

F. ECONOMIC SCENARIO ANALYSIS

The 2020-21 Budget relies on forecasts and judgements about the future of the economy, based on information available at the time of preparation. These forecasts are subject to inherent uncertainties, such as changes in behaviours, evolving relationships between variables and unexpected events or shocks.

This appendix explores the impact of variations in key economic parameters on other areas of the economy, the overall macroeconomic outlook and general government tax revenues. This is intended to provide greater insight into the interdependencies within our complex economy, that a partial sensitivity analysis does not capture.

This scenario analysis was selected to cover a plausible economic event that could affect New South Wales over the forecast horizon. The modelling takes account of linkages between key international, Australian and New South Wales economic aggregates, but does not account for any monetary policy or fiscal policy response.

The summary of the results should be interpreted with care because economic events tend to be unique in nature - the scenario presented in this appendix is unlikely to completely reflect any future shock to the State economy. Any departures from the specified scenario would result in different impacts on the economic and revenue outlook.

F.1 Impact of variations in key forecast assumptions

This scenario analysis is intended to complement the central economic outlook as presented in Chapter 2 by quantifying some of the key risks to the overall narrative. The scenario is a delayed vaccine for COVID-19, which subsequently delays the reopening of international borders and the easing of domestic health restrictions by 12 months.

The economic and revenue impact of this scenario was modelled using the Centre of Policy Studies (CoPS) Victoria University Regional Model Tax (VURMTAX)¹ and presented as a deviation from baseline.

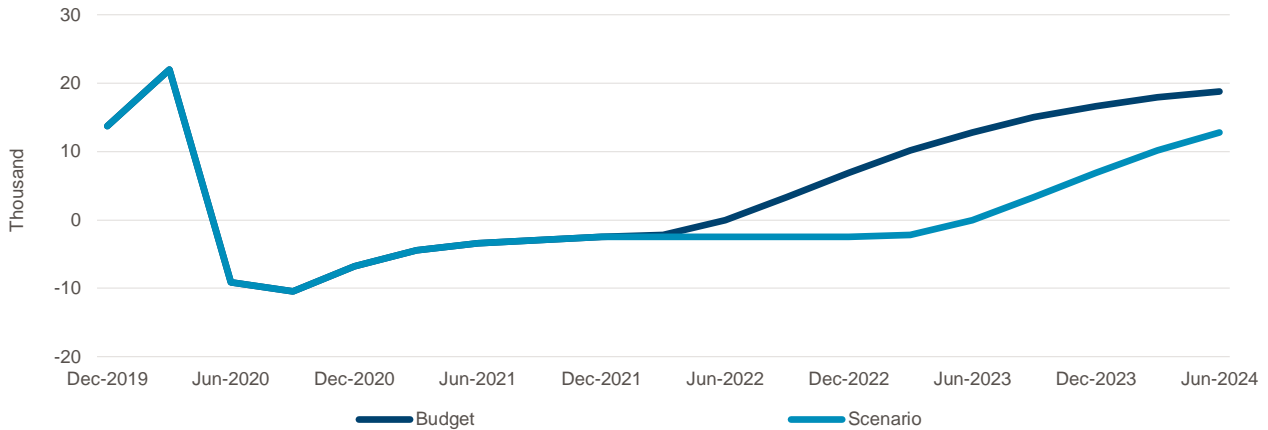
A delayed vaccine

COVID-19 has resulted in the closure of international borders and the introduction of a number of health restrictions, including social distancing measures. This has resulted in a sharp fall in NSW's net overseas migration, a reduction in international tourist and student numbers, and an ongoing drag on economic activity.

Current forecasts in line with the Commonwealth assume that an effective vaccine for COVID-19 will be available to Australians in the second half of 2021. Australia's international borders are expected to re-open in the December quarter 2021, in line with the assumed timing of a widely available vaccine. A gradual return of international students and permanent migrants is assumed from the latter part of 2021. Inbound and outbound international travel is expected to remain low through the latter part of 2021, after which a gradual recovery in international tourism also is assumed to occur.

¹ VURMTAX is a dynamic computable general equilibrium model of Australia's six states and two territories, with each region modelled as an economy in its own right. See Adams, Philip, Dixon, Janine and Horridge, Mark (2015), 'The Victoria University Regional Model (VURM): Technical Documentation, Version 1.0', CoPS/IMPACT Working Paper Number G-254 for more detail on the model.

Chart F.1: Net overseas migration to NSW will remain subdued for an extended period if a vaccine is delayed



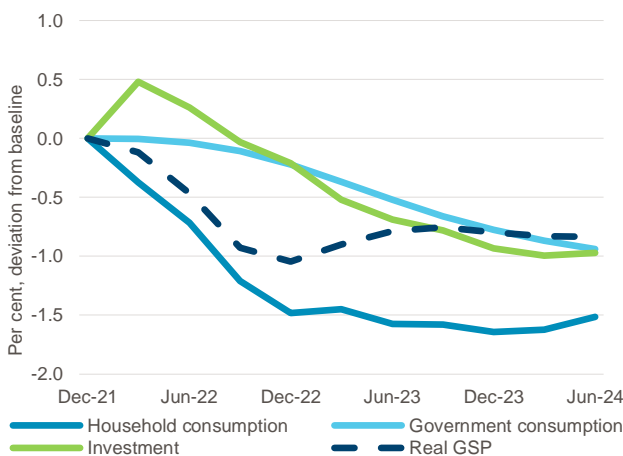
Source: ABS and NSW Treasury

This scenario assumes that the availability of an effective vaccine is delayed by 12 months, which results in the timing of the reopening of international borders and the easing of social distancing restrictions being pushed back by 12 months. Consequently, net overseas migration, as well as international tourist and student numbers remain low for a more extended period (see Chart F.1).

Macroeconomic impact on the Budget and over the forward estimates

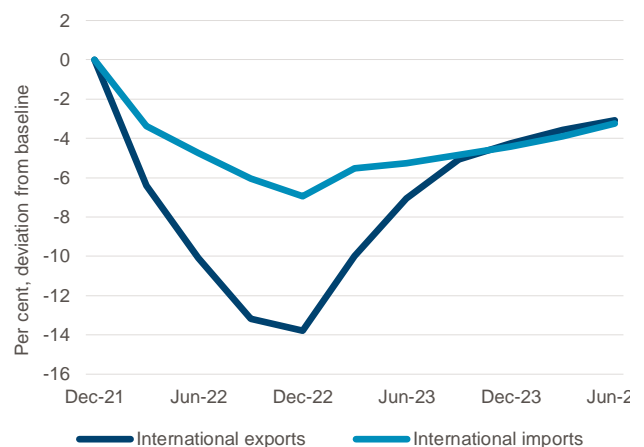
In the scenario, the delayed reopening of international borders results in a reduction in international education exports as well as travel-related exports such as tourism. International travel-related imports also are lower, which helps to cushion the shock. Some of the savings from fewer overseas holidays will be redirected into domestic tourism and other components of household expenditure. However, the continuation of social distancing restrictions for an additional 12 months reduces household consumption.

Chart F.2: Lower household consumption drives much of the decline in Gross State Product



Source: CoPS, Victoria University and NSW Treasury

Chart F.3: International exports also decline but a fall in international imports helps to offset the impact



Source: CoPS, Victoria University and NSW Treasury

Due to the international borders remaining closed for a longer period, the NSW population is almost 1 per cent below the baseline forecast by the end of 2023-24. The lower population is another driver of reduced household consumption. Investment also falls as the capital stock adjusts to a lower level. In addition, spending by both the Commonwealth and NSW Governments is lower due to the lower population.

The weaker economy is associated with a deterioration in the labour market. There is a fall in employment and an increase in the unemployment rate, with little change in the labour force participation rate. Consequently, there is also an easing in inflation and wages growth.

Once the vaccine for COVID-19 becomes available, the international border reopens and social distancing restrictions are removed, which contribute to a recovery in economic activity and in the labour market. Nevertheless, the economy remains smaller than in the baseline due to the lower population, with the loss of population assumed to be permanent, consistent with current Commonwealth Government policy.

Table F.1: The effect of a delayed vaccine on major economic parameters^(a)

	2020-21	2021-22	2022-23	2023-24
State Final Demand	...	(0.1)	(1.0)	(1.3)
Gross State Product	...	(0.1)	(0.9)	(0.8)
Employment	...	(0.4)	(1.5)	(1.0)
Unemployment rate	...	0.3	1.0	0.1
Consumer price index	...	(0.1)	(0.2)	0.1
Nominal wages	...	(0.0)	(0.7)	(0.5)
Working age population	...	(0.0)	(0.3)	(0.8)

(a) Figures reported are the per cent change in the level of each parameter relative to the baseline.

Source: CoPS, Victoria University and NSW Treasury

Revenue impact over the Budget and forward estimates

Under this scenario, overall revenues are \$1.1 billion lower after four years (see Table F.2). Payroll tax collections are lower due to the lower level of employment and decline in wages growth. GST revenue is lower due to the reduction in household consumption, but the extent of the fall in GST revenue is cushioned by a rise in the share of household consumption subject to GST. This is because spending by Australian residents overseas, which generally is exempt from GST, is replaced with domestic spending that is subject to GST. Similarly, a shift in household expenditure patterns also supports a redirection of spending from overseas holidays into housing, which provides a boost to transfer duty and land tax collections. Other tax revenue is lower, with falls in gambling and motor vehicle taxes reflecting the decline in household consumption and population.

Table F.2: The effect of a delayed vaccine on major revenue parameters^(a)

	2020-21	2021-22	2022-23	2023-24
	\$m	\$m	\$m	\$m
Payroll tax	...	(45)	(274)	(185)
Transfer duty	...	92	89	(90)
Land tax	...	0	0	(1)
Royalties	...	(16)	1	25
Other tax revenue	...	21	(85)	(174)
GST revenue	...	(76)	(350)	(297)
Sale of goods and services	...	(3)	(91)	(253)
Other revenue	...	(9)	(150)	(157)
Total revenue	...	(34)	(859)	(1,132)

(a) Figures reported are the change in the level of each parameter relative to the baseline.

Source: CoPS, Victoria University and NSW Treasury