

# STATE OF HOUSING DEMAND

## Key Points

- Long-term housing demand is largely a function of population growth and the rate of household formation. Over the period 2020 to 2025 (inclusive), the COVID-19-induced shock will see new demand for housing fall by a total of 286,000 dwellings relative to the pre-crisis outlook, with the impact largely felt in Australia's eastern seaboard rental markets over the short to medium term.
- The projections show new demand for housing falling sharply in 2021 and in 2022 to 54,200 and 91,600 respectively, from pre-COVID-19 levels of around 176,300 and 186,900, mainly due to sharp fall in NOM.
- The sharp fall in new demand is being felt largely in the rental housing segment given the composition of net overseas migration, particularly lower demand from international students, and the households most affected by the recent rise in unemployment are more likely to be renters.
- From 2023, on the back of positive NOM and a strengthening economy, new housing demand will lift to 144,700 dwellings in 2023 and move back close to pre-COVID levels to around 179,000 dwellings in 2024.
- New housing demand is extremely sensitive to changes in population growth and Australia's migration intake. Sensitivity analysis shows that, under a slightly more optimistic scenario where NOM is negative in 2021 but recovers earlier and returns positive in 2022, this would boost new demand by around 86,000 dwellings over the period to 2025 relative to the central scenario.
- The projections indicate lone households with residents aged 70+ will grow strongly (+23 per cent) over the period 2019 to 2025, and couples without children expected to also grow strongly over the same period (+9 per cent).
- Demand for detached and medium-density dwellings will recover to pre-crisis levels by 2024, while demand for apartments will fall to around 16,200 dwellings in 2021 before gradually recovering to around 31,700 in 2025, still well below pre-crisis demand (47,600 in 2019).
- The unique circumstances of the impact of the COVID-19 pandemic add an unusual degree of uncertainty for the longer term outlook for housing demand. This is a function of the high degree of uncertainty around international border reopenings and associated impacts on NOM, and the uncertainty around how many Australian citizens living overseas return home to live.

## Introduction

# The purpose of this chapter is to provide projections of new housing demand to 2025, to outline the factors that drive housing demand, while also assessing current housing demand and the outlook for housing demand in the context of COVID-19.

Housing is considered a basic necessity. People need a roof over their heads and a place to call home. But, for many, housing is also an important investment. The purchase of a dwelling is the largest financial decision most households make, and their home is typically their most valuable asset. The consumption of housing services and investment in housing—from renters, first home buyers, homeowners, and investors—underpins housing demand across the economy.

This chapter details the factors that drive housing demand, the methodologies used to project housing demand, and the national housing demand projections.

**Table 2.1: Housing demand categories**

Housing Category	ABS Structure Dwelling Types
Detached	Separate house
Medium	Semi-detached, row or terrace house, townhouse etc. with one storey
	Semi-detached, row or terrace house, townhouse etc. with two or more storeys
	Flat or apartment in a one- or two-storey block
	Flat or apartment attached to a house
Apartment	Flat or apartment in a three-storey block
	Flat or apartment in a four- or more-storey block

Source: Macroplan, ABS. Non-private dwellings have been excluded from the analysis. These dwelling types include hotels, staff quarters, hospitals, hostels, nursing homes, certain types of welfare accommodation (i.e. group homes) and prisons.

### Housing demand by dwelling type

The projections in this chapter account for demand for all residential dwellings across Australia. All residential dwellings include occupied dwellings—both private and public—but also vacant private dwellings. The three main types of dwellings are detached, medium density, and apartment dwellings (Table 2.1). Other dwelling types such as cabins and caravans account for under one per cent, and a declining share, of the dwelling market.

### Housing demand by location

This chapter details housing demand at the national level, with more detailed demand projections outlined in the Supply-Demand Balance chapter. The report presents demand (and supply) projections for all eight major cities and rest of state (see Table 2.2).<sup>2</sup>

**Table 2.2: Dwelling locations**

Capital Cities	Rest of state
Greater Sydney	NSW
Greater Melbourne	VIC
Greater Brisbane	QLD
Greater Adelaide	SA
Greater Perth	WA
Greater Hobart	TAS
Greater Darwin	NT
Canberra/ACT	

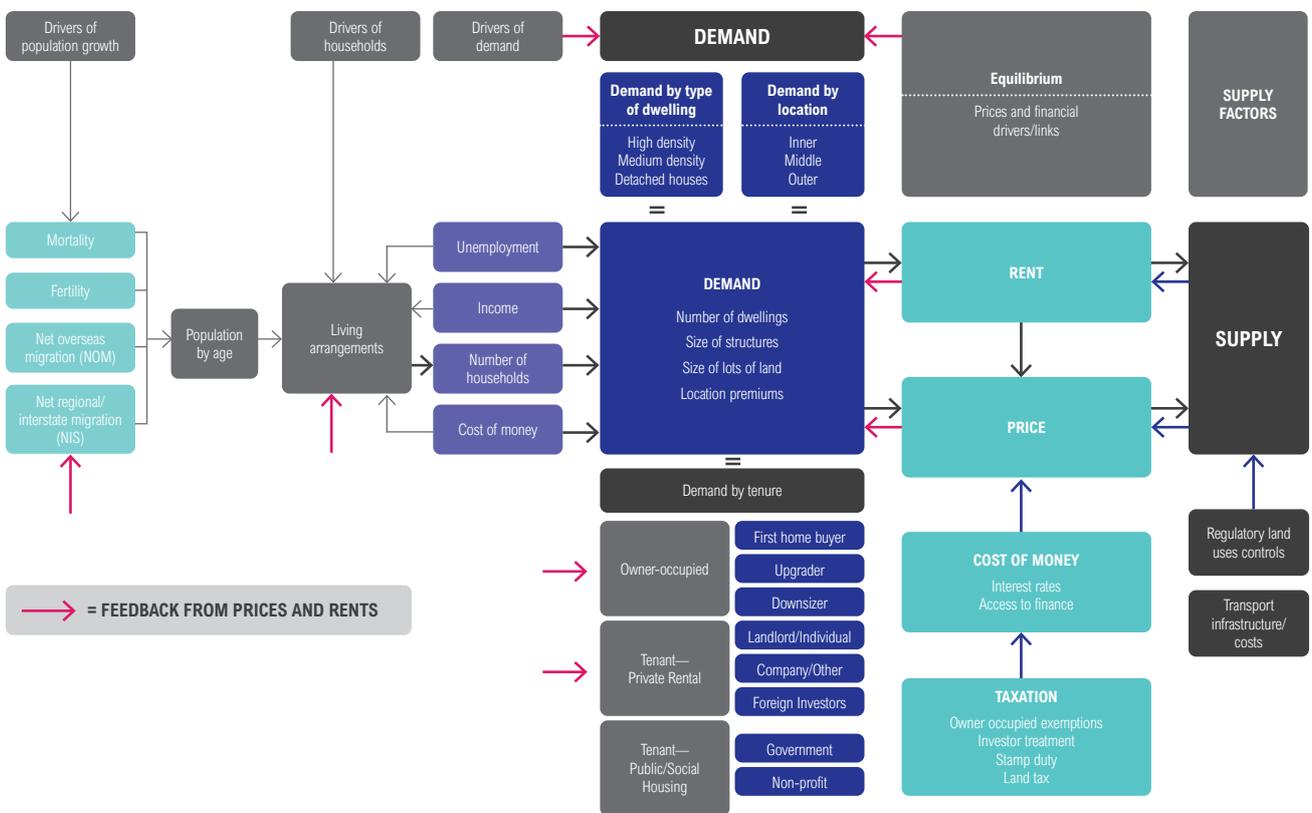
Source: Macroplan, SGS Economics.

<sup>2</sup> There are also more detailed spatial dynamics at play when assessing where housing is needed within major cities, particularly as households can re-locate, but this is not within the scope of the modelling in this report.

# Factors that affect dwelling demand

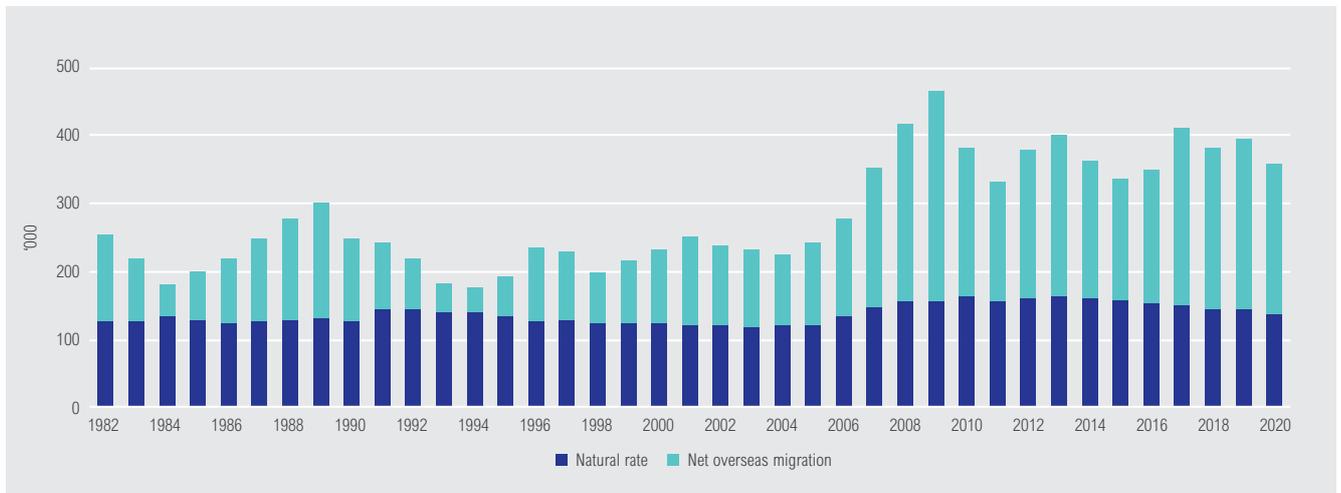
There are a range of short-to-longer term economic factors that drive housing demand which are set out in Figure 2.1. The primary long-term drivers are population and income, while in the short to medium term, the cyclical state of the economy, including changes in interest rates, are also major influences.

Figure 2.1: Factors that influence housing demand



Source: Macroplan

Figure 2.2: Australia's population growth



Source: ABS Cat No. 3412.0, NHFC

## Population and NOM

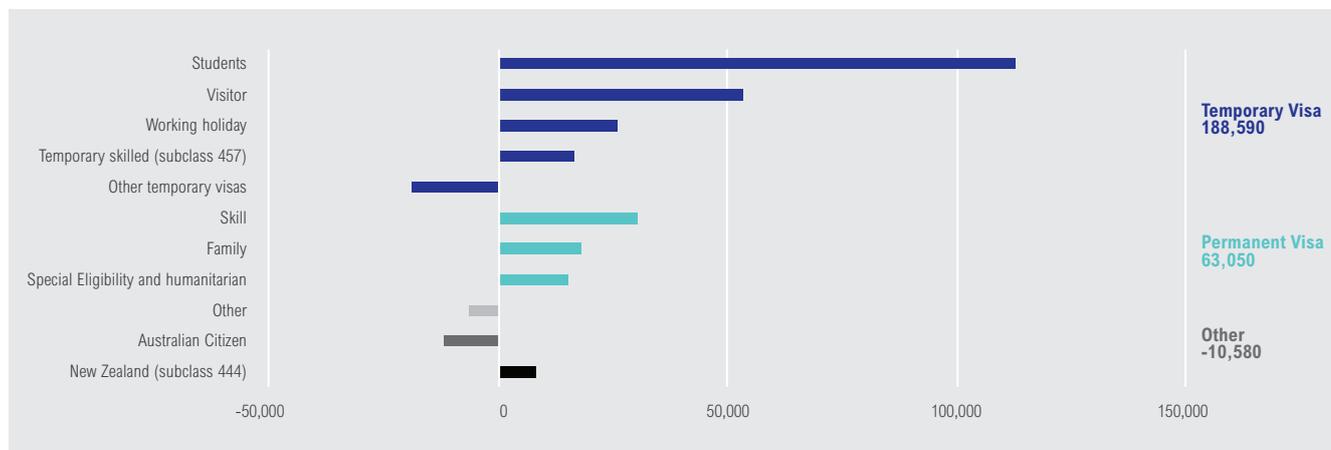
Over the long term, population growth is the major influence on new housing demand, both from the natural rate of increase and from NOM. Large and growing populations also drive increases in the size and density of cities, which contributes to increases in the value of land. Contrary to housing supply, where policy levers are more of a state and territory responsibility, population growth is largely determined by the Commonwealth Government through its migration program.

Australia has historically been a high immigration country (Figure 2.2), and this has been a major influence on aggregate demand for housing and housing cycles in recent decades. Since 2007, NOM has made up almost 60 per cent of all population growth in Australia, underpinning a large proportion of additional housing demand. Australia is currently experiencing a significant decline in NOM due to COVID-19 and this is a major factor driving the housing demand projections in this report.

Research released by NHFC in September (COVID-19: Australia's Population and Housing Demand) showed that the COVID-19 shock to NOM and, in particular, the sharp fall in international students, and their recovery, is highly uncertain and will be a large swing factor for housing demand over the coming period.<sup>3</sup> Based on recent budget and Population Statement estimates of population growth, the fall in NOM is now expected to be much sharper, more sustained and will take longer to recover than previously anticipated. NOM is now expected to detract from population growth this year and next, the first time this has occurred since 1946. This has substantial flow-on effects to the anticipated number of households that will likely form over the coming years. International students made up around half of total NOM in 2018–19 (see Figure 2.3) and their presence or absence particularly affects demand for rental accommodation in the inner-city apartment markets of Sydney, Melbourne and Brisbane.

3 National Housing Finance and Investment Corporation (September 2020) COVID-19: Australia's Population and Housing Demand.

Figure 2.3: Net overseas migration, by major groupings and visa (2018–19)



Source: ABS Cat 3412.0; Macroplan

### Prices and economic conditions

In the short to medium term, changes in prices and rents and economic conditions are a major influence on people's living arrangements and the rate of new household formation. These factors are incorporated in a more comprehensive measure of underlying demand that is adjusted for economic parameters (see opposite page for discussion).

## Underlying housing demand, economic adjusted underlying housing demand and former work of the National Housing Supply Council

Underlying housing demand measures the impact of demographic factors—population growth and the changing age profile of the population—on the number of households and hence on the number of dwellings needed to meet that demand. In simple terms, underlying demand abstracts from all economic factors and assumes a constant rate of demand for houses per person for each age cohort over time.

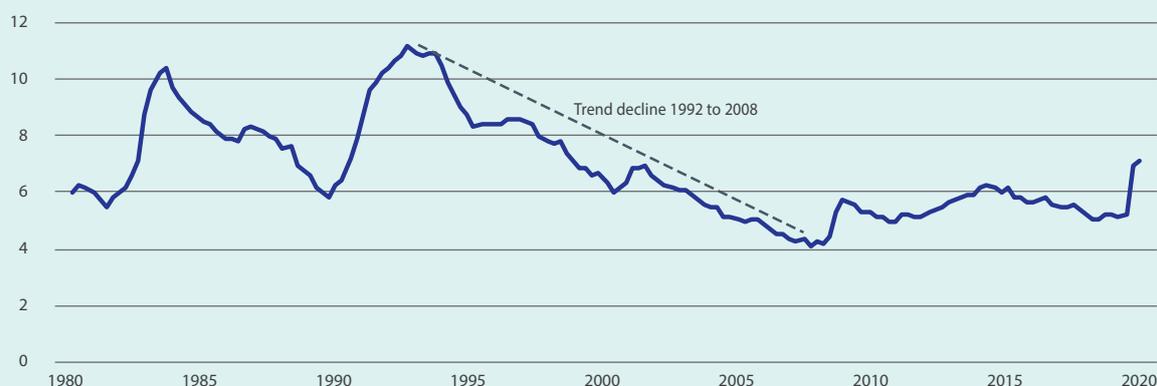
The central measures for projections of demand in this report account for these demographic factors but then also make an adjustment for a broader suite of economic factors, which impact on living arrangements—and hence household size—over the short and long term. Unlike underlying demand, economic adjusted underlying housing demand per person is not constant and can change depending on prevailing economic factors at any point in time.

The impact of economic factors is more difficult to quantify but adjusting underlying demand for market and economic factors provides a more realistic picture of actual demand for housing in the economy at any point in time.

NHFIC commissioned Macroplan to assess the projections produced in the former 2008 and 2010 Housing Supply Council (HSC) reports, which also undertook projections of housing demand. In these reports, the HSC relied on underlying demand (a solely demographic measure) as the central measure for housing demand. However, Macroplan found that the underlying demand as conceived in these reports implicitly assumed that past economic trends would continue into the future. This approach led to a significant overestimation of household growth over the projection period. For example, allowing for population growth (higher than expected), the 2008 HSC projected household growth of 25.7 per cent (vs actual 18.3 per cent), with projections underestimating growth in group households, while more significantly overstating the growth in single households.

Different economic periods can drive different trends in living arrangements and household formation and this was not assessed in these reports. For example, in the period 1992–2006, the unemployment rate fell sharply from the cyclical high produced by the recession in 1989–91 (Figure 2.4).

Figure 2.4: Quarterly unemployment rate (%) 1980–2020



Source: Macroplan & ABS catalogue 6202.0 Labour Force, Australia

The period 1991–2006 also saw income rising ahead of rental growth (making renting more affordable) and with unemployment falling substantially, these economic factors favoured living arrangements generating smaller households. By contrast, between 2006 and 2019, income growth continued but has not matched rises in rents (affordability has declined), while unemployment has been marginally higher. In this period, while the changing age profile favoured smaller households, overall, these economic factors countered that.

Given the importance of the state of the economy on housing demand, NHFIC uses an adjusted measure of underlying housing demand as the central demand projections in this report, including a broader suite of market factors that are integral to household growth and formation. While house prices can affect housing demand (for example, when prices rise demand can fall and vice versa) regression analysis undertaken by Macroplan shows that the unemployment rate, incomes and rents have a larger impact on household formation and these are the main factors driving the adjustment to underlying demand.

It's important to note that the underlying demand and adjusted underlying demand projections are more closely related to demand for housing services. They do not take account of housing as a financial asset, which is important for determining house prices. Even during a period of low or no household growth (as seen in our projections), actual demand for new housing in the market can be higher given people purchase housing for a range of reasons (for example, households upgrading to larger houses or purchasing second properties).

Income growth and the unemployment rate have historically been significant economic factors when it comes to housing demand. Over the long term, household incomes have risen substantially. While housing is a basic necessity, there is also considerable evidence to show that as incomes rise, households are actually prepared to spend an increasing share of their income on housing<sup>4</sup> —not only on larger houses but also on premiums for locations with higher levels of amenity. The size of an average dwelling increased from around 162m<sup>2</sup> in the mid-1980s to around 248m<sup>2</sup> in 2009, and more recently, has fallen back slightly to 232m<sup>2</sup>. More recently, high prices (of land) and cost constraints caused buyers to opt for marginally smaller houses (Figure 2.5).

Relatedly, one of the biggest factors driving housing demand is jobs, and people tend to move to where they can find employment. Consistent with that, there has been a long-term trend towards higher density of dwellings in and around Australia's major cities, particularly close to CBDs where more, and higher paying jobs exist. The impact of COVID-19 could see some of these trends change, as people seek to make their current work-from-home arrangements permanent, although it's too early to tell whether these behaviours will be enduring.

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4 Albouy A, Ehrlich G and Liu Y (2016) *Housing Demand, Cost-of-Living Inequality, and the Affordability Crisis*, National Bureau of Economic Research.

Figure 2.5: Dwelling size 1980 to 2018 (square metres)



Source: Macropian

Interest rates have, in recent decades, also had a substantial effect on housing demand. In a stable interest rate environment, interest rates would be a secondary influence on demand. However, in the period since the late 1980s, a structural decline in interest rates has, with a lag, and together with supply constraints, accentuated the rise in dwelling prices in Australia that have run well ahead of rent growth. Lower interest rates are capitalised into higher house prices (when supply is inelastic).

More recently, in the 2010s, interest rates have fallen to historic lows, with the COVID-19 pandemic in 2020 seeing the Reserve Bank of Australia cutting the official interest rate to 0.25 per cent in March and a further 0.1 per cent in November. With interest rates at levels that leave little scope to go lower, the high rates of price growth experienced in the last two decades are probably an unreliable guide to likely demand and price growth.

## Housing supply

Demand for housing can also be affected by supply factors. Supply constraints push up housing costs and reduce the quantity of housing services for a given level of demand. Rising housing costs can reduce demand and reduce household formation as more households struggle to cover the costs of housing services. In addition, policies which constrain supply—either in aggregate or in specific locations—can also distort the market. Supply constraints in inner city suburbs affect the spatial distribution within cities, particularly if people are forced to live further from the CBD where housing costs are lower. For example, while there has been a strong trend towards high density in Australian cities (for Sydney in particular), that does not mean demand has been met or satisfied. Constraints on density in these inner areas puts upward pressure on prices and creates unmet demand. A recent study has estimated that, despite the trend to higher density, there is significant unmet demand in the inner areas of Sydney.<sup>5</sup> Over the past 15 years, new housing constructed in cities like Sydney has typically fallen well short of agreed housing targets, which has helped exacerbate affordability problems, and reflects the challenges of building enough homes in areas of need.<sup>6</sup>

<sup>5</sup> Jenner K and Tulip P (2020) *The Apartment Shortage*, Reserve Bank of Australia.

<sup>6</sup> New South Wales Commissioner for Productivity (2020) *Productivity Commission Green Paper: Continuing the productivity conversation*.

**Table 2.3: Foreign surcharges and foreign land tax surcharges for a \$750,000 property purchase**

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
Stamp duty	29,085	40,070	19,600	35,080	29,741	28,935	22,200	37,125
Foreign surcharge (8%/7%)	60,000	60,000	52,500	52,500	52,500	60,000	0	0
<b>Total Transfer duty payable</b>	<b>89,085</b>	<b>100,070</b>	<b>72,100</b>	<b>87,580</b>	<b>82,241</b>	<b>88,935</b>	<b>22,200</b>	<b>37,125</b>
Land tax*	0	775	0	250	780	4,088	5,356	0
Foreign land tax surcharge	10,000	10,000	3,000	0	0	0	3,750	0
Total land tax payable	10,000	10,775	3,000	250	780	4,088	9,106	0
<b>Total transfer duty and land tax</b>	<b>99,085</b>	<b>110,845</b>	<b>75,100</b>	<b>87,830</b>	<b>83,021</b>	<b>93,023</b>	<b>31,306</b>	<b>37,125</b>

\* assumes land value is 2/3 property value

Source: Respective state revenue offices

## Other factors

A range of other factors can also affect housing demand. Government policy settings on taxation (for example, State Government stamp duty or the Commonwealth tax treatment of rental income and capital gains) impact on decisions by owner-occupiers and investors. Foreign investors, while they can typically purchase only new residential properties, have had a major impact on demand in recent times.

NHFIC industry liaison suggests that increases in Commonwealth and State Government fees for newly purchased residential dwellings has affected the level of demand from foreign investors in recent years. Surcharges on foreign purchases of residential dwellings have increased in some states from around 3 per cent to as high as 8 per cent (New South Wales, Victoria and Tasmania), which has raised the cost of a \$750,000 dwelling by around \$60,000 (see Table 2.3).

This has had an impact on the role played by foreigners in Australian housing markets in recent years, with the share of demand for new property purchases from foreign buyers falling from over 15 per cent in 2014–15 to closer to 5 per cent more recently.<sup>7</sup> Recent Australian Tax Office data show that in 2018–19, the total number of foreign residential real estate purchase transactions had a total value of \$7.5 billion, which was a 11.8 per cent reduction in the value of transactions when compared 2017–18.<sup>8</sup> More recently, expectations that the market share of foreign buyers will fall over the next year have jumped significantly.<sup>9</sup> This is likely to have an ongoing impact on demand for new apartments.

7 National Australia Bank (July 2020) *NAB Residential Property Survey Q2-2020*.

8 Australian Taxation Office (2018–19) *Insights into foreign purchases and sales of residential real estate*.

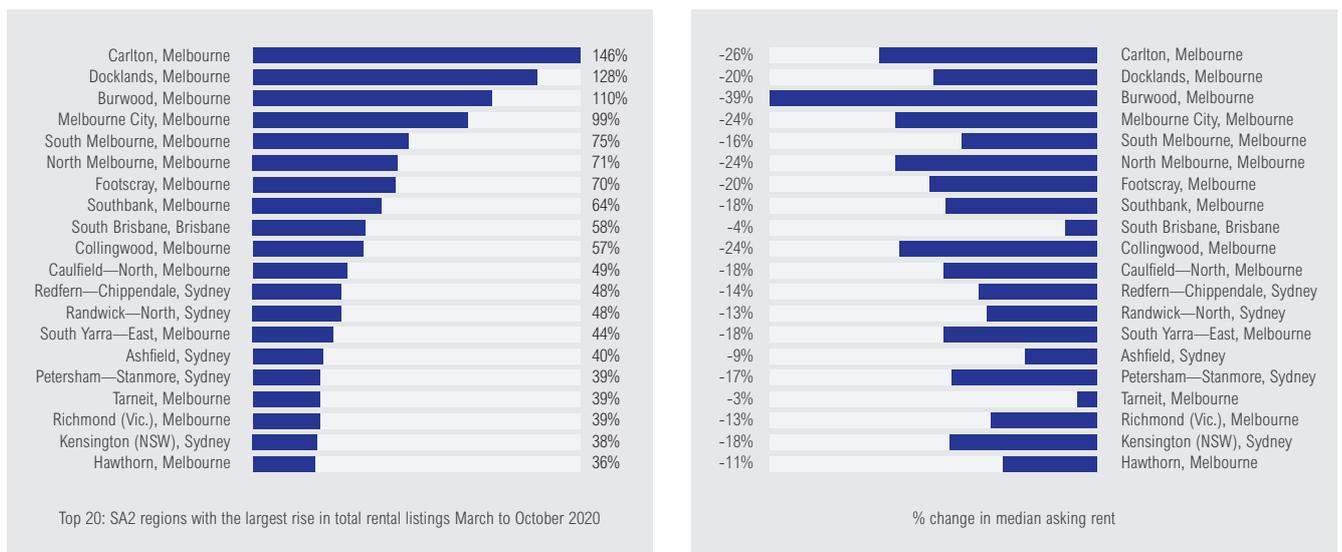
9 National Australia Bank (2020) *NAB Residential Property Survey Q2-2020*.

## Current demand

The immediate effect of the COVID-19 shock has been felt more acutely in Australia's rental markets, particularly in Sydney and Melbourne. Consistent with observations made by the RBA, COVID-19 has delivered an 'unprecedented' shock to the rental housing market, reducing demand for rental properties at a time when the supply of rental properties was increasing.<sup>10</sup> Rental listings in some inner-city areas, including near university campuses, has risen substantially, translating into lower asking rents (Figure 2.6). This is likely from reduced demand, but also from increased supply on the market (for example, shorter term Airbnb listings declined by around 20 per cent, or 40,000 properties, between February and May<sup>11</sup>).

The weakening economy post the onset of COVID-19 is also having an influence on household formation as many people struggling financially move back into (or delay moving out of) shared accommodation. Some surveys suggest one in six people changed their living arrangements after the onset of COVID-19, such as moving back in with the parents or delaying moving out. As at May, more than 300,000, mostly young, Australians had moved back to their parents' house.<sup>12</sup> Together with the closure of international borders, these factors are driving reduced demand for rental accommodation.

Figure 2.6: Eastern state capital city rental listings and rents



Source: Corelogic

10 Jenner K and Tulip P (2020) *The Apartment Shortage*, Reserve Bank of Australia.

11 Evans E, Rosewall T and Wong A (September 2020) *The Rental Market and COVID-19*, Reserve Bank of Australia.

12 Casey B (2020) *COVID-19 pandemic creates 'generation boomerang' of young people moving back home to live with parents*, realestate.com.au.

Meanwhile the buyers' market has been less affected than the rental market. Clearance rates have largely recovered since the onset of the crisis, although there are differences across states. Volumes and clearance rates have been fairly resilient in markets less affected by COVID-19 (e.g. Sydney, Adelaide, Canberra). NHFIC liaison suggests state government stamp duty concessions and the Commonwealth's HomeBuilder program is helping to bring forward investment and support near-term demand. The combination of government stimulus, record low interest rates and pent-up demand through the crisis is translating into above average residential sales for some large developers, primarily for new detached dwellings.<sup>13</sup>

Significant COVID-19-related income support (such as through JobKeeper and JobSeeker) is due to be phased out in March 2021 and there remains a considerable amount of residential mortgage loan deferrals outstanding, both of which could affect people's ability to pay for their housing services and service mortgages. As at the end of October, around 3.9 per cent of all housing loans (around \$88b) had been granted deferrals<sup>14</sup>, although this has come down considerably from its peak.

The recent RBA Statement on Monetary Policy suggests low interest rates are supporting housing demand and housing credit growth has also picked up, most notably to owner-occupiers<sup>15</sup>.

## Methodology

The model for housing demand projections first builds an estimate of underlying demand for dwellings based on longer term drivers, namely population growth and broader demographic changes. This initial model accounts for the fact that each household in Australia needs somewhere to live and that there needs to be an additional flow of homes to house a growing population (in this model demand for housing per person is constant—a restriction we relax below).

The model then builds an estimate of adjusted underlying demand which accounts for a broader array of economic factors delivering final housing demand projections. This model accounts for underlying demand for housing from population growth, but also adjusts for the impact that economic factors can have on people's living conditions (housing demand per person can change depending on economic factors).

The model developed here projects how many households are expected to form (and disperse) over time due to population growth and the impact on people's living arrangements from changes in key economic variables, such as changes in unemployment. The model is not intended as a measure of observed transactions in the market in any one year. In the current period of low or no household growth, there could still be positive market sentiment and considerable purchases of homes which could support higher levels of actual demand for new housing. However, the adjusted underlying demand approach developed here is of benefit because it incorporates the impacts of some key macroeconomic variables on demand and builds on the work of the former Housing Supply Council.

The model for estimating underlying demand follows the approach utilised by the ABS for its household and family projections. This model then extends from household projections into the number of occupied dwellings required to accommodate those households.

<sup>13</sup> Stockland (20 October 2020) [1Q21 Update](#).

<sup>14</sup> Australian Prudential Regulation Authority (30 November 2020) [Temporary loan repayment deferrals due to COVID-19, October 2020](#).

<sup>15</sup> Reserve Bank of Australia (November 2020) [Statement on Monetary Policy](#).

The methodology for projecting underlying demand is broadly as follows:

- Population projections are based on data provided by the Centre for Population and are consistent with the population figures in the 2020 Budget and the recent Population Statement.
- These projections are provided at state, capital city and regional level and also provide estimates of the age distribution of the projected resident populations for each area for each year over the projection period.
- From the Census data, the ABS provides estimates of propensity for each of the age cohorts in the resident population to form, or belong to, a family or non-family household, or to live in a non-private dwelling. These living arrangements are applied at the state, capital city and regional level to the changing population size and age profile to estimate the number of households each year.
- The number of households by type includes estimates for family households including couples with children, couples without children, sole parents and other family households. The number of group households and lone person households is also estimated. These household types also have specific preferences for dwellings types (detached houses, medium density, and apartments) and the changing trends in these preferences are applied to provide estimates of trends in demand by dwelling type.
- Finally, the number of dwellings demanded is estimated for each state, capital city and regional area, including by type of dwelling, and aggregated to the national level over the projection period.

The most consequential assumption for underlying demand in the model is net overseas migration (NOM). NOM figures provided by the Centre for Population (and consistent with the 2020 Budget) which underpin the projections for underlying demand are assumed to fall from around 154,000 persons in 2019–20 to around -72,000 persons by the end of 2020–21, and then -22,000 in 2021–22, before gradually increasing to around 201,000 persons in 2023–24.<sup>16</sup>

The underlying housing demand projections are then adjusted by drawing on empirical assessments of how key macroeconomic variables—unemployment, income and rents—affect living arrangements and demand for dwellings.

The following assumptions have been made to estimate adjusted underlying demand, and are broadly in line with the 2020 Budget estimates:

- The unemployment rate, which rose to 7 per cent in June quarter 2020, is expected to reach 8 per cent in December 2020. This has been negative for demand. It then falls steadily to 6½ per cent by the June quarter in 2022, which has the reverse impact of boosting demand. Further projected declines out to 2025 will continue to be positive for demand.
- Income growth (in real terms) in 2019–20 rose 4.7 per cent and was significantly boosted by JobKeeper. This growth was a partial counter to the rise in unemployment. In 2020–21 and 2021–22, the boost to income is reversed, which then offsets the initial improvement in the unemployment rate. From 2022–23 it returns to growth, boosting demand.
- Following the decline in 2019–20, rents (in real terms) are projected to show further declines out to 2022–23. These declines will provide a substantial boost to demand. There will be a lag before the surplus stock is absorbed as NOM rebounds, unemployment declines and incomes recover. Rents are expected to show modest rises in 2024–25 but, with incomes rising, affordability will show a further modest improvement.
- Overall, in the period from 2020 to 2025 the cumulative effect of these economic factors will add about 90,000 to dwelling demand, which will be a partial offset to the significant detraction of demand from the decline in net overseas migration.

16 Commonwealth of Australia (2 April 2019) *Budget 2019–20: Budget Strategy and Outlook Budget Paper No. 1 2019–20*, pages 2–6.

## Housing demand projections

The population shock from COVID-19, principally from forecast negative NOM, is expected to drive a sharp fall in new housing demand from 192,400 dwellings in 2019 to just 54,200 and 91,600 respectively in 2021 and 2022. The shock will see demand for dwellings around 286,000 lower than it otherwise would have been over the projection period compared to a pre-COVID-19 outlook.

From 2022–23, the rise in net overseas migration will help to lift demand to 144,700 dwellings in 2023, increasing to 178,800 by 2024 and staying at a similar level in 2025.

The apartment and medium-density markets are more exposed to the closure of international borders to net overseas migration and particularly international students. Meanwhile, the detached dwelling market is more likely to benefit from the Federal Government's HomeBuilder program and state government building grants.

**Table 2.4: Projections of housing demand**

	2019	2020 (e)	2021	2022	2023	2024	2025	2020 to 2025
<b>Pre-COVID adjusted underlying demand</b>	<b>192,400</b>	<b>178,000</b>	<b>176,300</b>	<b>186,900</b>	<b>178,100</b>	<b>175,300</b>	<b>172,400</b>	<b>1,067,000</b>
Underlying demand	-	142,500	58,200	69,900	111,600	150,700	155,100	-
Impact of economic parameters	-	-6,100	-4,000	21,700	33,100	28,100	20,200	-
<b>Adjusted underlying demand*</b>	<b>192,400</b>	<b>136,400</b>	<b>54,200</b>	<b>91,600</b>	<b>144,700</b>	<b>178,800</b>	<b>175,300</b>	<b>781,000</b>
Impact of COVID-19 shock	-	-41,600	-122,100	-95,300	-33,400	3,500	2,900	-286,000

Source: Macroplan, NHFIC; (e) estimate

\*Underlying demand and impacts of parameters may not add up to Adjusted underlying demand (see Appendix)

NB: The estimates of the impact of the economic parameters in this table are marginally higher than those presented in the more detailed Appendix as they include an allowance for growth in the stock of vacant dwellings consistent with the equilibrium vacancy rate in the housing market.

**Table 2.5: Demand by dwelling type**

Demand by dwelling type	2019	2020 (e)	2021	2022	2023	2024	2025
Detached	113,000	75,300	30,400	57,200	94,100	116,800	113,900
Medium	33,100	21,800	10,100	16,700	26,100	32,400	31,700
Apartment	47,600	41,200	16,200	19,900	26,500	31,500	31,700
Other	-1,300	-1,900	-2,500	-2,200	-2,000	-1,900	-2,000
<b>Total dwellings</b>	<b>192,400</b>	<b>136,400</b>	<b>54,200</b>	<b>91,600</b>	<b>144,700</b>	<b>178,800</b>	<b>175,300</b>

Source: Macroplan, NHFIC. (e) estimate.

NB: Numbers may not add up due to rounding

## Sensitivity analysis

Given the heightened uncertainty associated with border reopenings and what this means for population growth (and NOM) projections, Macroplan has also generated an additional demand scenario.

Under this scenario, it is assumed that NOM recovers more quickly than set out in the Budget and the Population Statement. It assumes the borders reopen earlier, there is a stronger recovery in international students, and (while not directly related to NOM), could reflect more returning Australians than currently anticipated.

If this were to play out, demand for dwellings would be around 86,000 higher over the projection period compared with the central forecasts. This highlights the sensitivity of overall housing demand to population growth and how quickly demand for housing could bounce back in the event of a faster recovery in the migration program.

**Table 2.6: Sensitivity analysis of housing demand and NOM**

	2021	2022	2023	2024	2025
<b>NOM sensitivity assumptions</b>					
Budget	-72,000	-22,000	96,000	201,000	208,000
Optimistic	-25,000	50,000	150,000	205,000	225,000
<b>Adjusted Housing demand</b>					
Budget NOM	54,200	91,600	144,700	178,800	175,300
Optimistic NOM	73,600	121,700	168,200	182,300	184,400
Difference	19,400	30,100	23,500	3,500	9,100