoted in different locations as a way of accumulating capital for affordable housing or increasing the supply of affordable units. However, such approaches have been met with significant resistance from existing market players who see these approaches as just another development cost being loaded onto the developer. Other strategies such as taxing the uplift of the value of land as it is rezoned has also met with significant resistance. Ultimately, central government needs to set policy around who pays any subsidy or provide the low cost patient capital required.

There are no easy answers in developing the appropriate policy responses to these trends, particularly in an Auckland context. It is important that future policy development considers their impact on the housing market whether it relates to issues directly associated with the housing market or in a more general economic context.



2. Introduction

The objective of this report is to present an update on the trend relating to the size of the intermediate housing market since 2015. This report should be read in conjunction with ER5 Can Work Cannot Buy - The Intermediate Housing Market.

The intermediate housing market is a relative measure of the affordability of housing for first home buyers. The intermediate housing market is defined as those households:

- Currently in the private rental market;
- That have at least one member of the household in paid employment; and
- That cannot afford⁷ to buy a house at the lower quartile house price under standard bank lending criteria.

The report includes:

- Analysis of the changes in the intermediate market 2013 to 2018. This considers the size of the impact of the different drivers such as population growth, tenure mix, interest rates, house price appreciation and growth in household income;
- Affordability trends for in work private rents and examples of the impact of movements in lower quartile and median rents and house prices on peoples' ability to affordably pay their housing costs;
- Examining the relative housing affordability across a range of occupations using current median incomes for different types of jobs;
- Modelling the potential change in the size of the intermediate housing market between 2018 and 2028 under a range of different scenarios; and
- A discussion of the implication of these trends for the housing market

⁷ Housing costs are defined as unaffordable when they exceed 30% of gross household income.



3. The intermediate housing market

3.1 Introduction

The objective of this section of the report is to provide an overview of key trends in the intermediate housing market and includes:

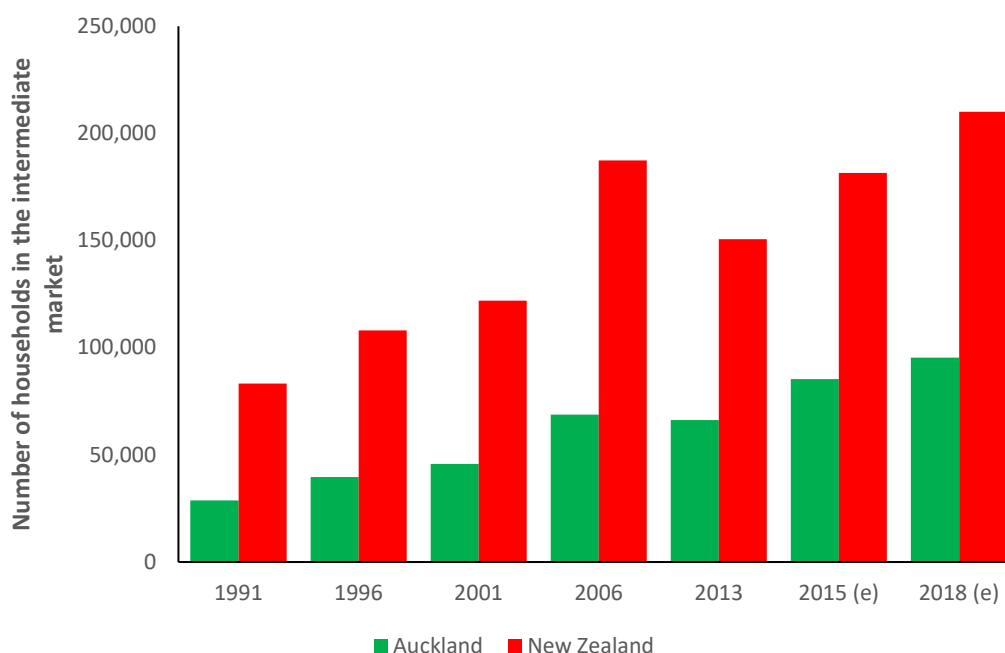
- Trends in the size of the intermediate housing market; and
- Affordability trends for in-work private sector renters.

A summary of the definition of key terms used in this report is included in appendix one.

3.2 Trends in the intermediate housing market

The number of households in the intermediate housing market has increased over the past 27 years by approximately 152% nationally and 231% in the Auckland region. There are now 210,000 intermediate households⁸ nationally and 95,400 of these are located in Auckland. Figure 3.1 presents the trends in the size of the intermediate housing market nationally and in the Auckland region between 1991 and 2018⁹.

Figure 3.1: Intermediate housing market 1991 to 2018



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

⁸ As at 30th June 2018

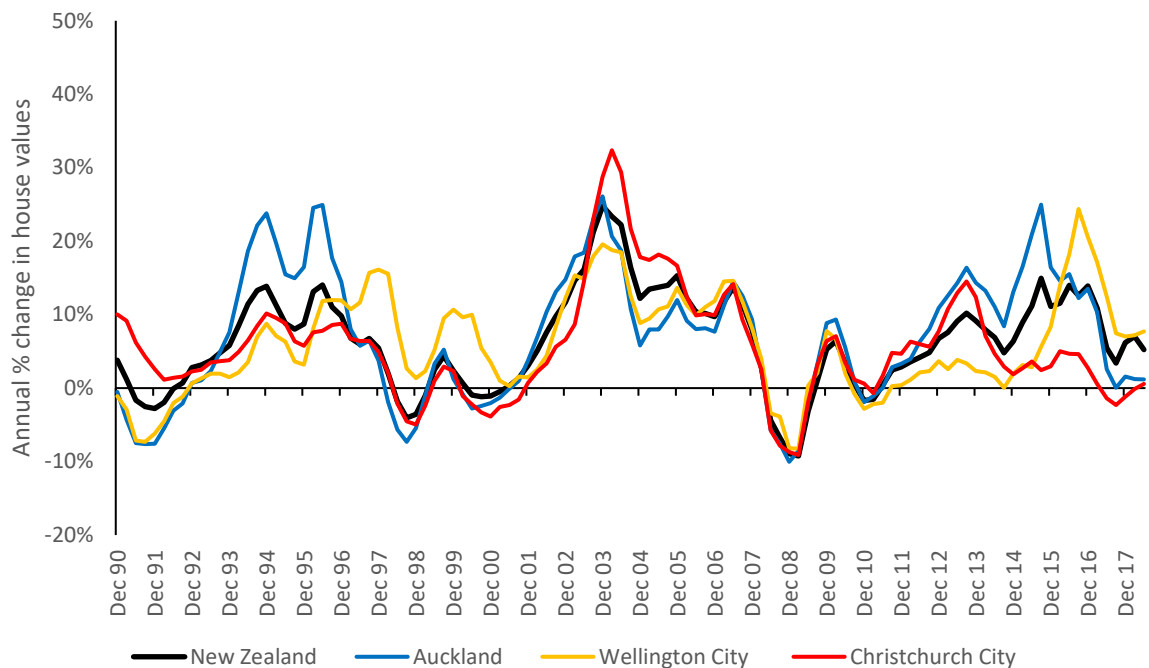
⁹ Household incomes are assumed to have increased by 3.5% per annum between 2013 and 2018.



The proportion of intermediate households located in the Auckland region relative to the national total increased from 34% in 1991 to 45% in 2018. Over the last three years Auckland's intermediate households as a percentage of the national total declined. This was caused by lower house price growth in Auckland while house sale prices increased at a higher rate outside Auckland.

Figure 3.2 presents the annual percentage change in house values between 1989 and 2018 in the main metropolitan markets.

Figure 3.2: Annual house value growth



Source: Corelogic

Over the last two years Auckland house values have increased by 4% while nationally they grew by 11% and by 21% in Wellington City. Christchurch's house values are still adjusting post the 2010/11 earthquake rebuild and fell by 1%. House price growth along with changes in interest rates can have a significant impact on the size of the intermediate market.



Table 3.1 presents analysis of the quantum of the impact of the key drivers of the change in the size of the intermediate housing market between 2006 and 2018.

Table 3.1: Key drivers of the change in the size of the intermediate housing market 2006 to 2018

Driver	Change in the number of intermediate hhlds			
	New Zealand		Auckland	
	06 to 13	13 to 18	06 to 13	13 to 18
Growth in total households	12,400	16,000	5,600	10,500
Growth as a result of tenure change (excluding population growth)	18,700	21,400	5,000	9,700
Change in interest rates	-44,800	-5,700	-16,700	-3,500
House sale price appreciation	33,400	64,500	22,600	25,100
Household income growth	-56,500	-36,800	-19,200	-12,600
Total change	-36,800	59,400	-2,700	29,200

Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

Key trends include:

- The fall in interest rates (by approximately 3.7 percentage points) and growth in household income between 2006 and 2013 more than offset the impact of house sale price appreciation, population growth and a fall in homeownership rates on the size of the intermediate housing market;
- Strong population growth has also increased the size of the intermediate market in Auckland and nationally;
- Growth in the size of Auckland's intermediate market between 2013 and 2018 accounts for 49% of the national increase; and
- House sale prices increased faster than the expected growth in household incomes resulting a significant increase in intermediate households nationally and in Auckland.



3.3 Affordability trends for in-work private renters

The intermediate housing market forms an important part of the housing market continuum. They represent working households unable to affordably buy a dwelling at the lower quartile house sale price. Figure 3.3 presents a more detailed view of the housing continuum.

Figure 3.3: The housing continuum

Social Renters	Private Renters							Owner Occupiers
	Not in-work	In-work						
		Unable to affordably					Able to affordably	
		Pay rent at the			Buy at			
		lower quartile	median	upper quartile	lower quartile house sale price	median house sale price		
Social Renters	Not in-work Private renters	The Intermediate Housing Market				Relatively Well Off Private Sector Renters	Owner Occupiers	

NB: Note that this diagram is not to scale and does not represent the relative size of each sub group

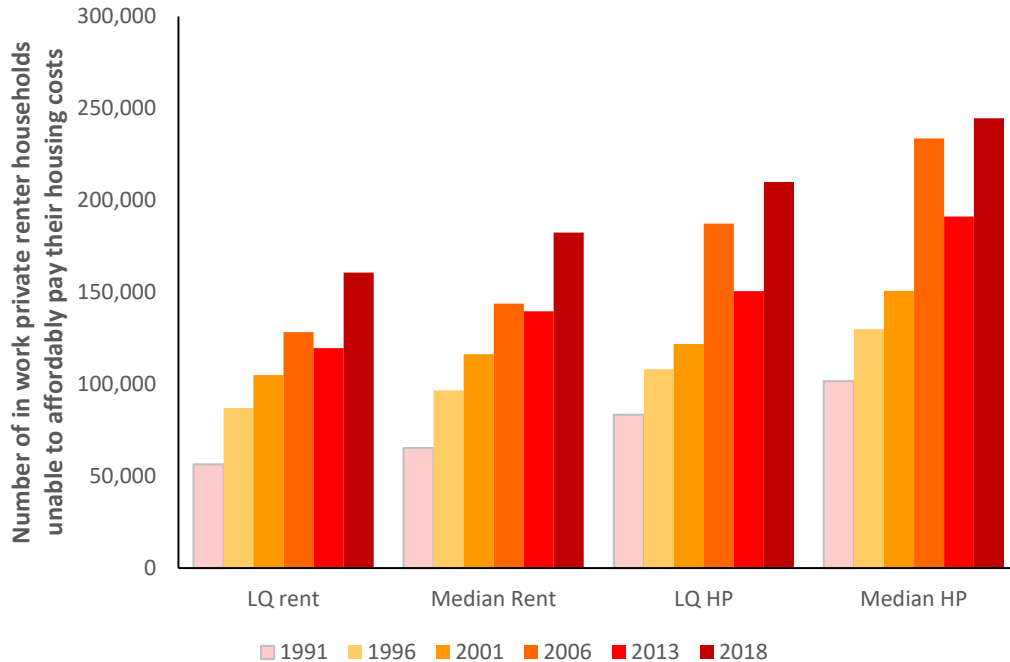
Analysis of these different groups within the housing continuum can provide additional insight into the relative affordability of rents and house prices in different locations around the country.

Figures 3.4 and 3.5 present the number of private renter households, with at least one person in paid employment, who are unable to affordably¹⁰ pay lower quartile rent (LQ), median rent, upper quartile rent (UQ) or buy a dwelling at the lower quartile house price (LQHP) or median house price (median HP) nationally (all regions combined) and in the Auckland region respectively.

¹⁰ Affordably pay is defined as paying no more than 30% of their household income in either rent or mortgage servicing.

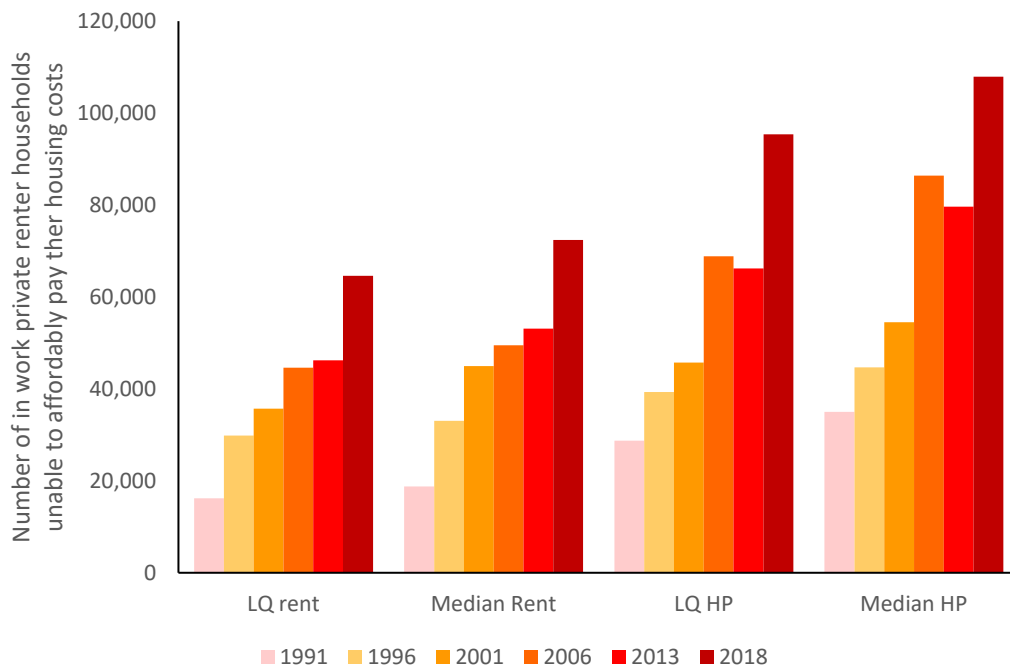


Figure 3.4: New Zealand – Housing affordability, 1991 to 2018



Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ

Figure 3.5: Auckland Region – Housing affordability, 1991 to 2018



Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ



Nationally, the size of the intermediate housing market fell from 187,400 households in 2006 to 150,600 in 2013 and then increased to 210,000 by 2018. At the same time the number of private renters unable to affordably pay the median market rent increased from 96,600 in 1991 to 182,400 in 2018, an increase of 85,800 households, or by 89%. A similar trend was experienced in Auckland.

It is beyond the scope of this study to determine why rents are now increasing at a significantly faster pace than renter household income however it does suggest building pressure within rental markets is driving growth in rents. If this trend continues lower income households could be priced out of the market and be forced to either crowd (increase household income by grouping more people with incomes together in the same dwelling) or relocate to lower cost locations.

Table 3.2 presents the income required in Auckland region to affordably pay the lower quartile rent, median rent or the mortgage costs associated with buying a dwelling at the lower quartile house sale price.

Table 3.2: Auckland Region – Household incomes required to affordably pay housing costs

June	Lower quartile rent		Median rent		Lower quartile house sale price		Median household income ¹¹	
	\$	Change	\$	Change	\$	Change	\$	Change
2001	\$40,100		\$45,100		\$52,800		\$49,000	
2006	\$51,900	29%	\$57,000	26%	\$92,200	75%	\$63,400	29%
2013	\$70,200	35%	\$78,800	38%	\$95,000	3%	\$76,500	21%
2018	\$90,000	28%	\$99,000	26%	\$132,300	39%	\$90,900	19%
Change 01 to 18	\$49,900	124%	\$53,900	120%	\$79,500	151%	\$41,900	86%

Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, & Statistics NZ

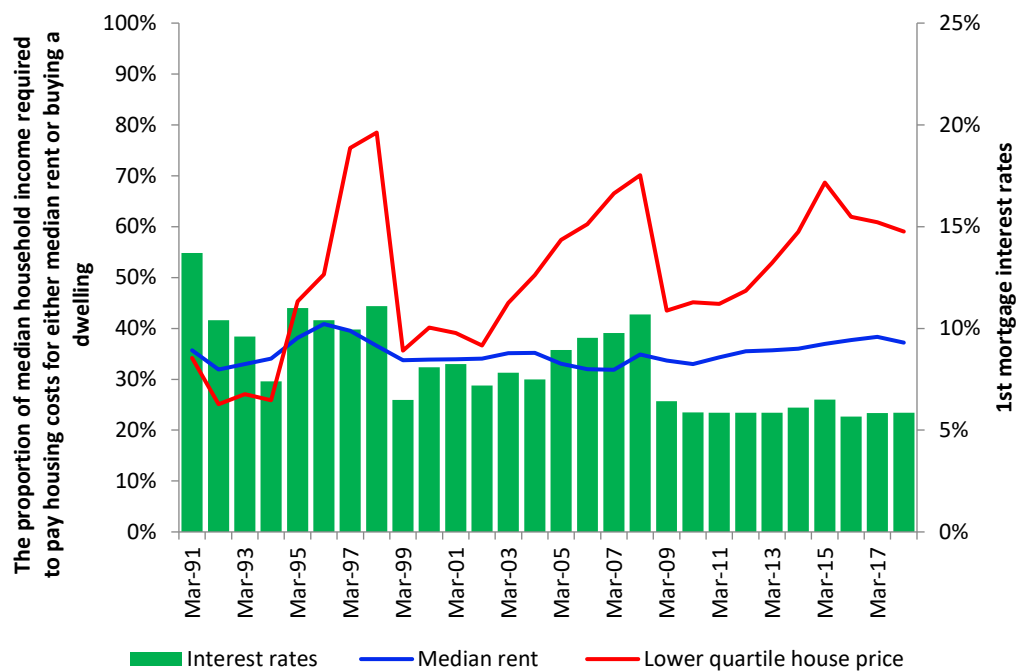
Housing affordability has significantly deteriorated. In 2001 households had to earn 84% of median household income to affordably pay the lower quartile rent, 92% to pay the median market rent, and 108% to buy at the lower quartile house price. In 2018, Auckland households now almost need to be earning the median household income to be able to affordably pay the city's lower quartile rent. They need to earn 108% of median household income to affordably pay the median rent and 146% of median household income to affordably buy a dwelling at the lower quartile house sale price. This trend is not unique to Auckland and has also occurred to a greater or lesser extent in other urban areas around the country.

¹¹ Assumes median household incomes increased by 3.5% per annum between 2013 and 2018



Figure 3.6 presents Auckland's median market rent for a three bedroom house and the debt servicing on the purchase of a dwelling at the lower quartile house sale price as a percentage of median household income in Auckland City between 1991 and 2018.

Figure 3.6: Auckland – Percentage of median household income required to affordably pay the median rent or buy at the lower quartile house price and the trend in mortgage interest rates.



Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ

Prior to 2010 a large proportion of the volatility in the affordability of buying a dwelling at the lower quartile house price reflected changes in mortgage interest rates. Since 2010, interest rates have been relatively stable and the majority of the growth in the intermediate market has been driven by house prices increasing at a faster pace than income.

The proportion of median household income required to pay the median rent peaked in 1996 at 41% and subsequently declined falling to 32% in 2007 before gradually increasing to 37% in 2018.

In summary, after the global financial crisis, housing affordability for both renters and first home buyers has deteriorated at a faster pace with building pressure within the market particularly for renter households. Households appear particularly vulnerable to a decline in first home buyer affordability due to an unexpected increase in interest rates.



4. Sub-national and demographic trends in the intermediate housing market

4.1 Introduction

The objective of this section of the report is to present the detailed analysis of the intermediate housing market by region and demographic characteristics between 2001 and 2018. The analysis initially presents the results by region followed by additional analysis by region and demographic characteristics and includes:

- Trends in the number of intermediate households (IH) by region, the number of IH households as a percentage of in-work private sector renter households (IWPSRH) and as a percentage of all households in the region;
- An overview of the demographic characteristics of the intermediate housing market as presented in 2015 report; and
- The impact of occupation on the ability of a households to affordably pay their housing costs.



4.2 Intermediate housing market by region

The relative size of the intermediate housing market varies by region. The relativities of household income, house prices and the size of the in-work private sector renters within the housing continuum all are important drivers. In addition, variations in interest rates play a key role.

Table 4.1 presents the trend in the intermediate housing market by region between 2001 and 2018.¹²

Table 4.1: The Intermediate Housing Market by Region 2001 to 2018

Region	Intermediate Households (IH)					
	2001	2006	2013	2015	2018	01 to 18
Northland	4,000	5,100	3,600	4,000	5,100	+1,100
Auckland	45,700	68,800	66,200	85,400	95,400	+49,700
Waikato	11,300	16,500	12,100	14,300	19,600	+8,300
BOP	9,200	12,600	8,400	9,900	14,600	+5,400
Gisborne	900	1,400	700	800	1,000	+100
Hawkes Bay	4,200	6,100	4,100	4,500	5,400	+1,200
Taranaki	2,100	3,400	2,500	2,800	2,900	+800
Manawatu- Whanganui	4,900	7,800	4,600	4,900	6,300	+1,400
Wellington	14,400	23,300	17,700	19,400	23,700	+9,300
Tasman	1,300	2,100	1,700	1,900	2,300	+1,000
Nelson	1,700	2,700	2,000	2,200	2,700	+1,000
Marlborough	1,000	1,400	1,200	1,300	1,500	+500
West Coast	300	700	400	500	400	+100
Canterbury	15,100	24,700	17,900	21,500	18,300	+3,200
Otago	4,600	8,800	6,100	6,900	9,500	+4,900
Southland	1,000	1,800	1,100	1,200	1,400	+400
Total	121,900	187,400	150,600	181,500	210,000	+88,100

Sourced: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, and Statistics New Zealand

Nationally the number of intermediate households increased by 16% (or 5% per annum) between 2015 and 2018. This compares to annual average growth of 3.5% per annum between 1991 and 2018.

With the exception of Christchurch and West Coast regions, all other markets experienced strong growth in the number of intermediate households between 2015 and 2018. Flat house prices combined with growing incomes resulted in a fall in the size of Canterbury's intermediate market. Bay of Plenty experienced the strongest growth in intermediate households between 2015 and 2018 increasing by 47%.

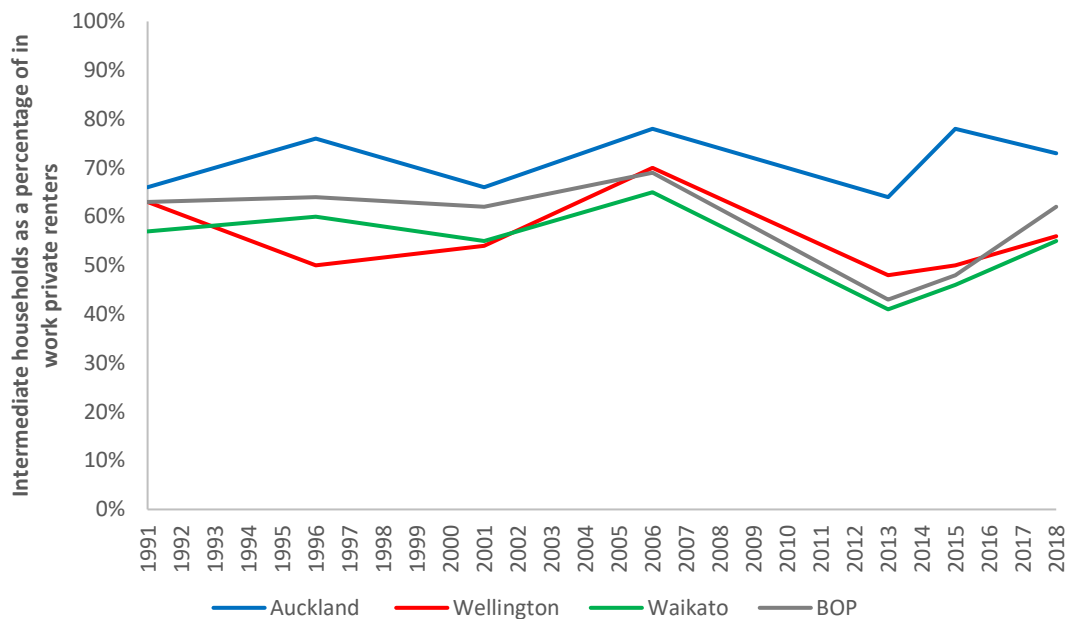
¹² A summary of the intermediate housing market trends by region is presented in appendix two.



Other regions experiencing growth at least 10 percentage points higher than the national average were Waikato (up 37%), Otago (up 38%), Manawatu-Whanganui (up 29%) and Northland (up 28%).

Figure 4.1 presents the trend in the ratio of intermediate housing market households as a percentage of in-work private renter households in Auckland, Waikato, Bay of Plenty and Wellington regions.

Figure 4.1: Intermediate households as a % of in work private renters



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, & Statistics NZ

Despite the current low interest rates, there has been a significant growth in the proportion of in work private renters who are unable to buy at the lower quartile house price. Auckland experienced stronger house price growth earlier than the other main centres however as the pace of value growth slowed over the last three years the proportion of households unable to affordably buy eased. Outside Auckland house price growth is continuing to outpace household income growth and consequently the proportion of in work private renters unable to affordably buy is continuing to increase.



4.3 A summary of intermediate households by demographic characteristics

Intermediate housing market demographics were discussed in-depth in Livingston and Associates (2015)¹³. A summary of the markets key demographic characteristics include:

- The number of intermediate renters aged 50 years and older is continuing to increase;
- One person and couple with children households account for over 50% of the intermediate housing market;
- The majority of couples with children and one parent intermediate households have reference people aged between 30 and 49 years of age;
- The number of one parent intermediate households has significantly increased over the last decade;
- Couple only households are under-represented in the intermediate housing market;
- A total of 77% of the increase in the size of the intermediate housing market was in households with the reference person employed as either a manager or in a profession;
- Corporate managers, engineers, and teachers all experienced strong growth in the count of intermediate market households; and
- A similar pattern was experienced in Auckland where managers and professionals accounted for 71% of the growth in the intermediate housing market. Managers and professionals living in Auckland accounted for 50% of the total national growth in the intermediate housing market. These traditional higher paying areas of employment are likely to increasingly account for growth in the intermediate housing market if the affordability of buying a dwelling continues to decline.

¹³ Livingston and Associates, (2015) *"ER5 Can Work, Cannot Afford to Buy - The Intermediate Housing Market"*
A research report funded by the Building Research Levy - BRANZ report number LR0484.

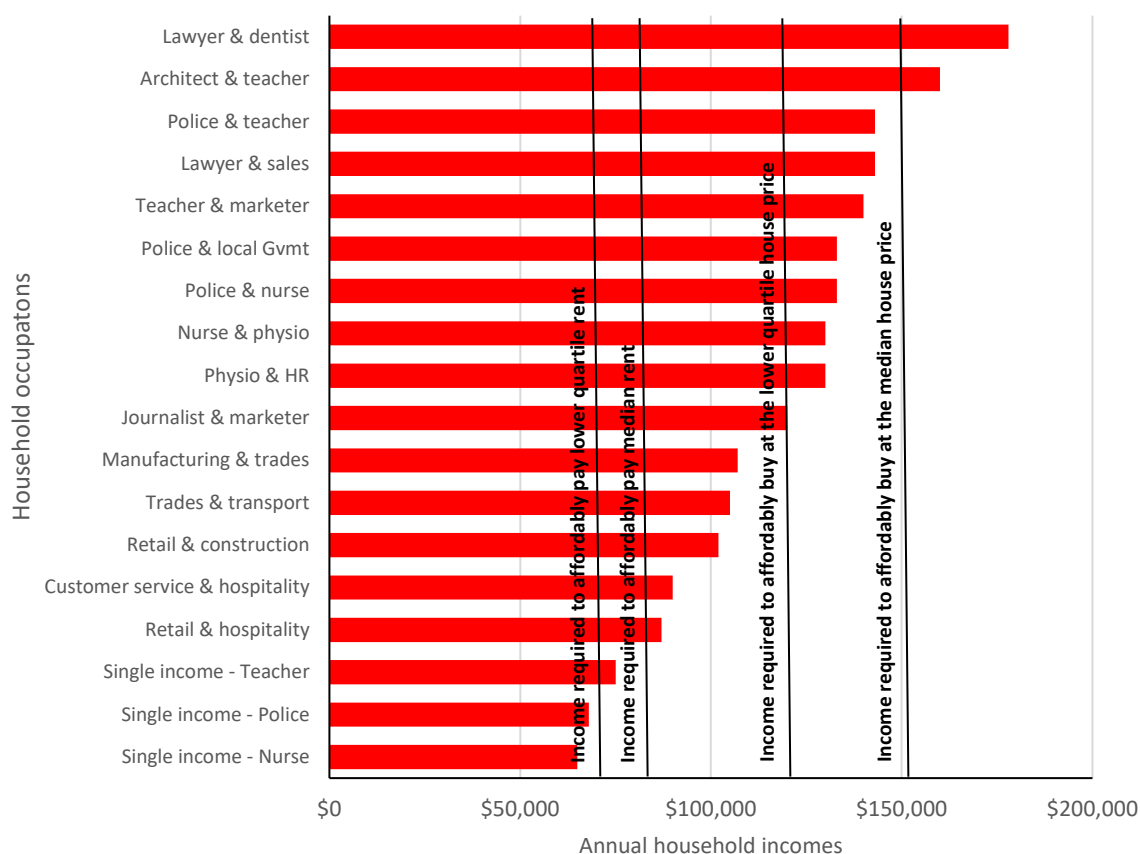


4.4 The impact of occupation on households ability to pay housing costs

Housing affordability is poor even for households earning more than the median household income. Auckland's median household income is estimated at \$90,900¹⁴ per annum. This is just sufficient to affordably pay Auckland's lower quartile rent.

Figure 4.2 presents households' ability to affordably pay the housing costs associated with the lower quartile rent, median rent, buy at the lower quartile house price and buy at the median house price. The income levels¹⁵ assume one or two full time incomes for the different occupations presented.

Figure 4.2: Auckland – Relative housing affordability by occupation in 2018¹⁶.



Source: Modelled from data sourced from Headway Systems, MBIE, RBNZ, & Statistics NZ

¹⁴ This assumes the median household income has increased at 3.5% per annum since the 2013 census,

¹⁵ Incomes are based on the 2018 median incomes by occupation published by www.careers.govt.nz

¹⁶ A summary of the incomes used is presented in appendix 3.



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All of the two household incomes by occupations presented are higher than Auckland's median household income. In addition, all households with two incomes (two full time occupations) are higher than Auckland's median household income. The key trend is the inability of nearly all the different combinations of occupations to affordably buy a dwelling at the median house price and how unaffordable the housing costs are at the lower quartile house price as well. Households with single incomes struggle to affordably pay the lower quartile market rent.

Housing affordability has become a key issue for a range of essential worker households. Effectively they need two full time incomes to affordably pay market rents. These housing costs have the potential to impact on the region's ability to attract essential workers and for staff retention.



5. Intermediate housing market growth scenarios

5.1 Introduction

The objective of this section of the report is to present an update of a range of scenarios reflecting how the intermediate market may increase or decrease between 2018 and 2028. The goal is to identify potential market outcomes under these scenarios rather than to try and predict the future. This section of the report includes:

- A summary of the scenarios used;
- Results of the scenario analysis; and
- Discussion on the results

5.2 Scenario overview

There is a number of key variables which will impact on the future size of the intermediate housing market and these include:

- Level of population growth and rate of household formation by region;
- Trends in household tenure;
- Growth in household incomes;
- Mortgage interest rates; and
- House sale price growth rates.

Table 5.1 summarises the key model inputs.

Table 5.1: Key scenario inputs

Variable	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Household income (%pa)	3.5% pa	3.5% pa	3.5% pa	3.5% pa	3.5% pa	3.5% pa
Population growth	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium
Interest rates	Constant	Constant	Constant	Constant	Constant	+2%
House price growth (%pa)	Long term Ave	50% long term Ave	2%	0%	3.5%	Long term Ave



Table 5.2 presents the results of the scenario analysis of the relative growth of the intermediate housing market in Auckland and nationally between 2018 and 2028¹⁷.

Table 5.2: Scenario outcomes – projected growth in the intermediate market

	Number of intermediate households			Intermediate households as a % of IWPR ¹⁸		
	2018	2028	18 to 28	2018	2028	18 to 28
Auckland						
Scenario 1	95,400	151,700	56,300	73%	86%	13%
Scenario 2	95,400	126,100	30,700	73%	71%	-1%
Scenario 3	95,400	116,000	20,600	73%	66%	-7%
Scenario 4	95,400	91,900	-3,500	73%	52%	-21%
Scenario 5	95,400	128,900	33,500	73%	73%	0%
Scenario 6	95,400	164,000	68,600	73%	93%	20%
New Zealand						
Scenario 1	210,000	329,800	119,800	58%	70%	13%
Scenario 2	210,000	260,800	50,800	58%	56%	-2%
Scenario 3	210,000	238,500	28,500	58%	51%	-7%
Scenario 4	210,000	185,500	-24,500	58%	40%	-18%
Scenario 5	210,000	275,900	65,900	58%	59%	1%
Scenario 6	210,000	370,100	160,100	58%	79%	21%

Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ

Key trends include:

- If house prices continue to grow at the same annual average growth rate as they have since 1989 (scenario 1) the number of intermediate households will increase by 59% (or 56,300) in Auckland and 57% (or 119,800) nationally;
- Under scenario 2 the house price growth rate is half the long term annual average growth between 1989 and 2018. This reduces the total increase in intermediate households to 30,700 in Auckland and 50,800 nationally;
- Under scenario 3 house prices are assumed to increase at 2% per annum which equates to the mid-point in the Reserve Bank's long term inflation target. This reduces the total increase in intermediate households to 20,600 in Auckland and 28,500 nationally;
- Scenario 4 assumes house prices remain unchanged between 2018 and 2028. Under this scenario household affordability would improve as household incomes increased

¹⁷ A summary of the impact on all regions is presented in appendix 4.

¹⁸ In work private renters (IWPR)



- by 3.5% per annum. Intermediate households declined by 2,500 in Auckland and 24,500 nationally;
- Scenario 5 assumes house prices increase at the same pace as household incomes. The intermediate market grows with the increase in private renters. Relative to scenario one, these assumptions reduce the increase in intermediate households to 30,700 in Auckland and 20,800 nationally; and
 - Under scenario 6 house prices increase at the same rate as the long term annual average and interest rates are assumed to increase by two percentage points. This increases the total increase in intermediate households to 68,600 in Auckland and 160,100 nationally.

Market expectations are for interest rates to remain low in the short to medium term. Any significant variation in interest rates would have an immediate impact on the size of the intermediate market. Mortgage interest rates are significantly below their long term average. During the global financial crisis interest rates were also 4 percent higher than they are today. Future interest rate increases present a significant longer term risk to housing affordability, however if they did increase house price growth is also likely to slow.

5.3 Implications of these trends

New Zealanders' experience with declining housing affordability for both renting and for first home buyers is not unique and a number of other countries have experienced similar market outcomes. Large rapidly growing cities around the world have struggle to build sufficient affordable housing to retain key workers close to where they work. The housing market outcomes experienced by different communities around the country reflect the changing economic and institutional environment in which they operated.

Increasingly households earning less than the median household income for their market are struggling to affordably pay their housing costs whether renting or buying a dwelling. To some extent the longer term decline in affordability for first home buyers has been masked by lower than average interest rates. If and when mortgage interest rates increase to nearer their long term average is beyond the scope of this project.

One of the consequences of the growth in the intermediate market has been renters have become a more diverse group incorporating more households consisting of proportionally more couples-with-children and older renters. Declining rates of owner occupation across cohorts aged less than 55 years of age suggest the increase in older renters will accelerate over the next two decades as these cohorts age and subsequently retire.

If house prices continue to increase at rates significantly higher than the growth in household incomes very few renter households will be able to afford to buy a dwelling in Auckland. Owner occupation will be limited to households who inherit significant capital,



those earning well above the median household income, or those lucky enough to qualify for a subsidised form of ownership.

DPMC (2008) analysed the long term average median house price to median household income ratio at approximately 3.5. Auckland's current house price to income ratio is now over 9. This also suggests a significant imbalance and either house prices need to fall or alternatively not increase for a long time whilst incomes grow for this imbalance to change.

The current low interest rates have assisted in reducing the size of the intermediate housing market. If interest rates were to increase to their long term average the size of the intermediate market would increase by approximately 7 to 8 percentage points (scenario 1 outcomes compared to scenario 6 outcomes).

The economic consequences of a growing intermediate housing market for the mainstream economy include the growing inability of workers in essential occupations such as police, nurses and teachers to buy in areas in which they work. Again, failure to provide the desired local housing options for these key workers can impact upon the efficiency of the local labour market and in particular labour availability in these key occupations.

The breakdown of the traditional housing pathway is likely to result in a growing number of households who will never attain home ownership. Renter households on fixed incomes, particularly those with people aged 65 years and older, are particularly vulnerable to changes in the level of market housing costs (rents). This has significant potential fiscal implications for Government in terms of the level of additional support they may need to provide to these households.

Traditionally, home ownership and the stability it provides has been associated with a range of positive educational, health and social outcomes. A key challenge for government housing policy is how, in the context of a growing intermediate housing market, with growing numbers of life-long renters, these benefits might also be secured by those unable for reasons of affordability to secure home ownership.

Home ownership has also been one of households' key wealth building strategies. Growth in the intermediate housing market limits the ability of those households' (in the intermediate housing market) ability to save and accumulate wealth for old age via home ownership. This has implications for the quantum and type of consumption support Government may have to provide during old age for those confined for most of their lives to the private rental market.

A range of alternative tenure models have been used overseas to try and address the decline in housing affordability and provide key worker and older person housing. These solutions range from rental cooperatives for low income households, community land trusts, and shared equity products which assist higher household income (within 80% to 120% of median household income) into shared ownership solutions. All have their own



merits and issues to be resolved and are more or less appropriate at different points of the housing continuum.

The unfortunate truth about all these solutions is they all require significant amounts of low cost patient capital. Policies such as inclusion zoning have been promoted in different locations as a way of accumulating capital for affordable housing or increasing the supply of affordable units. However, such approaches have been met with significant resistance from existing market players who see these approaches as just another development cost being loaded onto the developer. Other strategies such as taxing the uplift of the value of land as it is rezoned has also met with significant resistance. Ultimately, central government needs to set policy around who pays any subsidy or provide the low cost patient capital required.

There are no easy answers in developing the appropriate policy responses to these trends, particularly in an Auckland context. It is important that future policy development considers their impact on the housing market whether it relates to issues directly associated with the housing market or in a more general economic context.



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<http://www.jrf.org.uk/bookshop/ebooks/185935243x.pdf>



Appendix One: Definitions

There is a number of key terms used in this report. They are defined as follows:

- Ability to “affordably” rent or buy a dwelling;
- Intermediate housing market; and
- Sub-groups within the housing continuum.

The Ability to Affordably Rent or Buy a Dwelling

In the context of this report the ability of a household to “affordably” rent or buy a dwelling assumes no more than 30% of gross household income from all sources is used to meet its housing costs whether they rent or service a mortgage. Consequently, housing is unaffordable when households are spending more than 30% of their gross household income to meet their housing costs whether it’s paying the lower quartile rent, or servicing a mortgage as a consequence of buying at the lower quartile house sale price.

Intermediate Housing Market

The concept of the intermediate housing market was developed in the United Kingdom largely by Stephen Wilcox of the Centre for Housing Policy at the University of York. He published a number of reports between 2003 and 2010 which developed the concept which focusing on the geographical distribution of affordable and unaffordable housing and the ability of working households to become home owners. DTZ (2008) adopted this approach to housing affordability analysis and adapted it to a New Zealand context taking into account data availability. DTZ defined the intermediate housing market in a New Zealand context as *“private renter households with at least one person in paid employment, unable to affordably purchase a house at the lower quartile house sale price for the local authority area at standard bank lending conditions.”*

Standard bank lending conditions were defined as a 25 year table mortgage assuming no more than 30% of the household’s gross income is used to service the debt, a 10% deposit, and the one year fixed mortgage interest rate. A 10% deposit rate was used to ensure the 2013 results were comparable with previous reports.

Sub-Groups within the Housing Continuum.

There is a number of ways in which households can be divided into different sub-groups to analyse the housing continuum, from social renters at one end of the spectrum to owner occupied households at the other. In the context of this report the housing continuum is divided into a number of sub-groups based on, tenure (social renters,



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private sector rents, and owner occupied households), their ability to affordably pay lower quartile, median or upper quartile rent or purchase a dwelling at the lower quartile or upper quartile house sale price.



Appendix Two

Intermediate housing market trends by region 2001 to 2018

	Intermediate households				Change in the number of households			
	2001	2006	2013	2018	01 to 06	06 to 13	13 to 18	01 to 18
Number of households								
Northland	4,000	5,100	3,600	5,100	1,100	-1,500	1,500	1,100
Auckland	45,700	68,800	66,200	95,400	23,100	-2,600	29,200	49,700
Waikato	11,300	16,500	12,100	19,600	5,200	-4,400	7,500	8,300
Bay of Plenty	9,200	12,600	8,400	14,600	3,400	-4,200	6,200	5,400
Gisborne	900	1,400	700	1,000	500	-700	300	100
Hawkes Bay	4,200	6,100	4,100	5,400	1,900	-2,000	1,300	1,200
Taranaki	2,100	3,400	2,500	2,900	1,300	-900	400	800
Manawatu-Whanganui	4,900	7,800	4,600	6,300	2,900	-3,200	1,700	1,400
Wellington	14,400	23,300	17,700	23,700	8,900	-5,600	6,000	9,300
Tasman	1,300	2,100	1,700	2,300	800	-400	600	1,000
Nelson	1,700	2,700	2,000	2,700	1,000	-700	700	1,000
Marlborough	1,000	1,400	1,200	1,500	400	-200	300	500
West Coast	300	700	400	400	400	-300	0	100
Canterbury	15,100	24,700	17,900	18,300	9,600	-6,800	400	3,200
Otago	4,600	8,800	6,100	9,500	4,200	-2,700	3,400	4,900
Southland	1,000	1,800	1,100	1,400	800	-700	300	400
New Zealand	121,900	187,400	150,600	210,000	65,500	-36,800	59,400	88,100
Intermediate households as a % of in work private renters								
Northland	59%	61%	42%	49%	2%	-19%	8%	-9%
Auckland	66%	78%	64%	73%	12%	-13%	8%	7%
Waikato	55%	65%	41%	55%	10%	-24%	14%	0%
Bay of Plenty	62%	69%	43%	62%	7%	-26%	19%	0%
Gisborne	41%	56%	26%	29%	15%	-30%	3%	-12%
Hawkes Bay	55%	69%	42%	49%	13%	-26%	7%	-7%
Taranaki	40%	57%	37%	38%	17%	-21%	1%	-2%
Manawatu-Whanganui	40%	53%	31%	39%	14%	-22%	7%	-1%
Wellington	54%	70%	48%	56%	16%	-22%	8%	2%
Tasman	68%	84%	65%	75%	16%	-19%	10%	7%
Nelson	61%	81%	59%	68%	19%	-22%	9%	7%
Marlborough	53%	58%	45%	51%	4%	-13%	7%	-2%
West Coast	23%	38%	22%	19%	16%	-16%	-3%	-4%
Canterbury	54%	72%	47%	39%	18%	-26%	-8%	-15%
Otago	41%	65%	43%	56%	24%	-23%	13%	15%
Southland	22%	37%	19%	20%	14%	-18%	1%	-2%
New Zealand	56%	70%	50%	58%	13%	-20%	8%	2%



Appendix Three

Median incomes by occupation 2018

	Median Income	Pay range	
		Low	High
Accounting	\$65,000	\$42,000	\$125,000
Architecture	\$50,000	\$37,000	\$85,000
Automotive	\$55,000	\$37,000	\$85,000
Banking finance and insurance	\$65,000	\$42,000	\$125,000
Construction and roading	\$60,000	\$37,000	\$145,000
Customer service	\$45,000	\$37,000	\$65,000
Education	\$55,000	\$37,000	\$85,000
Engineering	\$70,000	\$42,000	\$125,000
Executive and general management	\$85,000	\$45,000	\$207,000
Government and council	\$70,000	\$40,000	\$145,000
Healthcare	\$55,000	\$40,000	\$85,000
Hospitality and Tourism	\$45,000	\$35,000	\$63,000
HR and recruitment	\$65,000	\$45,000	\$125,000
IT	\$100,000	\$45,000	\$207,000
Legal	\$65,000	\$40,000	\$115,000
Manufacturing	\$47,000	\$35,000	\$85,000
Marketing, media and communications	\$65,000	\$42,000	\$125,000
Office and administration	\$50,000	\$37,000	\$75,000
Property	\$75,000	\$42,000	\$155,000
Retail	\$42,000	\$35,000	\$65,000
Sales	\$60,000	\$37,000	\$105,000
Science and technology	\$55,000	\$37,000	\$105,000
Trades and services	\$55,000	\$37,000	\$85,000
Transport and logistics	\$50,000	\$37,000	\$80,000
Median income after 10 years			
Performing arts	\$43,000		
Engineering	\$83,000		
Law	\$83,000		
Dental	\$95,000		
Medical	\$124,000		
Teaching	\$75,000		
Police	\$68,000		
plumber / electrician	\$60,000		
journalist	\$55,000		
Local government	\$65,000		



Architect	\$85,000		
Nursing	\$65,000		
Physiotherapy	\$65,000		
Household incomes used in Figure 4.2			
Single income - Nurse	\$65,000		
Single income - Police	\$68,000		
Single income - Teacher	\$75,000		
Retail & hospitality	\$87,000		
Customer service & hospitality	\$90,000		
Retail & construction	\$102,000		
Trades & transport	\$105,000		
Manufacturing & trades	\$107,000		
Journalist & marketer	\$120,000		
Physio & HR	\$130,000		
Nurse & physio	\$130,000		
Police & nurse	\$133,000		
Police & local Gvmt	\$133,000		
Teacher & marketer	\$140,000		
Lawyer & sales	\$143,000		
Police & teacher	\$143,000		
Architect & teacher	\$160,000		
Lawyer & dentist	\$178,000		



Appendix Four -Results of scenario outcomes by region

	2018	2028 Scenario outcomes					
	Int mkt	1	2	3	4	5	6
Intermediate households							
Northland	5,100	7,900	5,900	5,300	4,600	6,500	9,300
Auckland	95,400	151,700	126,100	116,000	91,900	128,900	164,000
Waikato	19,600	31,600	23,900	21,000	15,700	25,100	35,400
Bay of Plenty	14,600	22,500	17,800	16,400	12,800	19,000	24,600
Gisborne	1,000	1,500	1,000	900	1,100	1,200	2,000
Hawkes Bay	5,400	8,400	6,100	5,500	4,100	6,600	9,900
Taranaki	2,900	4,700	3,400	3,000	2,300	3,600	5,300
Manawatu-Wanganui	6,300	8,600	6,900	6,800	5,400	8,300	10,400
Wellington	23,700	33,500	25,700	23,600	17,700	28,600	39,100
Tasman	2,300	3,500	2,900	2,700	2,100	3,000	3,700
Nelson	2,700	3,800	3,100	2,800	2,200	3,300	4,200
Marlborough	1,500	2,200	1,600	1,500	1,100	1,800	2,600
West Coast	400	600	600	600	500	600	600
Canterbury	18,300	32,300	21,800	19,500	13,700	24,700	39,400
Otago	9,500	15,000	11,900	10,700	8,600	12,300	16,800
Southland	1,400	2,100	2,200	2,100	1,700	2,300	2,800
New Zealand	210,000	329,800	260,800	238,500	185,500	275,900	370,100
Intermediate households as a % of in work private renters							
Northland	49%	60%	45%	41%	35%	50%	71%
Auckland	73%	86%	71%	66%	52%	73%	93%
Waikato	55%	70%	53%	47%	35%	56%	79%
Bay of Plenty	62%	75%	59%	55%	42%	63%	82%
Gisborne	29%	38%	25%	23%	28%	29%	50%
Hawkes Bay	49%	63%	46%	41%	31%	50%	74%
Taranaki	38%	52%	37%	33%	25%	40%	59%
Manawatu-Wanganui	39%	44%	35%	35%	28%	42%	53%
Wellington	56%	66%	50%	46%	35%	56%	77%
Tasman	75%	87%	73%	68%	53%	75%	92%
Nelson	68%	78%	64%	58%	45%	68%	87%
Marlborough	51%	63%	45%	42%	31%	51%	73%
West Coast	19%	27%	24%	23%	19%	27%	26%
Canterbury	39%	52%	35%	31%	22%	39%	63%
Otago	56%	70%	56%	50%	40%	58%	79%
Southland	20%	25%	26%	25%	20%	26%	33%
New Zealand	58%	70%	56%	51%	40%	59%	79%



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What's happened in the intermediate housing market since 2015

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1. Executive summary

The objective of this report is to present an update on the trend relating to the size of the intermediate housing market since 2015. This report should be read in conjunction with BRANZ research report [ER5 Can Work, Cannot Afford to Buy – The Intermediate Housing Market](#) (Livingstone and Associates, 2015) and ER35 Alternative Tenure Markets (Livingstone and Associates, 2019).

The intermediate housing market

The intermediate housing market is a relative measure of the affordability of housing for first home buyers. The intermediate housing market is defined as those households:

- Currently in the private rental market;
- That have at least one member of the household in paid employment; and
- That cannot afford¹ to buy a house at the lower quartile house price under standard bank lending criteria.

The intermediate housing market forms an important part of the housing market continuum. They represent working households unable to affordably buy a dwelling at the lower quartile house sale price. Figure 1.1 presents a more detailed view of the housing continuum.

Figure 1.1: The housing continuum & the intermediate market sub-group

Social Renters	Private Renters							Owner Occupiers
	Not in-work	In-work						
		Unable to affordably					Able to affordably	
		Pay rent at the			Buy at			
		lower quartile	median	upper quartile	lower quartile house sale price	median house sale price		
Social Renters	Not in-work	The Intermediate Housing Market				Relatively Well Off		Owner Occupiers
	Private renters					Private Sector Renters		

NB: Note that this diagram is not to scale and does not represent the relative size of each sub group or that groups will move all the continuum. In fact, unless their incomes increase faster than housing costs they may remain in one sub group for extended periods of time.

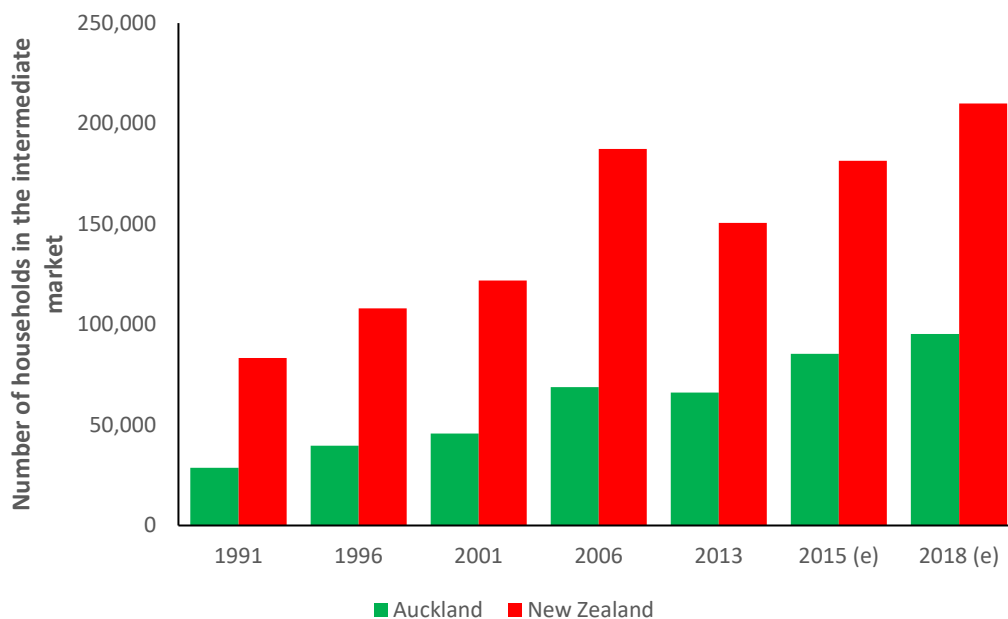
¹ Housing costs are defined as unaffordable when they exceed 30% of gross household income.



The number of households in the intermediate housing market has increased over the past 27 years by approximately 152% nationally and 231% in the Auckland region. There are now 210,000 intermediate households² nationally and 95,400 of these are located in Auckland.

Figure 1.2 presents the trend in the size of the intermediate housing market in Auckland and nationally between 1991 and 2018.

Figure 1.2: Intermediate housing market 1991 to 2018



Source: Modelled from data sourced from Corelogic, RBNZ, and Statistics New Zealand

One of the key drivers of the growth in the intermediate housing market over the last 27 years has been house price growth exceeding the growth households incomes. For example, lower quartile house prices in Auckland are estimated to have increased by 540% between 1991 and 2018 while median household incomes increased by 150%.

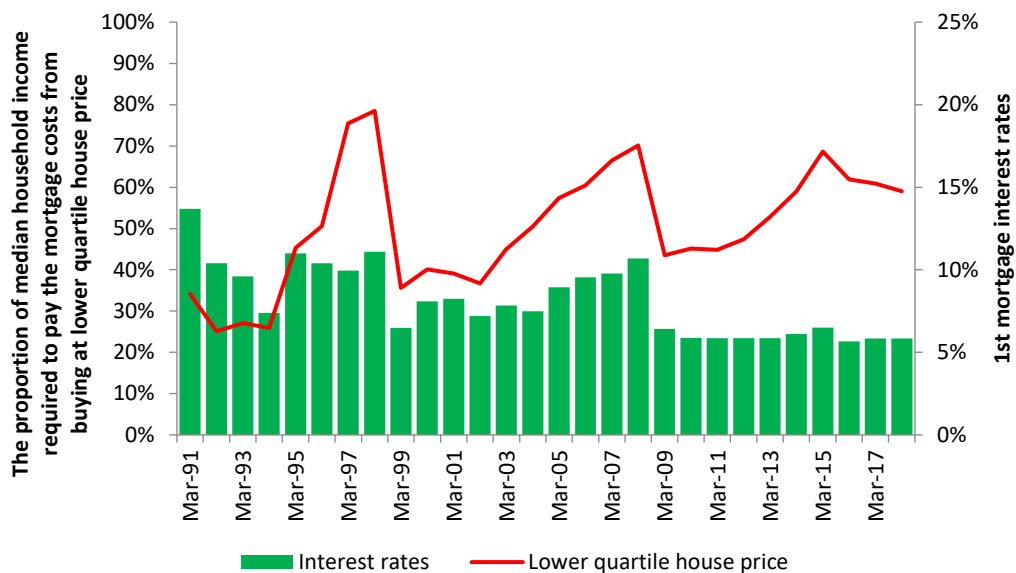
Trends in housing affordability

The volatility of mortgage interest rates also have had a significant impact on the size of the intermediate market. Variations in interest rates have a significant impact on the relative affordability of a dwelling for first home buyers. Figure 1.3 presents the costs associated with servicing a mortgage (using Auckland's lower quartile house sale price as the purchase price) as a percentage of median household income in Auckland City between 1991 and 2018.

² As at 30th June 2018



Figure 1.3: Auckland – Percentage of median household income required to affordably buy at the lower quartile house price and the trend in mortgage interest rates.



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

Prior to 2010 a large proportion of the volatility in the affordability of buying a dwelling at the lower quartile house price reflected changes in mortgage interest rates. Since 2010, interest rates have been relatively stable and the majority of the growth in the intermediate market has been driven by house prices increasing at a faster pace than household incomes.

Rental market affordability has also declined as well. Table 1.1 presents the income required in Auckland region to affordably pay the lower quartile rent, median rent or the mortgage costs associated with buying a dwelling at the lower quartile house sale price.



Table 1.1: Auckland Region – Household incomes required to affordably pay housing costs

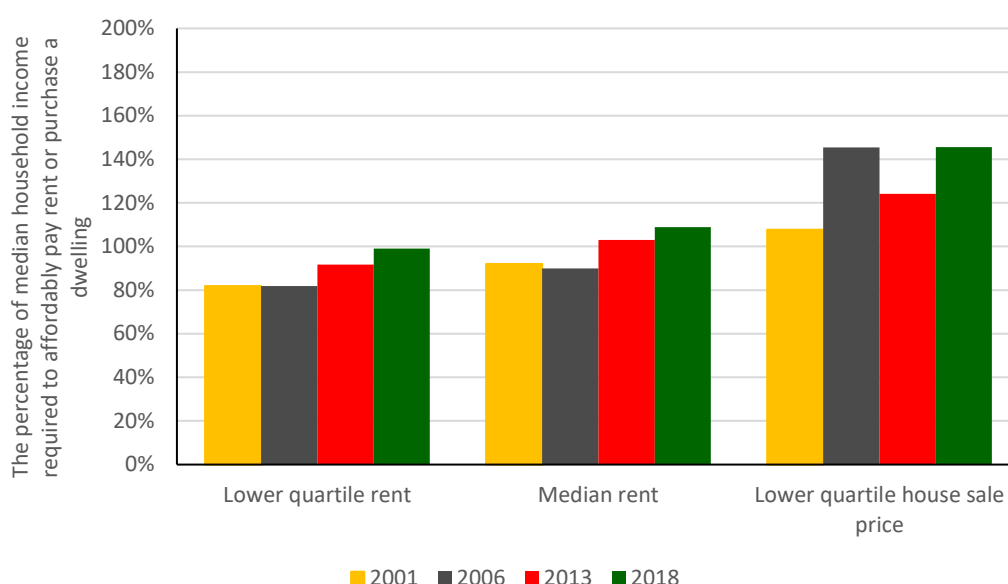
June	Income required to affordably pay rent or buy at:						Median household income ³	
	Lower quartile rent		Median rent		Lower quartile house sale price			
	\$	Change	\$	Change	\$	Change	\$	Change
2001	\$40,100		\$45,100		\$52,800		\$49,000	
2006	\$51,900	29%	\$57,000	26%	\$92,200	75%	\$63,400	29%
2013	\$70,200	35%	\$78,800	38%	\$95,000	3%	\$76,500	21%
2018	\$90,000	28%	\$99,000	26%	\$132,300	39%	\$90,900	19%
Change 01 to 18	\$49,900	124%	\$53,900	120%	\$79,500	151%	\$41,900	86%

Source: Modelled from data sourced from MBIE, Corelogic, Headway Systems and Statistics New Zealand

Housing affordability is poor even for households earning more than the median household income. Auckland's median household income is estimated at \$90,900⁴ per annum. This is just sufficient to affordably pay Auckland's lower quartile rent.

Figure 1.4 presents the percentage of Auckland's median household income required to affordably pay the lower quartile rent, median rent, or buy at the lower quartile house sale price between 2001 and 2018.

Figure 1.4: The percentage of median household income required to affordably pay rent or buy a dwelling in Auckland.



Source: Modelled from data sourced from MBIE, Headway Systems and Statistics New Zealand

³ Assumes median household incomes increased by 3.5% per annum between 2013 and 2018

⁴ This assumes the median household income has increased at 3.5% per annum since the 2013 census,



Housing affordability has deteriorated. In 2001, households had to earn 84% of median household income to affordably pay the lower quartile rent, 92% to pay the median market rent, and 108% to buy at the lower quartile house price. In 2018, Auckland households now almost need to be earning the median household income to be able to affordably pay the city's lower quartile rent. They need to earn 108% of median household income to affordably pay the median rent and 146% of median household income to affordably buy a dwelling at the lower quartile house sale price. This trend is not unique to Auckland and has also occurred to a greater or lesser extent in other urban areas around the country.

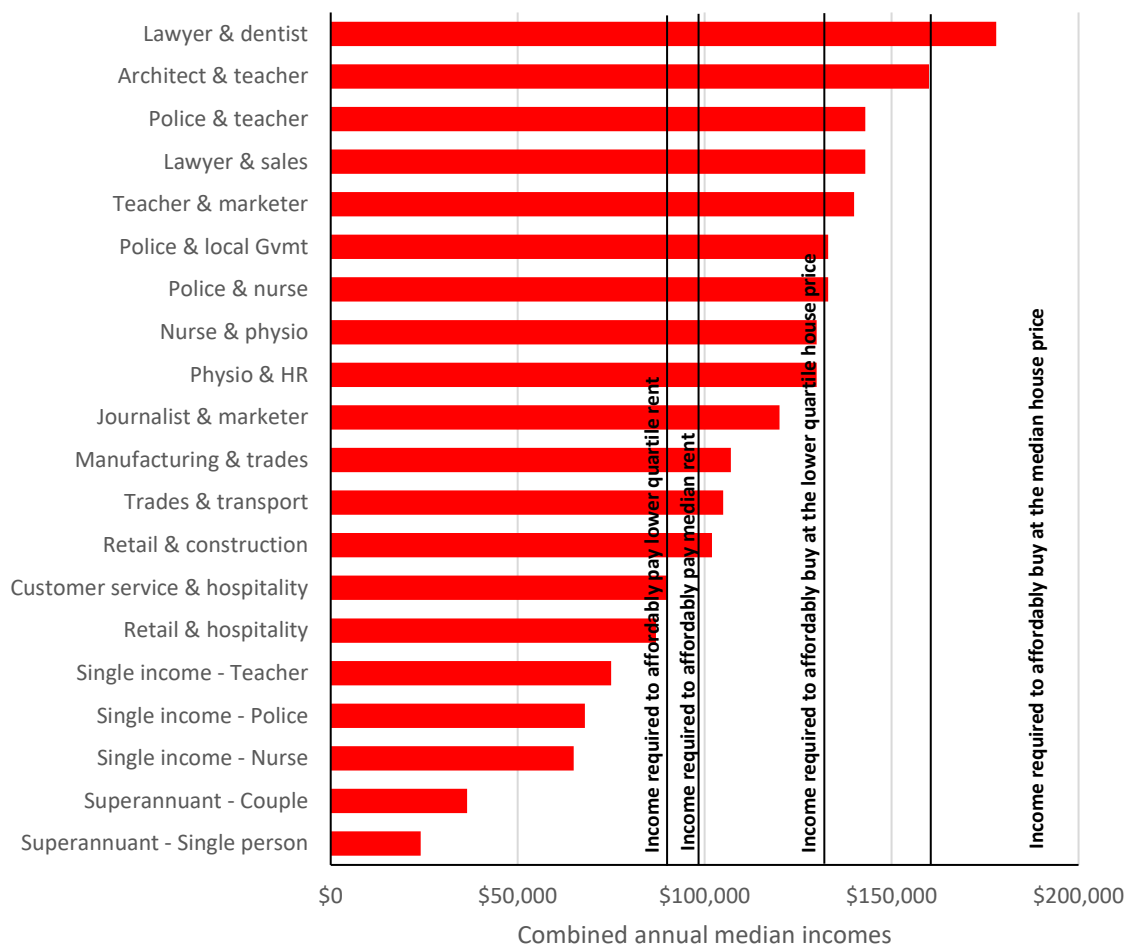
Household's ability to pay by occupation

Figure 1.5 presents households ability to affordably pay the housing costs associated with the lower quartile rent, median rent, buy at the lower quartile house price and buy at the median house price. The income levels⁵ assume one or two full time incomes for the different occupations presented.

⁵ Incomes are based on the 2018 median incomes by occupation published by www.careers.govt.nz



Figure 1.5: Auckland – Relative housing affordability by occupation⁶.



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

All of the two household incomes by occupations presented are higher than Auckland's median household income. In addition, all households with two incomes (two full time occupations) are higher than Auckland's median household income. The key trend is the inability of nearly all the different combinations of occupations to affordably buy a dwelling at the median house price and how unaffordable the housing costs are at the lower quartile house price as well. Households with single incomes struggle to affordably pay the lower quartile market rent.

Housing affordability has become a key issue for a range of essential worker households. Effectively they need two full time incomes to affordably pay market rents. These housing costs have the potential to impact on the region's ability to attract essential workers and for staff retention.

⁶ A summary of the incomes used is presented in appendix 3.



Discussion – The implication of these trends

New Zealanders' experience with declining housing affordability for both renting and first home buyers is not unique and a number of other countries have experienced similar market outcomes. Large, rapidly growing cities around the world have struggled to build sufficient affordable housing to retain key workers close to where they work. The housing market outcomes experienced by different communities around the country reflect the changing economic and institutional environment in which they operate.

Increasingly households earning less than the median household income for their market are struggling to affordably pay their housing costs whether renting or buying a dwelling. To some extent the longer term decline in affordability for first home buyers has been masked by lower than average interest rates. If and when mortgage interest rates increase to nearer their long term average is beyond the scope of this project.

One of the consequences of the growth in the intermediate market has been renters have become a more diverse group incorporating more households consisting of proportionally more couples-with-children and older renters. Declining rates of owner occupation across cohorts aged less than 55 years of age suggest the increase in older renters will accelerate over the next two decades as these cohorts age and subsequently retire.

If house prices continue to increase at rates significantly higher than the growth in household incomes very few renter households will be able to afford to buy a dwelling in Auckland. Owner occupation will be limited to households who inherit significant capital, those earning well above the median household income, or those lucky enough to qualify for a subsidised form of ownership.

A range of alternative tenure models have been used overseas to try and address the decline in housing affordability and provide key worker and older person housing. These solutions range from rental cooperatives for low income households, community land trusts, and shared equity products which assist higher household income (within 80% to 120% of median household income) into shared ownership solutions. All have their own merits and issues to be resolved and are more or less appropriate at different points of the housing continuum. The unfortunate truth about all these solutions is they all require significant amounts of low cost patient capital. Policies such as inclusion zoning have been promoted in different locations as a way of accumulating capital for affordable housing or increasing the supply of affordable units. However, such approaches have been met with significant resistance from existing market players who see these approaches as just another development cost being loaded onto the developer. Other strategies such as taxing the uplift of the value of land as it is rezoned has also met with significant resistance. Ultimately, central government needs to set policy around who pays any subsidy or provide the low cost patient capital required.

There are no easy answers in developing the appropriate policy responses to these trends, particularly in an Auckland context. It is important that future policy development considers their impact on the housing market whether it relates to issues directly associated with the housing market or in a more general economic context.



2. Introduction

The objective of this report is to present an update on the trend relating to the size of the intermediate housing market since 2015. This report should be read in conjunction with ER5 Can Work Cannot Buy - The Intermediate Housing Market.

The intermediate housing market is a relative measure of the affordability of housing for first home buyers. The intermediate housing market is defined as those households:

- Currently in the private rental market;
- That have at least one member of the household in paid employment; and
- That cannot afford⁷ to buy a house at the lower quartile house price under standard bank lending criteria.

The report includes:

- Analysis of the changes in the intermediate market 2013 to 2018. This considers the size of the impact of the different drivers such as population growth, tenure mix, interest rates, house price appreciation and growth in household income;
- Affordability trends for in work private rents and examples of the impact of movements in lower quartile and median rents and house prices on peoples' ability to affordably pay their housing costs;
- Examining the relative housing affordability across a range of occupations using current median incomes for different types of jobs;
- Modelling the potential change in the size of the intermediate housing market between 2018 and 2028 under a range of different scenarios; and
- A discussion of the implication of these trends for the housing market

⁷ Housing costs are defined as unaffordable when they exceed 30% of gross household income.



3. The intermediate housing market

3.1 Introduction

The objective of this section of the report is to provide an overview of key trends in the intermediate housing market and includes:

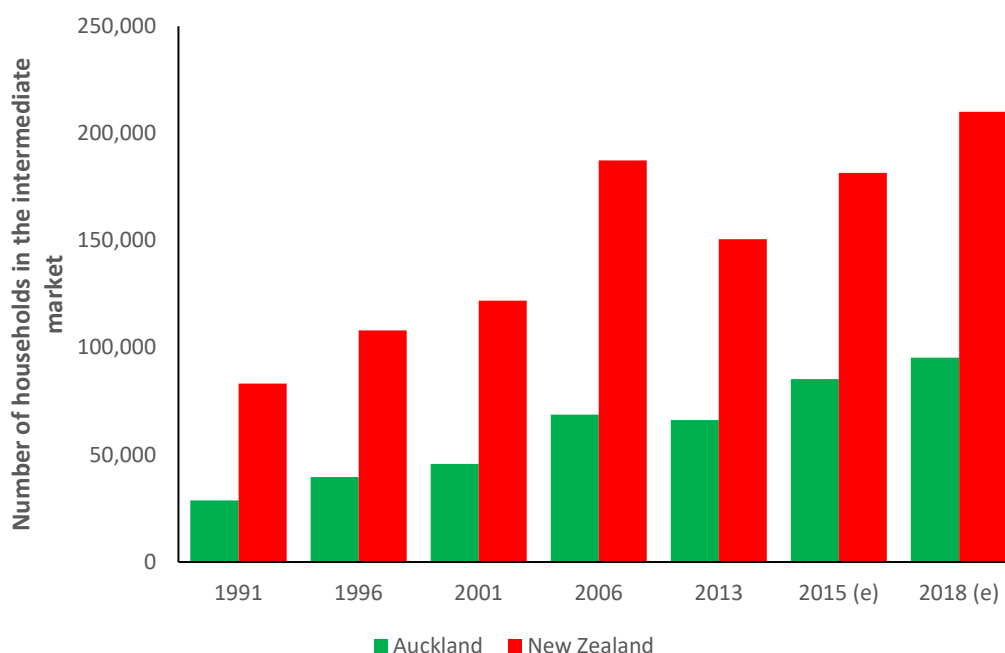
- Trends in the size of the intermediate housing market; and
- Affordability trends for in-work private sector renters.

A summary of the definition of key terms used in this report is included in appendix one.

3.2 Trends in the intermediate housing market

The number of households in the intermediate housing market has increased over the past 27 years by approximately 152% nationally and 231% in the Auckland region. There are now 210,000 intermediate households⁸ nationally and 95,400 of these are located in Auckland. Figure 3.1 presents the trends in the size of the intermediate housing market nationally and in the Auckland region between 1991 and 2018⁹.

Figure 3.1: Intermediate housing market 1991 to 2018



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

⁸ As at 30th June 2018

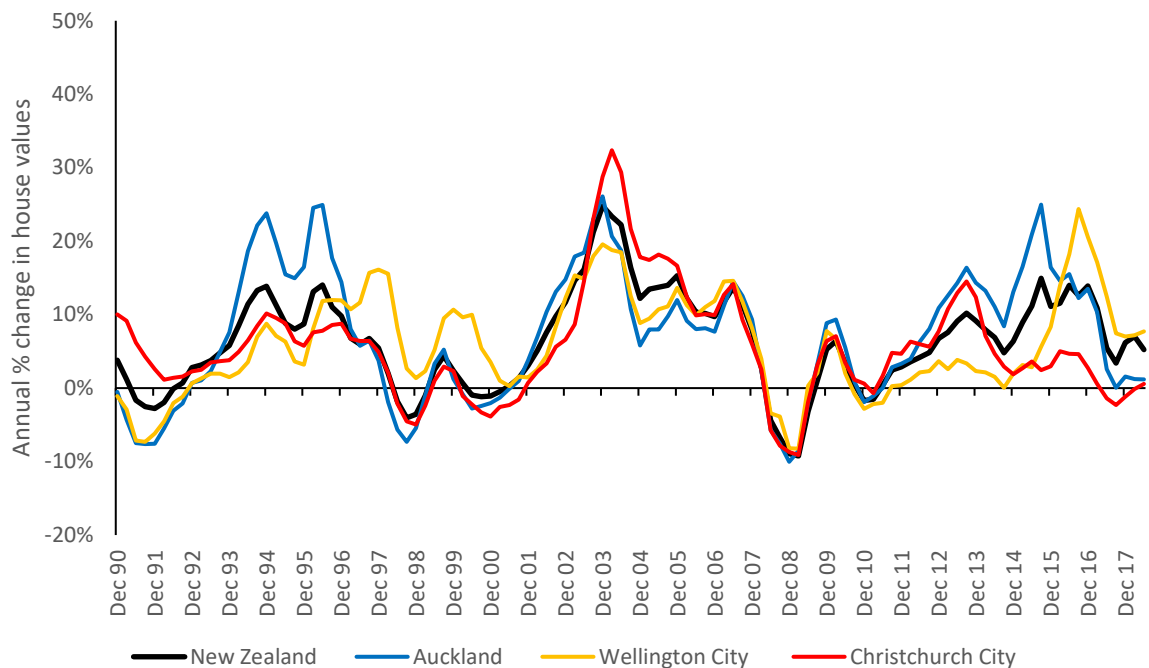
⁹ Household incomes are assumed to have increased by 3.5% per annum between 2013 and 2018.



The proportion of intermediate households located in the Auckland region relative to the national total increased from 34% in 1991 to 45% in 2018. Over the last three years Auckland's intermediate households as a percentage of the national total declined. This was caused by lower house price growth in Auckland while house sale prices increased at a higher rate outside Auckland.

Figure 3.2 presents the annual percentage change in house values between 1989 and 2018 in the main metropolitan markets.

Figure 3.2: Annual house value growth



Source: Corelogic

Over the last two years Auckland house values have increased by 4% while nationally they grew by 11% and by 21% in Wellington City. Christchurch's house values are still adjusting post the 2010/11 earthquake rebuild and fell by 1%. House price growth along with changes in interest rates can have a significant impact on the size of the intermediate market.



Table 3.1 presents analysis of the quantum of the impact of the key drivers of the change in the size of the intermediate housing market between 2006 and 2018.

Table 3.1: Key drivers of the change in the size of the intermediate housing market 2006 to 2018

Driver	Change in the number of intermediate hhlds			
	New Zealand		Auckland	
	06 to 13	13 to 18	06 to 13	13 to 18
Growth in total households	12,400	16,000	5,600	10,500
Growth as a result of tenure change (excluding population growth)	18,700	21,400	5,000	9,700
Change in interest rates	-44,800	-5,700	-16,700	-3,500
House sale price appreciation	33,400	64,500	22,600	25,100
Household income growth	-56,500	-36,800	-19,200	-12,600
Total change	-36,800	59,400	-2,700	29,200

Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, and Statistics New Zealand

Key trends include:

- The fall in interest rates (by approximately 3.7 percentage points) and growth in household income between 2006 and 2013 more than offset the impact of house sale price appreciation, population growth and a fall in homeownership rates on the size of the intermediate housing market;
- Strong population growth has also increased the size of the intermediate market in Auckland and nationally;
- Growth in the size of Auckland's intermediate market between 2013 and 2018 accounts for 49% of the national increase; and
- House sale prices increased faster than the expected growth in household incomes resulting a significant increase in intermediate households nationally and in Auckland.



3.3 Affordability trends for in-work private renters

The intermediate housing market forms an important part of the housing market continuum. They represent working households unable to affordably buy a dwelling at the lower quartile house sale price. Figure 3.3 presents a more detailed view of the housing continuum.

Figure 3.3: The housing continuum

Social Renters	Private Renters							Owner Occupiers
	Not in-work	In-work						
		Unable to affordably					Able to affordably	
		Pay rent at the			Buy at			
		lower quartile	median	upper quartile	lower quartile house sale price	median house sale price		
Social Renters	Not in-work Private renters	The Intermediate Housing Market				Relatively Well Off Private Sector Renters	Owner Occupiers	

NB: Note that this diagram is not to scale and does not represent the relative size of each sub group

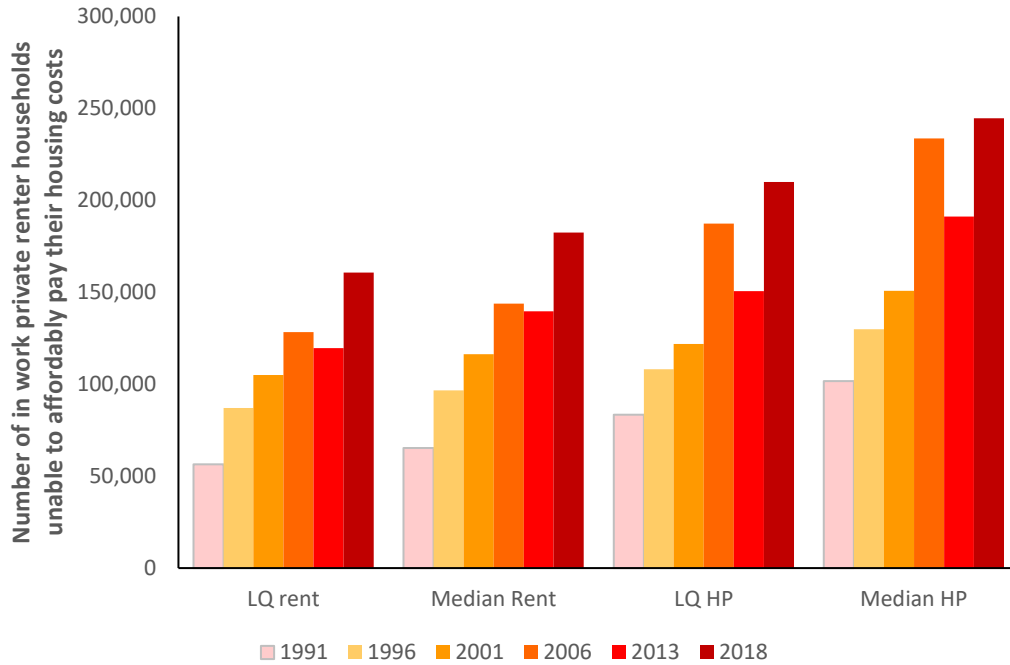
Analysis of these different groups within the housing continuum can provide additional insight into the relative affordability of rents and house prices in different locations around the country.

Figures 3.4 and 3.5 present the number of private renter households, with at least one person in paid employment, who are unable to affordably¹⁰ pay lower quartile rent (LQ), median rent, upper quartile rent (UQ) or buy a dwelling at the lower quartile house price (LQHP) or median house price (median HP) nationally (all regions combined) and in the Auckland region respectively.

¹⁰ Affordably pay is defined as paying no more than 30% of their household income in either rent or mortgage servicing.

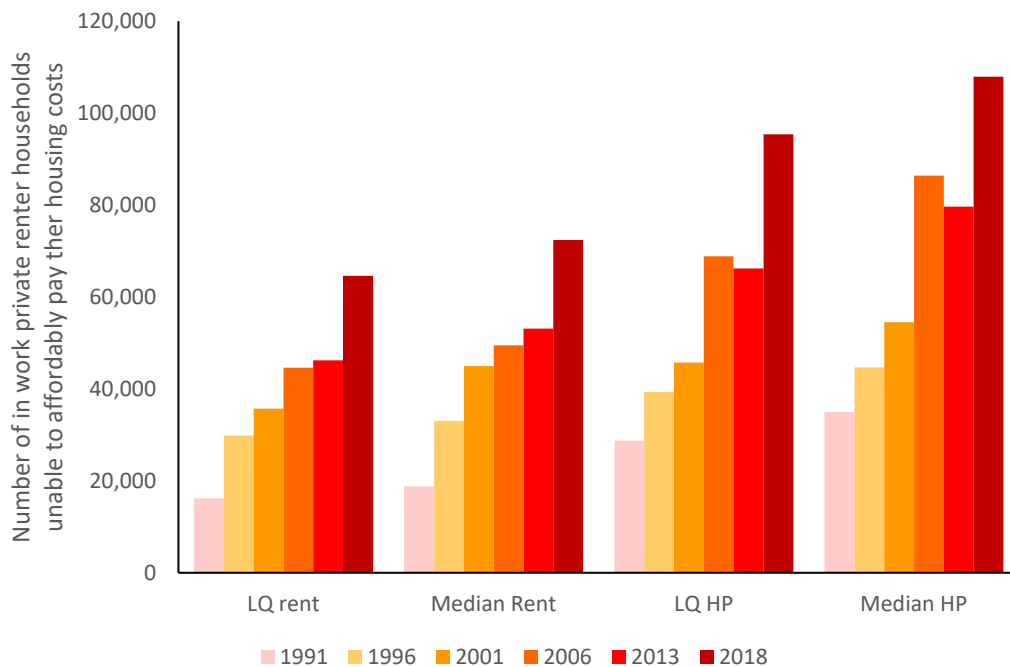


Figure 3.4: New Zealand – Housing affordability, 1991 to 2018



Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ

Figure 3.5: Auckland Region – Housing affordability, 1991 to 2018



Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ



Nationally, the size of the intermediate housing market fell from 187,400 households in 2006 to 150,600 in 2013 and then increased to 210,000 by 2018. At the same time the number of private renters unable to affordably pay the median market rent increased from 96,600 in 1991 to 182,400 in 2018, an increase of 85,800 households, or by 89%. A similar trend was experienced in Auckland.

It is beyond the scope of this study to determine why rents are now increasing at a significantly faster pace than renter household income however it does suggest building pressure within rental markets is driving growth in rents. If this trend continues lower income households could be priced out of the market and be forced to either crowd (increase household income by grouping more people with incomes together in the same dwelling) or relocate to lower cost locations.

Table 3.2 presents the income required in Auckland region to affordably pay the lower quartile rent, median rent or the mortgage costs associated with buying a dwelling at the lower quartile house sale price.

Table 3.2: Auckland Region – Household incomes required to affordably pay housing costs

June	Lower quartile rent		Median rent		Lower quartile house sale price		Median household income ¹¹	
	\$	Change	\$	Change	\$	Change	\$	Change
2001	\$40,100		\$45,100		\$52,800		\$49,000	
2006	\$51,900	29%	\$57,000	26%	\$92,200	75%	\$63,400	29%
2013	\$70,200	35%	\$78,800	38%	\$95,000	3%	\$76,500	21%
2018	\$90,000	28%	\$99,000	26%	\$132,300	39%	\$90,900	19%
Change 01 to 18	\$49,900	124%	\$53,900	120%	\$79,500	151%	\$41,900	86%

Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, & Statistics NZ

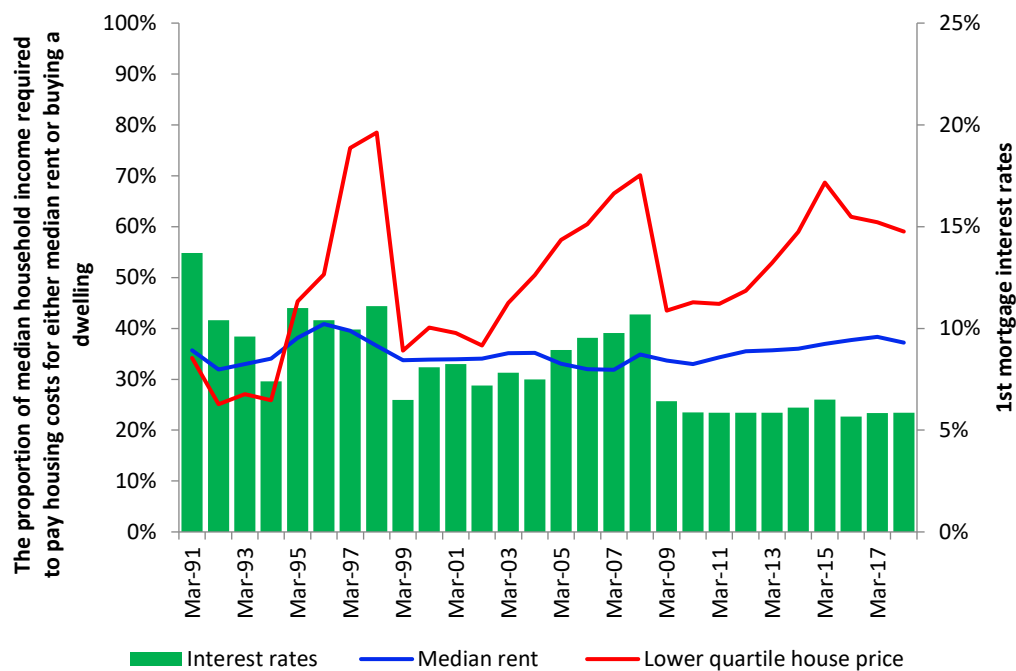
Housing affordability has significantly deteriorated. In 2001 households had to earn 84% of median household income to affordably pay the lower quartile rent, 92% to pay the median market rent, and 108% to buy at the lower quartile house price. In 2018, Auckland households now almost need to be earning the median household income to be able to affordably pay the city's lower quartile rent. They need to earn 108% of median household income to affordably pay the median rent and 146% of median household income to affordably buy a dwelling at the lower quartile house sale price. This trend is not unique to Auckland and has also occurred to a greater or lesser extent in other urban areas around the country.

¹¹ Assumes median household incomes increased by 3.5% per annum between 2013 and 2018



Figure 3.6 presents Auckland's median market rent for a three bedroom house and the debt servicing on the purchase of a dwelling at the lower quartile house sale price as a percentage of median household income in Auckland City between 1991 and 2018.

Figure 3.6: Auckland – Percentage of median household income required to affordably pay the median rent or buy at the lower quartile house price and the trend in mortgage interest rates.



Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ

Prior to 2010 a large proportion of the volatility in the affordability of buying a dwelling at the lower quartile house price reflected changes in mortgage interest rates. Since 2010, interest rates have been relatively stable and the majority of the growth in the intermediate market has been driven by house prices increasing at a faster pace than income.

The proportion of median household income required to pay the median rent peaked in 1996 at 41% and subsequently declined falling to 32% in 2007 before gradually increasing to 37% in 2018.

In summary, after the global financial crisis, housing affordability for both renters and first home buyers has deteriorated at a faster pace with building pressure within the market particularly for renter households. Households appear particularly vulnerable to a decline in first home buyer affordability due to an unexpected increase in interest rates.



4. Sub-national and demographic trends in the intermediate housing market

4.1 Introduction

The objective of this section of the report is to present the detailed analysis of the intermediate housing market by region and demographic characteristics between 2001 and 2018. The analysis initially presents the results by region followed by additional analysis by region and demographic characteristics and includes:

- Trends in the number of intermediate households (IH) by region, the number of IH households as a percentage of in-work private sector renter households (IWPSRH) and as a percentage of all households in the region;
- An overview of the demographic characteristics of the intermediate housing market as presented in 2015 report; and
- The impact of occupation on the ability of a households to affordably pay their housing costs.



4.2 Intermediate housing market by region

The relative size of the intermediate housing market varies by region. The relativities of household income, house prices and the size of the in-work private sector renters within the housing continuum all are important drivers. In addition, variations in interest rates play a key role.

Table 4.1 presents the trend in the intermediate housing market by region between 2001 and 2018.¹²

Table 4.1: The Intermediate Housing Market by Region 2001 to 2018

Region	Intermediate Households (IH)					
	2001	2006	2013	2015	2018	01 to 18
Northland	4,000	5,100	3,600	4,000	5,100	+1,100
Auckland	45,700	68,800	66,200	85,400	95,400	+49,700
Waikato	11,300	16,500	12,100	14,300	19,600	+8,300
BOP	9,200	12,600	8,400	9,900	14,600	+5,400
Gisborne	900	1,400	700	800	1,000	+100
Hawkes Bay	4,200	6,100	4,100	4,500	5,400	+1,200
Taranaki	2,100	3,400	2,500	2,800	2,900	+800
Manawatu- Whanganui	4,900	7,800	4,600	4,900	6,300	+1,400
Wellington	14,400	23,300	17,700	19,400	23,700	+9,300
Tasman	1,300	2,100	1,700	1,900	2,300	+1,000
Nelson	1,700	2,700	2,000	2,200	2,700	+1,000
Marlborough	1,000	1,400	1,200	1,300	1,500	+500
West Coast	300	700	400	500	400	+100
Canterbury	15,100	24,700	17,900	21,500	18,300	+3,200
Otago	4,600	8,800	6,100	6,900	9,500	+4,900
Southland	1,000	1,800	1,100	1,200	1,400	+400
Total	121,900	187,400	150,600	181,500	210,000	+88,100

Sourced: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, and Statistics New Zealand

Nationally the number of intermediate households increased by 16% (or 5% per annum) between 2015 and 2018. This compares to annual average growth of 3.5% per annum between 1991 and 2018.

With the exception of Christchurch and West Coast regions, all other markets experienced strong growth in the number of intermediate households between 2015 and 2018. Flat house prices combined with growing incomes resulted in a fall in the size of Canterbury's intermediate market. Bay of Plenty experienced the strongest growth in intermediate households between 2015 and 2018 increasing by 47%.

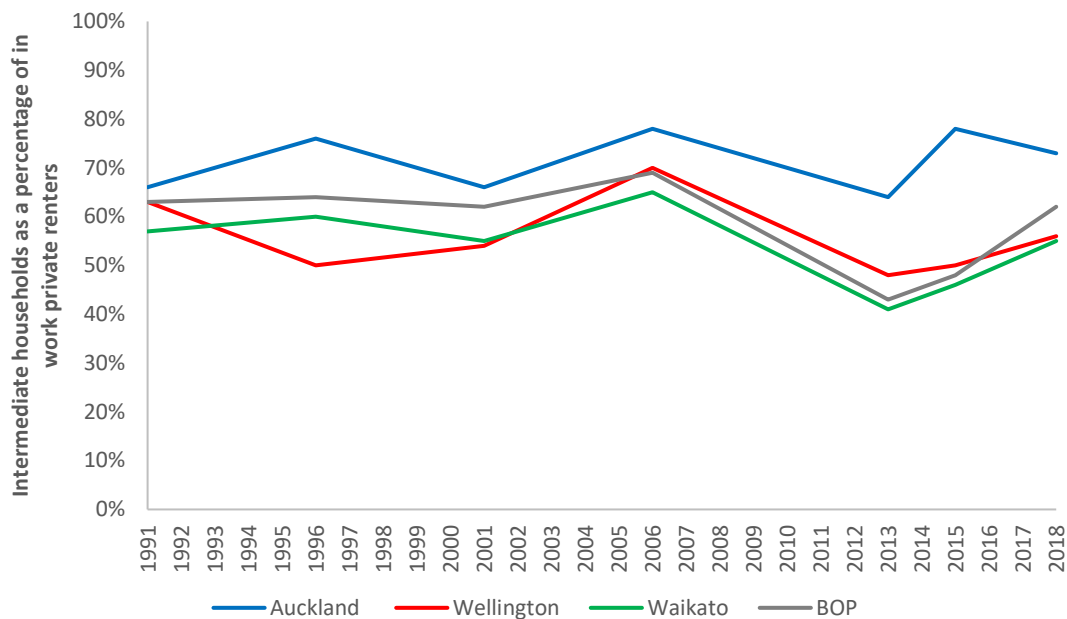
¹² A summary of the intermediate housing market trends by region is presented in appendix two.



Other regions experiencing growth at least 10 percentage points higher than the national average were Waikato (up 37%), Otago (up 38%), Manawatu-Whanganui (up 29%) and Northland (up 28%).

Figure 4.1 presents the trend in the ratio of intermediate housing market households as a percentage of in-work private renter households in Auckland, Waikato, Bay of Plenty and Wellington regions.

Figure 4.1: Intermediate households as a % of in work private renters



Source: Modelled from data sourced from Corelogic, Headway Systems, RBNZ, & Statistics NZ

Despite the current low interest rates, there has been a significant growth in the proportion of in work private renters who are unable to buy at the lower quartile house price. Auckland experienced stronger house price growth earlier than the other main centres however as the pace of value growth slowed over the last three years the proportion of households unable to affordably buy eased. Outside Auckland house price growth is continuing to outpace household income growth and consequently the proportion of in work private renters unable to affordably buy is continuing to increase.



4.3 A summary of intermediate households by demographic characteristics

Intermediate housing market demographics were discussed in-depth in Livingston and Associates (2015)¹³. A summary of the markets key demographic characteristics include:

- The number of intermediate renters aged 50 years and older is continuing to increase;
- One person and couple with children households account for over 50% of the intermediate housing market;
- The majority of couples with children and one parent intermediate households have reference people aged between 30 and 49 years of age;
- The number of one parent intermediate households has significantly increased over the last decade;
- Couple only households are under-represented in the intermediate housing market;
- A total of 77% of the increase in the size of the intermediate housing market was in households with the reference person employed as either a manager or in a profession;
- Corporate managers, engineers, and teachers all experienced strong growth in the count of intermediate market households; and
- A similar pattern was experienced in Auckland where managers and professionals accounted for 71% of the growth in the intermediate housing market. Managers and professionals living in Auckland accounted for 50% of the total national growth in the intermediate housing market. These traditional higher paying areas of employment are likely to increasingly account for growth in the intermediate housing market if the affordability of buying a dwelling continues to decline.

¹³ Livingston and Associates, (2015) *"ER5 Can Work, Cannot Afford to Buy - The Intermediate Housing Market"*
A research report funded by the Building Research Levy - BRANZ report number LR0484.

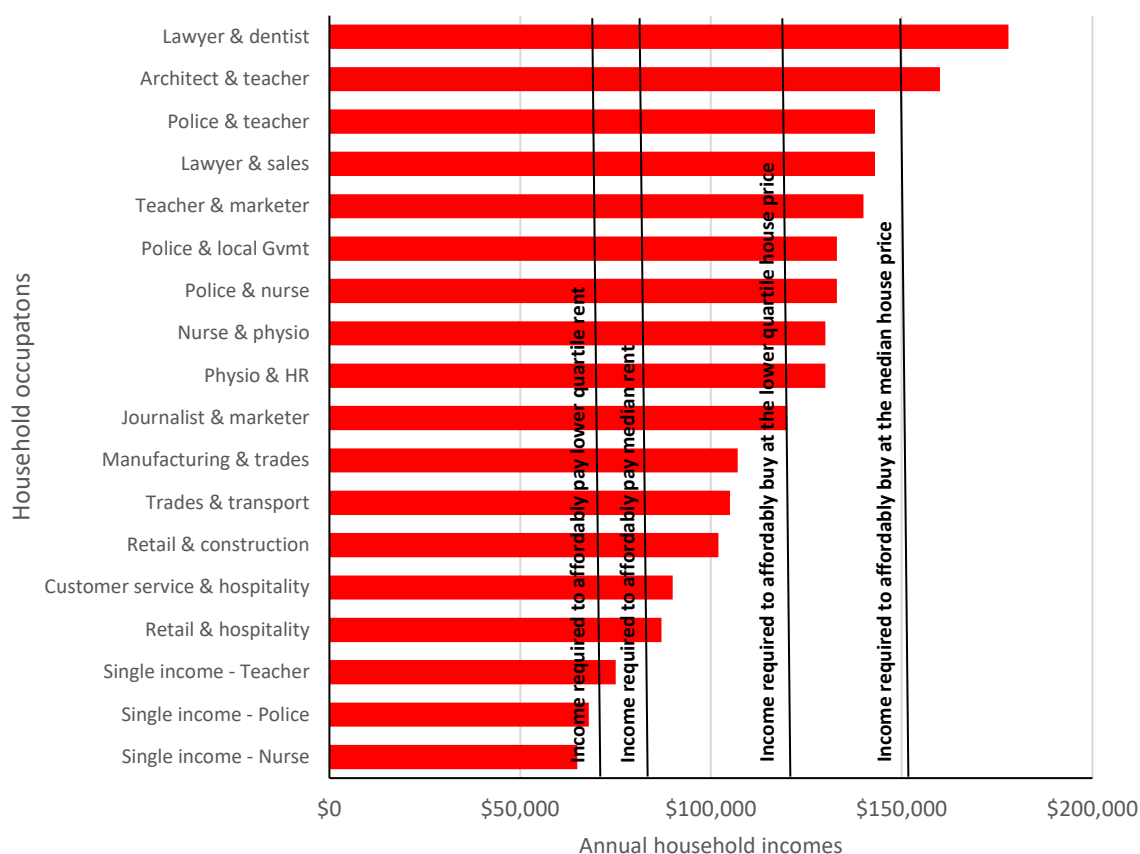


4.4 The impact of occupation on households ability to pay housing costs

Housing affordability is poor even for households earning more than the median household income. Auckland's median household income is estimated at \$90,900¹⁴ per annum. This is just sufficient to affordably pay Auckland's lower quartile rent.

Figure 4.2 presents households' ability to affordably pay the housing costs associated with the lower quartile rent, median rent, buy at the lower quartile house price and buy at the median house price. The income levels¹⁵ assume one or two full time incomes for the different occupations presented.

Figure 4.2: Auckland – Relative housing affordability by occupation in 2018¹⁶.



Source: Modelled from data sourced from Headway Systems, MBIE, RBNZ, & Statistics NZ

¹⁴ This assumes the median household income has increased at 3.5% per annum since the 2013 census,

¹⁵ Incomes are based on the 2018 median incomes by occupation published by www.careers.govt.nz

¹⁶ A summary of the incomes used is presented in appendix 3.



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All of the two household incomes by occupations presented are higher than Auckland's median household income. In addition, all households with two incomes (two full time occupations) are higher than Auckland's median household income. The key trend is the inability of nearly all the different combinations of occupations to affordably buy a dwelling at the median house price and how unaffordable the housing costs are at the lower quartile house price as well. Households with single incomes struggle to affordably pay the lower quartile market rent.

Housing affordability has become a key issue for a range of essential worker households. Effectively they need two full time incomes to affordably pay market rents. These housing costs have the potential to impact on the region's ability to attract essential workers and for staff retention.



5. Intermediate housing market growth scenarios

5.1 Introduction

The objective of this section of the report is to present an update of a range of scenarios reflecting how the intermediate market may increase or decrease between 2018 and 2028. The goal is to identify potential market outcomes under these scenarios rather than to try and predict the future. This section of the report includes:

- A summary of the scenarios used;
- Results of the scenario analysis; and
- Discussion on the results

5.2 Scenario overview

There is a number of key variables which will impact on the future size of the intermediate housing market and these include:

- Level of population growth and rate of household formation by region;
- Trends in household tenure;
- Growth in household incomes;
- Mortgage interest rates; and
- House sale price growth rates.

Table 5.1 summarises the key model inputs.

Table 5.1: Key scenario inputs

Variable	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Household income (%pa)	3.5% pa	3.5% pa	3.5% pa	3.5% pa	3.5% pa	3.5% pa
Population growth	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium	Stats NZ Medium
Interest rates	Constant	Constant	Constant	Constant	Constant	+2%
House price growth (%pa)	Long term Ave	50% long term Ave	2%	0%	3.5%	Long term Ave



Table 5.2 presents the results of the scenario analysis of the relative growth of the intermediate housing market in Auckland and nationally between 2018 and 2028¹⁷.

Table 5.2: Scenario outcomes – projected growth in the intermediate market

	Number of intermediate households			Intermediate households as a % of IWPR ¹⁸		
	2018	2028	18 to 28	2018	2028	18 to 28
Auckland						
Scenario 1	95,400	151,700	56,300	73%	86%	13%
Scenario 2	95,400	126,100	30,700	73%	71%	-1%
Scenario 3	95,400	116,000	20,600	73%	66%	-7%
Scenario 4	95,400	91,900	-3,500	73%	52%	-21%
Scenario 5	95,400	128,900	33,500	73%	73%	0%
Scenario 6	95,400	164,000	68,600	73%	93%	20%
New Zealand						
Scenario 1	210,000	329,800	119,800	58%	70%	13%
Scenario 2	210,000	260,800	50,800	58%	56%	-2%
Scenario 3	210,000	238,500	28,500	58%	51%	-7%
Scenario 4	210,000	185,500	-24,500	58%	40%	-18%
Scenario 5	210,000	275,900	65,900	58%	59%	1%
Scenario 6	210,000	370,100	160,100	58%	79%	21%

Source: Modelled from data sourced from Corelogic, Headway Systems, MBIE, RBNZ, & Statistics NZ

Key trends include:

- If house prices continue to grow at the same annual average growth rate as they have since 1989 (scenario 1) the number of intermediate households will increase by 59% (or 56,300) in Auckland and 57% (or 119,800) nationally;
- Under scenario 2 the house price growth rate is half the long term annual average growth between 1989 and 2018. This reduces the total increase in intermediate households to 30,700 in Auckland and 50,800 nationally;
- Under scenario 3 house prices are assumed to increase at 2% per annum which equates to the mid-point in the Reserve Bank's long term inflation target. This reduces the total increase in intermediate households to 20,600 in Auckland and 28,500 nationally;
- Scenario 4 assumes house prices remain unchanged between 2018 and 2028. Under this scenario household affordability would improve as household incomes increased

¹⁷ A summary of the impact on all regions is presented in appendix 4.

¹⁸ In work private renters (IWPR)



- by 3.5% per annum. Intermediate households declined by 2,500 in Auckland and 24,500 nationally;
- Scenario 5 assumes house prices increase at the same pace as household incomes. The intermediate market grows with the increase in private renters. Relative to scenario one, these assumptions reduce the increase in intermediate households to 30,700 in Auckland and 20,800 nationally; and
 - Under scenario 6 house prices increase at the same rate as the long term annual average and interest rates are assumed to increase by two percentage points. This increases the total increase in intermediate households to 68,600 in Auckland and 160,100 nationally.

Market expectations are for interest rates to remain low in the short to medium term. Any significant variation in interest rates would have an immediate impact on the size of the intermediate market. Mortgage interest rates are significantly below their long term average. During the global financial crisis interest rates were also 4 percent higher than they are today. Future interest rate increases present a significant longer term risk to housing affordability, however if they did increase house price growth is also likely to slow.

5.3 Implications of these trends

New Zealanders' experience with declining housing affordability for both renting and for first home buyers is not unique and a number of other countries have experienced similar market outcomes. Large rapidly growing cities around the world have struggle to build sufficient affordable housing to retain key workers close to where they work. The housing market outcomes experienced by different communities around the country reflect the changing economic and institutional environment in which they operated.

Increasingly households earning less than the median household income for their market are struggling to affordably pay their housing costs whether renting or buying a dwelling. To some extent the longer term decline in affordability for first home buyers has been masked by lower than average interest rates. If and when mortgage interest rates increase to nearer their long term average is beyond the scope of this project.

One of the consequences of the growth in the intermediate market has been renters have become a more diverse group incorporating more households consisting of proportionally more couples-with-children and older renters. Declining rates of owner occupation across cohorts aged less than 55 years of age suggest the increase in older renters will accelerate over the next two decades as these cohorts age and subsequently retire.

If house prices continue to increase at rates significantly higher than the growth in household incomes very few renter households will be able to afford to buy a dwelling in Auckland. Owner occupation will be limited to households who inherit significant capital,



those earning well above the median household income, or those lucky enough to qualify for a subsidised form of ownership.

DPMC (2008) analysed the long term average median house price to median household income ratio at approximately 3.5. Auckland's current house price to income ratio is now over 9. This also suggests a significant imbalance and either house prices need to fall or alternatively not increase for a long time whilst incomes grow for this imbalance to change.

The current low interest rates have assisted in reducing the size of the intermediate housing market. If interest rates were to increase to their long term average the size of the intermediate market would increase by approximately 7 to 8 percentage points (scenario 1 outcomes compared to scenario 6 outcomes).

The economic consequences of a growing intermediate housing market for the mainstream economy include the growing inability of workers in essential occupations such as police, nurses and teachers to buy in areas in which they work. Again, failure to provide the desired local housing options for these key workers can impact upon the efficiency of the local labour market and in particular labour availability in these key occupations.

The breakdown of the traditional housing pathway is likely to result in a growing number of households who will never attain home ownership. Renter households on fixed incomes, particularly those with people aged 65 years and older, are particularly vulnerable to changes in the level of market housing costs (rents). This has significant potential fiscal implications for Government in terms of the level of additional support they may need to provide to these households.

Traditionally, home ownership and the stability it provides has been associated with a range of positive educational, health and social outcomes. A key challenge for government housing policy is how, in the context of a growing intermediate housing market, with growing numbers of life-long renters, these benefits might also be secured by those unable for reasons of affordability to secure home ownership.

Home ownership has also been one of households' key wealth building strategies. Growth in the intermediate housing market limits the ability of those households' (in the intermediate housing market) ability to save and accumulate wealth for old age via home ownership. This has implications for the quantum and type of consumption support Government may have to provide during old age for those confined for most of their lives to the private rental market.

A range of alternative tenure models have been used overseas to try and address the decline in housing affordability and provide key worker and older person housing. These solutions range from rental cooperatives for low income households, community land trusts, and shared equity products which assist higher household income (within 80% to 120% of median household income) into shared ownership solutions. All have their own



merits and issues to be resolved and are more or less appropriate at different points of the housing continuum.

The unfortunate truth about all these solutions is they all require significant amounts of low cost patient capital. Policies such as inclusion zoning have been promoted in different locations as a way of accumulating capital for affordable housing or increasing the supply of affordable units. However, such approaches have been met with significant resistance from existing market players who see these approaches as just another development cost being loaded onto the developer. Other strategies such as taxing the uplift of the value of land as it is rezoned has also met with significant resistance. Ultimately, central government needs to set policy around who pays any subsidy or provide the low cost patient capital required.

There are no easy answers in developing the appropriate policy responses to these trends, particularly in an Auckland context. It is important that future policy development considers their impact on the housing market whether it relates to issues directly associated with the housing market or in a more general economic context.



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Appendix One: Definitions

There is a number of key terms used in this report. They are defined as follows:

- Ability to “affordably” rent or buy a dwelling;
- Intermediate housing market; and
- Sub-groups within the housing continuum.

The Ability to Affordably Rent or Buy a Dwelling

In the context of this report the ability of a household to “affordably” rent or buy a dwelling assumes no more than 30% of gross household income from all sources is used to meet its housing costs whether they rent or service a mortgage. Consequently, housing is unaffordable when households are spending more than 30% of their gross household income to meet their housing costs whether it’s paying the lower quartile rent, or servicing a mortgage as a consequence of buying at the lower quartile house sale price.

Intermediate Housing Market

The concept of the intermediate housing market was developed in the United Kingdom largely by Stephen Wilcox of the Centre for Housing Policy at the University of York. He published a number of reports between 2003 and 2010 which developed the concept which focusing on the geographical distribution of affordable and unaffordable housing and the ability of working households to become home owners. DTZ (2008) adopted this approach to housing affordability analysis and adapted it to a New Zealand context taking into account data availability. DTZ defined the intermediate housing market in a New Zealand context as “*private renter households with at least one person in paid employment, unable to affordably purchase a house at the lower quartile house sale price for the local authority area at standard bank lending conditions.*”

Standard bank lending conditions were defined as a 25 year table mortgage assuming no more than 30% of the household’s gross income is used to service the debt, a 10% deposit, and the one year fixed mortgage interest rate. A 10% deposit rate was used to ensure the 2013 results were comparable with previous reports.

Sub-Groups within the Housing Continuum.

There is a number of ways in which households can be divided into different sub-groups to analyse the housing continuum, from social renters at one end of the spectrum to owner occupied households at the other. In the context of this report the housing continuum is divided into a number of sub-groups based on, tenure (social renters,



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private sector rents, and owner occupied households), their ability to affordably pay lower quartile, median or upper quartile rent or purchase a dwelling at the lower quartile or upper quartile house sale price.



Appendix Two

Intermediate housing market trends by region 2001 to 2018

	Intermediate households				Change in the number of households			
	2001	2006	2013	2018	01 to 06	06 to 13	13 to 18	01 to 18
Number of households								
Northland	4,000	5,100	3,600	5,100	1,100	-1,500	1,500	1,100
Auckland	45,700	68,800	66,200	95,400	23,100	-2,600	29,200	49,700
Waikato	11,300	16,500	12,100	19,600	5,200	-4,400	7,500	8,300
Bay of Plenty	9,200	12,600	8,400	14,600	3,400	-4,200	6,200	5,400
Gisborne	900	1,400	700	1,000	500	-700	300	100
Hawkes Bay	4,200	6,100	4,100	5,400	1,900	-2,000	1,300	1,200
Taranaki	2,100	3,400	2,500	2,900	1,300	-900	400	800
Manawatu-Wanganui	4,900	7,800	4,600	6,300	2,900	-3,200	1,700	1,400
Wellington	14,400	23,300	17,700	23,700	8,900	-5,600	6,000	9,300
Tasman	1,300	2,100	1,700	2,300	800	-400	600	1,000
Nelson	1,700	2,700	2,000	2,700	1,000	-700	700	1,000
Marlborough	1,000	1,400	1,200	1,500	400	-200	300	500
West Coast	300	700	400	400	400	-300	0	100
Canterbury	15,100	24,700	17,900	18,300	9,600	-6,800	400	3,200
Otago	4,600	8,800	6,100	9,500	4,200	-2,700	3,400	4,900
Southland	1,000	1,800	1,100	1,400	800	-700	300	400
New Zealand	121,900	187,400	150,600	210,000	65,500	-36,800	59,400	88,100
Intermediate households as a % of in work private renters								
Northland	59%	61%	42%	49%	2%	-19%	8%	-9%
Auckland	66%	78%	64%	73%	12%	-13%	8%	7%
Waikato	55%	65%	41%	55%	10%	-24%	14%	0%
Bay of Plenty	62%	69%	43%	62%	7%	-26%	19%	0%
Gisborne	41%	56%	26%	29%	15%	-30%	3%	-12%
Hawkes Bay	55%	69%	42%	49%	13%	-26%	7%	-7%
Taranaki	40%	57%	37%	38%	17%	-21%	1%	-2%
Manawatu-Wanganui	40%	53%	31%	39%	14%	-22%	7%	-1%
Wellington	54%	70%	48%	56%	16%	-22%	8%	2%
Tasman	68%	84%	65%	75%	16%	-19%	10%	7%
Nelson	61%	81%	59%	68%	19%	-22%	9%	7%
Marlborough	53%	58%	45%	51%	4%	-13%	7%	-2%
West Coast	23%	38%	22%	19%	16%	-16%	-3%	-4%
Canterbury	54%	72%	47%	39%	18%	-26%	-8%	-15%
Otago	41%	65%	43%	56%	24%	-23%	13%	15%
Southland	22%	37%	19%	20%	14%	-18%	1%	-2%
New Zealand	56%	70%	50%	58%	13%	-20%	8%	2%



Appendix Three

Median incomes by occupation 2018

	Median Income	Pay range	
		Low	High
Accounting	\$65,000	\$42,000	\$125,000
Architecture	\$50,000	\$37,000	\$85,000
Automotive	\$55,000	\$37,000	\$85,000
Banking finance and insurance	\$65,000	\$42,000	\$125,000
Construction and roading	\$60,000	\$37,000	\$145,000
Customer service	\$45,000	\$37,000	\$65,000
Education	\$55,000	\$37,000	\$85,000
Engineering	\$70,000	\$42,000	\$125,000
Executive and general management	\$85,000	\$45,000	\$207,000
Government and council	\$70,000	\$40,000	\$145,000
Healthcare	\$55,000	\$40,000	\$85,000
Hospitality and Tourism	\$45,000	\$35,000	\$63,000
HR and recruitment	\$65,000	\$45,000	\$125,000
IT	\$100,000	\$45,000	\$207,000
Legal	\$65,000	\$40,000	\$115,000
Manufacturing	\$47,000	\$35,000	\$85,000
Marketing, media and communications	\$65,000	\$42,000	\$125,000
Office and administration	\$50,000	\$37,000	\$75,000
Property	\$75,000	\$42,000	\$155,000
Retail	\$42,000	\$35,000	\$65,000
Sales	\$60,000	\$37,000	\$105,000
Science and technology	\$55,000	\$37,000	\$105,000
Trades and services	\$55,000	\$37,000	\$85,000
Transport and logistics	\$50,000	\$37,000	\$80,000
Median income after 10 years			
Performing arts	\$43,000		
Engineering	\$83,000		
Law	\$83,000		
Dental	\$95,000		
Medical	\$124,000		
Teaching	\$75,000		
Police	\$68,000		
plumber / electrician	\$60,000		
journalist	\$55,000		
Local government	\$65,000		



Architect	\$85,000		
Nursing	\$65,000		
Physiotherapy	\$65,000		
Household incomes used in Figure 4.2			
Single income - Nurse	\$65,000		
Single income - Police	\$68,000		
Single income - Teacher	\$75,000		
Retail & hospitality	\$87,000		
Customer service & hospitality	\$90,000		
Retail & construction	\$102,000		
Trades & transport	\$105,000		
Manufacturing & trades	\$107,000		
Journalist & marketer	\$120,000		
Physio & HR	\$130,000		
Nurse & physio	\$130,000		
Police & nurse	\$133,000		
Police & local Gvmt	\$133,000		
Teacher & marketer	\$140,000		
Lawyer & sales	\$143,000		
Police & teacher	\$143,000		
Architect & teacher	\$160,000		
Lawyer & dentist	\$178,000		



Appendix Four -Results of scenario outcomes by region

	2018	2028 Scenario outcomes					
	Int mkt	1	2	3	4	5	6
Intermediate households							
Northland	5,100	7,900	5,900	5,300	4,600	6,500	9,300
Auckland	95,400	151,700	126,100	116,000	91,900	128,900	164,000
Waikato	19,600	31,600	23,900	21,000	15,700	25,100	35,400
Bay of Plenty	14,600	22,500	17,800	16,400	12,800	19,000	24,600
Gisborne	1,000	1,500	1,000	900	1,100	1,200	2,000
Hawkes Bay	5,400	8,400	6,100	5,500	4,100	6,600	9,900
Taranaki	2,900	4,700	3,400	3,000	2,300	3,600	5,300
Manawatu-Whanganui	6,300	8,600	6,900	6,800	5,400	8,300	10,400
Wellington	23,700	33,500	25,700	23,600	17,700	28,600	39,100
Tasman	2,300	3,500	2,900	2,700	2,100	3,000	3,700
Nelson	2,700	3,800	3,100	2,800	2,200	3,300	4,200
Marlborough	1,500	2,200	1,600	1,500	1,100	1,800	2,600
West Coast	400	600	600	600	500	600	600
Canterbury	18,300	32,300	21,800	19,500	13,700	24,700	39,400
Otago	9,500	15,000	11,900	10,700	8,600	12,300	16,800
Southland	1,400	2,100	2,200	2,100	1,700	2,300	2,800
New Zealand	210,000	329,800	260,800	238,500	185,500	275,900	370,100
Intermediate households as a % of in work private renters							
Northland	49%	60%	45%	41%	35%	50%	71%
Auckland	73%	86%	71%	66%	52%	73%	93%
Waikato	55%	70%	53%	47%	35%	56%	79%
Bay of Plenty	62%	75%	59%	55%	42%	63%	82%
Gisborne	29%	38%	25%	23%	28%	29%	50%
Hawkes Bay	49%	63%	46%	41%	31%	50%	74%
Taranaki	38%	52%	37%	33%	25%	40%	59%
Manawatu-Whanganui	39%	44%	35%	35%	28%	42%	53%
Wellington	56%	66%	50%	46%	35%	56%	77%
Tasman	75%	87%	73%	68%	53%	75%	92%
Nelson	68%	78%	64%	58%	45%	68%	87%
Marlborough	51%	63%	45%	42%	31%	51%	73%
West Coast	19%	27%	24%	23%	19%	27%	26%
Canterbury	39%	52%	35%	31%	22%	39%	63%
Otago	56%	70%	56%	50%	40%	58%	79%
Southland	20%	25%	26%	25%	20%	26%	33%
New Zealand	58%	70%	56%	51%	40%	59%	79%



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Appendix Five -