



Australian Government
Centre for Population

2022 POPULATION STATEMENT

CENTRE FOR POPULATION



Strong evidence. Deep insights. Collaborative approach.

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ACKNOWLEDGEMENT OF COUNTRY

In the spirit of reconciliation Treasury acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community.

We pay our respects to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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The Hon Dr Jim Chalmers MP

Treasurer

The Albanese Government is committed to building a stronger, fairer Australia that is better placed to meet the challenges ahead of us – and where there are more opportunities for more people, in every part of our great country.

An important part of this is having a responsible plan to deliver the housing, services and infrastructure that Australia’s changing population needs. It is also about ensuring that we have the workers and the skills needed for the future economy, and recognising the strength that comes from our cultural diversity.

The 2022 Population Statement provides evidence and analysis to help us to prepare for the changes and challenges ahead.

The past few years have seen some of the biggest changes to our population since Federation. As a result of the international travel restrictions introduced to slow the spread of COVID-19, Australia experienced the first net outflow of overseas migration since World War II. This has had an impact on cities and regions across the country.

Now restrictions have eased, population growth has begun to recover. However, ongoing demographic challenges like ageing will continue to influence how our population evolves over time.

The 2022 Population Statement examines how the different components of population growth interact, and tells us how the population is expected to grow over the next decade – at the national, state, city and regional levels. The Statement also provides a picture of how the composition of the population is expected to change and age over time.

The Government will draw on this evidence to better align Australia’s infrastructure planning, housing, and service delivery with its population projections. The findings from this Statement will also inform the Government’s review of the migration system, the Employment White Paper and the next Intergenerational Report, so we can keep building a better future for Australia.

A handwritten signature in blue ink, appearing to read 'Jim Chalmers', with a long horizontal line extending to the right.



Damien White
Executive Director
Centre for Population

The Population Statement is the Centre for Population’s flagship annual publication. It provides insights into how Australia’s population has recently changed and projects future population changes. This is the third edition of the Statement, building on the analysis and projections contained in the 2020 and 2021 Population Statements.

The 2022 Population Statement looks at population change over the past year and includes projections of the population over the next decade, providing further detail on the projections in the 2022–23 October Budget. It analyses the role of the different drivers of population change – overseas migration, natural increase, internal migration, as well as the impact of the current age structure of the population. The analysis spans states and territories, capital cities and regions, age and sex, as well as providing insights from the 2021 Census.

The Centre for Population continues to add to the population evidence-base with insights into relevant population issues. The Centre drives research on several population topics, including: how policies affect fertility rates and net internal migration; how different fertility rates and different levels of migration impact Australia’s future population and interact with the economy; how temporary migrants transition to permanent residency; and how population growth has differed across different cities and regions. We continue to publish regular analysis of Australian Bureau of Statistics’ data, including revisions to Australia’s population from the 2021 Census.

Ongoing changes to Australia’s population and data due to the COVID-19 pandemic make it difficult to confidently analyse recent population trends. There is significant uncertainty around projections of future population. The Centre has used its best professional judgement in its analysis and will continue to monitor developments as new data become available.

In preparing the Population Statement, the Centre has drawn on external input from academics and other population experts. The Statement has also been developed in consultation with the states and territories. I thank all those involved in its preparation.

A handwritten signature in blue ink that reads "Damien White". The signature is written in a cursive, flowing style.

SUMMARY

The COVID-19 pandemic has had a substantial impact on Australia's population, mostly due to international border restrictions limiting overseas migration. As a result, our population is now expected to be smaller and older than was estimated prior to the onset of the pandemic.

Over the past year, restrictions have eased and Australia is adjusting to living with COVID-19. The 2022 Population Statement details how Australia's population growth is projected to recover and how it is expected to change over the next decade, reflecting longstanding demographic trends like population ageing.

Part 1 of the Statement explains how Australia's estimated resident population is expected to grow from 25.7 million on 30 June 2021 to 29.9 million by 30 June 2033. This indicates a slight, but not full recovery from the pandemic. Annual population growth is forecast to increase from 0.1 per cent in 2020–21 to 1.4 per cent in 2022–23. Growth is then projected to gradually decline from 2024–25, reaching 1.2 per cent by 2032–33. Ageing will continue to present a demographic challenge for Australia, with the median age projected to increase from 38.4 years in 2020–21 to 40.1 years by 2032–33.

Overseas migration was particularly affected by COVID-19, with international travel restrictions resulting in a net outflow of 85,000 overseas migrants from Australia in 2020–21. With the easing of restrictions, overseas migration has returned quickly and is expected to recover to the pre-pandemic trend of a net inflow of 235,000 people from 2022–23. However, the recovery in migration is not expected to fully offset the lost population growth during the pandemic, with Australia expected to remain smaller and older than would have otherwise been the case.

So far, COVID-19 has not had as large an impact on deaths in Australia as in many other developed countries. However, as COVID-19 infection rates increased in 2022, deaths from COVID-19 and other causes have also increased in Australia. This is expected to result in a short-term fall in life expectancy in 2021–22 and 2022–23, after which life expectancy is projected to improve at the same rate as was expected before the pandemic, reflecting uncertainty around the long-term impact of the pandemic on mortality.

COVID-19 has not had a significant impact on fertility rates, although it may have affected the timing of some conceptions in 2020–21. Fertility rates have been slowly declining over the past 60 years and this trend is expected to continue. The total fertility rate is projected to decline from 1.66 babies per woman in 2021–22 to 1.62 babies by 2030–31.

Part 2 of the Statement analyses population growth and changes within the states and territories (including at the capital city and rest-of-state level) over the past year. It also provides projections of future growth. The revisions to Australia's population estimates using the 2021 Census data (known as rebasing) have revised growth patterns over the past 5 years, with the population of the two largest states revised downwards, and the population of smaller jurisdictions revised upwards.

States and territories are projected to return to the well-established patterns of population growth that were experienced pre-pandemic. Capital cities and regional areas are also projected to return to normal patterns of population growth as net overseas migration returns and internal migration returns to pre-pandemic patterns. Melbourne is projected to overtake Sydney as Australia's largest city in 2031–32. South Australia and Tasmania are expected to continue to be older than other states, and rest-of-state areas (except for the rest of the Northern Territory) are expected to continue to be older than capital cities.

Part 3 details the assumptions applied to the projections in this Statement, which are consistent with the 2022–23 October Budget (see also [Budget Paper 3, 2022–23 October Budget](#)). Data for the projections used in the Statement can be found at [population.gov.au](https://www.population.gov.au).

1. NATIONAL POPULATION

1.1 SUMMARY

Australia's population grew by 0.1 per cent in 2020–21 to reach 25.7 million on 30 June 2021. As overseas migration returns, Australia's population is expected to have grown by 1.1 per cent in 2021–22 to be 26.0 million on 30 June 2022 (Table 1). This growth is still significantly lower than before the pandemic. Between 2008–09 and 2018–19, Australia experienced average population growth of 1.6 per cent per year.

Australia's annual population growth is expected to reach 1.4 per cent in 2022–23, before gradually slowing to 1.2 per cent by 2032–33. Australia's population is expected to reach 29.9 million by 2032–33 (Table 1). The gradual decline in population growth results from assumptions that annual net overseas migration remains steady at 235,000 people over the medium term (so slowly declines as a proportion of the population) and the total fertility rate declines from 1.66 babies per woman in 2021–22 to 1.62 by 2030–31. In the longer-term, the population is projected to grow to 39.2 million by 2060–61.

The size of the population is expected to be 1.2 million people (4 per cent) smaller in 2030–31 compared with what was projected in the 2019–20 MYEFO, prior to the onset of the pandemic. Around 30 per cent of this difference is attributable to lower overseas migration. The remainder is the result of a lower fertility assumption, which was updated in early 2020 following research commissioned by the Centre for Population¹ and better reflects long-running trends and fewer births attributable to migrants.

Australia's population is expected to continue ageing, reflecting long-running trends of declining fertility and increasing life expectancies, with the median age increasing by 1.5 years between 2021–22 and 2032–33 (Table 1). This ageing trend was accelerated by the pandemic, with the projected median age in 2030–31 being 1.4 years older than what was projected pre-pandemic (39.8 years compared to 38.4 years).

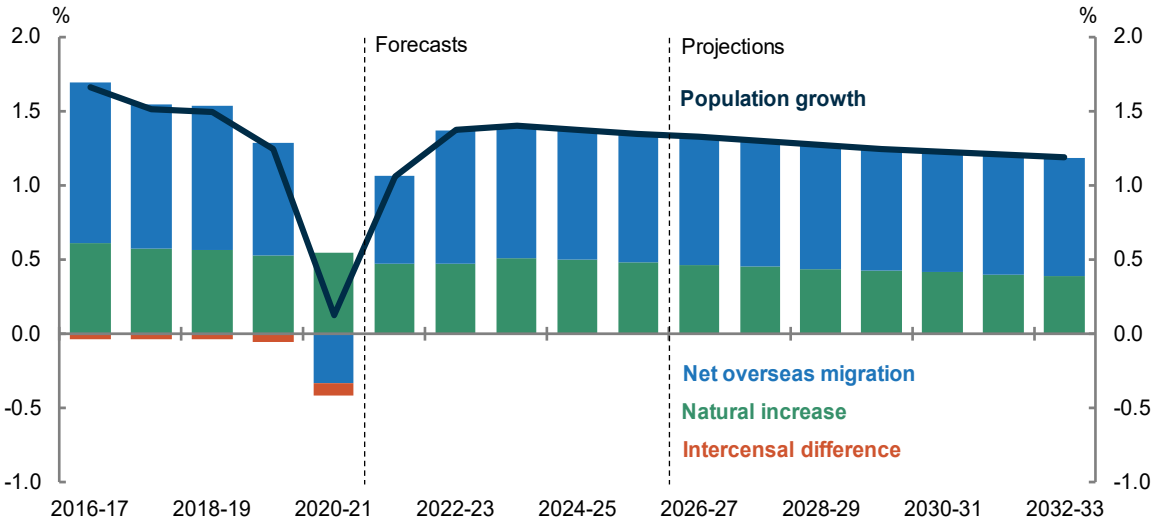
Table 1. POPULATION OUTCOMES AND PROJECTIONS, AUSTRALIA

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population at 30 June (millions)	25.7	26.0	26.3	26.7	27.1	29.9
Population growth (per cent)	0.1	1.1	1.4	1.4	1.4	1.2
Population growth (thousands)	33	273	357	369	368	352
Natural increase (thousands)	140	123	122	134	133	117
<i>Births</i>	305	304	306	309	311	329
<i>Deaths</i>	166	182	184	174	178	212
Net overseas migration (thousands)	-85	150	235	235	235	235
<i>Overseas Arrivals</i>	146	366	481	536	550	584
<i>Overseas Departures</i>	231	216	246	301	315	349
Median age (years)	38.4	38.6	38.7	38.9	39.0	40.1

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

1 McDonald, P. (2020). *A Projection of Future Fertility Rates*. Canberra: Centre for Population.

Chart 1. POPULATION GROWTH AND COMPONENTS, AUSTRALIA



Note: Intercensal difference refers to the difference between the estimated resident population after incorporating the results of the 2021 Census and previously published estimates.

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

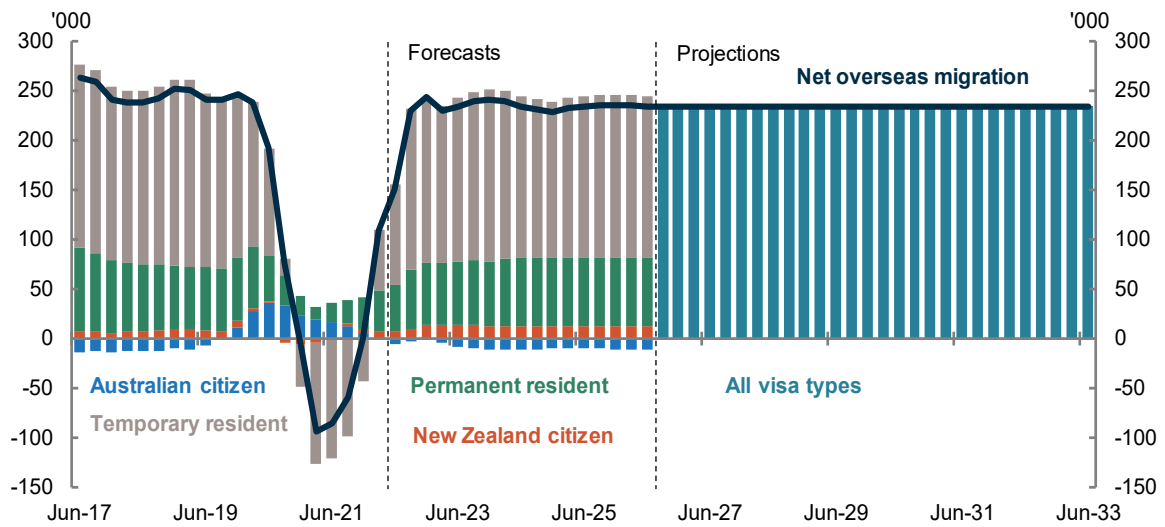
1.2 NET OVERSEAS MIGRATION

Overseas migration had been the largest contributor to population growth in Australia since 2005-06. However, the introduction of international travel restrictions and quarantine arrangements in response to COVID-19 led to the first net loss of migrants from Australia since the end of World War II. Overseas migration reached a record low in 2020–21, with a net outflow of 85,000 people as travel restrictions meant very few people could migrate to Australia. There was also an initial increase in departures at the onset of the pandemic.

As international travel restrictions have eased, net overseas migration has started recovering. In November 2021, international travel restrictions were removed for fully vaccinated Australians, permanent residents, and their families. Shortly after this, international travel restrictions were eased for fully vaccinated international students, skilled migrants, humanitarian migrants, working holiday makers and provisional family visa holders. In February 2022, international border restrictions were eased for all vaccinated travellers.

Preliminary estimates of migration in the December 2021 and March 2022 quarters show a sharp increase in migrant arrivals and little change in departures. As a result, overseas migration is forecast to increase to a net inflow of 150,000 in 2021–22. It is then forecast to reach the pre-pandemic trend of 235,000 from 2022–23 and remain at that level thereafter (Table 1).

Chart 2. NET OVERSEAS MIGRATION, BY VISA TYPE



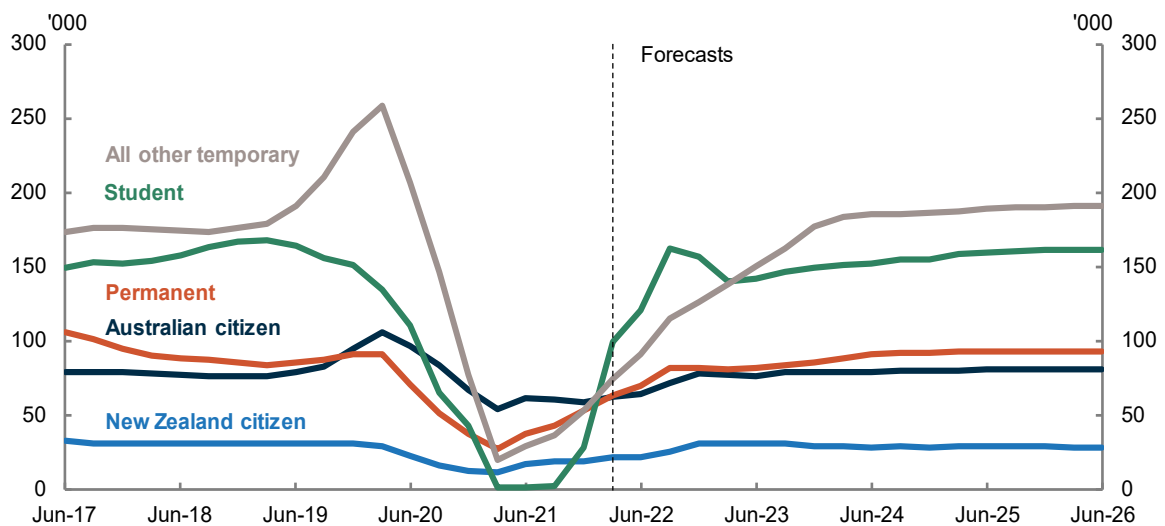
Note: Quarterly data presented on a year-ending basis. Migrant arrivals and departures are categorised based on the visa type at the time of a traveller’s arrival or departure. Care should be taken attributing net flows to specific groups of migrants as subsequent transfers to other visa types while onshore are not captured.

Source: Australian Bureau of Statistics, customised data consultancy and Centre for Population projections.

MIGRANT ARRIVALS

The strong recovery in net overseas migration was driven by a rebound in migrant arrivals from late 2021, particularly international student arrivals (Chart 3).

Chart 3. ANNUAL MIGRANT ARRIVALS, BY VISA TYPE

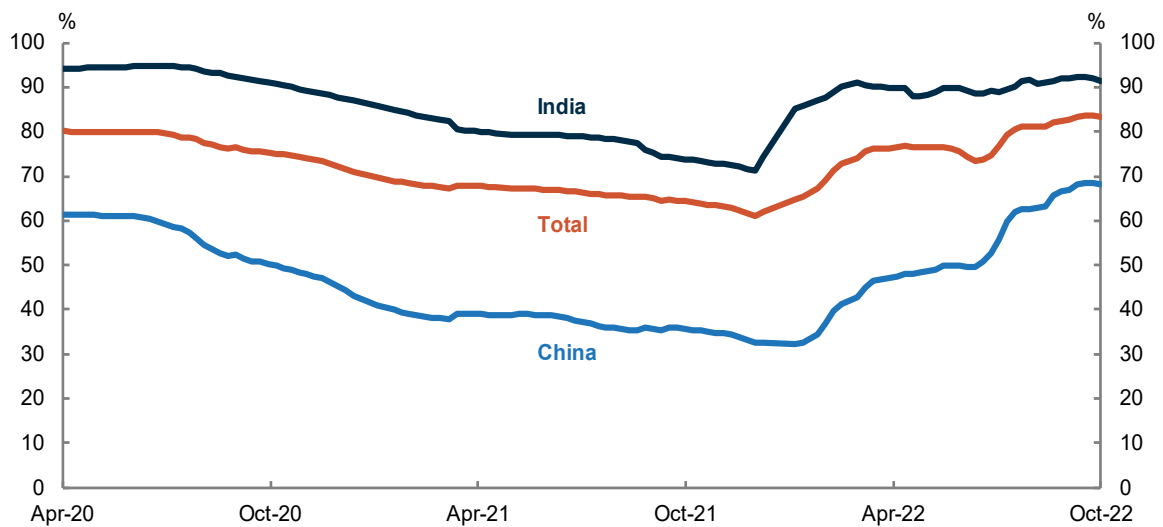


Note: Quarterly data presented on a year-ending basis. Migrant arrivals and departures are categorised based on the visa type at the time of a traveller’s arrival.

Source: Australian Bureau of Statistics, customised data consultancy and Centre for Population projections.

There was a strong recovery in international student arrivals in the December 2021 and March 2022 quarters as students who previously studied online and offshore took advantage of eased border restrictions. In mid-October 2022, there were 122,000 more international students in Australia than in mid-December 2021. In the same period, the number of Chinese students in the country rose by 36,000.

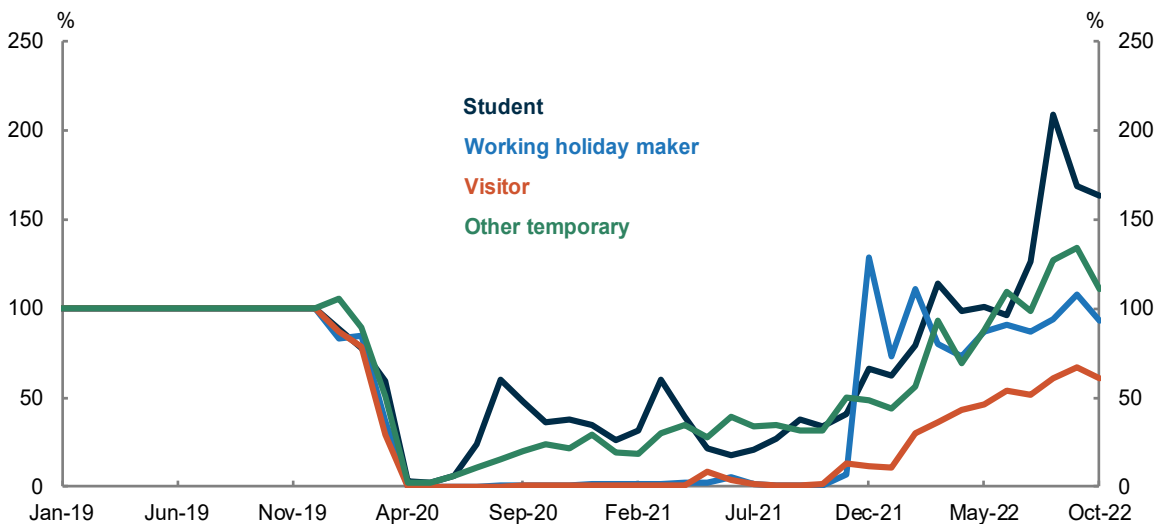
Chart 4. SHARE OF TOTAL STUDENT VISA HOLDERS WHO ARE PRESENT IN AUSTRALIA



Source: Unpublished data from the Department of Home Affairs.

The outlook for student arrivals in 2022–23 is also strong. Offshore student visa grants from January to October 2022 were higher than the corresponding period since the 2006 calendar year. Increased access to post-study work options may contribute to stronger future demand for student visas. Unrestricted work rights for students were extended in September 2022, and are planned to end in June 2023, which may contribute to some increased demand in the short-term. Offshore grants of working holiday visas and other temporary visas have also been increasing, and in September 2022 surpassed 2019 levels based on a corresponding month comparison (Chart 5).

Chart 5. MONTHLY OFFSHORE GRANTS OF TEMPORARY VISAS, COMPARED TO SAME MONTH IN 2019



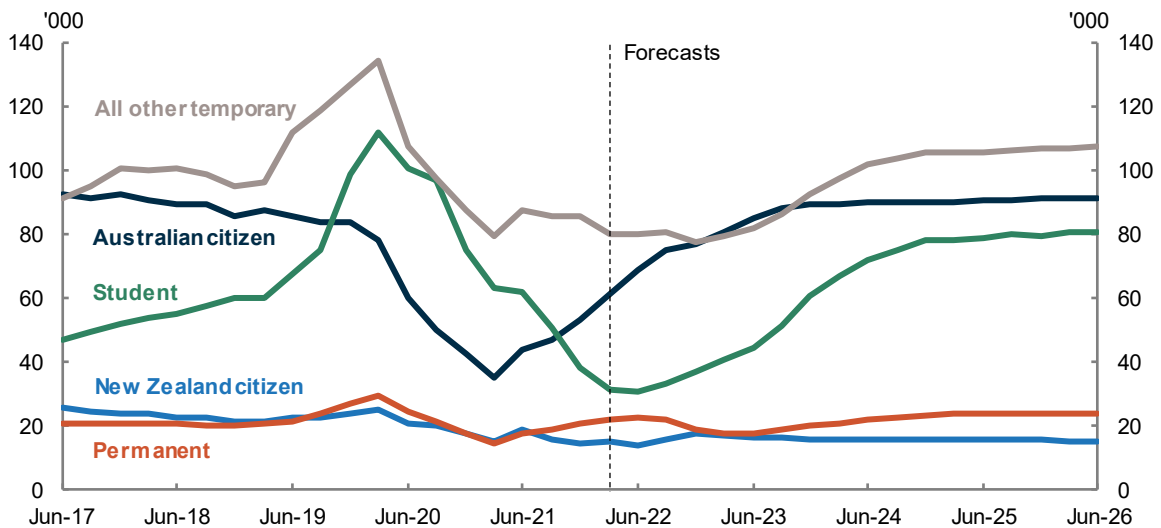
Source: Unpublished data from the Department of Home Affairs. Only includes visas granted to individuals located outside Australia and excludes New Zealand citizens and people on Crew and Transit visas.

Permanent migrant arrivals have bounced back from a year-ending low in the March 2021 quarter and are forecast to continue rising. Data up to the March 2022 quarter show a continuing strong recovery in family and skilled permanent arrivals. The outlook for permanent arrivals is further strengthened by the Australian Government decision to increase the permanent Migration Program planning level by 35,000 to 195,000 in 2022–23. The humanitarian migration planning level in 2022–23 is unchanged at 13,750 places.

MIGRANT DEPARTURES

Travel restrictions have disrupted the usual patterns in migrant departures since late 2019. Migrant departures rose at the beginning of the pandemic, in part because migrants that left Australia were unable to re-enter the country when border restrictions were in place (Chart 6). This particularly affected temporary migrant cohorts such as international students, many of whom were unable to return for Semester 1, 2020 and continued their studies online and offshore. Migrant departures fell in the second half of 2020 and have generally remained subdued after border restrictions began easing in late 2021, especially for international students, working holiday makers and temporary skilled migrants.

Chart 6. ANNUAL MIGRANT DEPARTURES, BY VISA TYPE



Note: Quarterly data presented on a year-ending basis. Migrant arrivals and departures are categorised based on the visa type at the time of a traveller's departure.

Source: Australian Bureau of Statistics, customised data consultancy and Centre for Population projections.

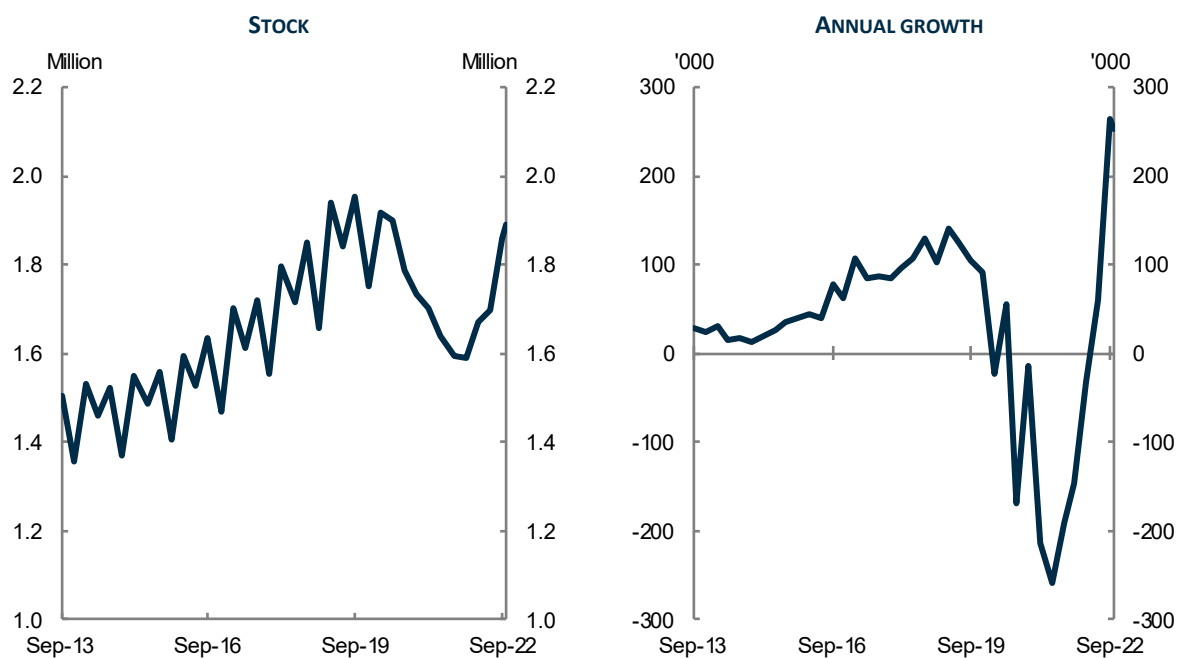
Very few migrant arrivals over 2020 and 2021 significantly lowered the number of new migrants in the country, particularly international students and working holiday makers. This left a smaller pool of temporary migrants who are likely to depart. As a result, the outlook for migrant departures is lower until 2023–24, with a slower return to pre-pandemic trends than arrivals.

There are significant uncertainties around international travel and migration patterns in the coming years. Recently observed migrant behaviour continues to be less predictable than prior to the pandemic. An upside risk to net overseas migration in the short-term is that migrant departures may be lower than forecast, particularly if those temporary migrants who remained in Australia during the pandemic were those planning to stay in Australia even longer. Student arrivals pose both upside and downside risks and are dependent on movement restrictions in student source countries and the continuation of online study options. In the past, student arrivals have contributed significantly to Australia's growing migrant intake, and future net overseas migration will be sensitive to any changes in Australia's share of the international student market. Australian citizens pose a downside risk to the net overseas migration outlook, as Australians who chose to remain in the country during the pandemic may now choose to depart.

TEMPORARY MIGRANT STOCKS

From 30 June 2004 to 30 June 2018 the number of temporary visa holders in Australia (excluding visitors) increased by around 900,000 (or an average of 65,000 per year)², driven by international students and New Zealand citizens. Measures taken to contain the pandemic limited opportunities for temporary migrants to travel to Australia, while temporary visa holders were allowed to depart as usual. The number of temporary visa holders in Australia fell from a peak of 2.0 million in the September 2019 quarter to a trough of 1.6 million in the December 2021 quarter. Since border restrictions eased, the number of temporary migrants has begun to recover and was 1.9 million as of October 2022.³

Chart 7. TEMPORARY VISA HOLDER STOCK (LHS) AND ANNUAL GROWTH (RHS), AUSTRALIA



Note: Excludes people on Visitor visas and Crew and Transit visas. Figures are for the last day in each quarter.

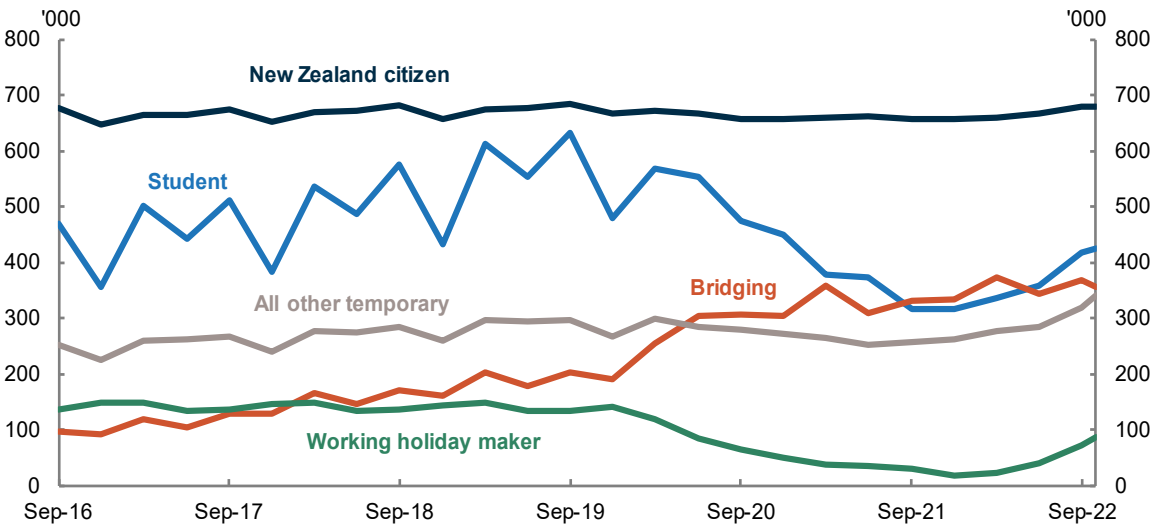
Source: Department of Home Affairs, 2022.

The number of temporary visa holders in Australia has partially recovered due to an increase in temporary visa arrivals, particularly international students, since December 2021 (Chart 8). The number of working holiday makers in the country has not yet recovered as quickly despite a sharp increase in offshore visa grants in late 2021. While there is lag between someone being granted a visa and arriving in Australia (and some people are granted a visa and never arrive), arrivals of working holiday makers are expected to eventually reflect the strength in offshore visa grants.

2 Treasury calculations based on unpublished data from the Department of Home Affairs.

3 Department of Home Affairs, A migration system for Australia's future. (2022, November). *A migration system for Australia's future*. Retrieved from https://www.homeaffairs.gov.au/reports-and-pubs/files/reviews-and-inquiries/discussion_paper.pdf

Chart 8. SELECTED TEMPORARY VISA HOLDERS, AUSTRALIA



Note: Excludes people on Visitor visas and Crew and Transit visas. Figures are for the last day in each quarter. Change in stocks of visa type holders may come from people in Australia changing their visa type as well as from people arriving in or departing from Australia. Bridging visas are typically issued to people already in Australia.

Source: Department of Home Affairs, 2022.

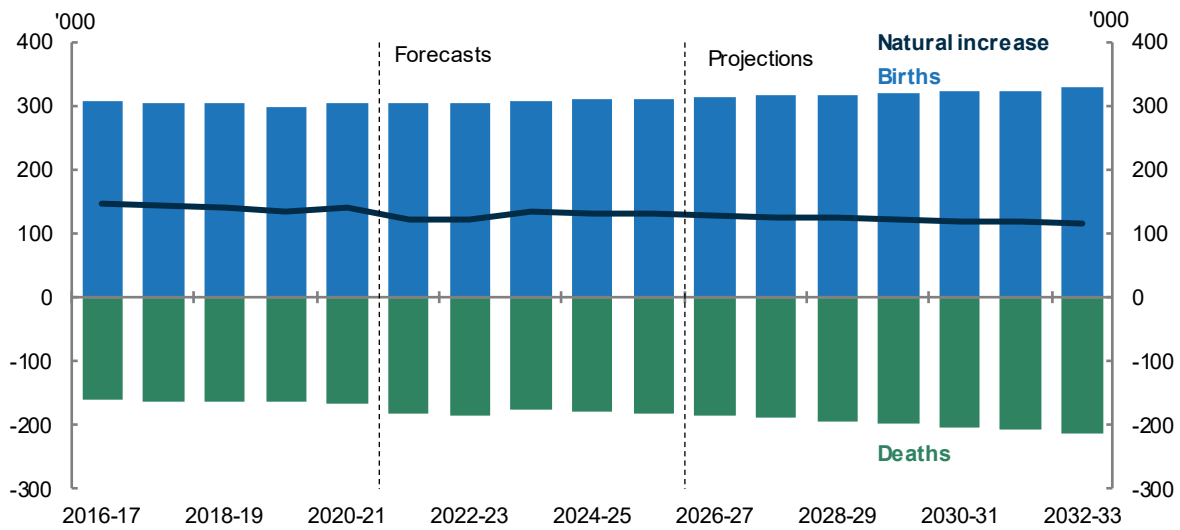
1.3 NATURAL INCREASE

Historically, the level of natural increase (births minus deaths) has remained relatively stable. When overseas migration fell sharply in 2020–21, natural increase was the sole driver of population growth. As overseas migration begins to recover in 2021–22, natural increase is forecast to contribute 44.9 per cent to population growth.

Consistent with long-running trends, natural increase is projected to decline gradually over the next decade, from 139,000 in 2020–21 to 116,000 by 2032–33. This reflects the increase in the number of births being less than the increase in the number of deaths, primarily the result of an ageing population (Chart 9). Births are projected to gradually increase from 305,000 in 2020–21 to 328,000 by 2032–33, while deaths are expected to increase from 166,000 in 2020–21 to 212,000 by 2032–33.

The pandemic is expected to cause natural increase to fall more than usual over 2021–22 and 2022–23, due to an increase in the estimated total number of deaths from COVID-19 and other causes not directly attributable to COVID-19 (8,800 higher in each of these years than in the 2022–23 March Budget). Natural increase is projected to return to pre-pandemic levels in 2023–24.

Chart 9. NATURAL INCREASE AND COMPONENTS, AUSTRALIA

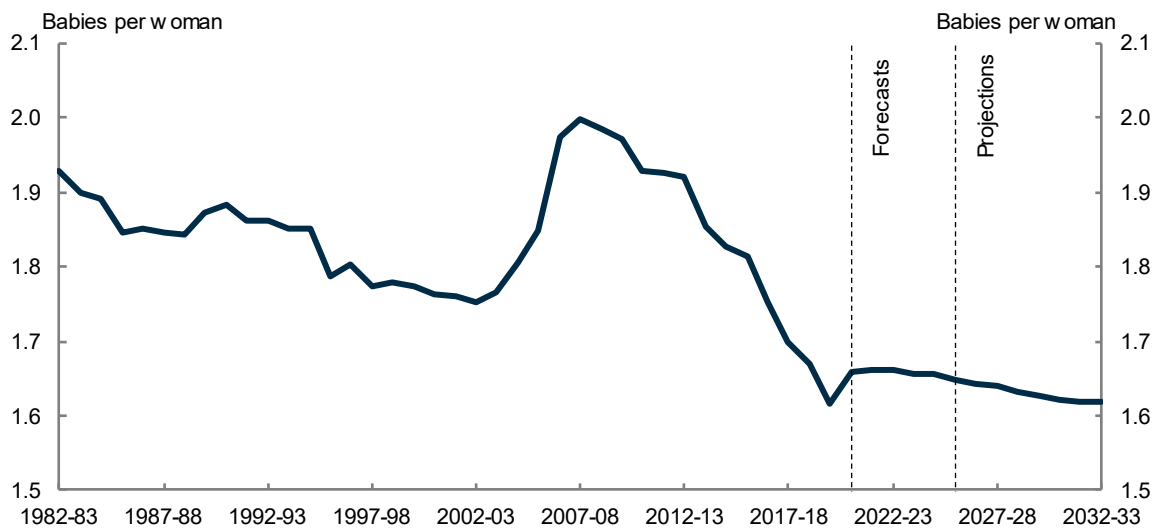


Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

FERTILITY

Australia’s total fertility rate is expected to decline slightly from 1.66 babies per woman in 2021–22 to 1.65 by 2024–25, and then fall to 1.62 babies per woman by 2030–31. This reflects a long-running trend of Australian women having children later in life and having fewer children when they do.

Chart 10. TOTAL FERTILITY RATE, AUSTRALIA



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

The impact of the pandemic on Australia’s fertility appears to have been relatively short-lived, with a small drop and subsequent rebound in births in 2021. This suggests that people adapted to the uncertainty of the pandemic and quickly caught-up on delayed childbearing plans.⁴

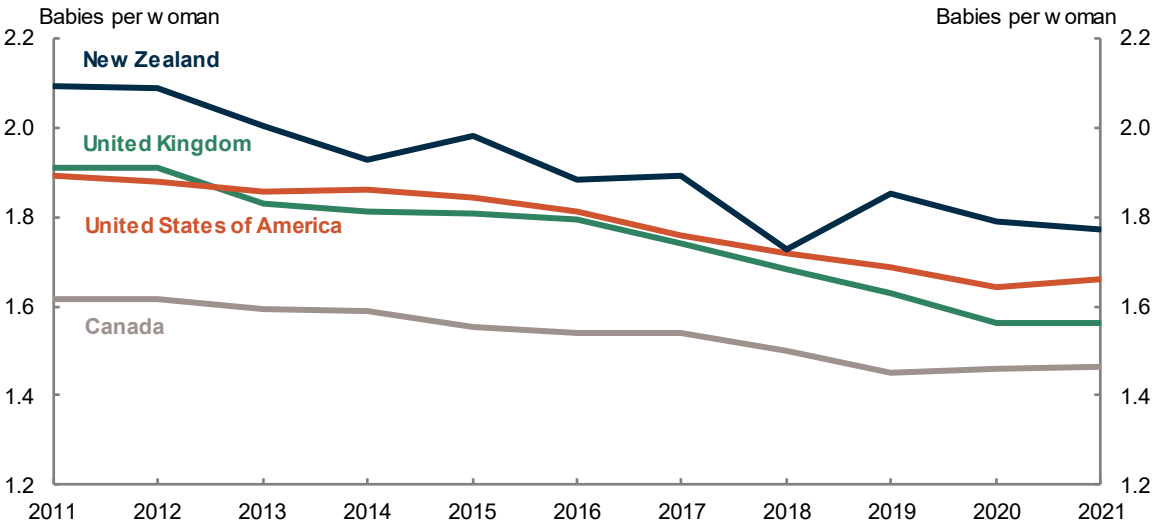
4 Gray, E., Evans, A., & Reimondos, A. (2022). Having babies in times of uncertainty: first results of the impact of COVID-19 on the number of babies born in Australia. *Australian Population Studies*, 15-30. Retrieved from <https://www.australianpopulationstudies.org/index.php/aps/article/view/101>.

The temporary decline in births was most evident in the December 2020 quarter, when births fell by 3,000 to reach 71,000, the lowest quarterly result in the past 14 years. Births in this quarter would have been conceived during the early stages of the pandemic, a period of high uncertainty which likely influenced families’ childbearing plans.⁵ Births then rebounded in the first half of 2021, reaching a peak of 80,000 in the March 2021 quarter, which was the highest quarterly result in over 40 years.⁶

In 2020–21, the total fertility rate was 1.66 babies per woman,⁷ similar to the rate recorded in 2018–19. Early data suggest that births in 2021–22 are likely to continue to occur at levels observed prior to the pandemic, leading to a forecast total fertility rate of 1.66 babies per woman.

Australia’s experience during the pandemic is broadly in line with other high-income countries, which also experienced short-term fluctuations in the number of births and are expected to return to long-term trends after that (Chart 11).

Chart 11. TOTAL FERTILITY RATES, SELECTED COUNTRIES



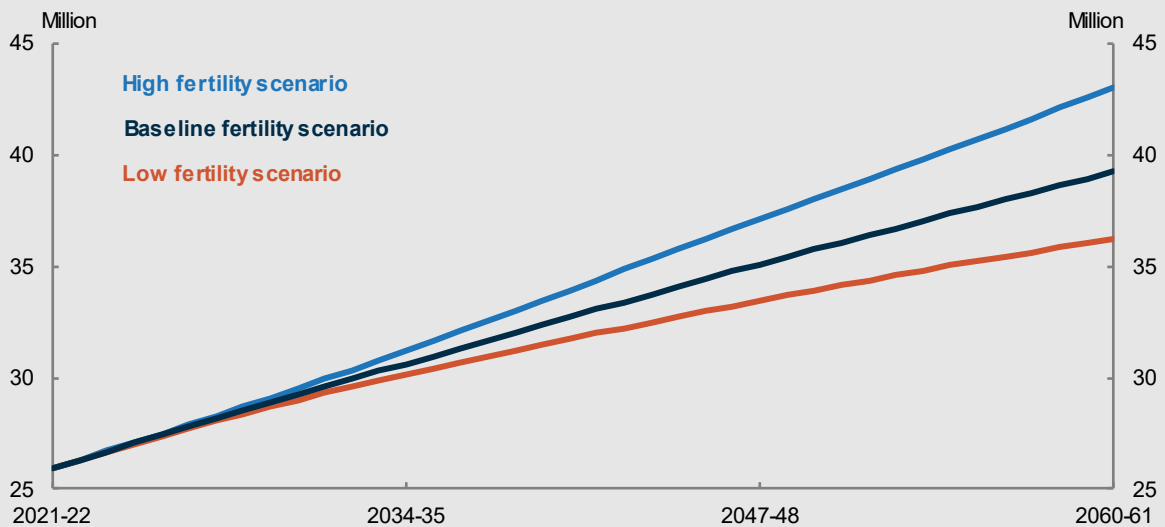
Note: Total fertility rates in this chart are presented on a calendar year basis.
 Source: United Nations Department of Economic and Social Affairs, Population Division, 2022.

5 Ibid.
 6 Australian Bureau of Statistics, National, state and territory population, March 2022, 2022.
 7 The Australian Bureau of Statistics initially reported the total fertility rate for 2020–21 at 1.63 (registration-based), but then revised the rate up to 1.66 babies per woman (occurrence-based).

BOX 1. FERTILITY SCENARIOS

The following scenarios illustrate how different total fertility rates impact the future size and age structure of the Australian population to 2060–61, with higher fertility rates leading to a larger and younger population. The scenarios retain the same future migration and mortality assumptions as in the baseline projections used throughout this Population Statement.

Chart 12. POPULATION, AUSTRALIA, FERTILITY SCENARIOS



Source: Centre for Population projections.

The **baseline fertility scenario** is used throughout this Population Statement and has the total fertility rate falling gradually from 1.66 babies per woman in 2021–22 to 1.62 by 2030–31. Under this scenario, the population would grow to 39.2 million people by 2060–61 (Table 2 and Chart 12), and natural increase would contribute around a quarter of this growth, with the rest of the growth driven by overseas migration. The median age rises by 4.2 years from 2021–22 to be 42.8 in 2060–61.

Under a **high fertility scenario**, the total fertility rate gradually increases from 1.66 babies per woman in 2021–22 to 2.1 by 2036–37, which is the replacement rate or the rate required for a generation to replace itself.⁸ Under this scenario, the population would grow from 26.0 million in 2021–22 to 43.1 million in 2060–61, with more than half of population growth from natural increase. Population ageing would effectively cease, with the median age rising by only 0.5 years between 2021–22 and 2060–61 (from 38.6 to 39.1 years).

Under a **low fertility scenario**, the total fertility rate gradually falls from 1.66 babies per woman in 2021–22 to 1.22 by 2036–37, in line with the rates already observed in some other advanced economies. The population would age the fastest under this scenario, with the median age rising by 7.2 years by 2060–61. Deaths would outnumber births, culminating in negative natural increase by 2048–49. This means that population would only continue to increase due to overseas migration. The population would grow to 36.2 million people in 2060–61, which is 8 per cent smaller than the *baseline fertility scenario* and 16 per cent smaller than the *high fertility scenario*.

The old-age dependency ratio (the number of people aged 65 and over per 100 people aged 15–64) is projected to initially increase at the same rate under all fertility scenarios, but differences start to emerge from the mid-2030s as those born in or after 2021–22 turn 15. By 2060–61, the old-age dependency ratio is projected to be 37.7 under the *baseline fertility scenario*, compared to 40.1 under the *low fertility scenario*, and 35.1 under the *high fertility scenario*.

Table 2. POPULATION OUTCOMES FOR TOTAL FERTILITY RATE SCENARIOS, 2060–61

	Population size	Median age	Percentage aged 0-14	Percentage aged 15-64	Percentage aged 65 and over	Old-age dependency ratio ⁹
2020–21 population	25.7 million	38.4	18.5	64.7	16.8	25.9
Low fertility scenario	36.2 million	45.8	12.6	62.4	25.0	40.1
Baseline fertility scenario	39.2 million	42.8	15.6	61.3	23.1	37.7
High fertility scenario	43.1 million	39.1	19.0	59.9	21.1	35.1

Source: Centre for Population projections.

MORTALITY

The pandemic is projected to have a temporary effect on mortality rates in Australia. The mortality rates for those aged 60 and above are projected to have increased slightly in 2021–22 and 2022–23. This reflects the increase in the number of deaths in this age group in the second half of 2021–22 which is expected to continue into the first half of 2022–23. Compared to the 2022–23 March Budget, the forecast number of deaths has been increased by 8,800 in 2021–22 and 2022–23. From 2023–24 onwards, mortality rates for all age groups are assumed to return to pre-pandemic trends and continue declining at the annualised rate observed over the past 3 decades.

Compared to many other advanced economies, Australia experienced relatively low mortality during the pandemic. Australia’s mortality rate in 2020 was a historical low of 491.6 deaths per 100,000 people. Mortality remained low during 2021 at 507.2 deaths per 100,000 people, with the leading causes of death being ischaemic heart, cerebrovascular and chronic lower respiratory diseases, dementia and lung cancer. COVID-19 was the 34th leading cause of death in 2021.¹⁰

Lockdowns and restrictions limited the spread of COVID-19 in 2020 and 2021. However, as COVID-19 infection rates increased significantly from the beginning of 2022, deaths from both COVID-19 and causes not directly attributable to COVID-19 increased (Chart 13). As at August 2022, more than 78.8 per cent of deaths from COVID-19 had occurred in 2022. The median age of those who died from COVID-19 remained high in 2022, at 83.7 years for males and 87.5 years for females.¹¹

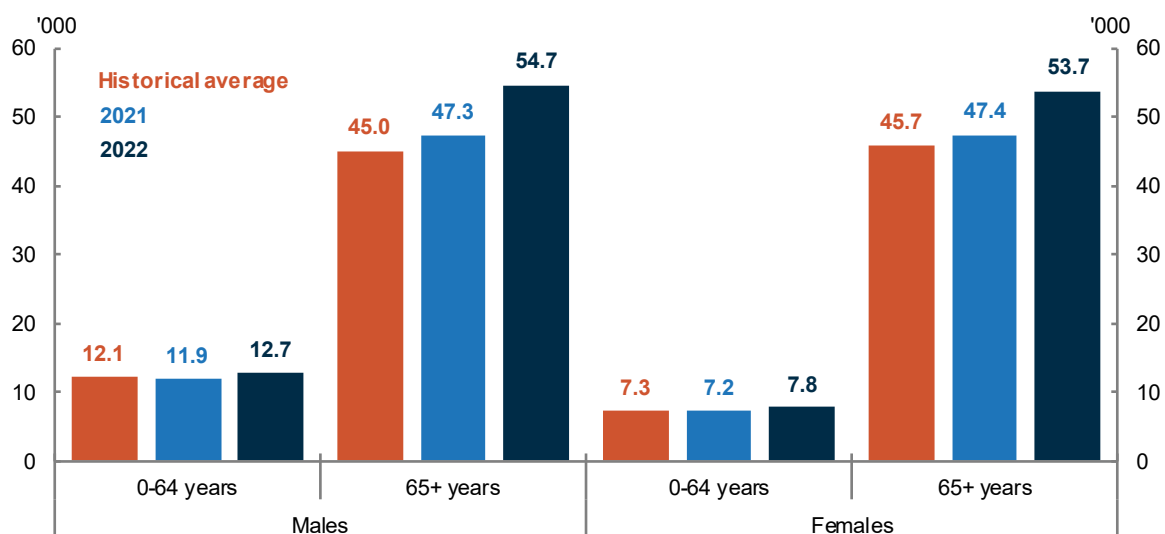
8 The replacement rate, which is around 2.1 births per woman, is the rate required to maintain stable population size in the absence of overseas migration. Australia’s total fertility rate has been below 2.1 since the mid-1970s.

9 The old-age dependency ratio figures included in the 2022 Population Statement are not comparable to those included in recent Treasury publications, including the 2020 Population Statement and the 2021 Intergeneration Report, due to methodological differences in calculating them.

10 Australian Bureau of Statistics, Deaths, Australia, 2021, 2022.

11 Australian Bureau of Statistics, COVID-19 Mortality in Australia, 2022.

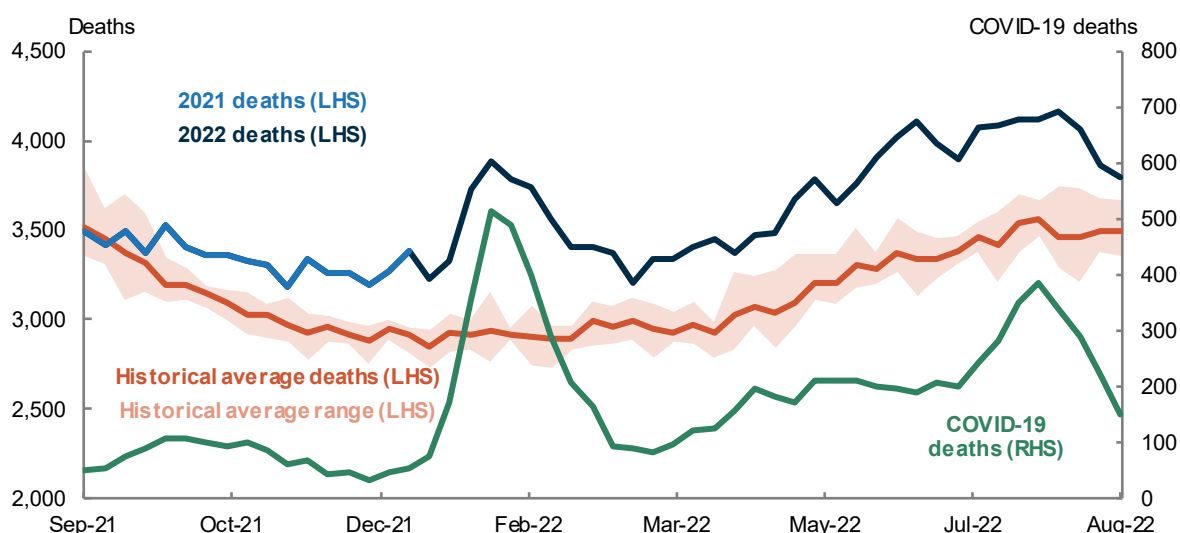
Chart 13. DEATHS BY AGE AND SEX, YEAR TO AUGUST (2022, 2021, HISTORICAL AVERAGE)



Note: Historical average is calculated as the average number of deaths over the same period during 2017–2019 and 2021. Source: Australian Bureau of Statistics, Provisional Mortality Statistics, January - August 2022, 2022.

Deaths were elevated in 2022, driven by deaths due to the Omicron variant wave. In the first 8 months of 2022 there were 129,000 deaths in Australia. This was 13.2 per cent higher than in the same period in 2021, and 17.0 per cent above the historical average (Chart 14). COVID-19 accounted for 7,700 doctor-certified deaths from January to August 2022, which was 6 times higher than during the entirety of 2021. During this period, the number of weekly deaths from all causes in Australia peaked at 4,200 deaths in the week ending 7 August (20.2 per cent above the historical average) and at 4,100 deaths in the weeks ending 31 July and 24 July (15.5 and 16.2 per cent above the historical average).¹²

Chart 14. WEEKLY DEATHS AND COVID-19 DEATHS, 2021 AND 2022



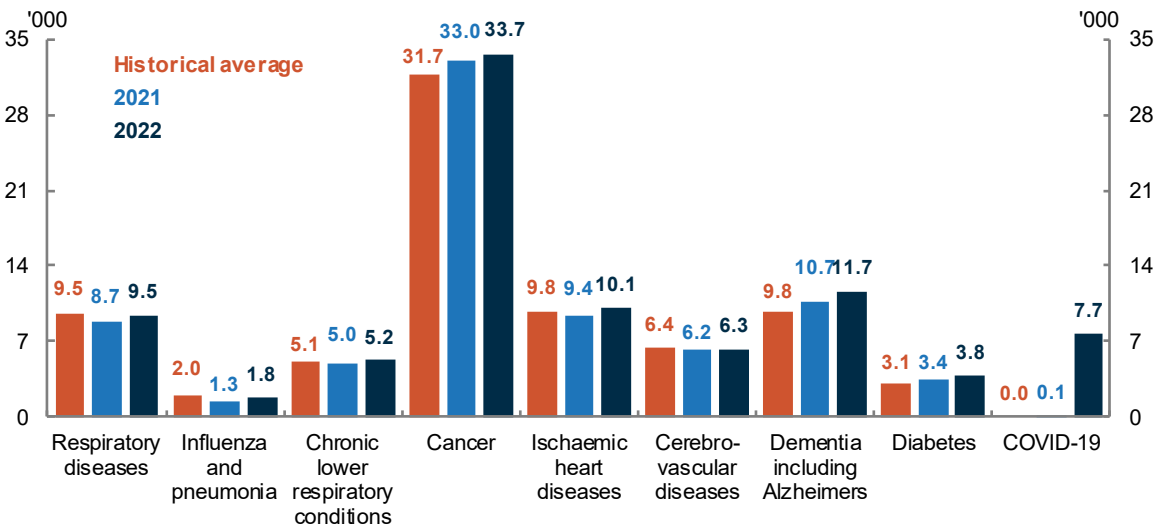
Note: Historical average used for 2022 is calculated as the average number of deaths over the 2017–2019 period and 2021. 2020 is not included as there were periods when deaths were significantly lower than expected during that year. Historical average used for 2021 is calculated as the average number of deaths over 2015–2019. Source: Australian Bureau of Statistics, Provisional Mortality Statistics, January - August 2022, 2022.

¹² The age-standardised death rates were also above the historical average, indicating that there was a genuine increase in mortality over this period driven by factors other than a larger or older population. Australian Bureau of Statistics, Provisional Mortality Statistics, Jan - Aug 2022, 2022.

The peaks in COVID-19 deaths observed in Australia in January (3.3 COVID-19 deaths per million) and July 2022 (3.7 COVID-19 deaths per million) were well below the peaks observed in other countries in the first two years of the pandemic.¹³ The January 2021 peaks in COVID-19 deaths in the United Kingdom were 20.6 COVID-19 deaths per million and in the United States 10.0 COVID-19 deaths per million.¹⁴

Deaths from other causes, such as cancer, ischaemic heart disease and respiratory diseases also contributed to the increase in deaths in 2022 during the period of increased infections (Chart 15). Early data suggest COVID-19 may increase the risk of dying from other causes, while pre-existing conditions may also increase the risk of dying from COVID-19.¹⁵ Deaths due to dementia and diabetes increased substantially relative to the historical average (18.9 per cent and 20.8 per cent). Dementia (including Alzheimer’s disease) and diabetes are among the most reported pre-existing chronic conditions that increase the risk of developing severe illness and dying due to COVID-19 in Australia.¹⁶

Chart 15. DOCTOR-CERTIFIED DEATHS BY SPECIFIED CAUSE OF DEATH, YEAR TO AUGUST (2022, 2021, HISTORICAL AVERAGE)

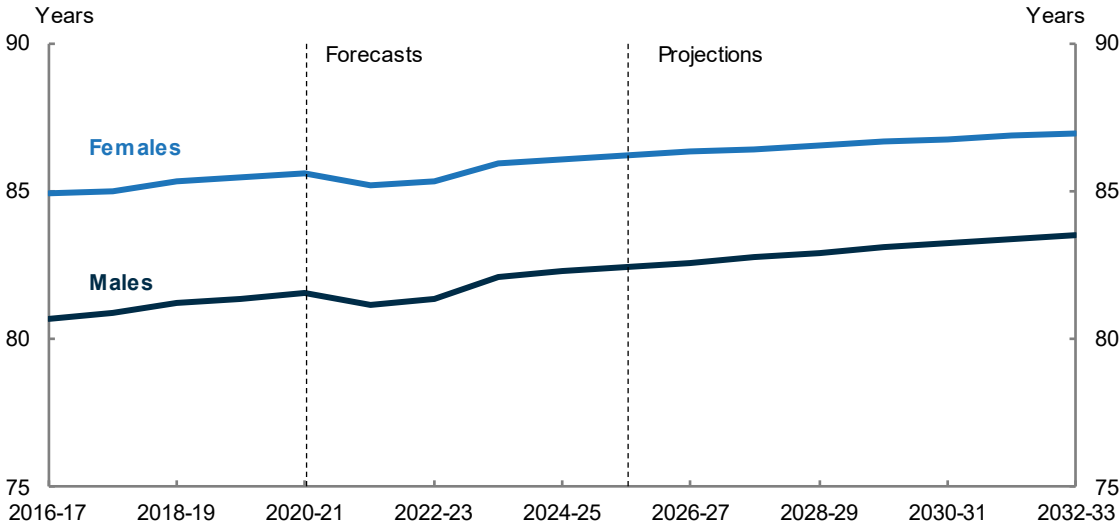


Note: Historical average is calculated as the average number of deaths over the same period during 2017–2019 and 2021. Source: Australian Bureau of Statistics, Provisional Mortality Statistics, January - August 2022, 2022.

The increase in deaths in 2021–22 and 2022–23 has resulted in a temporary drop in life expectancy in these 2 years.¹⁷ Compared to 2020–21, life expectancies are projected to decrease by 0.4 years for both females and males in 2021–22 and 0.2 years for males and 0.3 years for females in 2022–23. From 2023–24, life expectancies are projected to return to their long-term trend of gradual increase, reaching 87.0 years for females and 83.5 years for males by 2032–33 (Chart 16).

13 Data represent daily new COVID-19 deaths per million on a rolling 7-day average.
 14 Dong, E., Du, H., & Gardner, L. (2020). An interactive web-based dashboard to track COVID-19 in real time. *The Lancet*. Retrieved from <https://github.com/CSSEGISandData/COVID-19>.
 15 Australian Bureau of Statistics, COVID-19 Mortality by wave, 2022.
 16 Australian Bureau of Statistics, Provisional Mortality Statistics, Jan - Aug 2022, 2022.
 17 Life expectancy refers to life expectancy at birth and represents the average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area. (World Health Organisation, (n.d.). *Indicator Metadata Registry List*. Retrieved from The Global Health Observatory: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/31311>).

Chart 16. HISTORICAL AND PROJECTED LIFE EXPECTANCIES, AUSTRALIA



Source: Australian Bureau of Statistics, Life tables, 2021, Australian Government Actuary and Centre for Population projections.

COVID-19 has had a much larger impact on life expectancies in other countries. In the United Kingdom, COVID-19 contributed to life expectancies falling by 1.5 years for males and 1.0 years for females in 2020. In the United States, COVID-19 was the primary driver of life expectancies falling by 2.0 years for males and 1.4 years for females in 2020.¹⁸

Considerable uncertainty remains over the medium and long-term effect of COVID-19 on mortality. The risk of future COVID-19 waves and variants is unclear, as is the longer-term impacts of the burden of disease.

18 United Nations Department of Economic and Social Affairs. (2022, July 11) op. cit.

BOX 2. DEATHS OF DESPAIR

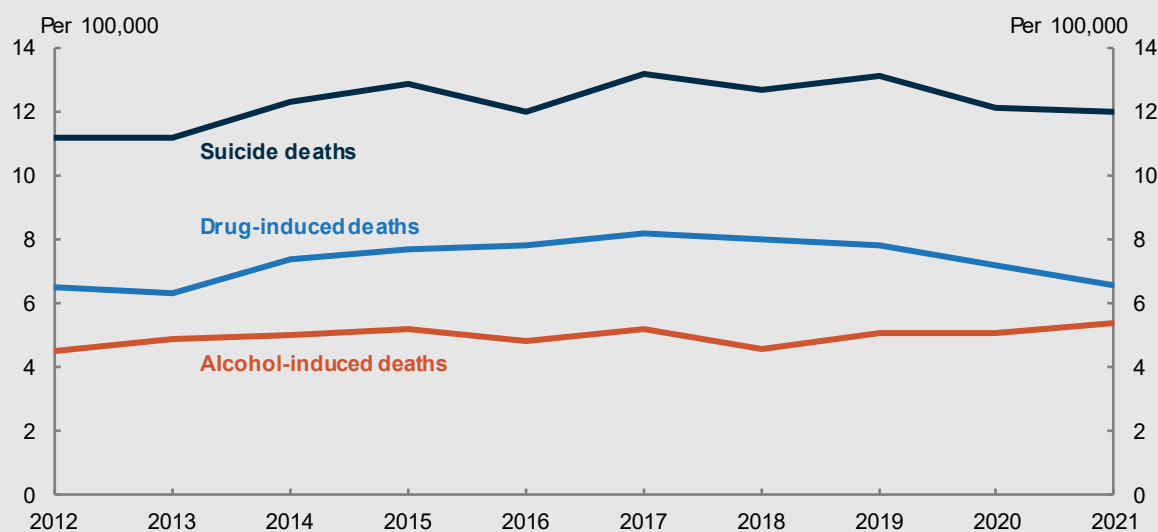
This box discusses suicide and presents material that some people may find distressing. These support services are available 24 hours a day, 7 days a week:

- **Lifeline:** 13 11 14 (lifeline.org.au)
- **Suicide Call Back Service:** 1300 659 467 (suicidecallbackservice.org.au)
- **Beyond Blue:** 1300 224 636 (beyondblue.org.au/forums)
- **13YARN:** 13 92 76 (13yarn.org.au)

There has been growing attention to the rise of so-called ‘deaths of despair’ – deaths by suicide and/or induced by drug or alcohol consumption, whether accidental or intentional. This has been prominent in the United States where deaths of despair have been increasing since the late 1990s and have accelerated in the 2010s in the context of the opioid crisis.¹⁹ In Australia, deaths of despair have been roughly stable over the same period, although mortality rates for these causes of death have not improved as they have for other causes, like heart disease. While there has been a rise in the use of mental health services and an increase in psychological distress during the pandemic,²⁰ there is no evidence of increased deaths of despair thus far, with small declines in suicide and drug-induced death rates and a small increase in alcohol-induced death rates in 2020 and 2021 (Chart 17). Every life lost is significant and the loss is felt deeply by family, friends, carers, first responders and communities.

- Age-standardised²¹ suicide rates fell from 13.1 deaths per 100,000 in 2019 to 12.1 per 100,000 in 2020 and 12.0 per 100,000 in 2021, largely driven by falls in the male suicide rate. Despite these falls, suicide was still the leading cause of death for Australians aged 15-44 in 2021. Suicide is also the fifth leading cause of death for First Nations Australians and has been increasing over time, with First Nations age-standardised suicide rates more than double the rate for non-First Nations Australians.²² Historically, suicide rates have been 3 to 4 times higher for men than women,²³ while two thirds of all hospitalisations for intentional self-harm injuries in 2020–21 were women.²⁴
- Age-standardised drug-induced deaths fell from 7.8 deaths per 100,000 in 2019 to 7.2 per 100,000 in 2020 and 6.6 per 100,000 in 2021. Historically, drug-induced death rates have been 1.5 to 1.8 times higher for men than women. The difference between men and women is higher for younger age groups (15-44) and close to equal for older age groups (65 and over). Opioids were the most common drug class identified in toxicology for drug-induced deaths in 2021.
- Age-standardised alcohol-induced death rates increased from 4.9 per 100,000 in 2019 to 5.1 per 100,000 in 2020 and 5.4 per 100,000 in 2021. Alcohol-induced deaths in 2021 were the highest in 10 years, with an 8.1 per cent increase in male deaths since 2020, while female deaths remained relatively steady. The rate has increased over the last decade largely due to conditions associated with long-term alcohol use, including liver cirrhosis. Historically, alcohol-induced deaths have been around 3 times higher for men than women and are highest for those in middle age.

Chart 17. AGE-STANDARDISED SUICIDE, DRUG-INDUCED AND ALCOHOL-INDUCED DEATH RATES, AUSTRALIA, 2012 TO 2021



Note: Age-standardised death rates in this chart are presented on a calendar year basis.

Source: Australian Bureau of Statistics, Causes of Death, 2021.

The trends for these types of deaths in Australia are very different from those in the United States and England.^{25,26} In the United States, there has been a dramatic rise in rates of suicide, drug-induced (driven by synthetic opioid use) and alcohol-induced deaths since the late 1990s. In England, suicide rates have fallen over the past 40 years and drug-related deaths remain lower than in the United States, but death rates for alcohol-induced deaths remain high. During the pandemic so far, suicide rates in the United States, England and Australia all experienced a drop compared to pre-pandemic trends, while drug and alcohol-induced deaths increased in the United States and England. Australia's deaths related to suicide and/or drugs and alcohol have been comparatively low, with no evidence of a similar increase in opioid-related deaths and relatively low rates of alcohol-induced deaths.

19 Case, A., & Deaton, A. (2020). *Deaths of Despair and the Future of Capitalism*. Princeton University Press.

20 Australian Institute of Health and Welfare. (2020-21). *Suicide & self-harm monitoring*. Retrieved from <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/behaviours-risk-factors/deaths-of-despair>.

21 Age-standardised death rates enable the comparison of death rates over time and between populations of different age structures by accounting for differences in the size and age structure of the population (Australian Bureau of Statistics, Provisional Mortality Statistics, Jan - Aug 2022, 2022).

22 Australian Institute of Health and Welfare. (2020-21) op. cit.

23 Australian Bureau of Statistics, Causes of Death, 2021.

24 Australian Institute of Health and Welfare. (2020-21) op. cit.

25 For further information on England and Wales, see Office of National Statistics. (2022). *Deaths*. Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths>. For further information on the United States, see Centres for Disease Control and Prevention. (2022). *CDC Wonder*. Retrieved from <https://wonder.cdc.gov/>.

26 Australian Bureau of Statistics, Causes of Death, 2021; Australian Institute of Health and Welfare. (2022). *General Record of Incidence of Mortality (GRIM)*. Retrieved from <https://www.aihw.gov.au/reports/life-expectancy-deaths/grim-books/contents/grim-excel-workbooks>; Australian Institute of Health and Welfare. (2022). *Alcohol, tobacco & other drugs in Australia*. Retrieved from <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/about>.

1.4 POPULATION AGE STRUCTURE

Australia's greatest long-term demographic challenge is the ageing population, with the share of people aged 65 and over doubling in the past 70 years. Australia's population will continue ageing over the coming decades, with the share of people aged 65 and over projected to increase from 16.8 per cent in 2020–21 to 19.9 per cent in 2032–33, and 23.1 per cent in 2060–61. There will be corresponding decreases in the share of young Australians (Chart 18), as well as continued increases in the median age and old-age dependency ratio (Table 3). As the population ages, there will be a larger percentage of older Australians relative to the people of working age. This presents long-term economic and fiscal challenges similar to those faced in most comparable countries.²⁷

Australia's population ageing is driven by increasing life expectancies and falling fertility rates, which have been below the replacement level since the mid-1970s.²⁸ Australia is in the middle of a large wave of people entering retirement age from 2010 to 2030. This wave was created by the large baby boomer generation (people born in Australia between 1946 and 1966) and the large cohort of migrants who arrived in Australia after World War II.²⁹

Population ageing is not unique to Australia; this trend applies to many developed economies. The United States projects that the share of people aged 65 and over will increase from 15 per cent in 2016 to 23 per cent in 2060 – the same magnitude of ageing as expected in Australia.³⁰ Many other developed economies have been facing population ageing ahead of Australia, including Italy, Japan and South Korea, which offers the opportunity to draw lessons from the experiences of these countries.

Table 3. KEY FIGURES ON THE POPULATION AGE STRUCTURE IN AUSTRALIA

	Median age	Percentage aged 0-14	Percentage aged 15-64	Percentage aged 65 and over	Old-age dependency ratio
2008–09	36.9	19.2	67.5	13.3	19.7
2020–21	38.4	18.5	64.7	16.8	25.9
2032–33	40.1	16.6	63.6	19.9	31.2

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population forecasts.

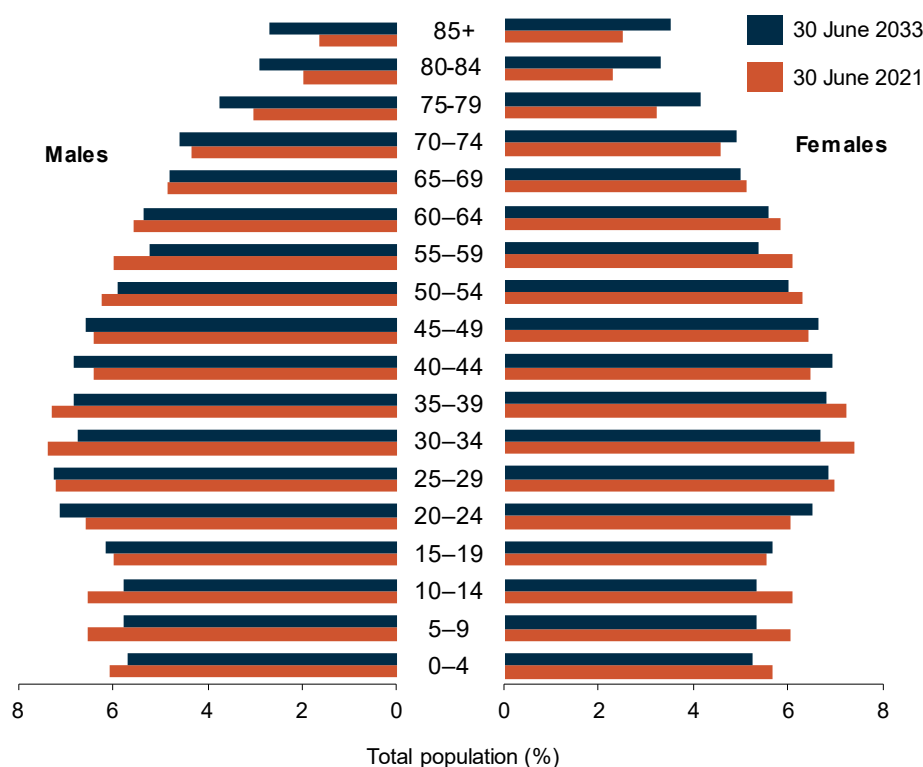
27 Commonwealth of Australia. (2021). *2021 Intergenerational Report*. Canberra

28 This is the level required for a generation to replace itself. See Glossary for a full definition.

29 For more information about Australia's historical population ageing trends see: Centre for Population. (2020). *Population Statement*. Canberra and Commonwealth of Australia. (2021). op. cit.

30 United States Census Bureau. (2020, February). *Demographic Turning Points for the United States; Population Projections for 2020 to 2060*. Retrieved from <https://www.census.gov/http://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1144.pdf>

Chart 18. AGE STRUCTURE, AUSTRALIA, 2020–21 AND 2032–33



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

THE EFFECTS OF COVID-19 AND OVERSEAS MIGRATION ON AUSTRALIA’S AGE STRUCTURE

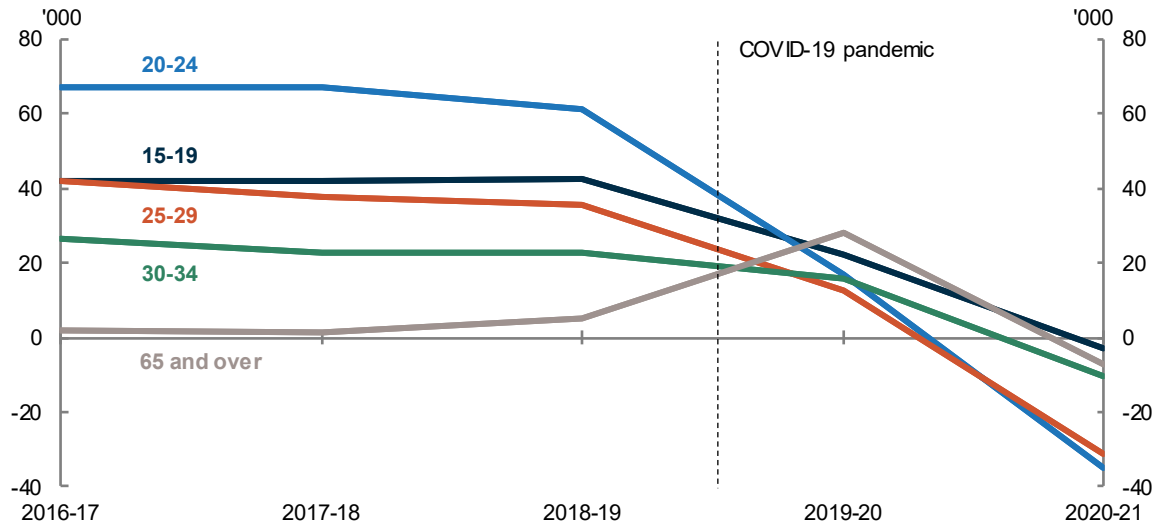
Disruptions to overseas migration between March 2020 and December 2021 had a significant impact on the age structure of the Australian population, which accelerated population ageing. The median age is expected to be 1.4 years older by 2030–31 compared to pre-pandemic projections.³¹ This is largely because migrants arriving in Australia are, on average, younger than the existing population.

Most migrants arrive in Australia between the ages of 15 and 34. Net migration of people aged 15 to 34 decreased by 58.7 per cent between 2018–19 and 2019–20. This was mostly due to temporary migrants, particularly international students, who are generally aged 20 to 24, departing Australia at the start of the pandemic. This continued in 2020–21, which saw net outflows of migrants aged 15 to 34 of 79,000, including particularly large outflows of migrants in their 20s.

The early stages of the pandemic also had an impact on the older end of the age distribution. Historically, there was only a small net inflow of people migrating to Australia aged 65 and over. However, there was an increase of 23,000 people in this cohort between 2018–19 and 2019–20, with older Australian citizens and permanent migrants returning to Australia during the early stages of the pandemic. As a result, the net migrant cohort aged 65 and over went from being the smallest cohort to the largest in 2019–20. In 2020–21, this partially reversed and there was a net outflow of 7,200 migrants aged 65 and over (Chart 19).

³¹ As per the pre-pandemic projections released in the 2019-20 MYEFO.

Chart 19. NET OVERSEAS MIGRATION BY SELECTED AGE GROUPS, 2016–17 TO 2020–21



Source: Australian Bureau of Statistics, Overseas migration, 2020–21, 2021.

BOX 3. MIGRATION AND AGEING SCENARIOS

Because migrants arriving in Australia are relatively young, overseas migration has helped slow Australia's population ageing amid declining fertility rates and increasing life expectancies. The following scenarios illustrate how different long-run levels of net overseas migration could impact the projected age structure of Australia's population between 2021–22 and 2060–61. These scenarios illustrate that population ageing is slowed by higher levels of overseas migration if migrants continue to be younger than the average population (Table 4).

In the **baseline migration scenario** (net overseas migration at 235,000 people per year), Australia's median age would be 42.8 years in 2060–61, up from 38.6 years in 2021–22. This is 3.8 years younger than it would be under the **no migration scenario**, in which the median age of Australians would increase by 8 years to be 46.6 years in 2060–61. In the **high migration scenario** (net overseas migration at 470,000 people a year), Australia's median age would only increase to be 41.0 years in 2060–61, 1.8 years younger than in the baseline migration scenario.

These scenarios hold the levels of net migration constant (at zero, 235,000 or 470,000) over the long-term. This means that, in these scenarios, each additional migrant is a smaller proportion of the population over the long-term. This leads to the diminishing marginal effects on the age structure of the population by increasing the level of net overseas migration observed in Chart 20. However, different dynamics would likely result if migration was a constant share of the population, instead of the constant levels assumed in these scenarios.

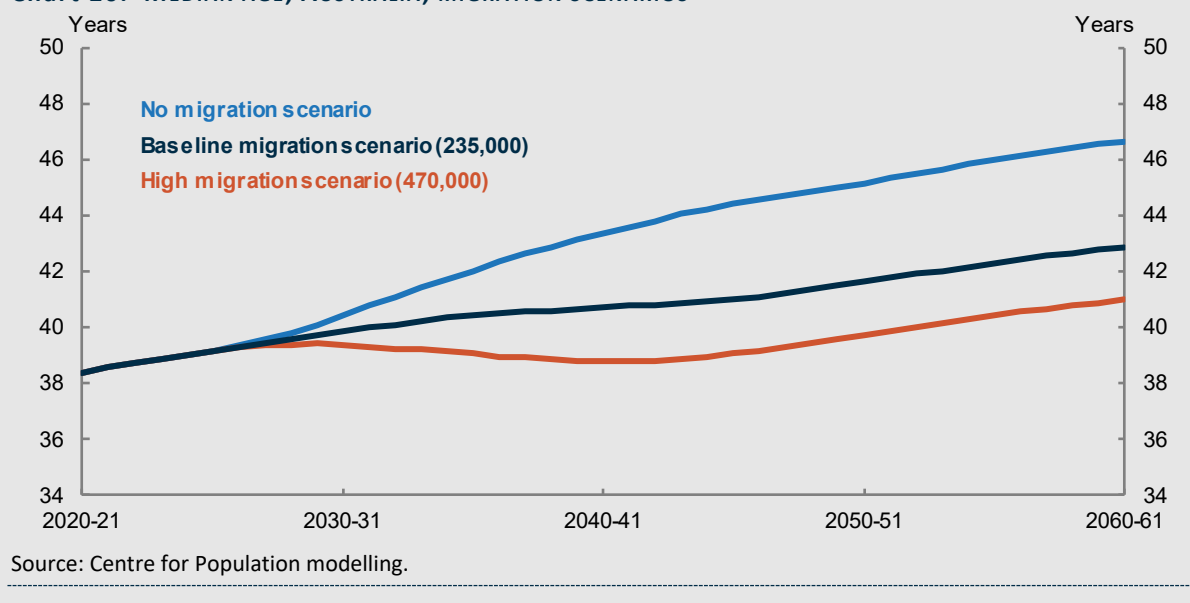
Table 4. AGEING OUTCOMES IN THE NET OVERSEAS MIGRATION SCENARIOS, 2060–61

	Population size	Median age	Percentage aged 65 and over	Percentage aged 85 and over	Old-age dependency ratio
2020–21 population	25.7 million	38.4	16.8	2.1	25.9
No migration scenario	29.1 million	46.6	28.7	6.6	50.3
Baseline migration scenario (235,000)	39.2 million	42.8	23.1	5.1	37.7
High migration scenario (470,000)	49.3 million	41.0	19.9	4.2	31.1

Note: The no migration scenario assumes that arrivals are equal to departures. It is assumed that departures remain constant across all scenarios, whereas arrivals are allowed to vary to achieve the desired level of net overseas migration. The median age of arrivals and departures are held constant at 26.2 years and 28.3 years respectively.

Source: Centre for Population modelling.

Chart 20. MEDIAN AGE, AUSTRALIA, MIGRATION SCENARIOS



HOW THE CURRENT AGE STRUCTURE AFFECTS FUTURE POPULATION

The current age structure of Australia's population reflects past demographic trends and has a large influence on Australia's future size and composition. This is a dynamic known as 'population momentum'.

Australia's population momentum is particularly evident through the natural increase component of population growth, which is still positive despite fertility rates remaining below the replacement level since the mid-1970s. This is because the number of births is the result of both the total fertility rate, which captures the *number of babies born per woman*, and the *number of women at childbearing age*. The population can continue to grow even after the fertility rate has fallen below the replacement level, provided there are sufficient women in the population moving into their reproductive age. In this regard, Australia has maintained a relatively large cohort of women in their 20s and 30s despite population ageing, supported by overseas migration and baby boomers' children moving into adulthood. This age structure has supported faster population growth through positive natural increase, with births continuing to outnumber deaths.

Population momentum fades over time. The momentum of Australia's current age structure will dissipate as the large cohort of those currently in their 20s and 30s become older, and the contribution of natural increase to Australia's population growth declines.³² The United Nations produced a scenario that estimates the population growth of Australia and New Zealand that is attributable to population momentum.³³ The United Nations estimates that the current population age structure accounts for 0.7 percentage points of Australia and New Zealand's average annual population growth over the next five years. The effects of population momentum then start to dissipate, contributing 0.4 percentage points of growth by 2032 and zero by 2040.

³² The 2021 Intergenerational Report found that the contribution of natural increase to population growth will fall to around one quarter of annual population growth by 2060–61, compared with around 44 per cent of population growth over the past 20 years (Commonwealth of Australia. (2021). *op. cit.*).

³³ While this scenario combines Australia and New Zealand, it is instructive for each country given the similar age structures they share. The scenario assumes the fertility rate is 2.1 births per woman, net overseas migration is zero and assumes no improvement in mortality rates. This allows the scenario to isolate how much growth is attributable only to the current population age structure. United Nations Department of Economic and Social Affairs, Population Division. (2022, July 11). *2022 Revision of World Population Prospects*. Retrieved from <https://population.un.org/wpp/>.

2. SUB-NATIONAL POPULATIONS

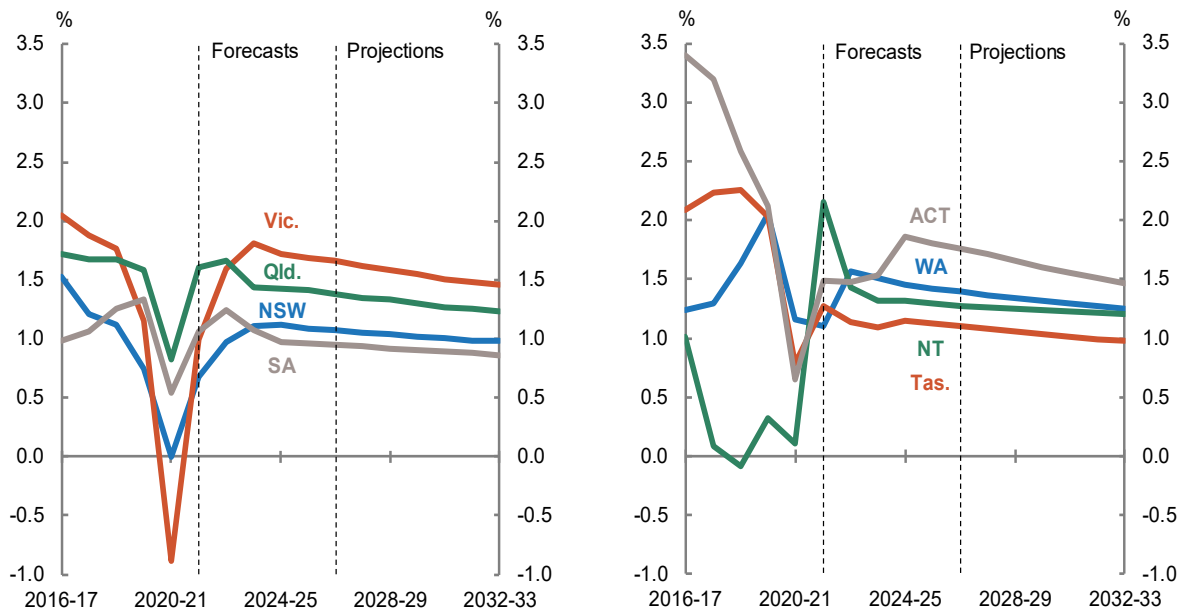
2.1 SUMMARY

STATES AND TERRITORIES

Consistent with national trends, all states and territories except the Northern Territory saw a reduction in population growth owing to international travel restrictions associated with the pandemic. Population growth fell to 0.0 per cent in New South Wales and -0.9 per cent in Victoria in 2020–21, reflecting that these states historically receive a larger share of their population growth from net overseas migration. The fastest growing state in 2020–21 was Western Australia at 1.2 per cent.

State and territory population growth is projected to return to pre-pandemic patterns as net overseas migration recovers (Chart 21). Victoria and Queensland are expected to be the fastest growing of the 3 largest jurisdictions over the next decade. New South Wales is projected to grow more slowly than the other eastern states but is projected to remain Australia’s largest state with a population of 9.1 million in 2032–33.

Chart 21. POPULATION GROWTH, STATES AND TERRITORIES



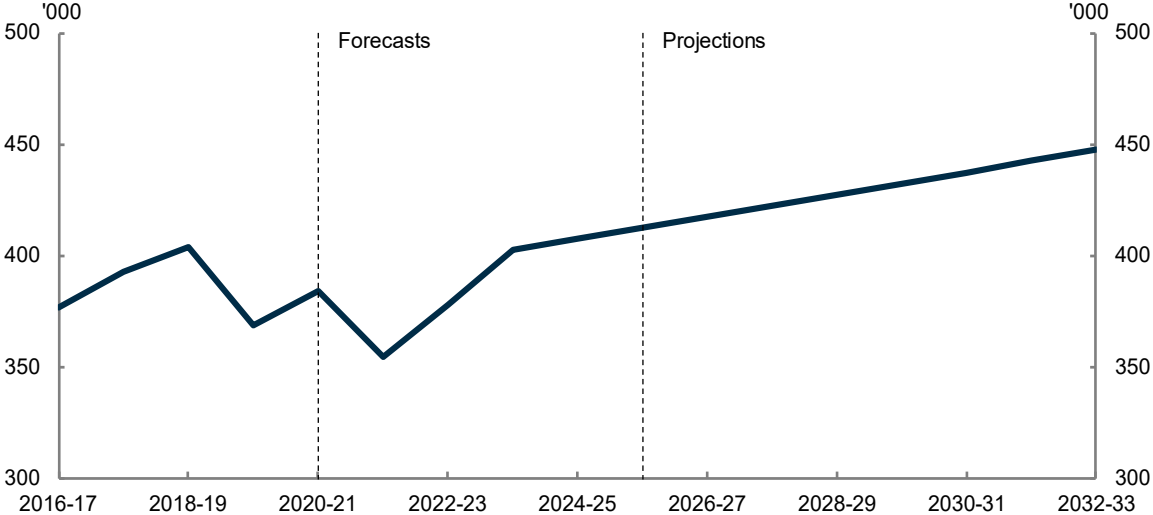
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Interstate migration is a large driver of population change at the state and territory level. There were 404,000 interstate moves nationally in 2018–19. Pandemic-related restrictions, particularly lockdowns in Melbourne, led to a decline in total interstate moves to 369,000 in 2019–20 and 384,000 in 2020–21.

It is difficult to obtain an accurate picture of interstate moves since mid-2021. While Australian Bureau of Statistics data indicate that net interstate moves were elevated in the June, September and December quarters of 2021, it is highly likely that a significant number of these reported moves did not occur in these quarters. The Australian Bureau of Statistics uses address changes lodged with Medicare to estimate internal migration. As there are no data as to when the address change occurred, the Australian Bureau of Statistics assumes the move occurred 3 months prior to the Medicare address change being registered. During the COVID-19 mass vaccination program which began in late February 2021, the number of Medicare address changes spiked.

This resulted in the Australian Bureau of Statistics publishing historically high interstate migration estimates.³⁴ The Centre for Population’s forecasts assume the elevated number of moves recorded for the September and December quarters of 2021 occurred over a longer period and do not reflect actual mobility in those quarters. Interstate moves are expected to remain low in 2021–22 due to pandemic-related restrictions, including lockdowns in late 2021 (Chart 22). Interstate moves are then expected to recover to pre-pandemic levels by 2023–24 and are projected to gradually increase in line with population growth.

Chart 22. ANNUAL INTERSTATE MOVEMENTS, AUSTRALIA



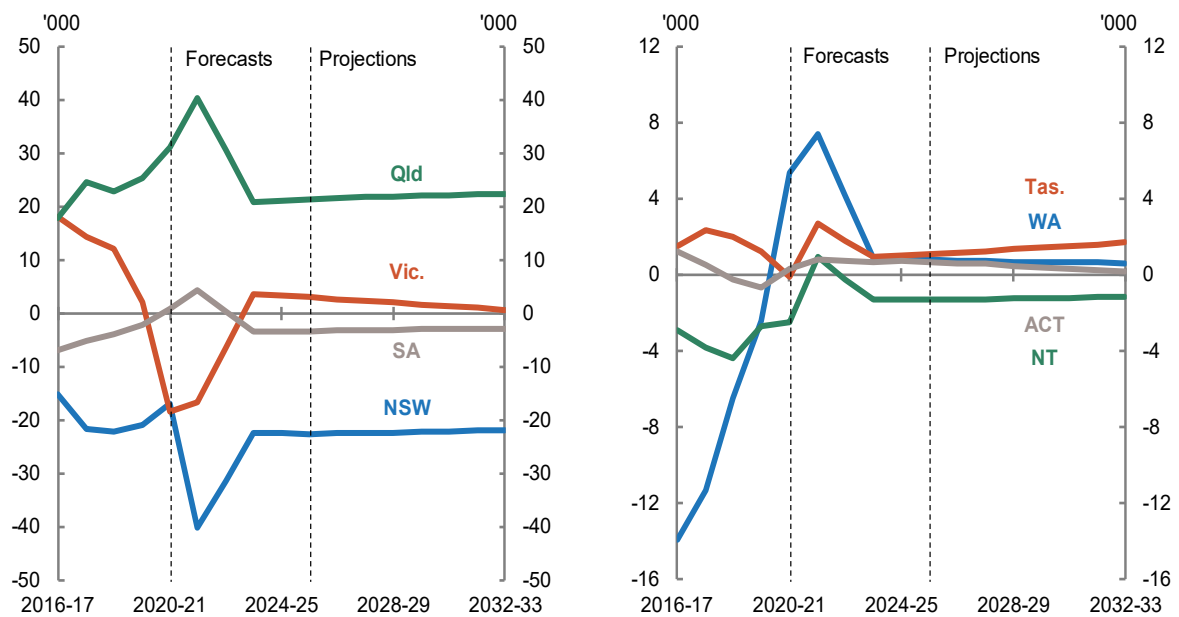
Source: Australian Bureau of Statistics, National, state and territory population, December 2021, 2022 and Centre for Population projections.

Movement restrictions also affected the pattern of interstate moves (Chart 23). Victoria experienced a particularly large reduction in interstate migration. Historically a recipient of interstate migrants, the state became a net donor in 2020–21. This trend is expected to continue in 2021–22 before positive net interstate movement returns in 2023–24. The reduction in net flows to Victoria saw increases in net interstate migration in states that previously lost interstate migration to Victoria, notably Western Australia and South Australia.

Interstate moves to New South Wales are similarly expected to fall in 2021–22 due to movement restrictions beginning in mid-2021. Queensland is expected to receive the majority of the additional interstate migrants, following historical movement patterns. The patterns of interstate migration are expected to return to established pre-pandemic trends from 2023–24 across the states and territories, reflecting an assumption that there will be no future, large-scale internal movement restrictions and lockdowns.

34 Australian Bureau of Statistics, National, state and territory population, methodology, June 2021, 2021.

Chart 23. NET INTERSTATE MIGRATION, STATES AND TERRITORIES



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

The Australian Bureau of Statistics has revised Australia’s estimated resident population to reflect new data from the 2021 Census. While there was only a slight downwards revision to the national population, there were significant revisions at the state and territory level. The populations of New South Wales and Victoria were revised down by more than 1 per cent while that of Queensland was largely unchanged. Other states and territories saw upwards revisions, particularly the Australian Capital Territory and Tasmania which were revised up by around 5 per cent. For full details see 0 in the Technical Appendix.

Tasmania and South Australia had high median ages at over 40 in 2020–21, compared with around 38 in most other jurisdictions. The Tasmanian and South Australian populations are expected to continue to age more rapidly than other jurisdictions. This is largely due to significant shares of their young adult population migrating to other states and territories for education and employment opportunities. The Northern Territory is significantly younger than other jurisdictions with a median age under 34, driven by its higher fertility rates and larger share of First Nations people.

CAPITAL CITIES AND REST-OF-STATE AREAS

Historically, Australia’s capital cities have grown faster than rest-of-state (regional) areas. This pattern changed during the pandemic as Australia’s international border restrictions reduced the growth of capital cities and there were larger than normal internal moves from cities to regions.³⁵

The combined population of the capital cities declined for the first time on record in 2020–21. Growth fell to -0.3 per cent from an average of 1.8 per cent over the decade prior to the pandemic. Growth remained relatively high in regional areas, only falling slightly by 0.2 percentage points to 1 per cent, as increased net internal migration partially offset lower overseas migration. As a result, in 2020–21 regional areas grew at a faster rate than capital cities for the first time since 1993–94.

³⁵ At the capital city and rest-of-state level, internal migration refers to moves within states as well as interstate moves.

Increased net internal migration to regions in 2019–20 was largely caused by a sharp drop in the number of people, especially young people, moving from regional areas to capital cities. This likely reflected a combination of travel restrictions reducing relocation options, and increased opportunities to work and study in the regions, including work and study from home. A smaller but significant increase in the number of people moving from capital cities to regional areas also occurred in 2020–21, possibly reflecting changed lifestyle preferences and remote working opportunities. As a result, regional areas gained 31,000 people from capital cities in 2019–20 and 49,000 in 2020–21, up from 16,000 in 2018–19. Net internal migration to regional areas is projected to drop to 23,000 in 2023–24, driven by increased moves from regional areas to capital cities as pre-pandemic trends of young people moving for education and employment resume. It is then projected to slowly increase to 43,000 by 2032–33 as the population increases.

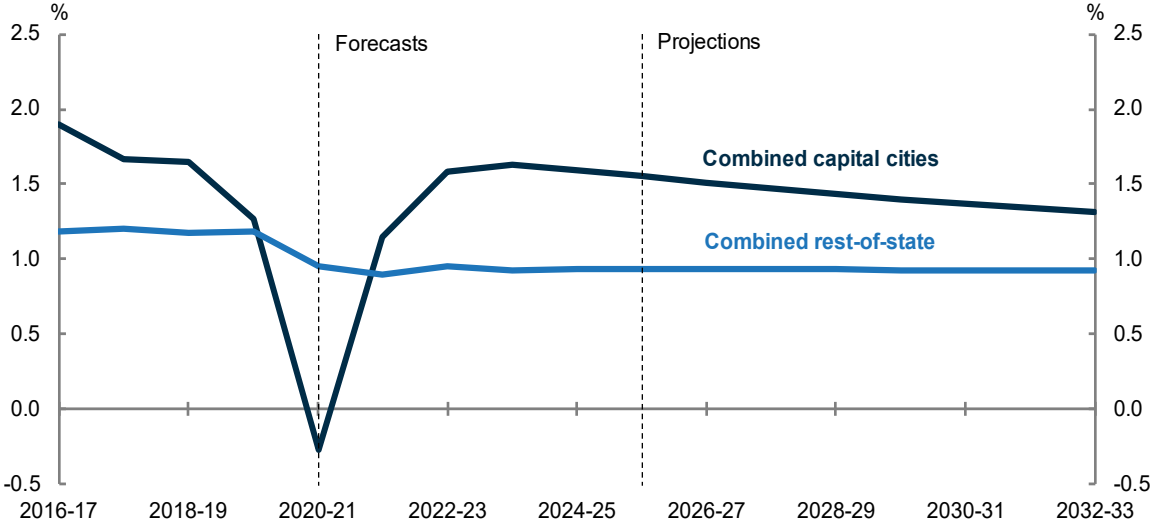
Capital cities experienced a net outflow of 80,000 overseas migrants in 2020–21 and regional areas a net outflow of 4,000. Net overseas migration is projected to return to being the largest driver of population growth in capital cities over the next decade. In regional areas, net overseas migration is forecast to be the largest driver of population growth from 2022–23 until 2030–31, after which net internal migration is expected to become a larger contributor to growth. Since international travel restrictions have eased, there are early indications that overseas migrants continue to prefer settling in capital cities over regional areas.

The contribution of natural increase to population growth is projected to be larger in the capital cities compared to regional areas, even though fertility rates are lower in capital cities. This is because populations in the regional areas are currently older than, and projected to age faster than, capital cities.³⁶ There are also fewer women of childbearing age due to lower net overseas migration (migrants are generally younger than the existing population) and net internal migration outflows of young people. In some regional areas, deaths are expected to outnumber births and natural increase will contribute negatively to population growth over the next 10 years. Negative natural increase is expected to occur in the rest of South Australia in 2021–22, in the rest of Tasmania in 2027–28, in the rest of New South Wales in 2030–31, and in the rest of Victoria in 2031–32.

Normalising patterns of overseas and internal migration are expected to result in future population growth returning to pre-pandemic patterns, with growth in capital cities outpacing growth in regional areas. Capital city growth is projected to return to 1.6 per cent in 2023–24, then slowly decline towards 1.3 per cent by 2032–33. Population growth in regional areas is projected to remain relatively stable, slowly declining from 1 per cent in 2022–23 to 0.9 per cent in 2032–33 (Chart 24).

36 Centre for Population. (2020). *op. cit.*

Chart 24. POPULATION GROWTH IN CAPITAL CITIES AND REST-OF-STATE AREAS



Source: Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

The population is older in regional areas than in capital cities. The median age for people in capital cities in 2020–21 was 37.1. This was more than 4.5 years younger than the median age of 41.8 in regional areas. Regional areas are expected to continue ageing faster than capital cities. The median regional age is expected to increase by almost 3 years to 44.5 by 2032–33, while the median age in capital cities is expected to increase by just over a year to 38.3. Patterns of overseas and internal migration are the largest drivers of these differences. Overseas migrants tend to be younger and more often settle in capital cities. Younger Australians also move to capital cities to pursue education and employment opportunities and regional areas attract a disproportionate share of people of retirement age.³⁷ These factors more than offset higher fertility rates and lower life expectancies in regional areas.

37 Wilson, T. (2020). Modelling Age Patterns of Internal Migration at the Highest Ages. *Spatial Demography*, 175-192.

2.2 NEW SOUTH WALES

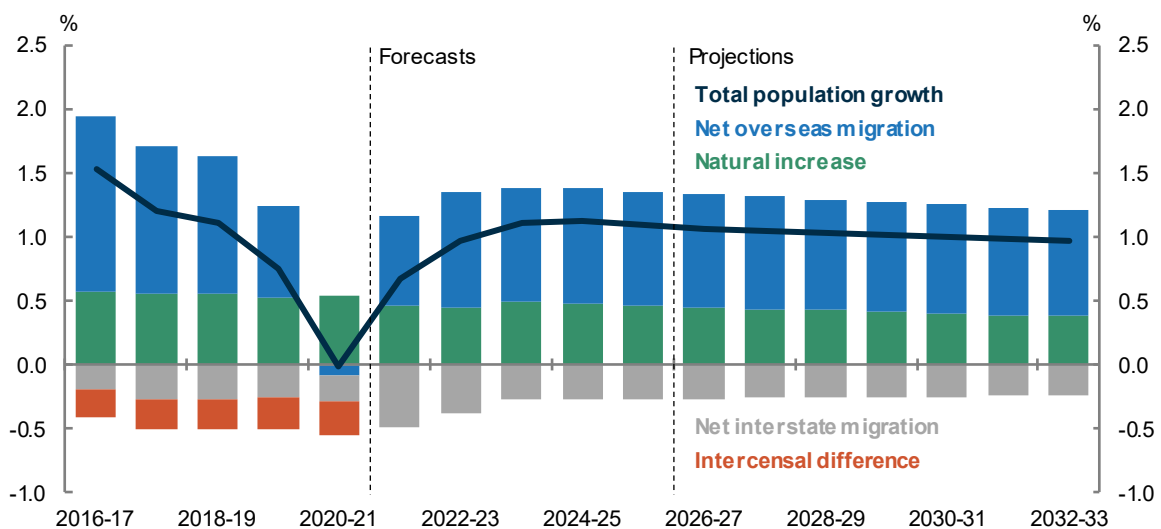
New South Wales is Australia's most populous state and is projected to remain so over the next decade, growing from 8.1 million people on 30 June 2021 to 9.1 million by 2032–33. Population growth in New South Wales is heavily reliant on net overseas migration. As such, the state recorded no population growth in 2020–21 due to international travel restrictions. Population growth is expected to recover to 1.1 per cent by 2024–25 before declining gradually to 1.0 per cent in 2032–33 (Chart 25).

In 2020–21, New South Wales recorded historically low net overseas migration (-6,500). Overseas migration is forecast to return to net inflows of 75,000 by 2025–26, driven by the return of international students and other temporary migrants. Net overseas migration is forecast to contribute 0.9 percentage points to New South Wales' population growth rate in 2025–26, up from -0.1 in 2020–21. The state's share of national net overseas migration is expected to decline over the next decade to 32 per cent, down from an average of 38.2 per cent between 2013–14 and 2017–18. This reflects a pre-pandemic trend in declining international student arrivals to New South Wales.

Natural increase remained stable in 2020–21, with births and deaths similar to pre-pandemic levels. It was the only positive contributor to population growth in that year. Natural increase is projected to fall more than usual in 2021–22 and 2022–23 due to an increase in the number of deaths from COVID-19 and other causes. After recovering in 2023–24, from 2024–25 onwards, natural increase is projected to return to pre-pandemic trends and gradually decrease through to 2032–33.

New South Wales has generally experienced net outflows of interstate migration. This is forecast to reach a historically high outflow of 40,000 in 2021–22 due to an extended COVID-19 lockdown in the second half of 2021, subtracting 0.5 percentage points from growth. Pre-pandemic patterns are forecast to return from 2023–24, resulting in net interstate migration of -23,000 for New South Wales, subtracting 0.3 percentage points from growth. Levels of interstate migration are projected to remain generally stable for the remainder of the projection period through to 2032–33.

Chart 25. POPULATION GROWTH AND COMPONENTS, NEW SOUTH WALES



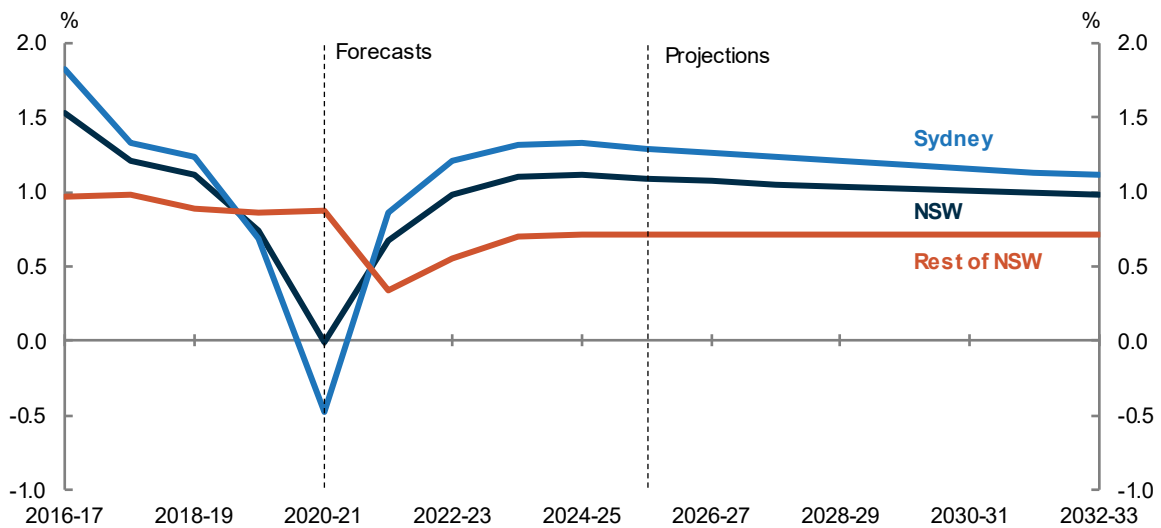
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

GREATER SYDNEY AND THE REST OF NEW SOUTH WALES

The population of Greater Sydney was 5.3 million on 30 June 2021, making it Australia’s largest city and 65 per cent of the population of New South Wales. Sydney experienced a large fall in population growth in 2020–21 to -0.5 per cent due to reductions in net overseas migration. Sydney’s population growth is projected to recover as international travel restrictions ease and overseas migration returns. Population growth is projected to be 0.9 per cent in 2021–22, 1.2 per cent in 2022–23 and 1.3 per cent by 2024–25, before slowing to 1.1 per cent in 2032–33. Sydney’s population is projected to be 6.1 million in 2032–33.

Population growth in the rest of New South Wales has also fallen throughout the pandemic, albeit less than in Sydney. Population growth in the rest of New South Wales is projected to be 0.3 per cent in 2021–22, driven largely by a drop in net internal migration, and then increase to 0.7 per cent by 2023–24. Population growth is then projected to remain steady through to 2032–33. In 2032–33, the population of the rest of New South Wales is projected to be 3.1 million.

Chart 26. POPULATION GROWTH IN NEW SOUTH WALES, SYDNEY AND THE REST OF NEW SOUTH WALES



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 5. POPULATION PROJECTIONS, NEW SOUTH WALES

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
New South Wales	8,094	8,149	8,228	8,319	8,412	9,131
<i>Greater Sydney</i>	5,260	5,305	5,369	5,440	5,512	6,062
<i>Rest of New South Wales</i>	2,834	2,844	2,859	2,879	2,900	3,069
Population growth (per cent)						
New South Wales	0	0.7	1	1.1	1.1	1
<i>Greater Sydney</i>	-0.5	0.9	1.2	1.3	1.3	1.1
<i>Rest of New South Wales</i>	0.9	0.3	0.6	0.7	0.7	0.7
Population growth ('000)						
New South Wales	-0.5	54.8	79.5	91	93.2	88.5
<i>Greater Sydney</i>	-25.1	45.1	63.8	71	72.7	66.8
<i>Rest of New South Wales</i>	24.6	9.7	15.7	19.9	20.5	21.7
Natural increase ('000)						
New South Wales	44.1	37.1	36.5	40.2	39.5	34.9
<i>Greater Sydney</i>	37	34.8	34.4	36.5	36.3	36.5
<i>Rest of New South Wales</i>	7.2	2.3	2.1	3.7	3.1	-1.6
Net overseas migration ('000)						
New South Wales	-6.4	57.7	74.3	73.3	76.3	75.4
<i>Greater Sydney</i>	-7.6	49.2	63.6	62.2	64.8	63.7
<i>Rest of New South Wales</i>	1.2	8.5	10.8	11.1	11.5	11.7
Net internal migration ('000)						
New South Wales	-16.8	-40.1	-31.3	-22.5	-22.5	-21.9
<i>Greater Sydney</i>	-34.8	-38.9	-34.1	-27.7	-28.4	-33.4
<i>Rest of New South Wales</i>	18	-1.2	2.8	5.1	5.8	11.5
Median age (years)						
New South Wales	38.6	38.8	38.9	39	39.2	40.1
<i>Greater Sydney</i>	37.1	37.3	37.3	37.4	37.4	37.9
<i>Rest of New South Wales</i>	42.5	42.6	42.8	43	43.3	45.3

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.3 VICTORIA

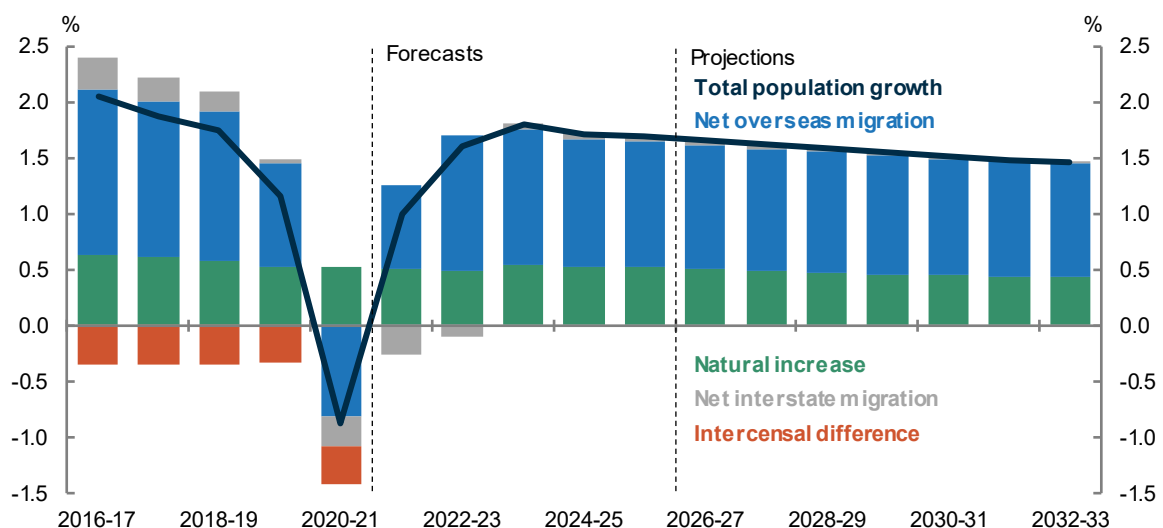
Victoria had a population of 6.6 million on 30 June 2021 and is projected to reach 7.9 million by 2032–33. The pandemic affected Victoria’s population growth more than any other state due to large falls in both net overseas migration and interstate migration. Annual population growth declined to -0.9 per cent in 2020–21, after averaging 2.1 per cent annual growth between 2014–15 and 2018–19. Victoria’s population growth is expected to recover to 1.8 per cent by 2023–24 and then slowly decline to 1.5 per cent in 2032–33 (Chart 27).

Net overseas migration to Victoria is forecast to recover from a low of -53,000 in 2020–21 to 49,000 in 2021–22 and increase to 81,000 in 2023–24, driven by the return of international students. Net overseas migration is forecast to contribute 1.1 percentage points to Victoria’s population growth in 2025–26, up from -0.8 in 2020–21. The Victorian share of net overseas migration is forecast to remain steady over the next decade at 34 per cent of national flows.

Natural increase in Victoria recovered by 3.4 per cent in 2020–21 from a low of 34,000 in 2019–20. Activity restrictions and lockdowns led to longer than usual delays in birth registrations, which affected the reported outcomes for 2019–20 and 2020–21. Natural increase was the only component that contributed positively to growth in 2020–21, partly reflecting the recovery in birth registrations. An increase in deaths is expected to drive a fall in natural increase in 2021–22 and 2022–23. Natural increase is then projected to return to pre-pandemic levels in 2023–24 and 2024–25. It is projected to decrease gradually from 2025–26 due to low fertility rates and deaths increasing faster than births.

Victoria experienced a significant net interstate migration outflow of 18,000 in 2020–21, reversing the net inflows of recent years. COVID-19 lockdowns reduced arrivals and increased departures from the state, resulting in a contribution to growth of -0.3 percentage points in 2020–21, the lowest contribution since the 1990s. A net outflow of 17,000 is also expected in 2021–22. A smaller net outflow of 6,000 is projected for 2022–23 before net interstate migration returns to pre-pandemic levels with an inflow of 4,000 in 2023–24. Net interstate migration is then projected to fall gradually, reaching 1,000 in 2032–33.

Chart 27. POPULATION GROWTH AND COMPONENTS, VICTORIA



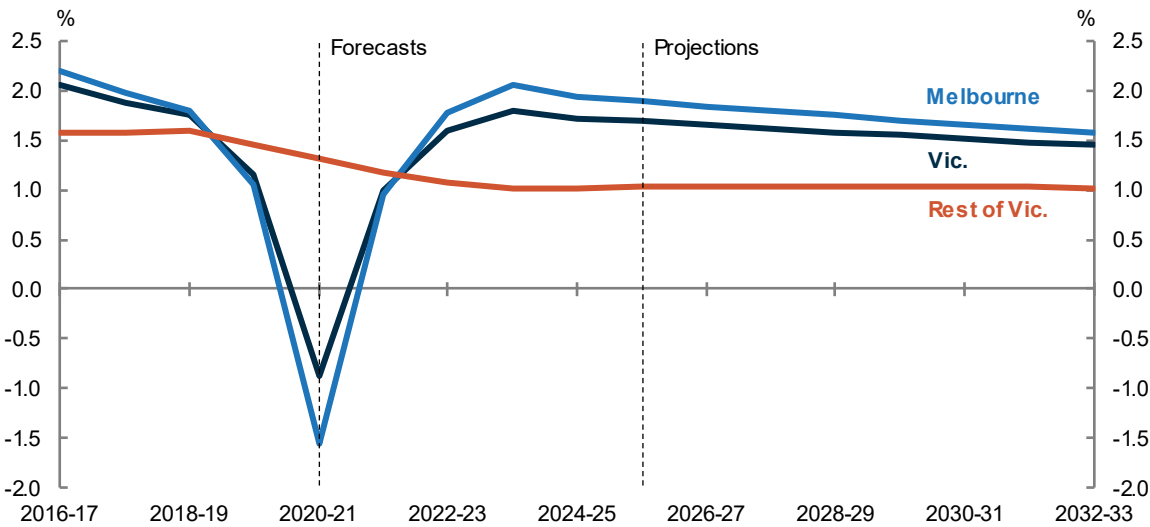
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

GREATER MELBOURNE AND THE REST OF VICTORIA

Greater Melbourne had 5 million residents on 30 June 2021, accounting for 76 per cent of Victoria’s population. Melbourne’s population growth declined further than other cities in 2020–21, with the loss of overseas migration compounded by falls in net internal migration. Melbourne’s population growth in 2018–19 was 1.8 per cent. By 2020–21, population growth had declined to -1.6 per cent. Population growth in Melbourne is projected to recover to 2.1 per cent in 2023–24, before slowly declining to 1.6 per cent in 2032–33. Melbourne is projected to overtake Sydney to become the largest city in Australia in 2031–32, with a population of 6 million, and then grow to 6.1 million in 2032–33.

The rest of Victoria had a population of 1.6 million on 30 June 2021. Population growth in the rest of Victoria was much stronger than in Melbourne, falling from 1.6 per cent in 2018–19 to 1.3 per cent in 2020–21. Growth was supported by strong internal migration in the early stages of the pandemic, which helped offset the decline in overseas migration. Growth is projected to decline to 1.1 per cent by 2022–23 and then gradually to 1 per cent by 2032–33, driven by the declining contribution of natural increase, which makes a negative contribution to growth from 2031–32. In 2032–33, the population of the rest of Victoria is projected to be 1.8 million.

Chart 28. POPULATION GROWTH IN VICTORIA, GREATER MELBOURNE AND THE REST OF VICTORIA



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 6. POPULATION PROJECTIONS, VICTORIA

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
Victoria	6,548	6,614	6,720	6,841	6,959	7,882
<i>Greater Melbourne</i>	4,976	5,023	5,112	5,217	5,318	6,101
<i>Rest of Victoria</i>	1,572	1,590	1,608	1,624	1,641	1,781
Population growth (per cent)						
Victoria	-0.9	1	1.6	1.8	1.7	1.5
<i>Greater Melbourne</i>	-1.6	0.9	1.8	2.1	1.9	1.6
<i>Rest of Victoria</i>	1.3	1.2	1.1	1	1	1
Population growth ('000)						
Victoria	-58.1	65.5	106.1	121.4	117.8	113.2
<i>Greater Melbourne</i>	-78.7	46.9	89	105	101.2	95.1
<i>Rest of Victoria</i>	20.5	18.6	17.1	16.4	16.6	18
Natural increase ('000)						
Victoria	35.3	32.9	32.8	36.2	36.3	33.7
<i>Greater Melbourne</i>	31.7	31	31.1	33.6	33.9	34.4
<i>Rest of Victoria</i>	3.5	1.9	1.8	2.6	2.4	-0.7
Net overseas migration ('000)						
Victoria	-53.3	49.2	79.7	81.4	78.1	78.7
<i>Greater Melbourne</i>	-51.6	44.8	73.1	74.5	71.3	71.8
<i>Rest of Victoria</i>	-1.6	4.4	6.6	7	6.8	7
Net internal migration ('000)						
Victoria	-18.3	-16.6	-6.4	3.7	3.4	0.7
<i>Greater Melbourne</i>	-33.5	-28.9	-15.1	-3.1	-4	-11
<i>Rest of Victoria</i>	15.2	12.3	8.8	6.8	7.4	11.7
Median age (years)						
Victoria	37.9	38.2	38.3	38.4	38.5	39.4
<i>Greater Melbourne</i>	36.8	37	37.1	37.1	37.2	37.8
<i>Rest of Victoria</i>	43	43.3	43.5	43.7	44	46

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.4 QUEENSLAND

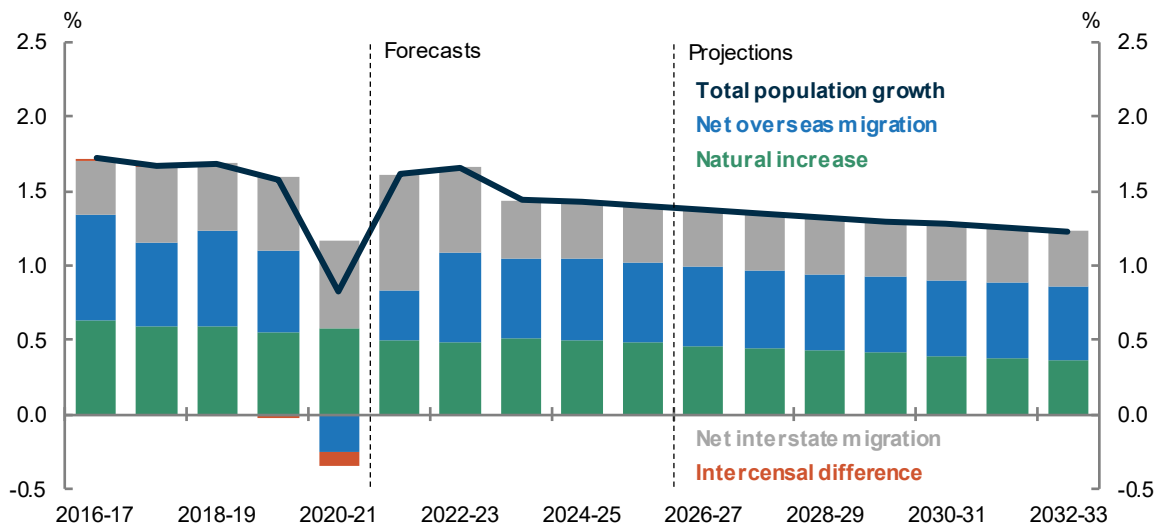
Queensland's population was 5.2 million on 30 June 2021 and is projected to reach 6.2 million by 2032–33. Queensland's population growth is underpinned by strong net interstate migration, so was less affected by the drop in overseas migration than the other large states. Queensland experienced relatively strong population growth of 0.8 per cent in 2020–21. Growth is forecast to recover to 1.7 per cent by 2022–23, before declining to 1.2 per cent in 2032–33 (Chart 29).

Net overseas migration to Queensland is forecast to recover from a low of -13,000 in 2020–21 to 18,000 in 2021–22. This will be driven by the return of temporary migrants, especially international students and working holiday makers. Overseas migrant arrivals are forecast to increase by an average of 20,000 annually up to 2023–24. Net overseas migration is forecast to contribute 0.5 percentage points to Queensland's population growth rate in 2025–26, up from -0.3 in 2020–21. Over the next decade, Queensland is expected to retain a 13 per cent share of national net overseas migration, consistent with its pre-pandemic share.

Natural increase was the second largest contributor to Queensland's population growth in 2020–21. Natural increase is forecast to decline by 13 per cent in 2021–22, reflecting an expected increase in deaths. Deaths are forecast to remain elevated in 2022–23, before dropping by 4.7 per cent in 2023–24. From 2024–25 onwards, natural increase is projected to gradually decline, consistent with long-term trends of population ageing and declining fertility rates (although they are above the national average).

Net interstate migration was the largest contributor to Queensland's population growth in 2020–21, increasing from already high levels. Net interstate migration is projected to increase again to 40,000 in 2021–22, before returning to pre-pandemic levels of 21,000 in 2023–24. Over the projection period, Queensland is expected to continue to have the highest interstate migration of any state or territory.

Chart 29. POPULATION GROWTH AND COMPONENTS, QUEENSLAND



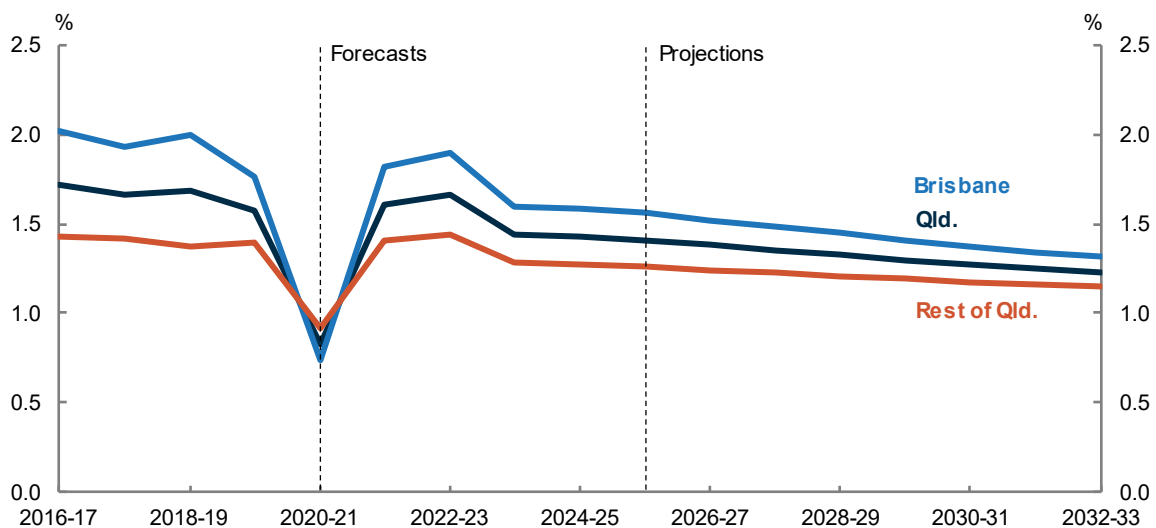
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

GREATER BRISBANE AND THE REST OF QUEENSLAND

Unlike most other capital cities, Greater Brisbane does not account for the majority of its state's population. Brisbane's population on 30 June 2021 was 2.6 million, representing 49 per cent of Queensland's population. Due largely to strong net internal migration, Brisbane's population continued to grow during the pandemic, with growth falling from 2.0 per cent in 2018–19 to 0.7 per cent in 2020–21. Population growth in Brisbane is forecast to recover to 1.9 per cent by 2022–23, before slowing to 1.3 per cent by 2032–33. Brisbane's population is projected to be 3.1 million in 2032–33.

The population of the rest of Queensland on 30 June 2021 was 2.7 million. Strong flows of internal migration during the pandemic contributed to relatively strong population growth of 0.9 per cent in 2020–21. Population growth is projected to reach 1.4 per cent in 2022–23 before declining to 1.2 per cent in 2032–33. The population of the rest of Queensland is projected to be 3.1 million in 2032–33 and to be just below half of the state's population.

Chart 30. POPULATION GROWTH IN QUEENSLAND, GREATER BRISBANE AND THE REST OF QUEENSLAND



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 7. POPULATION PROJECTIONS, QUEENSLAND

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
Queensland	5,218	5,302	5,390	5,467	5,545	6,156
<i>Greater Brisbane</i>	2,569	2,616	2,665	2,708	2,751	3,082
<i>Rest of Queensland</i>	2,649	2,686	2,725	2,759	2,795	3,075
Population growth (per cent)						
Queensland	0.8	1.6	1.7	1.4	1.4	1.2
<i>Greater Brisbane</i>	0.7	1.8	1.9	1.6	1.6	1.3
<i>Rest of Queensland</i>	0.9	1.4	1.4	1.3	1.3	1.2
Population growth ('000)						
Queensland	42.6	84	88.1	77.4	78.3	74.9
<i>Greater Brisbane</i>	18.7	46.8	49.5	42.6	43.1	39.9
<i>Rest of Queensland</i>	24	37.2	38.6	34.8	35.2	35
Natural increase ('000)						
Queensland	29.5	25.7	25.5	27.8	27.2	22.5
<i>Greater Brisbane</i>	17.5	16.4	16.4	17.4	17.2	15.5
<i>Rest of Queensland</i>	12	9.3	9.2	10.4	10	6.9
Net overseas migration ('000)						
Queensland	-13.1	17.9	32	28.7	29.8	29.9
<i>Greater Brisbane</i>	-9.6	10.5	19	16.8	17.4	17.4
<i>Rest of Queensland</i>	-3.5	7.4	13	11.9	12.4	12.5
Net internal migration ('000)						
Queensland	31.2	40.4	30.6	21	21.2	22.5
<i>Greater Brisbane</i>	15	19.9	14.2	8.4	8.4	7
<i>Rest of Queensland</i>	16.1	20.4	16.5	12.5	12.8	15.5
Median age (years)						
Queensland	38.4	38.6	38.7	38.9	39.1	40.5
<i>Greater Brisbane</i>	36.5	36.7	36.8	37	37.1	38.3
<i>Rest of Queensland</i>	40.5	40.7	40.9	41.1	41.3	42.7

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.5 SOUTH AUSTRALIA

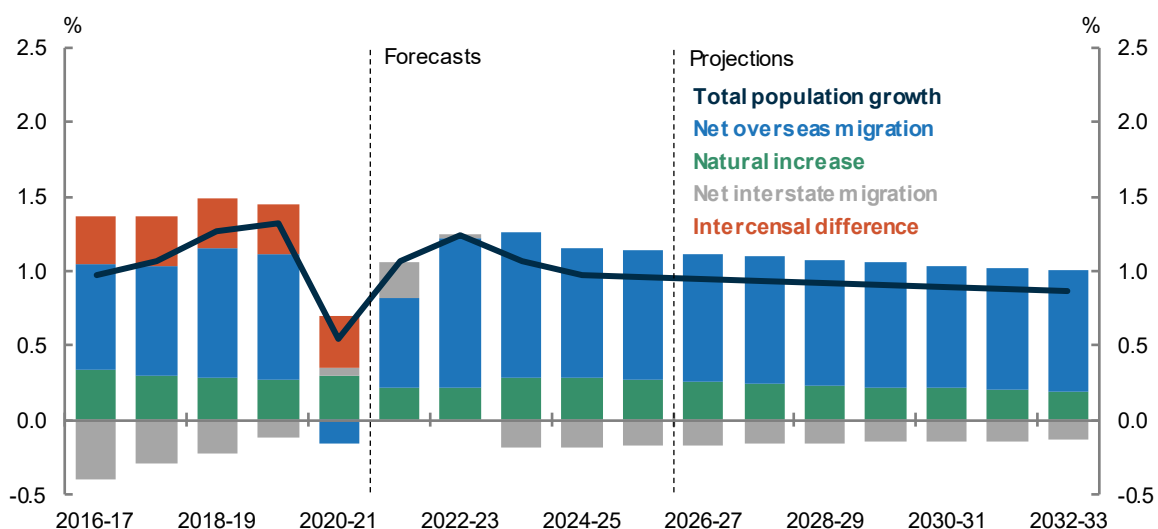
South Australia's population on 30 June 2021 was 1.8 million. Its population is projected to reach 2.0 million by 2032–33. South Australia generally relies on overseas migration to offset outflows of interstate migration, but this reversed during the pandemic. South Australia experienced reduced overseas migration during the pandemic but received stronger net interstate migration. Annual population growth declined to 0.5 per cent in 2020–21, but is projected to recover to 1.2 per cent in 2022–23 before slowly declining to 0.9 per cent in 2032–33 (Chart 31).

Net overseas migration to South Australia is forecast to increase from -2,900 in 2020–21 to 16,000 in 2025–26. More than a quarter of migrant arrivals to South Australia are from permanent visa holders, a larger proportion than in any other state. The resumption of significant numbers of permanent visa grants to individuals outside Australia, alongside a recovery in international student arrivals, is expected to drive a recovery to pre-pandemic trends. Net overseas migration is forecast to contribute 0.9 percentage points to South Australia's population growth rate in 2025–26, up from -0.2 in 2020–21. South Australia is expected to attract 7 per cent of national net overseas migration over the next decade. This is in line with a small increase in South Australia's share that was apparent in the year before the COVID-19 pandemic.

Natural increase is usually a smaller contributor to population growth in South Australia than in other states, reflecting the state's older age structure. However, in 2020–21 natural increase was the largest contributor to population growth, due to negative overseas migration. In 2021–22, natural increase is expected to decline by 28.1 per cent, driven by a large increase in the number of deaths. As in other states and territories, deaths are projected to remain high in 2022–23, leading natural increase to remain lower than pre-pandemic levels. Natural increase is forecast to recover in 2023–24, driven by fewer deaths. Natural increase is projected to decline steadily over the remainder of the projection period due to the state's older population age structure.

South Australia has generally experienced a net outflow of interstate migrants. This changed in 2020–21, with South Australia experiencing positive net interstate migration (900 people) for the first time since 1990–91. Net interstate migration is projected to be positive for South Australia again in 2021–22 at 4,400 and in 2022–23 at 500. Pre-pandemic trends are then expected to return with net interstate migration of -3,500 in 2023–24. Net interstate migration is then forecast to slowly increase reaching -2,800 in 2032–33.

Chart 31. POPULATION GROWTH AND COMPONENTS, SOUTH AUSTRALIA



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

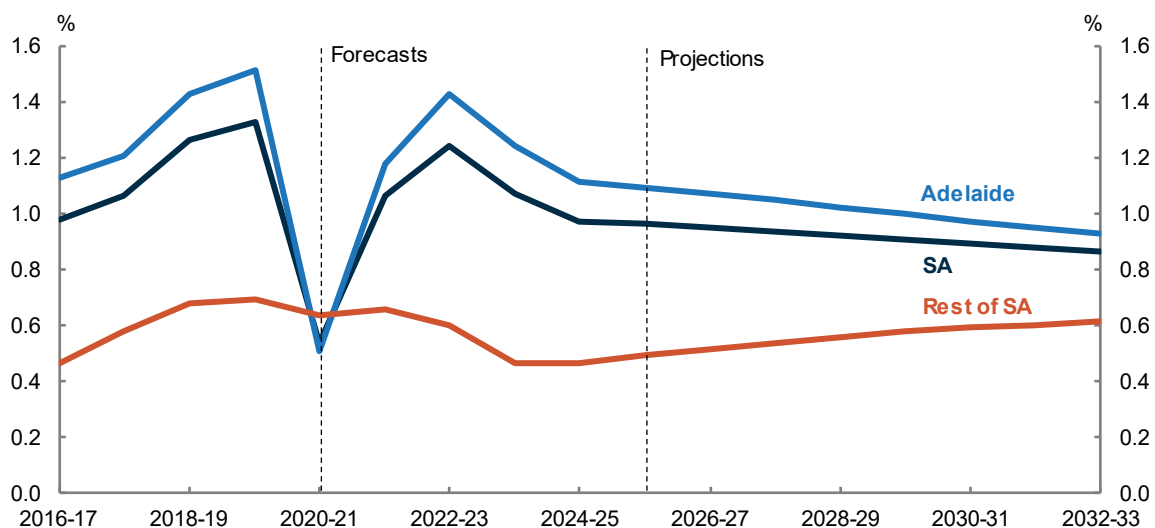
GREATER ADELAIDE AND THE REST OF SOUTH AUSTRALIA

The population of Greater Adelaide on 30 June 2021 was 1.4 million, accounting for 78 per cent of the state's population. In 2020–21, relatively strong net internal migration helped offset the losses from lower overseas migration. Population growth in Adelaide fell to 0.5 per cent in 2020–21 and is projected to recover to 1.4 per cent in 2022–23. Population growth is forecast to then slow to 0.9 per cent in 2032–33, by which time Adelaide's population is projected to be 1.6 million.

The rest of South Australia has historically experienced relatively slow growth. The population of the rest of South Australia on 30 June 2021 was 401,000. Population growth in the rest of South Australia remained relatively steady throughout the pandemic, recording 0.7 per cent growth in 2019–20 and 0.6 per cent in 2020–21. Annual population growth is projected to return to 0.7 per cent by 2021–22 and remain relatively stable between 0.5 and 0.6 per cent through to 2032–33, when the population is projected to be 428,000.

The rest of South Australia will experience negative natural increase from 2021–22 onwards. The increase in deaths in 2021–22 and 2022–23 brings forward what would otherwise have been a more gradual transition to negative natural increase for the rest of South Australia. Negative natural increase is expected to be offset by gradual increases in internal migration.

Chart 32. POPULATION GROWTH IN SOUTH AUSTRALIA, GREATER ADELAIDE AND THE REST OF SOUTH AUSTRALIA



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 8. POPULATION PROJECTIONS, SOUTH AUSTRALIA

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
South Australia	1,803	1,822	1,845	1,865	1,883	2,025
<i>Greater Adelaide</i>	1,402	1,419	1,439	1,457	1,473	1,597
<i>Rest of South Australia</i>	401	403	406	408	410	428
Population growth (per cent)						
South Australia	0.5	1.1	1.2	1.1	1	0.9
<i>Greater Adelaide</i>	0.5	1.2	1.4	1.2	1.1	0.9
<i>Rest of South Australia</i>	0.6	0.7	0.6	0.5	0.5	0.6
Population growth ('000)						
South Australia	9.6	19.2	22.6	19.7	18.1	17.3
<i>Greater Adelaide</i>	7.1	16.6	20.2	17.8	16.2	14.7
<i>Rest of South Australia</i>	2.5	2.6	2.4	1.9	1.9	2.6
Natural increase ('000)						
South Australia	5.4	3.9	4	5.2	5.2	3.7
<i>Greater Adelaide</i>	5.1	4.3	4.4	5.3	5.4	4.6
<i>Rest of South Australia</i>	0.3	-0.4	-0.4	-0.1	-0.2	-0.9
Net overseas migration ('000)						
South Australia	-2.9	10.9	18.2	18	16.3	16.4
<i>Greater Adelaide</i>	-2.7	10	16.7	16.5	15	15
<i>Rest of South Australia</i>	-0.2	0.9	1.5	1.5	1.4	1.4
Net internal migration ('000)						
South Australia	0.9	4.4	0.5	-3.5	-3.4	-2.8
<i>Greater Adelaide</i>	-0.2	2.3	-0.8	-4	-4.1	-4.9
<i>Rest of South Australia</i>	1.1	2.1	1.3	0.5	0.7	2.1
Median age (years)						
South Australia	40.6	40.7	40.7	40.8	41	42
<i>Greater Adelaide</i>	39.3	39.4	39.4	39.5	39.6	40.3
<i>Rest of South Australia</i>	46.4	46.6	46.9	47.2	47.5	49.1

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.6 WESTERN AUSTRALIA

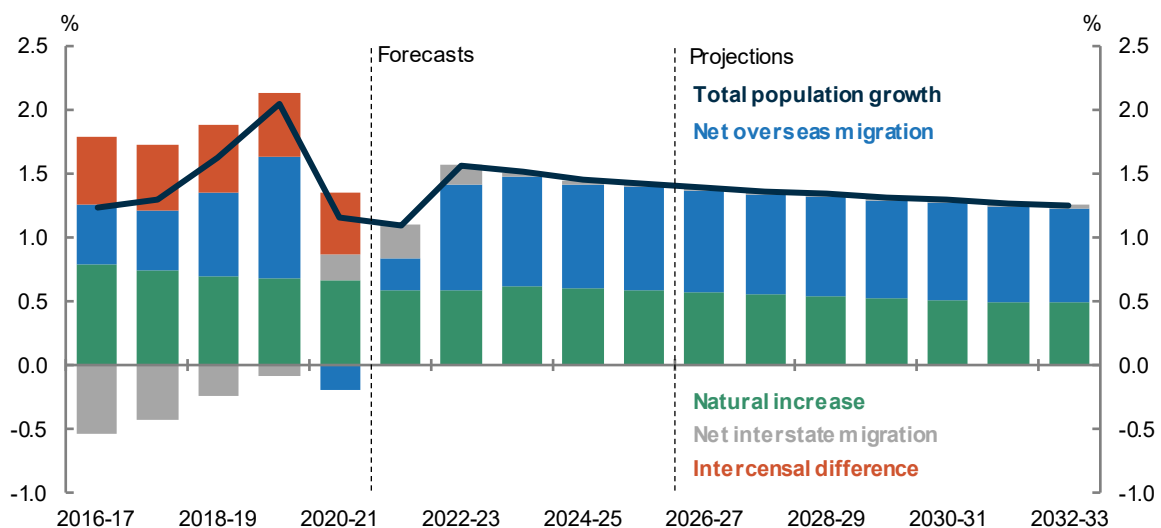
The population of Western Australia on 30 June 2021 was 2.7 million, revised up by 2.5 per cent following the 2021 Census. Annual population growth remained relatively strong in 2020–21 at 1.2 per cent, with stronger interstate migration offsetting the loss of overseas migration. Population growth is projected to be 1.1 per cent in 2021–22 and reach 1.6 per cent by 2022–23, before slowly declining to 1.3 per cent in 2032–33. At that point, Western Australia’s population is projected to be 3.2 million. However, population growth in Western Australia can be highly variable and generally follows the economic conditions of the state.

Net overseas migration to Western Australia is forecast to steadily increase until 2023–24. Following a low of -5,200 in 2020–21, the return of international students, temporary skilled migrants and working holiday makers is forecast to drive an increase to 25,000 in 2023–24. Net overseas migration is forecast to contribute 0.8 percentage points to Western Australia’s population growth rate in 2025–26, up from -0.2 in 2020–21. The state’s share of migration is expected to increase to 10 per cent over the projections period (up from 6.6 per cent from 2013–14 to 2017–18). This reflects the subsiding effects of the mining investment downturn and a larger share of permanent migration in the future.

Natural increase was the largest contributor to Western Australia’s population growth in 2020–21. In line with other states and territories, the level of natural increase is expected to fall significantly in 2021–22 (10.3 per cent) due to an increase in the number of deaths. However, natural increase will continue to be the largest contributor to population growth in 2021–22. Natural increase is forecast to decrease slightly again in 2022–23 due to deaths remaining high, before recovering in 2023–24. Natural increase is projected to decline steadily from 2024–25 due to lower fertility and deaths increasing faster than births.

Western Australia experienced negative interstate migration in the years leading up to the pandemic as the economic activity from the mining boom of the 2000s and 2010s dissipated. In 2020–21, interstate arrivals increased and departures declined, potentially due to COVID-19 restrictions in other states. This led to positive net interstate migration of 5,000 in 2020–21, which is forecast to increase to 7,500 in 2021–22. Net interstate migration is then forecast to fall to a small net inflow of 900 in 2023–24 and slowly decline to 650 by 2032–33.

Chart 33. POPULATION GROWTH AND COMPONENTS, WESTERN AUSTRALIA



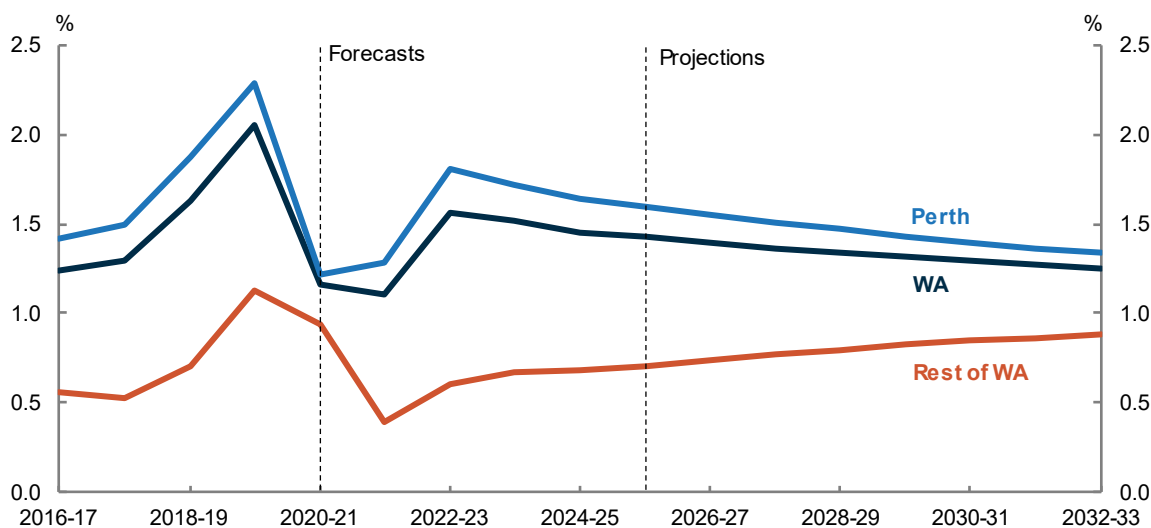
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

GREATER PERTH AND THE REST OF WESTERN AUSTRALIA

The population of Greater Perth was 2.2 million on 30 June 2021. This accounts for 80 per cent of the state’s population, making Western Australia’s population the most concentrated in Australia. Net internal migration to Perth increased in 2020–21 and population growth remained relatively high at 1.2 per cent. Growth is projected to increase to 1.8 per cent by 2022–23, before slowing to 1.3 per cent by 2032–33. In 2032–33, Perth’s population is projected to be 2.6 million.

The population of the rest of Western Australia on 30 June 2021 was 558,000. Population growth in the rest of Western Australia increased in the early stages of the pandemic, recording 1.1 per cent growth in 2019–20 and 0.9 per cent in 2020–21. Growth is projected to drop to 0.4 per cent in 2021–22 as natural increase begins to decline and is then projected to gradually increase to 0.9 per cent in 2032–33 driven by increasing net internal migration. In 2032–33, the population of the rest of Western Australia is projected to be 608,000.

Chart 34. POPULATION GROWTH IN WESTERN AUSTRALIA, GREATER PERTH AND THE REST OF WESTERN AUSTRALIA



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 9. POPULATION PROJECTIONS, WESTERN AUSTRALIA

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
Western Australia	2,750	2,780	2,824	2,866	2,908	3,232
<i>Greater Perth</i>	2,192	2,220	2,260	2,299	2,337	2,624
<i>Rest of Western Australia</i>	558	560	563	567	571	608
Population growth (per cent)						
Western Australia	1.2	1.1	1.6	1.5	1.4	1.3
<i>Greater Perth</i>	1.2	1.3	1.8	1.7	1.6	1.3
<i>Rest of Western Australia</i>	0.9	0.4	0.6	0.7	0.7	0.9
Population growth ('000)						
Western Australia	31.5	30.2	43.5	42.7	41.5	40
<i>Greater Perth</i>	26.3	28.1	40.2	38.9	37.7	34.7
<i>Rest of Western Australia</i>	5.2	2.2	3.4	3.8	3.9	5.3
Natural increase ('000)						
Western Australia	18.1	16.2	16.1	17.3	17.2	15.7
<i>Greater Perth</i>	14.7	13.8	13.7	14.7	14.7	13.9
<i>Rest of Western Australia</i>	3.3	2.4	2.3	2.5	2.4	1.7
Net overseas migration ('000)						
Western Australia	-5.2	6.6	23.2	24.6	23.5	23.7
<i>Greater Perth</i>	-4.9	5.9	20.8	22	21.1	21.2
<i>Rest of Western Australia</i>	-0.3	0.7	2.4	2.5	2.4	2.4
Net internal migration ('000)						
Western Australia	5.4	7.4	4.2	0.9	0.8	0.6
<i>Greater Perth</i>	6.5	8.4	5.6	2.1	1.8	-0.5
<i>Rest of Western Australia</i>	-1.1	-1	-1.4	-1.3	-1	1.1
Median age (years)						
Western Australia	38	38.3	38.5	38.6	38.8	39.9
<i>Greater Perth</i>	37.6	37.8	38	38.1	38.2	39.1
<i>Rest of Western Australia</i>	40	40.4	40.8	41.2	41.5	43.6

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.7 TASMANIA

The population of Tasmania on 30 June 2021 was 568,000, revised up by 4.9 per cent following the 2021 Census.³⁸ Tasmania experienced strong population growth in the 3 years before the pandemic, growing by an average of 2.2 per cent per year. This was well above the 0.4 per cent average population growth it experienced between 2009–10 and 2013–14. Annual population growth declined to 0.8 per cent in 2020–21 due to falls in overseas migration and interstate migration. Tasmania’s population growth is projected to recover to 1.3 per cent in 2021–22 with a recovery of overseas and interstate migration. Population growth is projected to slowly decline to 1 per cent by 2032–33 when Tasmania’s population is projected to be 646,000.

Net overseas migration is forecast to be the primary driver of Tasmania’s population growth from 2021–22. The arrival of over 2,000 temporary migrants to work in the agricultural sector is forecast to drive increases in net overseas migration from -300 in 2020–21 to a record high 3,500 in 2021–22. The return of international students and permanent migrants drive net overseas migration to the state to 4,400 in 2025–26. Net overseas migration is forecast to contribute 0.7 percentage points to Tasmania’s population growth rate in 2025–26, up from -0.1 in 2020–21. The national share of Tasmania’s net overseas migration has historically been consistently small at an average of 1 per cent, forecast to increase to 2 per cent over the forecast period.

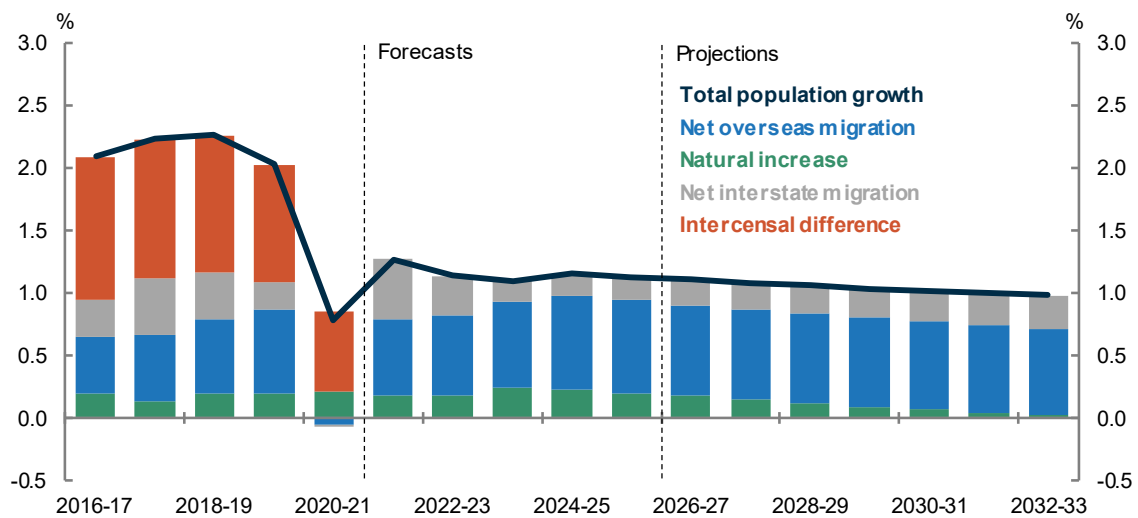
Natural increase was a small but relatively stable contributor to Tasmania’s population growth prior to the pandemic. This is due to the older age structure of the population and lower total fertility rates over recent years compared to the national average (although fertility rates for Tasmanian women aged 20 to 29 years have been higher than the national average). Natural increase is expected to decrease in 2021–22 due to an increase in the number of deaths, which are expected to remain elevated in 2022–23. Natural increase is expected to recover in 2023–24 due to a fall in deaths and then decline steadily to 2032–33, becoming very low as the number of deaths approaches the number of births.

Net interstate migration tends to correlate with labour force conditions in Tasmania³⁹ and was strong in the 5 years prior to the pandemic, but fell in 2020–21 (-100). Net interstate migration is expected to rebound in 2021–22 (2,700) with a relaxation in state border restrictions and less uncertainty around the pandemic. In 2023–24, interstate migration is projected to be 1,000 before increasing gradually to 1,700 in 2032–33.

38 This is reflected in the relatively high intercensal difference recorded between 2016–17 and 2020–21, which could reflect higher levels of overseas migration, natural increase or interstate migration. See Technical Appendix for further details.

39 Centre for Population. (2020). *op. cit.*

Chart 35. POPULATION GROWTH AND COMPONENTS, TASMANIA



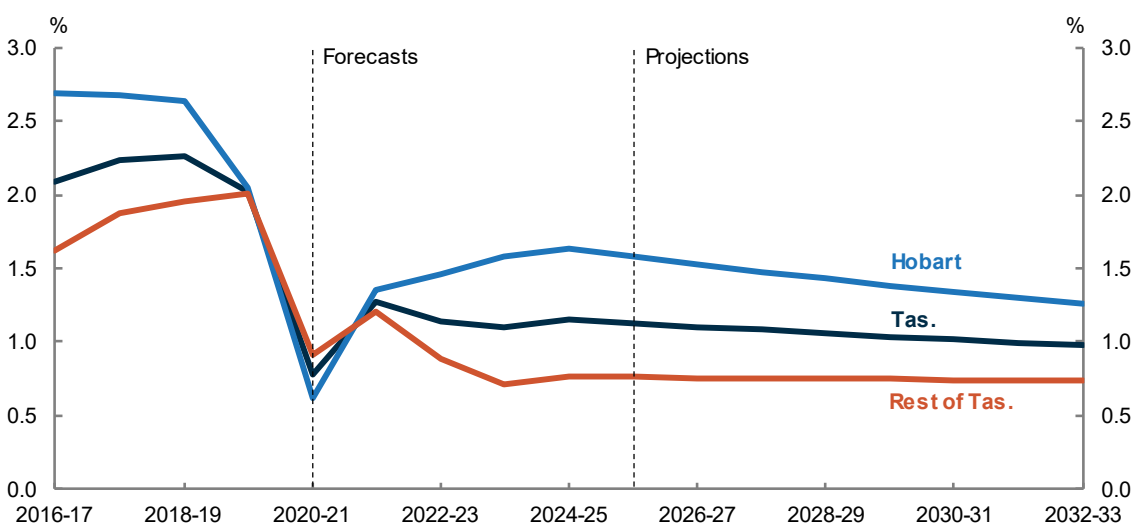
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

GREATER HOBART AND THE REST OF TASMANIA

The population of Greater Hobart on 30 June 2021 was 251,000. This represents 44 per cent of the state’s population, making Tasmania the least centralised state in Australia. Population growth fell to 0.6 per cent in 2020–21 but is projected to recover to 1.6 per cent by 2024–25 before slowing to 1.3 per cent in 2032–33. In 2032–33, Hobart’s population is projected to be 298,000. Hobart is also the only capital city projected to experience close to zero natural increase in the next decade (0.2 per cent in 2032–33).

The population of the rest of Tasmania was 317,000 on 30 June 2021. Net overseas migration is projected to make the largest contribution to population growth in the rest of Tasmania from 2022–23, while internal migration is expected to be high in 2021–22 and 2022–23. This is expected to fall in 2023–24 before gradually increasing through to 2032–33. Growth in the rest of Tasmania is projected to be 1.2 per cent in 2021–22, before falling to 0.7 per cent in 2023–24. It is then projected to remain relatively stable until 2032–33 when the population is projected to be 348,000.

Chart 36. POPULATION GROWTH IN TASMANIA, GREATER HOBART AND THE REST OF TASMANIA



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 10. POPULATION PROJECTIONS, TASMANIA

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
Tasmania	568	575	582	588	595	646
<i>Greater Hobart</i>	251	254	258	262	266	298
<i>Rest of Tasmania</i>	317	321	324	326	328	348
Population growth (per cent)						
Tasmania	0.8	1.3	1.1	1.1	1.1	1
<i>Greater Hobart</i>	0.6	1.4	1.5	1.6	1.6	1.3
<i>Rest of Tasmania</i>	0.9	1.2	0.9	0.7	0.8	0.7
Population growth ('000)						
Tasmania	4.4	7.2	6.5	6.4	6.8	6.2
<i>Greater Hobart</i>	1.5	3.4	3.7	4.1	4.3	3.7
<i>Rest of Tasmania</i>	2.9	3.8	2.8	2.3	2.5	2.5
Natural increase ('000)						
Tasmania	1.2	1	1	1.4	1.3	0.1
<i>Greater Hobart</i>	0.7	1	1	1.2	1.1	0.6
<i>Rest of Tasmania</i>	0.4	0	0	0.2	0.2	-0.5
Net overseas migration ('000)						
Tasmania	-0.3	3.5	3.7	4	4.4	4.4
<i>Greater Hobart</i>	-0.3	2.1	2.2	2.4	2.7	2.7
<i>Rest of Tasmania</i>	0	1.4	1.4	1.6	1.7	1.7
Net internal migration ('000)						
Tasmania	-0.1	2.7	1.8	1	1	1.7
<i>Greater Hobart</i>	-0.8	0.3	0.5	0.5	0.5	0.4
<i>Rest of Tasmania</i>	0.7	2.4	1.4	0.5	0.6	1.3
Median age (years)						
Tasmania	41.6	41.7	41.9	42.1	42.3	44.3
<i>Greater Hobart</i>	38.6	38.8	39	39.3	39.6	41.9
<i>Rest of Tasmania</i>	44.4	44.5	44.6	44.9	45.1	46.8

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.8 NORTHERN TERRITORY

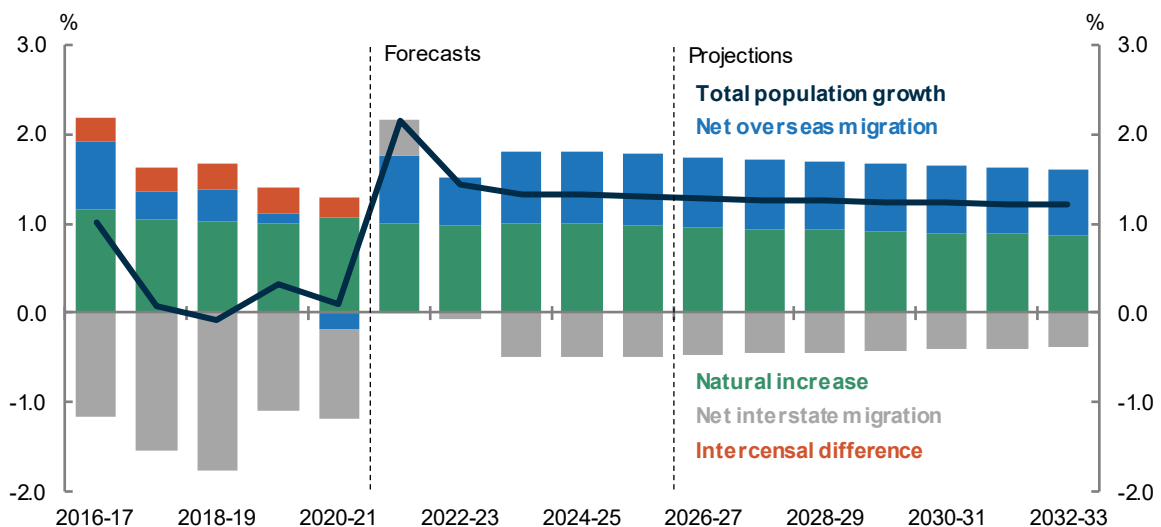
The population of the Northern Territory on 30 June 2021 was 249,000. Population growth increased from -0.1 per cent in 2018–19 to 0.3 per cent in 2019–20. It was the only jurisdiction to increase population growth early in the pandemic. After population growth moderated to 0.1 per cent in 2020–21, it is forecast to reach 2.2 per cent in 2021–22. Population growth is projected to then slowly decline to 1.2 per cent in 2032–33, when the Northern Territory’s population is projected to reach 293,000. However, like Western Australia, population growth in the Northern Territory is highly variable and is impacted by changes in economic conditions.

Net overseas migration to the Northern Territory is forecast to increase to 2,100 by 2023–24. Flows of overseas migrants to the Northern Territory are more diverse than in larger states. Skilled permanent migrants are forecast to contribute most strongly to the recovery of overseas migration. Net overseas migration is forecast to contribute 0.8 percentage points to the Northern Territory’s population growth rate in 2025–26, up from -0.2 in 2020–21. The Northern Territory’s national share of net overseas migration is forecast to remain steady over the projection period at 0.9 per cent.

Natural increase is expected to continue to make the largest contribution to the Northern Territory’s population growth over the projection period. This reflects its high fertility rate and younger population. The median age in the Northern Territory was 33.4 years in 2020–21. It is 5 years lower than the national median age. The median age is expected to reach 35.7 years by 2032–33. While natural increase is expected to decrease during 2021–22 and remain low in 2022–23 due to a rise in the number of deaths, it is expected to begin to recover from 2022–23. In line with broader national trends, fertility rates are projected to gradually decrease from 2025–26.

Net interstate migration to the Northern Territory, which has generally been negative in recent years, is forecast to reach 1,000 in 2021–22. This is due to significantly fewer expected departures of interstate migrants due to lockdowns in other jurisdictions. After this, net interstate migration to the Northern Territory is projected to return to long-run trends, falling to 1,300 in 2023–24 and remaining at similar levels thereafter.

Chart 37. POPULATION GROWTH AND COMPONENTS, NORTHERN TERRITORY



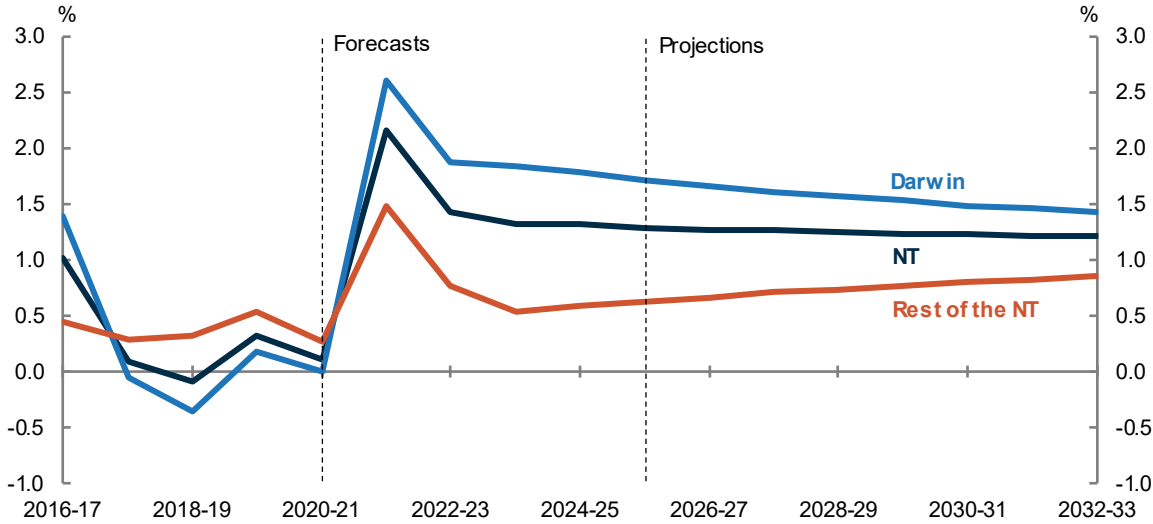
Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

GREATER DARWIN AND THE REST OF THE NORTHERN TERRITORY

The population of Greater Darwin was 149,000 on 30 June 2021. This represents 60 per cent of the population of the Northern Territory. Darwin experienced slow population growth before the pandemic, but is forecast to grow by 2.6 per cent in 2021–22 due to the return of overseas migration and higher net internal migration. Population growth is projected to decline slightly to 1.9 per cent in 2022–23 and then slow to 1.4 per cent by 2032–33. Darwin’s population is projected to be 182,000 in 2032–33.

The rest of the Northern Territory had a population of 100,000 on 30 June 2021. The population of the rest of the Northern Territory is the youngest jurisdiction in Australia and is projected to be 2.7 years younger than Darwin (the second youngest area) in 2021-22. Population growth in the rest of the Northern Territory remained relatively steady in the early years of the pandemic. It increased from 0.3 per cent in 2018–19 to 0.5 per cent in 2019–20, before declining to 0.3 per cent in 2020–21. Growth is forecast to increase to 1.5 per cent in 2021–22 due to increased overseas and internal migration, and then decline to 0.5 per cent in 2023–24. Growth is then projected to slowly increase to 0.9 per cent in 2032–33, when the population is projected to be 110,000.

Chart 38. POPULATION GROWTH IN THE NORTHERN TERRITORY, GREATER DARWIN AND THE REST OF THE NORTHERN TERRITORY



Source: Australian Bureau of Statistics, Regional population, 2022; Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 11. POPULATION PROJECTIONS, NORTHERN TERRITORY

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)						
Northern Territory	249	255	258	262	265	293
<i>Greater Darwin</i>	149	153	156	158	161	182
<i>Rest of Northern Territory</i>	100	102	103	103	104	110
Population growth (per cent)						
Northern Territory	0.1	2.2	1.4	1.3	1.3	1.2
<i>Greater Darwin</i>	0	2.6	1.9	1.8	1.8	1.4
<i>Rest of Northern Territory</i>	0.3	1.5	0.8	0.5	0.6	0.9
Population growth ('000)						
Northern Territory	0.3	5.4	3.6	3.4	3.4	3.5
<i>Greater Darwin</i>	0	3.9	2.9	2.9	2.8	2.6
<i>Rest of Northern Territory</i>	0.3	1.5	0.8	0.5	0.6	0.9
Natural increase ('000)						
Northern Territory	2.7	2.5	2.5	2.6	2.6	2.5
<i>Greater Darwin</i>	1.6	1.5	1.5	1.6	1.6	1.6
<i>Rest of Northern Territory</i>	0.9	1	1	1	1	0.9
Net overseas migration ('000)						
Northern Territory	-0.4	1.9	1.3	2.1	2.1	2.1
<i>Greater Darwin</i>	-0.3	1.5	1	1.6	1.6	1.6
<i>Rest of Northern Territory</i>	-0.1	0.5	0.3	0.5	0.5	0.5
Net internal migration ('000)						
Northern Territory	-2.5	1	-0.2	-1.3	-1.3	-1.1
<i>Greater Darwin</i>	-1.6	1	0.4	-0.3	-0.4	-0.6
<i>Rest of Northern Territory</i>	-0.9	0	-0.6	-1	-0.9	-0.5
Median age (years)						
Northern Territory	33.4	33.6	33.9	34.2	34.4	35.7
<i>Greater Darwin</i>	34.5	34.7	34.9	35.1	35.3	36.6
<i>Rest of Northern Territory</i>	31.7	32	32.4	32.6	32.8	34

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022; Australian Bureau of Statistics, Regional population, 2022 and Centre for Population projections.

2.9 AUSTRALIAN CAPITAL TERRITORY

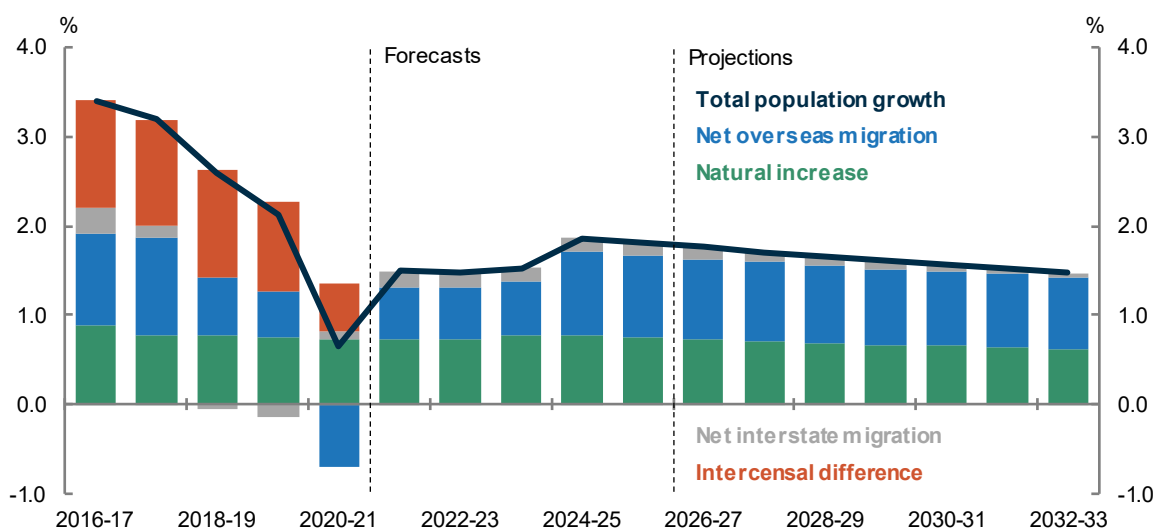
The population of the Australian Capital Territory was 454,000 on 30 June 2021. It was revised upwards by 5.1 per cent following the 2021 Census – the largest revision of any state or territory. This gave the Australian Capital Territory the highest average annual growth across the five-year intercensal period from 2016 to 2021 (2.4 per cent). Population growth fell to 0.7 per cent in 2020–21, reflecting the national drop in overseas migration. Population growth is projected to recover, but at more moderate rates than immediately before the pandemic. It is projected to peak at 1.9 per cent by 2024–25 before slowly declining to 1.5 per cent by 2032–33, when the population is projected to reach 550,000.

Net overseas migration to the Australian Capital Territory is forecast to increase from a low of -3,200 in 2020–21 to 4,500 by 2024–25, primarily due to the return of international students. Net overseas migration is forecast to contribute 0.9 percentage points to the Australian Capital Territory’s population growth rate in 2025–26, up from -0.7 in 2020–21. The Australian Capital Territory is forecast to receive 1.6 per cent of national net overseas migration over the forecast period.

Natural increase has been a strong contributor to population growth in the Australian Capital Territory, despite having the lowest fertility rate of all states and territories in 2020–21. Natural increase is expected to contribute around half the population growth in 2021–22, reflecting the territory’s younger age structure. Natural increase remained relatively steady during COVID-19 and is forecast to steadily decline from 2025–26 over the remainder of the projection period.

The Australian Capital Territory typically has a high number of interstate arrivals and departures relative to the size of its population. These largely offset each other, resulting in small net interstate migration flows each year. High population turnover, along with inflows of young adults who move to the Australian Capital Territory for education or employment opportunities, lowers the median age of the population which was 35.4 in 2020–21, the second youngest after the Northern Territory. Net interstate migration in 2020–21 was 400, after 2 years of small net outflows. Net interstate migration is projected to increase to 800 in 2021–22 driven by a decline in departures outweighing a smaller decline in arrivals. Net interstate migration is projected to slowly decline to 200 by 2032–33.

Chart 39. POPULATION GROWTH AND COMPONENTS, AUSTRALIAN CAPITAL TERRITORY



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Table 12. POPULATION PROJECTIONS, AUSTRALIAN CAPITAL TERRITORY

	2020–21	2021–22	2022–23	2023–24	2024–25	2032–33
Population ('000)	454	460	467	474	483	550
Population growth (per cent)	0.6	1.5	1.5	1.5	1.9	1.5
Population growth ('000)	2.9	6.8	6.8	7.2	8.8	8
Natural increase ('000)	3.3	3.3	3.4	3.6	3.7	3.4
Net overseas migration ('000)	-3.2	2.6	2.7	2.8	4.5	4.4
Net internal migration ('000)	0.4	0.8	0.7	0.7	0.7	0.2
Median age (years)	35.4	35.6	35.8	36	36.2	37.4

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections

3. TECHNICAL APPENDIX

3.1 FORECAST CONTEXT AND LIMITATIONS

Population projections are uncertain under normal conditions and are more uncertain during unprecedented shocks such as the COVID-19 pandemic. The data used to underpin the analysis in the Statement will also be superseded by new data and revisions to previous reference periods. The key assumptions that underpin the population forecasts are set out below. Outcomes could be substantially different to the forecasts, depending on the extent to which these assumptions hold:

- Community transmission of COVID-19 will continue to occur.
- Australia will continue to experience intermittent, localised waves of Omicron, or other new COVID-19 variants. However, it is assumed high vaccination rates and improved medical treatments, together with continued community adaptation to COVID-19, will see limited re-introductions of public health measures such as physical distancing and density restrictions, as well as continued freedom of movement across domestic borders.
- Australia's international borders are assumed to be open to migrants and tourists and the recovery in inwards and outwards overseas movements is assumed to continue.
- Subnational population projections take account of information in the 2021 Census and revised growth rates between June 2016 and June 2021. While the Australian Bureau of Statistics has not attributed intercensal difference to the components of population growth, it is important to account for the intercensal difference when forecasting the components of growth. For this reason, the subnational projections in this Statement attribute some of the intercensal difference to overseas migration and internal migration. Natural increase has the highest quality administrative data coverage and is the most stable of the population components and was therefore excluded from this attribution. This attribution is based on preliminary population estimates and as intercensal difference and the components of growth are finalised by the Australian Bureau of Statistics in June 2023, the Centre for Population will review this assumption.

Analysis for the projections is based on Australian Bureau of Statistics' population statistics up to and including the National, state and territory population, March 2022, released in September 2022. Further information about data considered is in Box 4 below.

3.1.1 NET OVERSEAS MIGRATION

Net overseas migration forecasts are based on customised Australian Bureau of Statistics estimates of quarterly overseas migrant arrivals and departures by visa group and by state. The Australian Bureau of Statistics provides preliminary estimates of overseas migration 6 months after the reference period and final estimates a further 12 months later.

The timing of the Australian Bureau of Statistics' final estimates reflects that a migrant arrival is defined as someone who has arrived in Australia and stayed for at least 12 out of 16 consecutive months. Similarly, a migrant departure is defined as someone who has departed Australia and remained overseas for at least 12 out of 16 consecutive months. This can only be determined once 16 months have elapsed from the arrival or departure date. The current definition of overseas migration was incorporated into population estimates in the September quarter of 2006 to account for short-term interruptions to a longer period of stay or absence and to better reflect someone's changed usual residence. Prior to the pandemic, data on permanent and long-term arrivals and departures provided some early insight into net overseas migration trends. These historical

relationships have been affected by the pandemic and do not currently appear to be a reliable indicator of net overseas migration.

Preliminary estimates use modelling based on behaviour of similar travellers in the past as the actual duration of stay or absence is not yet known. These estimates are revised several times before finalisation as more data become available. The pandemic has added uncertainty to the preliminary estimates because recent historical behaviour is much less reliable for predicting future behaviour. Therefore, differences between the first issuance of preliminary estimates and the final figures may be larger than in the years leading up to the pandemic.

The loss of overseas migration since the onset of the pandemic and subsequent recovery has disrupted trends and made historical data less reliable for forecasting. For example:

- The stock of migrants holding temporary visas has decreased, which means there is an upside risk of fewer departures in the short-term as there are fewer people in the country who could depart. Conversely, with fewer Australian citizens leaving during the pandemic, there is a downside risk of higher Australian citizen departures.
- The proportion of temporary visa holders who transition onto permanent visas may change, for various reasons including changing economic conditions, employment opportunities in Australia, government policy, administration and legislation.
- There is potential for international students to increasingly choose to study online outside Australia. Timely data is available from the Department of Home Affairs on offshore visa grants, but there is uncertainty about how that data will relate to future migrant arrivals.
- The risk to migrant arrivals due to changes in Australia's global market share of international students.
- Permanent and long-term overseas movements are a weaker leading indicator of overseas migration than they have historically been. The relationship between net permanent and long-term overseas movements and overseas migration is no longer stable. Since 2020, a much greater proportion of overseas arrivals and departures have been estimated as migrants, and this proportion continues to vary.

The 2021 Census-based revisions to the population resulted in intercensal difference. A proportion of the intercensal difference has been attributed to error in the state-level overseas migration estimates from 2016–17 to 2020–21 and carried forward in the forecasts to 2025–26.

3.1.2 NATURAL INCREASE

FERTILITY

Official births and fertility statistics are published by the Australian Bureau of Statistics based on information provided by each state registry of births, deaths and marriages. There is usually an interval between the occurrence and registration of a birth (referred to as a registration lag). As a result, some births occurring in one period are not registered until the following period or later. See the 2021 Population Statement Technical Appendix for more information.

The Australian Bureau of Statistics revises the most recent financial year of births from a registration basis to an occurrence basis in the March quarter release of National, state and territory population. The March 2022 population statistics, released in September 2022, included an upward revision to births for 2020–21. This resulted in a higher total fertility rate in 2020–21 than was originally estimated in the December 2021 release — from 298,000 revised up to 305,000. The total fertility rate of 1.63 babies per woman was also revised up to 1.66 babies per woman.

The latest total fertility rate reported by the Australian Bureau of Statistics was partially revised to reflect the 2021 Census preliminary rebased female estimated resident population. The total fertility rate is equal to the sum of age-specific fertility rates, which is the number of births by age of mother relative to the population of females at that age. The Census rebasing has revised the population of females aged 15 to 49 years. However, the births numbers have not been revised. Births will be revised in June 2023. At that point, the total fertility rate outcome for 2020–21, and the 4 preceding years, will be finalised.

MORTALITY

The Australian Government Actuary’s projections of state mortality rates apply the same national future mortality improvements to all states. The application of the same mortality improvement factors to each state implies that present differences between state and national mortality will be predominantly maintained into the future. Although the national age-specific mortality improvements may not be exactly representative of age-specific state improvements, they provide a good approximation of them over the short and medium term.

The Australian Government Actuary’s projections of mortality rates have been adjusted in 2021–22 and 2022–23 to account for an observed increase in deaths in the first part of 2022. The projections assume that the increase in mortality for those aged 60 years and over will persist until 2022–23. However, the long-term impacts of COVID-19 on mortality are highly uncertain. The degree to which ‘long-COVID’, ongoing mutations of the virus, and public health responses affect future mortality is unknown, which is a material uncertainty for future projections.

3.1.3 NET INTERNAL MIGRATION

The Centre for Population constructs internal migration rates by single year of age and sex, and for arrivals and departures (when age groups are aggregated into summary measures they are called ‘gross migraproduction rates’),⁴⁰ using a model migration schedule, published by Dr Tom Wilson,⁴¹ to create smooth age and sex migration profiles. The smoothed profiles are scaled to the assumed gross migraproduction rates for arrivals and departures for each geography. These rates are used to produce flows of arrivals and departures which are then combined to produce net internal migration. See the 2021 Population Statement Technical Appendix for further details.

Revisions to the estimated resident population from the 2021 Census have been incorporated by attributing a proportion of the intercensal difference to internal migration. This has resulted in changes to the historical long-run average for each jurisdiction (see Section 3.2.3 below). The calculation of the long-run average excludes 2019–20 and 2020–21 due to the unique impact the pandemic has had on internal migration during that period.

MEDICARE ADDRESS INFORMATION

The Australian Bureau of Statistics uses Medicare address information to form estimates of internal migration, as it has the most complete scope and coverage of all available administrative data sources.⁴² However, limitations of this Medicare data include:

- underestimating total moves due to individuals not updating their Medicare details when they move, especially young adults,

⁴⁰ See glossary for further details.

⁴¹ Wilson, T. (2020). op cit.

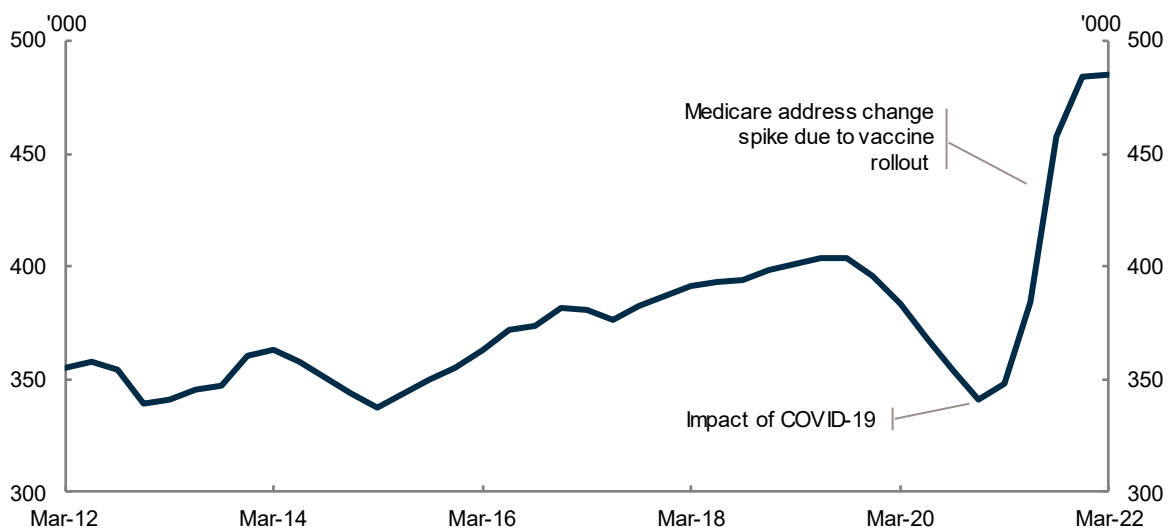
⁴² Australian Bureau of Statistics, National, state and territory population methodology, March 2021, 2021.

- incomplete population coverage, as there are people counted in the estimated resident population who may not be fully captured by Medicare (for example temporary migrants or Defence force personnel who do not frequently interact with Medicare), and
- the observed change of address in the data does not always align with when the move occurred, creating a lag between occurrence and observation.

The Australian Bureau of Statistics applies a range of treatments to the data to account for these limitations. They calculate and apply expansion factors to account for the inherent underestimation and calibrate the data to the interstate migration levels and patterns seen every 5 years in the Census. These factors are applied by age, sex, state and move type (arrival or departure). The Australian Bureau of Statistics accounts for the delay between occurrence of the move and updating Medicare addresses by assuming there is a 3-month delay between move occurrence and the updating of the Medicare address.

Australian Bureau of Statistics net interstate migration estimates for recent quarters show a historic spike in the number of interstate moves — driven by increased changes in address data lodged with Medicare prompted by the COVID-19 vaccine rollout (Chart 40). This is an improvement in the estimate of the stock of population but does not accurately reflect the occurrence of internal movements during 2021. The Australian Bureau of Statistics has noted that almost all states and territories recorded implausibly high levels of arrivals and departures at the end of 2021 and early in 2022.⁴³

Chart 40. ANNUAL INTERSTATE MOVEMENTS, AUSTRALIA



Note: Quarterly data presented on a year-ending basis.

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022.

43 Australian Bureau of Statistics, National, state and territory population methodology, March 2021, 2021.

BOX 4. DATA AVAILABILITY

In producing the Statement, the Centre for Population has used the most recent data available to analyse the changes in Australia's population. Some data released during the preparation of the Statement were not able to be taken into account.

Table 13. AUSTRALIAN BUREAU OF STATISTICS DATA SOURCES USED IN THE 2022 POPULATION STATEMENT

RELEASE	LATEST RELEASE	NEXT RELEASE
National, state and territory population (quarterly)	March 2022, release date 21 September 2022	June 2022, release date 15 December 2022
Births, Australia (calendar year)	2021, release date 25 October 2022	N/A
Deaths, Australia (calendar year)	2021, release date 29 September 2022	N/A
Causes of Death, Australia (calendar year)	2021, release date 19 October 2022	N/A
Life tables (three-yearly)	2018–20, release date 4 November 2021	2019–21, Release date 8 November 2022
Provisional Mortality Statistics (monthly)	August 2022, release date 25 November 2022	September 2022, release date 22 December 2022

3.2 ASSUMPTIONS

3.2.1 NET OVERSEAS MIGRATION

Major assumptions in the overseas migration forecast are:

- Net overseas migration is assumed to return to pre-pandemic trends from 2022–23. While more information is becoming available about the recovery in migration, including from offshore visa grants, many historical relationships have been interrupted by the pandemic. It is not clear how these leading indicators will translate into net overseas migration outcomes. As such, the forecasts continue to be guided by an assumption that migration returns to pre-pandemic trends.
- State net overseas migration figures take some account of information contained in the 2021 Census which showed that population growth in the intercensal period was different from that previously reported. A portion of this intercensal difference may be attributable to net overseas migration accruing to states differently than initially estimated by the Australian Bureau of Statistics.
- The age profiles of migrant arrivals and departures are assumed to be in line with a historical average from 2015–16 to 2017–18.
- In the long-run, net overseas migration is assumed to be 235,000 per year based on a historical average and assumed future planning levels for the permanent and humanitarian migration programs.

BOX 5. LONG-RUN NET OVERSEAS MIGRATION ASSUMPTION

The long-run assumption for overseas migration at the national level is 235,000 people per year. This assumption is derived using a 14-year average from 2004–05 to 2017–18 and assumed future planning levels for the permanent and humanitarian migration programs. This period utilises the full historical sample (excluding periods affected by the pandemic) of the Australian Bureau of Statistics' *Overseas Migration* release, which has the longest available history of net overseas migration using the 12/16 rule for residence. Historically, the long-run assumption can be decomposed as:

- The contribution of the Government's planning levels of the permanent and humanitarian migration programs to migrant arrivals – these migration planning levels are revised by the Government every year but are assumed to be 190,000 and 13,750 people per year respectively from 2023–24
- The number of permanent residents who subsequently emigrate (20,000 people per year)
- The flows of departing and returning Australian citizens (a net outflow of 15,000 people per year), and
- The flows of arriving and departing temporary migrants who reside in Australia for several years but never transition to permanent residency (an average of 66,000 people per year over the 14 years from 2004–05 to 2017–18)

The long-run assumption of 235,000, while being based on historical averages, does not assume anything about the composition of future migration. The long-run assumption is only used at an aggregate level; beyond 2025–26, the projections do not incorporate information on net overseas migration by visa group.

This is a fixed, nominal level which means the share of migration will decrease in size as population grows. An alternative approach was illustrated in the 2021 Intergenerational Report where long-run migration was assumed to grow with population, at a constant rate of 0.82 per cent of the population.

3.2.2 NATURAL INCREASE

FERTILITY

Future fertility rate assumptions are based on analysis undertaken and commissioned by the Centre for Population which indicates the total fertility rate has not been adversely affected by the pandemic. Based on this analysis, the total fertility rate in 2021–22 is likely to be similar to that observed in 2018–19.

The Australian Bureau of Statistics recently reported a total fertility rate of 1.66 babies per woman in 2020–21 (revised up from 1.63 babies per woman). Because of the 9-month gestation period, babies conceived in the first few months of the pandemic were born in the December 2020 quarter, when births dropped to 71,000. However, births recovered over each quarter in 2021 and were higher than births reported over the same period in recent years.⁴⁴

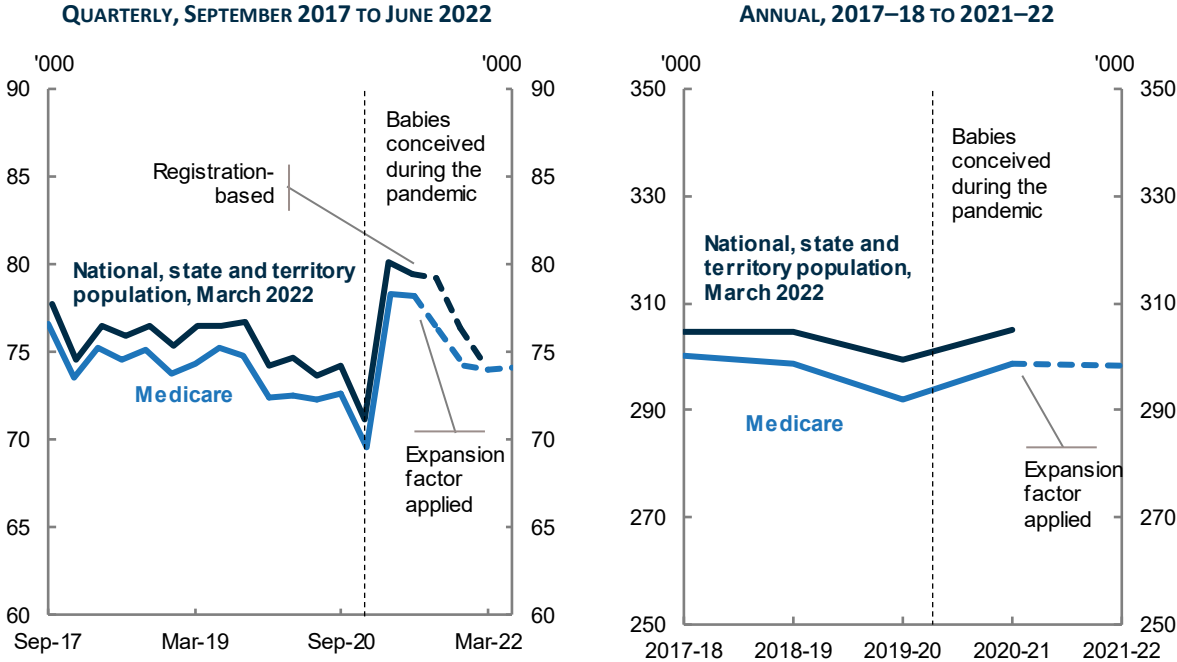
In addition, early Medicare data indicate that births for 2021–22 are returning to the same level observed in 2018–19. It is estimated that there were 299,000 babies registered in Medicare in 2021–22, compared with 292,000 babies in 2019–20 and 298,000 babies in 2018–19. The data also show a small 'baby boom' in 2021 with a peak in the March and June 2021 quarters (Chart 41).

⁴⁴ Australian Bureau of Statistics, National, state and territory population, March 2022, 2022.

The total fertility rate is assumed to decrease slightly from 1.66 babies per woman in 2020–21 to 1.65 by 2024–25. It is assumed to then gradually decline to 1.62 babies per woman by 2030–31, following the ‘no COVID-19 impact’ scenario from *A Projection of Australia’s Future Fertility Rates*.⁴⁵ This is consistent with the long running trend of families having children later in life and having fewer children when they do.

The same approach has been used at the state level, with state relativities to the national total fertility rate assumed to remain constant. At the capital city and rest-of-state level, the recent ratios (2015 to 2019 calendar years) of location-specific fertility rates to the state total fertility rate are assumed to remain constant. The fertility rates for these areas are also constrained to state fertility rates.

Chart 41. NUMBER OF BABIES REGISTERED IN MEDICARE AND REPORTED IN OFFICIAL STATISTICS



Note: The number of babies registered in Medicare is shown based on the date of birth and includes babies born up to 30 June 2022. Expansion factors have been applied to account for unregistered births.

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Services Australia data.

The Australian Bureau of Statistics recently reported a total fertility rate of 1.70 babies per woman in the 2021 calendar year, after a record low of 1.59 in 2020.⁴⁶ This is on a calendar year basis and differs from the Centre for Population’s projections which are on a financial year basis.

45 McDonald, P. (2020). op. cit.

46 Australian Bureau of Statistics, Births, Australia, 2021.

MORTALITY

Assumptions about future mortality rates are based on life tables produced by the Australian Government Actuary and the Australian Bureau of Statistics.⁴⁷

For national mortality, the mortality rates from the Australian Bureau of Statistics' 2018–20 national life tables⁴⁸ (by single year of age and sex) have been used with allowance for future improvement by applying the Australian Government Actuary's improvement factors to these mortality rates (Chart 42). The same approach has been used at the state level, but with the Australian Bureau of Statistics 2018–20 state life tables. Other than the increase in mortality rates for those aged 60 and above in 2021–22 and 2022–23, the projections assume that the annualised trend of mortality improvements observed over the past 3 decades for men and women will persist to 2032–33.

At the capital city and rest-of-state level, abridged life tables were constructed based on Australian Bureau of Statistics' deaths and estimated resident population data from financial years 2001–02 to 2019–20. The approach for future capital city and rest-of-state mortality rates assumes that average ratios of capital city/rest-of-state-to-state mortality rates over 2015–16 to 2019–20 apply from 2024–25 onwards. For the period up to 2024–25, the ratios are smoothed from recent values to the 5-year average. Projected mortality rates for capital cities and rest-of-state areas are then calculated by multiplying projected state mortality rates prepared by the Australian Government Actuary by the capital city/rest-of-state-to-state mortality ratios.

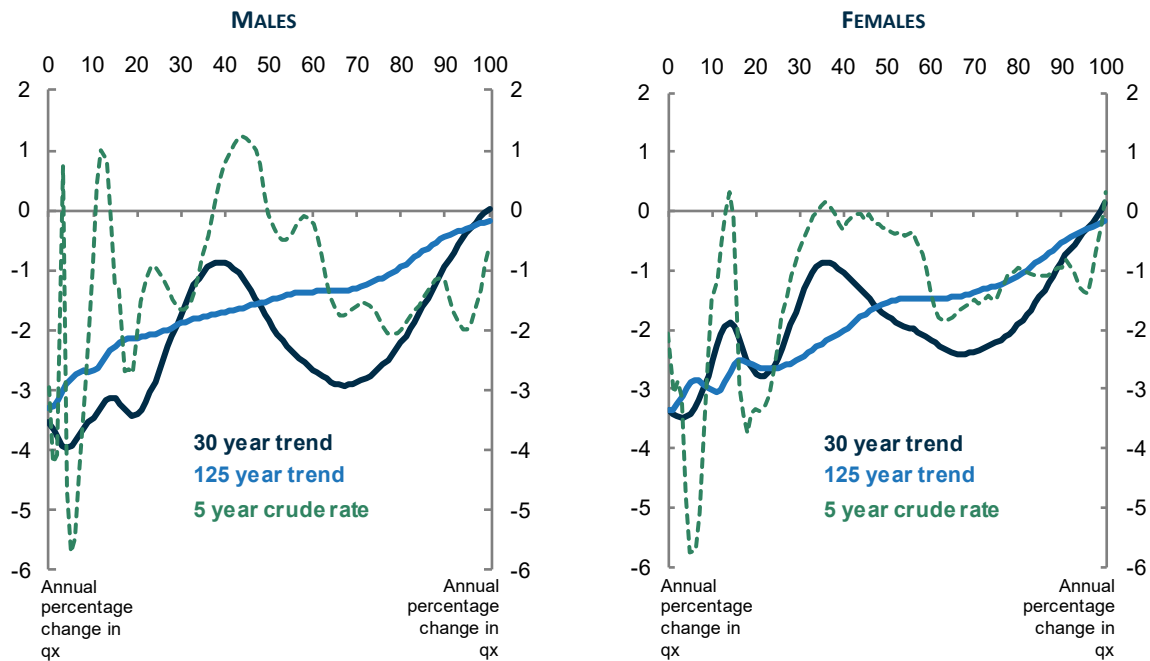
In estimating the improvement factors, the Australian Government Actuary applies the following constraints:

- female mortality rates are lower than males (except at very old ages, where they are currently higher),
- no mortality deterioration is assumed at very old ages (although deterioration has been historically observed in the available data, and applying this constraint ensures a continuation of the trend of improving life expectancies),
- no mortality improvement is assumed for centenarians or supercentenarians (based on the very small sample sizes available to assess historical trends), and
- no long-term mortality deterioration due to the pandemic is assumed.

47 Australian Bureau of Statistics, Life tables, 2021.

48 The 2019–21 life tables released by the Australian Bureau of Statistics on 8 November 2022 were not able to be taken into account in producing the Statement.

Chart 42. IMPROVEMENTS TO AGE-SPECIFIC MORTALITY OVER TIME, MALES (LHS) AND FEMALES (RHS)



Note: 'qx' is a measure of the probability of dying – see Glossary for more information.

Source: Australian Government Actuary, 2019.

To account for the increase in mortality observed in 2022, the mortality rates for those aged 60 and above were adjusted upwards in 2021–22 and 2022–23. The adjustment was based on the ratio of expected mortality (based on the 2022–23 March Budget projections) to the official mortality registered for 2021–22 (calculated using the Australian Bureau of Statistics' Provisional Mortality Statistics).

3.2.3 NET INTERNAL MIGRATION

Assumptions for internal migration at the state and capital city/rest-of-state levels include:

- there will be no future, large-scale, internal movement restrictions and lockdowns,
- uncertainty due to the pandemic has led to fewer people moving interstate, which is expected to continue over the short-term, and
- patterns of internal migration are assumed to gradually recover from lockdown induced lows to pre-pandemic patterns by 2023–24 and remain constant over the rest of the medium term.

Assumptions for internal migration at the state and capital city/rest-of-state levels were developed for the 3 main dimensions of internal migration:

- level – how many people move,
- patterns – where people move to and from, and
- composition – who is moving (including their basic demographic characteristics such as age and sex).

LEVEL

Based on the contextual assumptions outlined above, stakeholder engagement and our interpretation of the recent Australian Bureau of Statistics internal migration estimates and caveats, it is assumed that the national level of interstate migration will fall by 8 per cent in 2021–22. It is then assumed to grow by 7 per cent in 2022–23 before increasing again by 7 per cent in 2023–24 to return to a pre-pandemic level of around 400,000 annual national interstate moves. The national level of intrastate moves follows a similar trajectory, falling to 270,000 moves in 2021–22 and then recovering to around 300,000 moves in 2023–24. From 2023–24 onwards, the single year of age and sex migration rates which make up the gross migraproduction rates are held constant. This allows the national level of internal migration to move in line with national population growth and reflect the age composition of the population.

PATTERNS

The assumed future patterns of net internal migration in Australia generally follow established trends between states, capital cities and rest-of-state areas. Young adults generally migrate to the capital cities and older Australians generally move out of the capital cities. Notably, lockdowns have disrupted this pattern in a number of states.

Assumptions about the patterns of future net internal migration are based on the revised intercensal growth of the estimated resident population from 2021 Census data, as well as observations of changes to net internal migration patterns during and following the second Melbourne lockdown of 2020. It is assumed that:

- states that experienced the extended COVID-19 lockdowns in 2021 (New South Wales, Victoria and the Australian Capital Territory) will experience impacts to internal migration similar to Victoria after the second Melbourne COVID-19 lockdown in 2020 (differences in impacts between and within these states vary due to the contextual assumptions and size of each geography), and
- net internal migration patterns return to a long-run (19-year) average by 2023–24.

COMPOSITION

It is assumed that the composition of net internal migration – the age and sex distribution of people who move – will remain stable during the projections period. Currently, there is not enough evidence to suggest a structural change to the age and sex distribution of internal migration due to COVID-19.

POPULATION REBASING

The Australian Bureau of Statistics released the first stage of data from the 2021 Census on 28 June 2022. After each Census, the Australian Bureau of Statistics uses the new information to update the estimated resident population for Australia, its states and territories and all sub-state geographies (referred to as ‘rebasings’). The Australian Bureau of Statistics has rebased the estimated population at 30 June 2021, which has provided a more accurate base from which to estimate population and has led to a revised understanding of population growth over the intercensal period (30 September 2016 to 30 June 2021).⁴⁹

The difference between the rebased estimated population and the previously published estimates is referred to as the ‘intercensal difference’. Currently, the intercensal difference is preliminary, with the Australian Bureau of Statistics finalising all intercensal estimates in June 2023. The Australian Bureau of Statistics does not attribute the intercensal difference to any particular component of population change and usually assumes that it accumulates evenly over the intercensal period. However, the recent rebasing did apply an uneven distribution of intercensal difference in the case of Tasmania and the Australian Capital Territory. The intercensal difference may result from error in the starting population estimate, the end population estimate and quarterly estimates of the components of growth.

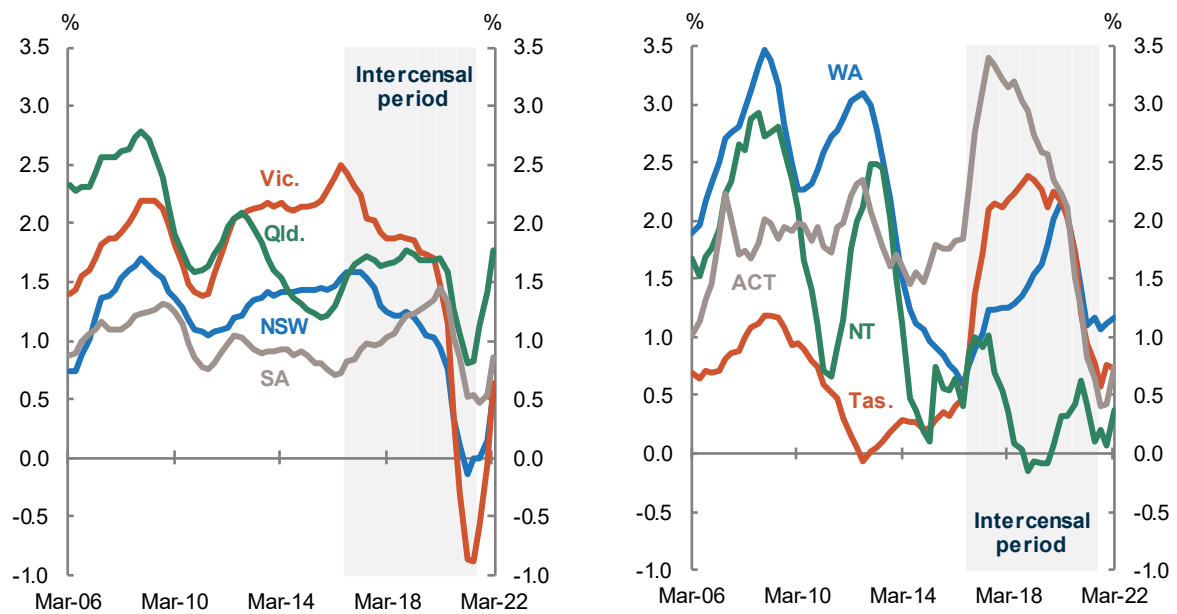
The preliminary rebased estimated population for Australia on 30 June 2021 was 25,688,000. This was a downward revision of 50,000 (or 0.2 per cent) from the 2016 Census-based estimate. Compared with the national-level, revisions to state and territory population estimates were more significant. The populations of the 2 largest states (Victoria and New South Wales) were revised down, while Queensland was largely unchanged. The smaller states and territories were revised up. The largest revisions were of around 5 per cent to the Australian Capital Territory and Tasmania.

Rebasing has also significantly changed population growth at the state and territory level (Chart 43). Prior to rebasing, Victoria and Queensland had been estimated to be growing the fastest during the intercensal period, with an average annual growth rate of 1.5 per cent. Following the revisions, the Australian Capital Territory and Tasmania were the fastest growing jurisdictions over the intercensal period, with both having growth rates revised up by a percentage point.

These revisions have resulted in estimates of growth in the Australian Capital Territory (from the March quarter 2017 to the September quarter 2018) surpassing 3 per cent annually, comparable to levels seen in Western Australia during the 2000’s mining boom. Tasmania has moved from being the slowest growing state in the decade prior to 2016 to being the second fastest growing state between 2016 and 2021. Western Australia grew as quickly as Queensland, and South Australia experienced slightly higher growth than New South Wales.

49 The Australian Bureau of Statistics rebased the estimated resident population as at 30 June 2021 to reflect person counts in the 2021 Census, adjusted for under and overcount estimates from the Post Enumeration Survey. For further detail on the Post Enumeration Survey see Australian Bureau of Statistics. (2022). *2021 Census overcount and undercount*. Retrieved from <https://www.abs.gov.au/statistics/people/population/2021-census-overcount-and-undercount/latest-release>.

Chart 43. POPULATION GROWTH DURING INTERCENSAL PERIOD, STATES AND TERRITORIES



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022.

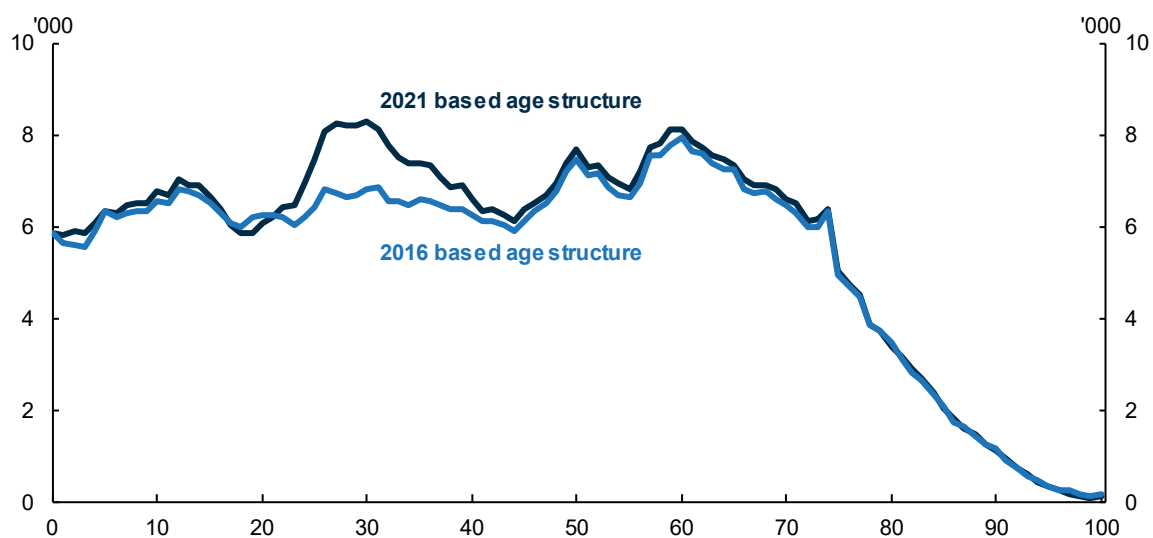
These revisions also changed the age structure of the population. The largest change occurred in Tasmania, where the median age dropped from 42.7 to 41.6 years, a low last observed in 2014. Tasmania has the oldest population in Australia as a large share of young adult Tasmanians traditionally leave the state to pursue opportunities on the mainland. However, the revisions to the population saw a 16 per cent increase in the cohort aged 25 to 40 years, resulting in a population that is younger than expected prior to rebasing.

Table 14. CHANGE IN MEDIAN AGE, STATES AND TERRITORIES

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Aust.
2016 based median age	38.4	37.7	38.2	40.7	38.0	42.7	33.9	36.4	38.2
2021 based median age	38.6	37.9	38.4	40.6	38.0	41.6	33.4	35.4	38.4
Revision to median age	0.2	0.2	0.2	-0.1	0.0	-1.1	-0.5	-1.0	0.2

Source: Australian Bureau of Statistics, National, state and territory population, June 2021, June 2016

Chart 44. IMPACT OF REBASING ON AGE STRUCTURE, TASMANIA, AS AT 30 JUNE 2021



Source: Australian Bureau of Statistics, National, state and territory population, June 2021, June 2016.

The downward revision of the combined capital cities was predominantly driven by Melbourne and Sydney, with the population of both cities revised down by over 100,000 at 30 June 2021. All other capitals except Brisbane had their populations revised up as did all rest of state regional areas.

Table 15. 2021 CENSUS REBASING OF 30 JUNE 2021 ESTIMATED RESIDENT POPULATION (ERP)

	2016 Census based-ERP ('000s)	2021 Census based-ERP ('000s)	Intercensal Difference ('000s)	Difference (%)
New South Wales	8,189	8,094	-95	-1.2
<i>Sydney</i>	5,361	5,260	-102	-1.9
<i>Rest of New South Wales</i>	2,827	2,834	7	0.2
Victoria	6,649	6,548	-101	-1.5
<i>Melbourne</i>	5,096	4,976	-120	-2.4
<i>Rest of Victoria</i>	1,553	1,572	19	1.2
Queensland	5,221	5,218	-4	-0.1
<i>Brisbane</i>	2,582	2,569	-13	-0.5
<i>Rest of Queensland</i>	2,639	2,649	10	0.4
South Australia	1,773	1,803	30	1.7
<i>Adelaide</i>	1,378	1,402	24	1.7
<i>Rest of South Australia</i>	395	401	6	1.5
Western Australia	2,682	2,750	68	2.5
<i>Perth</i>	2,142	2,192	50	2.4
<i>Rest of Western Australia</i>	540	558	17	3.2
Tasmania	541	568	27	4.9
<i>Hobart</i>	238	251	13	5.3
<i>Rest of Tasmania</i>	303	317	14	4.6
Northern Territory	246	249	2	1.3
<i>Darwin</i>	147	149	2	1.2
<i>Rest of Northern Territory</i>	99	100	1	1.5
Australian Capital Territory	432	454	22	5.1
Australia	25,738	25,688	-50	-0.2

Note: Totals will not add as Australia figures include other territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.

Source: Australian Bureau of Statistics, Regional population, 2022 and Australian Bureau of Statistics, National, state and territory population, December 2021, 2022.

3.4 COMPARING PAST FORECASTS AND PROJECTIONS TO OUTCOMES

The accuracy of population forecasts and projections depends on the quality of the input data and the assumptions made about the future. Population forecasts and projections will differ from subsequent observed outcomes for many reasons, including but not limited to, events turning out differently to assumptions, changes in behaviour, changes in government policy, and revisions to input data.

Table 16 compares the forecasts and projections from the 2020 and 2021 Population Statements, the 2015 and 2021 Intergenerational Reports, and selected Australian Bureau of Statistics' projections to the latest Australian Bureau of Statistics' national population estimates based on the 2021 Census. Relatively low growth from 2017–18 to 2020–21, compared with preceding years, resulted in overestimates of population across all selected projections.

Table 16. DIFFERENCE (%) BETWEEN POPULATION PROJECTIONS AND OUTCOME, AUSTRALIA, ON 30 JUNE

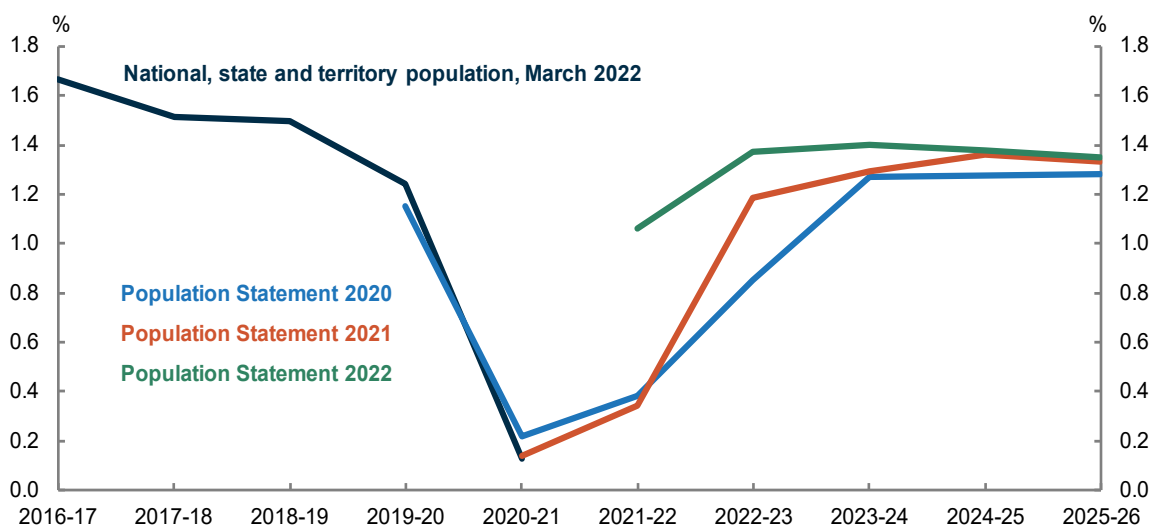
	2015	2016	2017	2018	2019	2020	2021
Intergenerational Report, 2015	-0.4	-0.5	-0.6	-0.8	-0.9	-1.2	-2.7
Intergenerational Report, 2021	–	–	–	-0.1	-0.1	-0.2	-0.2
ABS projection series A, 2018	–	–	–	-0.3	-0.5	-1.1	-2.8
ABS projection series B, 2018	–	–	–	-0.2	-0.4	-0.9	-2.4
ABS projection series C, 2018	–	–	–	-0.1	-0.3	-0.6	-2.0
Population Statement 2020	–	–	–	–	-0.1	0.0	-0.1
Population Statement 2021	–	–	–	–	–	-0.1	-0.2

Note: Positive numbers indicate an underestimation while negative numbers indicate an overestimation.

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

The 2020 and 2021 Population Statements accurately captured national growth in the first forecast year. Stronger growth than previously forecast is now expected in 2021–22 (Chart 45).

Chart 45. ACTUAL AND FORECASTED ANNUAL POPULATION GROWTH RATES, AUSTRALIA



Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

The largest relative differences in state level population forecasts were for the Australian Capital Territory and Tasmania (Table 17). The 2021 Census revision of outcomes included major revisions to the base estimates used in the 2020 and 2021 Population Statements and increased the forecast error for most states. These Census-related revisions cannot be assigned to any of the components of growth (births, deaths, and overseas migration).

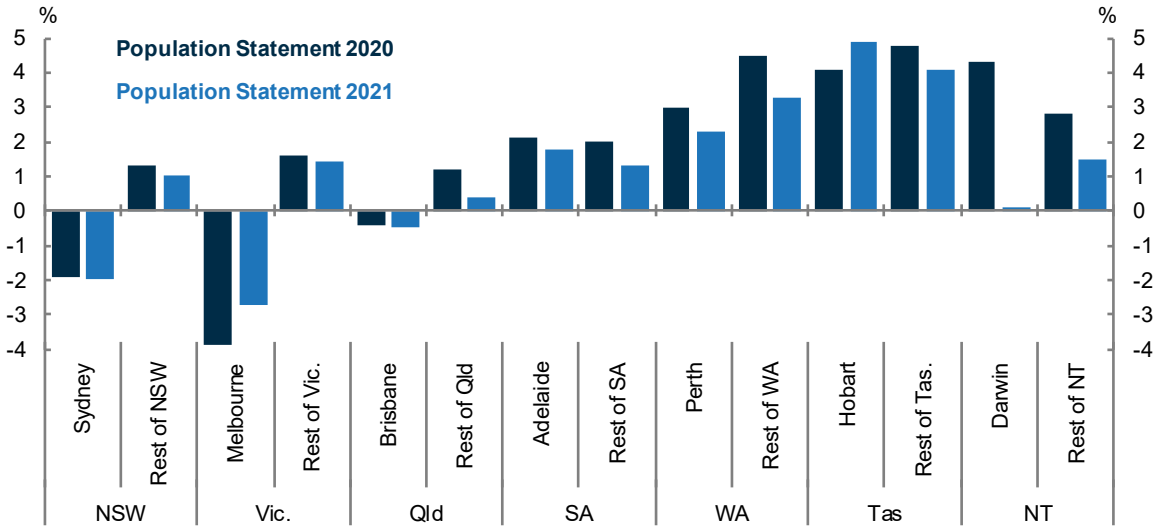
Table 17. DIFFERENCE (%) BETWEEN POPULATION FORECASTS AND OUTCOME, BY STATE, ON 30 JUNE

	Population Statement 2020			Population Statement 2021		
	2019 (base)	2020	2021	2020 (base)	2021	
New South Wales	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9
Victoria	-1.0	-1.5	-2.6	-1.3	-1.7	-1.7
Queensland	0.0	0.3	0.4	0.0	0.0	0.0
South Australia	1.0	1.6	2.1	1.3	1.7	1.7
Western Australia	1.5	2.6	3.3	2.0	2.5	2.5
Tasmania	3.2	4.2	4.5	4.1	4.5	4.5
Northern Territory	0.8	2.5	3.7	1.1	0.7	0.7
Australian Capital Territory	3.4	4.6	4.9	4.3	4.6	4.6

Note: Positive numbers indicate an underestimation while negative numbers indicate an overestimation.
 Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Forecasts in previous Population Statements for the 3 most populous greater capital city areas in 2021 were overestimated (Chart 46), while all other regions were underestimated. As expected, the 2021 Population Statement was more accurate for the 30 June 2021 population, except for Hobart and marginally for Sydney.

Chart 46. DIFFERENCE BETWEEN POPULATION FORECASTS AND OUTCOMES, BY GREATER CAPITAL STATISTICAL AREAS, 30 JUNE 2021



Note: Positive numbers indicate an underestimation while negative numbers indicate an overestimation.
 Source: Australian Bureau of Statistics, Regional population, 2021, 2022 and Centre for Population projections.

The largest source of forecast error in population growth for 2020–21, as published in the 2021 Population Statement, was net overseas migration (Table 18). Outcomes for net overseas migration at the national level were higher than forecast, while births and deaths were lower.

At the state level, projections for births had a lower forecast error than projections for deaths, with the notable exception of Victoria. Large revisions to quarterly births estimates in Victoria from the Australian Bureau of Statistics during this period dominated the forecast error in the state’s population.

Table 18. DIFFERENCE BETWEEN 2021 POPULATION STATEMENT COMPONENT FORECASTS AND OUTCOME, BY STATE, 2020–21

	Births		Deaths		Net overseas migration	Net interstate migration	
	no.	%	no.	%	no.	no.	
Australia	-2,842		-0.9	-6,551	-4.0	15,662	–
New South Wales	-919		-0.9	-3,060	-5.6	9,463	5,782
Victoria	-2,686		-3.5	-589	-1.4	1,941	-1,289
Queensland	82		0.1	-1,246	-3.8	3,240	-774
South Australia	44		0.2	-706	-5.1	279	-618
Western Australia	252		0.8	-562	-3.6	667	1,108
Tasmania	119		2.1	-235	-5.1	-118	-1,398
Northern Territory	187		4.9	-47	-4.0	95	-1,817
Australian Capital Territory	86		1.6	-97	-4.5	73	-995

Note: Positive numbers indicate an underestimation while negative numbers indicate an overestimation.

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Net overseas migration has historically been the most volatile component of national population growth and consequently the most difficult to forecast (Table 19). The loss of overseas migration since the onset of the pandemic disrupted trends, making historical data – including the latest data available at the time of the 2021 Population Statement – less reliable for forecasting.

Table 19. DIFFERENCE BETWEEN 2021 POPULATION STATEMENT MIGRATION FORECASTS AND OUTCOME, BY STATE, 2020–21

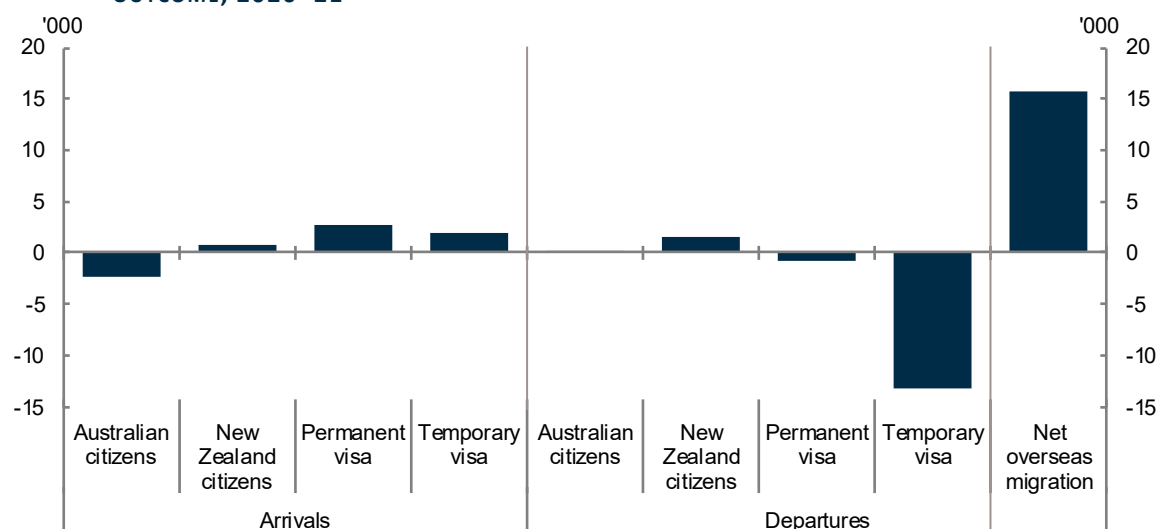
	Overseas migration				Interstate migration			
	Arrivals		Departures		Arrivals		Departures	
	no.	%	no.	%	no.	%	no.	%
Australia	3,257	2.2	-12,406	-5.4	–	–	–	–
New South Wales	4,402	6.2	-5,061	-6.5	9,152	9.5	3,369	3.0
Victoria	-1,636	-6.1	-3,577	-4.5	1,549	2.3	2,838	3.3
Queensland	1,166	5.0	-2,075	-5.7	5,724	5.2	6,498	8.3
South Australia	-59	-1.0	-338	-3.8	1,300	4.9	1,918	7.5
Western Australia	-229	-1.8	-895	-5.0	2,382	7.1	1,274	4.5
Tasmania	-95	-5.9	23	1.2	-93	-0.7	1,305	9.9
Northern Territory	-305	-21.1	-400	-21.3	-809	-6.0	1,009	6.3
Australian Capital Territory	-28	-1.0	-100	-1.7	781	3.5	1,776	8.2

Note: Positive numbers indicate an underestimation while negative numbers indicate an overestimation.

Source: Australian Bureau of Statistics, National, state and territory population, March 2022, 2022 and Centre for Population projections.

Overseas migration of temporary visa holders, including students, was the most difficult to forecast. The forecast error of 16,000 in net overseas migration was predominantly due to an under-forecast of 13,000 in the departures of temporary visa holders (Chart 47).

Chart 47. DIFFERENCE BETWEEN 2021 POPULATION STATEMENT OVERSEAS MIGRATION FORECAST AND OUTCOME, 2020–21



Note: Positive numbers indicate an underestimation while negative numbers indicate an overestimation.

Source: Australian Bureau of Statistics, Customised data consultancy and Centre for Population projections.

NOTES

References to years are all on a financial year basis (1 July to 30 June) unless otherwise stated. Population stocks for a year refer to stocks as at 30 June of that year (for example, 'Australia's population was 25.7 million in 2019–20' means that Australia's population was 25.7 million as at 30 June 2020). Population flows for a year refer to flows during the financial year (for example, 'Australia's natural increase was 135,000 in 2019–20' means the natural increase in Australia's population from 1 July 2019 to 30 June 2020 was 135,000).

References to the 'states' or 'each state' includes the Northern Territory and the Australian Capital Territory.

Figures in tables and in the text have been rounded. Transformations (for example, shares or rates of change) are calculated using unrounded numbers. Discrepancies between totals and sums of components are due to rounding. In general, the rounding conventions used include:

- most rates are rounded to one decimal place
- estimates over 10,000 are rounded to the nearest thousand
- estimates between 100 and 9,999 are rounded to the nearest 100
- estimates midway between rounding points are rounded up

Estimates of future population and components of change are either forecasts or projections.

- **Forecasts** are predictions about what may happen in the near term based on analysis and modelling in relation to current circumstances.
- **Projections** are based on analysis and modelling of long-term trends when rates or levels are stable. Projections may also include a transition from the last forecast to the assumed stable level or rate.

GLOSSARY

BABY BOOMER GENERATION

Australia's **Baby Boomers** were born between 1946 and 1966 during the post-war economic boom. It was a period characterised by high rates of marriage and fertility, high levels of immigration, rising rates of female participation in both tertiary education and the workforce, and the genesis of the two-income household as the norm.

COVID-19

COVID-19 refers to the coronavirus disease caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that was first identified in December 2019.

ESTIMATED RESIDENT POPULATION

The **estimated resident population** is the official measure of Australia's population based on the concept of usual residence. It refers to all people, regardless of nationality or citizenship, who usually live in Australia, except foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months. It excludes overseas visitors who are in Australia for less than 12 months (see 'overseas migration' definition).⁵⁰

GREATER CAPITAL CITY STATISTICAL AREAS

Greater Capital City Statistical Areas (GCCSA) represent the socio-economic extent of the capital cities as defined by the Australian Bureau of Statistics. GCCSAs are derived from Statistical Areas Level 4 (SA4).⁵¹

GROSS MIGRAPRODUCTION RATES

Gross migraproduction rates are the sum of single year of age and sex migration rates. Gross migraproduction rates are expressed as the average number of moves that a person could expect to make in a lifetime if they were subject to the age-specific migration rates of a given year.⁵²

INTERCENSAL DIFFERENCE

Intercensal difference is caused by differences in population estimates between successive Censuses, post-enumeration surveys, and the administrative data sources used for quarterly updates which cannot be attributed to a particular source.⁵³

INTERNAL MIGRATION – COMPOSITION

The **composition of net internal migration** refers to the specific groups of people who migrate. This can be measured by age, sex, ethnicity and place of birth.

50 Australian Bureau of Statistics, National, state and territory population methodology, March 2021, 2021.

51 Australian Bureau of Statistics, Australian Statistical Geography Standard: Volume 1 - Main Structure and Greater Capital City Statistical Areas, 2016.

52 Bell, M., Blake, M., Boyle, P., Duke-Williams, O., Rees, P., Stillwell, J., & Hugo, G. (2002). Cross-National Comparison of Internal Migration: Issues and Measures. *Journal of the Royal Statistical Society*, 435-464.

53 Australian Bureau of Statistics, Census of Population and Housing, 2021, 2022.

INTERNAL MIGRATION – INTERNAL, INTERSTATE, INTRASTATE

Internal migration refers to the movement of people across a specified boundary within Australia involving a change in place of usual residence. Net internal migration is the difference between arrivals and departures and can be either positive or negative.

Interstate migration refers to the movement of people over a state boundary involving a change in place of usual residence. Net interstate migration is the difference between arrivals and departures and can be either positive or negative.

Intrastate migration refers to the movement of people across a specified boundary within a state.⁵⁴

INTERNAL MIGRATION – LEVEL

The **level of net internal migration** refers to the overall number of people moving between locations. This can be measured by the numbers of people leaving and entering a location.

INTERNAL MIGRATION – PATTERNS

Patterns of net internal migration refer to the origins and destination locations for migration.

LIFE EXPECTANCY

Life expectancy measures how long a person is expected to live if the rest of their life follows the age and sex-specific mortality rates for the relevant year. This is the expectation of the average years that a person lives at a specific age. In the Statement, 'life expectancy' usually refers to 'life expectancy at birth' unless otherwise specified.⁵⁵

MORTALITY IMPROVEMENT

Mortality improvement measures the reduction in the rate of mortality over time. Rates of mortality have consistently decreased over many years, at all ages. Mortality improvement factors are based on the historical rates of decline in mortality rates and used to project the rate of future mortality.

OLD-AGE DEPENDENCY RATIO

The **old-age dependency ratio** refers to the number of people aged 65 and older for every 100 people of traditional working age (15-64) in the population.

OMICRON VARIANT WAVE

The **Omicron variant wave** refers to the outbreak of COVID-19 and subsequent increase in case numbers due to the Omicron variant during the last month of 2021 and the first part of 2022.

OVERSEAS MIGRANT – PERMANENT RESIDENT

For population purposes, an **Australian permanent resident** is a non-citizen who holds an Australian permanent visa and is usually resident in Australia (see 'overseas migration' definition below). Generally, permanent residents can live, work and study with fewer restrictions than temporary visa holders in Australia.

54 Australian Bureau of Statistics, Regional population, 2021, 2022.

55 Australian Government Actuary, Australian Life Tables 2015–17, 2019.

OVERSEAS MIGRANT – TEMPORARY RESIDENT

A **temporary resident** is a non-citizen who holds a temporary visa that grants authority for travel to and from Australia within a specific period for a specific purpose (such as work or study) and is usually resident in Australia (see 'overseas migration' definition below). Temporary visa holders may have other conditions tied to their stay in Australia. Not all temporary visa holders are considered residents as they may not meet the 'usually resident in Australia' criterion.

OVERSEAS MIGRATION

Overseas migration is defined using a 12/16 month rule. Under this rule, incoming overseas travellers (who are not currently counted in the population) must be resident in Australia for a total period of 12 months or more during a 16-month period to be included in the estimated resident population. Similarly, those travellers departing Australia (who are currently counted in the population) must be absent from Australia for a total of 12 months or more during a 16-month period to then be subtracted from the estimated resident population.

Therefore, the 12/16-month rule takes account of those people who may have left Australia briefly and returned, while still being resident for 12 months out of 16. Similarly, it accounts for Australian citizens who live overseas most of the time but who periodically return to Australia for short intervals.

POPULATION MOMENTUM

Population momentum refers to the effect that the age structure of the current population has on its future size and composition. Population momentum can be conducive to positive or negative population growth. The current age structure can be driven by factors like the fertility decision of previous generations or previous waves of overseas migration. Younger age structures contribute to faster population growth, as births from the relatively large number of women of reproductive age outnumber the number of deaths. This means that a young population can continue to grow, even if there are constant levels of mortality, net migration of zero and fertility at or below replacement level. Older age structures contribute to slower rates of growth or, in more extreme cases, to population decline.

PROBABILITY OF DYING (Q_x)

A demographic measure used in life tables referring to a probability of death between age x and age $x+1$.

REPLACEMENT RATE

The **replacement rate** (or replacement-level fertility) is the number of babies a woman would need to have over her reproductive life span to replace herself and her partner. Given not all babies survive to reproductive age and babies are more likely to be male, replacement fertility is around 2.1 babies per woman in most developed countries.

REST-OF-STATE AREA

Within each state, the area not defined as being part of the Greater Capital City is represented by a **rest-of-state area**.⁵⁶

⁵⁶ Australian Bureau of Statistics, Australian Statistical Geography Standard: Volume 1 - Main Structure and Greater Capital City Statistical Areas, 2016.

SECOND MELBOURNE LOCKDOWN

The **second Melbourne lockdown** refers to the COVID-19 lockdown experienced in Melbourne between early July 2020 and late October 2020.

STANDARDISED DEATH RATE

The age-**standardised death rate** allows for comparison of mortality trends across populations of different size and age structure. It is a weighted average of the age-specific mortality rates per 100,000 (or 1,000) persons, where the weights are the proportions of persons in the corresponding age groups of the standard population.

TOTAL FERTILITY RATE (TFR)

The **total fertility rate** is the sum of age-specific fertility rates (divided by 1,000). It represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life. Age-specific fertility rates are the annual number of babies in a specific age group.⁵⁷

57 Australian Bureau of Statistics, Births, Australia, 2021.

REFERENCES

- Australian Bureau of Statistics. (2016, July 12). Australian Statistical Geography Standard: Volume 1 - Main Structure and Greater Capital City Statistical Areas. Retrieved from <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.001>
- Australian Bureau of Statistics. (2021, December 8). Births, Australia. Retrieved from <https://www.abs.gov.au/statistics/people/population/births-australia/2020>
- Australian Bureau of Statistics. (2021). Causes of Death, Australia. Retrieved from <https://www.abs.gov.au/statistics/health/causes-death/causes-death-australia/2021>
- Australian Bureau of Statistics. (2021, November 4). Life tables. Retrieved from <https://www.abs.gov.au/statistics/people/population/life-tables/2018-2020>
- Australian Bureau of Statistics. (2021, September 16). National, state and territory population methodology, March 2021. Retrieved from <https://www.abs.gov.au/methodologies/national-state-and-territory-population-methodology/mar-2021>
- Australian Bureau of Statistics. (2021, December 16). National, state and territory population, methodology, June 2021. Retrieved from <https://www.abs.gov.au/methodologies/national-state-and-territory-population-methodology/jun-2021#interstate-migration>
- Australian Bureau of Statistics. (2021, December 17). Overseas Migration, 2020-21. Retrieved from <https://www.abs.gov.au/statistics/people/population/overseas-migration/2020-21>
- Australian Bureau of Statistics. (2021, August 8). Regional internal migration estimates, provisional, March 2021. Retrieved from <https://www.abs.gov.au/statistics/people/population/regional-internal-migration-estimates-provisional/mar-2021>
- Australian Bureau of Statistics. (2022). 2021 Census overcount and undercount. Retrieved from <https://www.abs.gov.au/statistics/people/population/2021-census-overcount-and-undercount/latest-release>
- Australian Bureau of Statistics. (2022). Census of Population and Housing, 2021. Retrieved from <https://www.abs.gov.au/census>
- Australian Bureau of Statistics. (2022, November 16). COVID-19 Mortality by wave. Retrieved from <https://www.abs.gov.au/articles/covid-19-mortality-wave>
- Australian Bureau of Statistics. (2022, November 25). COVID-19 Mortality in Australia: Deaths registered until 31 October 2022. Retrieved from <https://www.abs.gov.au/articles/covid-19-mortality-australia-deaths-registered-until-31-october-2022>
- Australian Bureau of Statistics. (2022, September 29). Deaths, Australia. Retrieved from <https://www.abs.gov.au/statistics/people/population/deaths-australia/2021>
- Australian Bureau of Statistics. (2022, June 28). National, state and territory population, December 2021. Retrieved from <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/dec-2021>

- Australian Bureau of Statistics. (2022, September 21). National, state and territory population, March 2022. Retrieved from <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>
- Australian Bureau of Statistics. (2022, November 25). Provisional Mortality Statistics, Jan - Aug 2022. Retrieved from <https://www.abs.gov.au/statistics/health/causes-death/provisional-mortality-statistics/jan-aug-2022>
- Australian Bureau of Statistics. (2022, July 26). Regional population. Retrieved from <https://www.abs.gov.au/statistics/people/population/regional-population/2021>
- Australian Government Actuary. (2019, December 5). Australian Life Tables 2015-17. Retrieved from <https://aga.gov.au/publications/life-tables/australian-life-tables-2015-17>
- Australian Institute of Health and Welfare. (2020-21). Suicide & self-harm monitoring. Retrieved from <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/behaviours-risk-factors/deaths-of-despair>
- Australian Institute of Health and Welfare. (2022). Alcohol, tobacco & other drugs in Australia. Retrieved from <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/about>
- Australian Institute of Health and Welfare. (2022, July 7). Changes in the health of Australians during the COVID-19 period. Retrieved from Australia's health 2022: data insights: <https://www.aihw.gov.au/reports/australias-health/australias-health-2022-data-insights/summary>
- Australian Institute of Health and Welfare. (2022). General Record of Incidence of Mortality (GRIM). Retrieved from <https://www.aihw.gov.au/reports/life-expectancy-deaths/grim-books/contents/grim-excel-workbooks>
- Bell, M., Blake, M., Boyle, P., Duke-Williams, O., Rees, P., Stillwell, J., & Hugo, G. (2002). Cross-National Comparison of Internal Migration: Issues and Measures. *Journal of the Royal Statistical Society*, 435-464.
- Case, A., & Deaton, A. (2020). *Deaths of Despair and the Future of Capitalism*. Princeton University Press.
- Centre for Population. (2020). *Population Statement*. Canberra.
- Centres for Disease Control and Prevention. (2022). CDC Wonder. Retrieved from <https://wonder.cdc.gov/>
- Commonwealth of Australia. (2021). *2021 Intergenerational Report*. Canberra.
- Department of Home Affairs. (2022, September 29). BP0019 Number of Temporary visa holders in Australia at 2022-08-31. Retrieved from <https://data.gov.au/dataset/ds-dga-ab245863-4dea-4661-a334-71ee15937130/distribution/dist-dga-54b2d02b-45bf-4c2d-a2bd-d9a9064f365c/details?q=>
- Department of Home Affairs, A migration system for Australia's future. (2022, November). A migration system for Australia's future. Retrieved from https://www.homeaffairs.gov.au/reports-and-pubs/files/reviews-and-inquiries/discussion_paper.pdf
- Dong, E., Du, H., & Gardner, L. (2020). An interactive web-based dashboard to track COVID-19 in real time. *The Lancet*. Retrieved from <https://github.com/CSSEGISandData/COVID-19>

Gray, E., Evans, A., & Reimondos, A. (2022). Having babies in times of uncertainty: first results of the impact of COVID-19 on the number of babies born in Australia. *Australian Population Studies*, 15-30. Retrieved from <https://www.australianpopulationstudies.org/index.php/aps/article/view/101>

McDonald, P. (2020). *A Projection of Future Fertility Rates*. Canberra: Centre for Population.

Office of National Statistics. (2022). Deaths. Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths>

United Nations Department of Economic and Social Affairs, Population Division. (2022, July 11). 2022 Revision of World Population Prospects. Retrieved from <https://population.un.org/wpp/>

United States Census Bureau. (2020, February). Demographic Turning Points for the United States; Population Projections for 2020 to 2060. Retrieved from <https://www.census.gov/>: <http://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1144.pdf>

Wilson, T. (2020). Modelling Age Patterns of Internal Migration at the Highest Ages. *Spatial Demography*, 175-192.

World Health Organisation. (n.d.). Indicator Metadata Registry List. Retrieved from The Global Health Observatory: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3131>