

B. FISCAL RISKS AND BUDGET SENSITIVITIES

The prospective nature of the Budget means it is informed by forecasts and assumptions. Events (fiscal risks) may unfold which could produce results different to forecasts – either positive or negative. COVID-19, in particular, has introduced new risks and heightened others. This appendix analyses some of those potential risks and events. It also helps readers understand the magnitude of potential variations by providing a ‘sensitivity analysis’. The impact of these variations is considered on the operating statement and the balance sheet.

The sensitivity analysis is presented to explain a 1 percentage point change to the identified variable in each year – while other variables are held constant to the forecasts in this Budget. The result should be used as a ‘rule of thumb’ estimated impact for a change in the relevant variable.

A positive impact from the variable change would improve the State’s budget position or net worth, while a negative impact would weaken the budget position or net worth.

Due to their uncertainty, fiscal risks are not incorporated into the aggregates presented in the 2020-21 Budget. Further information on the State’s contingent assets and liabilities is also available in Appendix C of this Budget Paper.

B.1 Operating statement risks and sensitivities

State taxation revenue

The state of the economy affects the level of tax collected. Changes in a range of macroeconomic drivers – from property sale volumes and prices, to employment levels and wage growth – can lead to major changes in the level of tax collected, increasing or decreasing Government revenues accordingly.

The Government’s own forecast assumptions for key macroeconomic variables across the Budget and forward estimates (as set out in Table B.1 below) are used to inform the revenue forecasts.

The forecasts prepared for the Budget are based on the latest available information. These forecasts are predictions about the future and the ultimate results may change as unknown events unfold. The extent of variation will depend on the weighting accorded to each macroeconomic variable when forecasting the tax head in question. Table B.2 summarises these weightings:

Table B.1: Forecasting revenue –What weighting is given to different variables

	Forecast weightings						
	GST	Payroll tax	Transfer duty	Mineral royalties	Land tax	Gambling taxes	Motor vehicle taxes
Employment	Medium	High	N/A	N/A	N/A	Medium	High
Wages	Medium	High	N/A	N/A	N/A	Low	Medium
Consumption	High	N/A	N/A	N/A	N/A	High	Medium
Dwelling investment	High	N/A	Medium	N/A	N/A	N/A	N/A
Dwelling prices	Medium	N/A	High	N/A	High	N/A	Medium
Population growth	High	Low	Medium	N/A	N/A	Low	Low
AUD exchange rate	N/A	N/A	N/A	High	N/A	N/A	N/A
Energy demand	N/A	N/A	N/A	High	N/A	N/A	N/A

Notes:

1. High, medium and low provide only a broad indication of the model weighting for illustration.
2. N/A here indicates only that the factor is not directly included as a variable in the relevant forecasting model, and does not signify that there is no relationship between the respective variable and tax head.

Payroll tax typically generates more revenue than any other State tax, including transfer duty. The main driver of payroll tax is total employee compensation, which in turn is a function of both wage and employment levels. COVID-19 has significantly affected both the level of employment and wage growth. All industries have been impacted but some particularly so: hospitality, tourism, arts, entertainment, gaming and recreation. In the short term, much of the negative impact of the pandemic on payroll tax revenues has been mitigated by the Commonwealth Government's JobKeeper subsidy scheme. Any longer-term impacts on employment and wage levels, however, will affect future revenues.

Table B.3 denotes the sensitivity of forecast payroll tax to a one percentage point increase in employment and wages respectively.

Table B.2: Revenue sensitivities – Payroll tax

Factors affecting payroll tax	2020-21	2021-22	2022-23	2023-24	Sensitivity
	Budget	Budget	Forward estimates	Forward estimates	
	\$m	\$m	\$m	\$m	
Average compensation of employees	109	114	117	120	Single percentage point increase in factor
Employment	109	114	117	120	

As the economy recovers, further COVID-19 outbreaks remain a risk for the labour market. Other risks which could impact payroll tax revenue in 2020-21 and over the forward estimates include macroeconomic and geopolitical uncertainties (including reduced globalisation), decreases in population growth and changes in households' propensity to consume.

Transfer duty is forecast to contribute about 9.6 per cent of total general government revenue in 2020-21. The actual percentage will be subject to the performance of the housing market, including both the volume of sales and the average transacted price. A downturn in the residential property market, or even a market that grows but below expectations, would detract from the State's budget result. Table B.4 denotes the sensitivity of forecast transfer duty to a one percentage point decrease in transacted residential prices and volumes respectively.

Table B.3: Revenue sensitivities – Transfer duty

Factors affecting transfer duty	2020-21	2021-22	2022-23	2023-24	Sensitivity
	Budget	Forward estimates			
	\$m	\$m	\$m	\$m	
Residential prices (average transacted price)	(84)	(137)	(153)	(163)	Single percentage point decrease in factor
Residential transaction volumes	(49)	(69)	(76)	(82)	

Other State taxes are typically less volatile than those mentioned above, and they generally correlate to changes in the broader NSW economy. For example, revenue from motor vehicle taxes, gambling taxes and other stamp duties rise and fall with consumption patterns across the State. As witnessed during the pandemic, consumption patterns can change suddenly and can be influenced by a range of factors from employment to house price growth.

GST and other Commonwealth payments

GST is collected by the Commonwealth Government and then apportioned to the States. Three main factors determine how much GST New South Wales receives over coming years:

- how much is collected in total across the nation (called the pool size)
- New South Wales' population as a fraction of the national population (called the population share)
- what portion of the pool is allocated to New South Wales (called the relativity).

None of these components are fixed and can change year on year.

The 2020-21 Commonwealth Budget scenario analysis¹ indicates that there is considerable uncertainty around receipt forecasts. At the 70 per cent confidence interval, GST receipts range by +/-1.2 per cent of GDP (\$23 billion), and at the 90 per cent confidence interval, the range increases to +/-1.9 per cent of GDP (\$36 billion). In the event that actual GST receipts fall in the lower range, this would lead to a commensurate fall in the State's GST revenue.

Table B.5 illustrates the sensitivity of forecast GST distribution to NSW to a one percentage point increase in taxable consumption and dwelling investment (the main drivers of the GST pool size), and to an equivalent increase in the NSW population share.

Table B.4: Revenue sensitivities – GST

Factors affecting GST	2020-21	2021-22	2022-23	2023-24	Sensitivity
	Budget	Forward estimates			
	\$m	\$m	\$m	\$m	
Taxable consumption	99	106	112	119	Single percentage point increase in factor
Dwelling investment	33	35	37	39	
Population share	163	196	199	201	

¹ Commonwealth Budget 2020-21, Budget Paper 1, Statement 8: Forecasting Performance and Scenario Analysis

Regarding the relativity, there is a formula that drives how much GST is provided to each State. Under this formula, the following events can lead to a changed share to New South Wales:

- changes to New South Wales' own-source revenue, relative to other States
- a change in the Commonwealth's assessment of how much expenditure New South Wales needs, compared to other States
- a change to National Agreement and National Partnership payments relative to other States.

The formula used to determine GST distributions to the States was revised under the Commonwealth Grants Commission (CGC) 2020 Methodology Review. The outcomes of the Review were such that New South Wales will gain a greater share of GST from 2020-21 to 2025-26, because of a more accurate assessment of the cost of providing public services across the State.

The forecasts in this Budget take into account expected National Agreement and National Partnership Payments. Actual results can vary from forecasts if there are new, renegotiated or ceased programs and infrastructure projects over the forward estimates period.

Royalties

New South Wales' mineral royalties can be volatile. A large share of royalties revenue is generated from coal exports to Asia, which means that the amount of royalties collected in coming years are sensitive to changes in:

- coal export volumes – an increase in coal volumes increases the quantity of coal that royalties are charged on, hence increasing revenue
- coal export prices – an increase in coal export prices increases the value of coal exports, increasing royalties revenue
- exchange rates – an appreciation of the Australian-US exchange rate reduces the Australian dollar value of coal exports, putting downward pressure on royalties revenue due to coal exports being transacted in US dollars.

Table B.6 denotes the sensitivity of forecast royalties revenue to a one percentage point increase in coal prices and coal production volumes.

Table B.5: Revenue sensitivities – Coal royalties

Factors affecting royalties revenue	2020-21	2021-22	2022-23	2023-24	Sensitivity
	Budget	Forward estimates			
	\$m	\$m	\$m	\$m	
Coal prices	13	14	14	15	Single percentage point increase in factor
Coal volumes	13	13	14	14	

General expense risks

Some expenditure risks are largely within the Government's control and can be actively managed, whereas other risks are primarily outside of its control. For example, impacts associated with existing Government policy, employee expenses or the reprofiling of expenditure can be more actively managed, while expenditure linked to Commonwealth payments, interest rate changes or natural disasters are exogenous risks. This includes the expenses associated with the continuation of emergency measures, such as cleaning and disinfecting, in response to the risk of a prolonged effect of COVID-19.

The State's largest operating expense is for employee related expenses, which includes salaries, wages, superannuation expenses and employment on-costs. Employee related expenses are impacted by factors including new enterprise bargaining agreements, public sector wage growth rates and the workforce size. Changes in these parameters can impact the budget result.

Some of the Government's larger non-labour operating expenses include the maintenance and depreciation of assets, electricity, insurance and fuel costs. Market fluctuations can see variations above or below what is forecast at the time of the Budget. For example, higher inflation could increase the cost of goods and services, which have historically outweighed the positive impacts on own-source revenues.

Table B.6: Expense sensitivities

Factors affecting expenses	2020-21	2021-22	2022-23	2023-24	Sensitivity
	Budget	Forward estimates			
	\$m	\$m	\$m	\$m	
Expenses					
Employee expenses (excl super)	(371)	(375)	(387)	(399)	Single percentage point increase in factor
Cost of goods and services	(248)	(235)	(221)	(216)	
Government services demand growth					
Health and education expenses	(436)	(436)	(443)	(462)	

Health and education services represent a significant proportion of public sector expenditure in New South Wales. Heightened demand for these services can worsen the budget result. COVID-19 has led to an increase in Government expenditure related to aged care, mental health, and personal protective equipment. Any decrease in Commonwealth Government payments towards health and education services would worsen the budget result for the State if the same level of service is maintained. Any further major outbreaks of COVID-19 would likely cause another short-term intensive public health response.

The 2019-20 Budget announced several savings initiatives as well as policy measures and election commitments being funded from within existing agency budgets. Changes to factors – such as demand growth or inflation – could impact agency budgets and risk the ability of agencies to meet these commitments from within existing budget allocations.

Other expenditure challenges that could impact the budget result include:

- higher maintenance, depreciation and operating costs associated with the Government's record infrastructure program
- if current time-limited programs were extended
- unforeseen legal expenses or costs associated with litigation
- changes to parameters that impact the liabilities and associated expenditure for superannuation, long service leave, other employee provisions and insurance provisions (see below for further balance sheet risks and sensitivities).

Investment revenue and borrowing costs

COVID-19 has caused significant volatility in global financial markets. The S&P500 fell by 35 per cent and the ASX200 declined by 44 per cent during the first wave of restrictions (February and March 2020). Unprecedented monetary and fiscal policy measures have been implemented to support businesses and individuals.

The Budget is susceptible to the performance of global financial markets and changes in interest rates. Lower interest rates may result in lower costs for new borrowings, while at the same time providing lower interest revenue. The Government's exposure to risk assets means its investment returns are sensitive to variation from forecasts, due to the uncertainty in the economic outlook. Investment returns may be above or below estimates, which would impact revenue. Adopting the Attribution Managed Investment Trust (AMIT) regime for the majority of Government investment funds can reduce investment revenue volatility by smoothing fund distributions over time.

The large size of the State's investments means that a one percentage movement in assumed investment return rates has a large impact on the Government's Budget result. In comparison, a one percentage movement in interest rates would change interest expenses on borrowings, while also impacting interest revenue on any cash invested in the same way, and so providing some offset.

Table B.7: Financial markets and interest rates sensitivities

Financial markets and interest rate sensitivities	2020-21 Budget	2021-22	2022-23	2023-24	Sensitivity
	\$m	\$m	\$m	\$m	
Investment revenue ^(a)	182	248	289	340	Single percentage point increase in factor
Interest revenue ^(b)	11	10	9	8	
Interest expenses ^(b)	(86)	(373)	(599)	(819)	

(a) A single percentage point increase in the expected investment rate of return (NIFF, SAHF, NGF only).

(b) A single percentage point increase in interest rates.

NSW Treasury continues to develop financial risk management strategies that optimise and protect the State's balance sheet. For example, this year Treasury and TCorp have worked closely to introduce the Total Portfolio Approach to constructing and managing investment portfolios. This approach is designed to produce greater returns per unit of risk through a more systematic method of diversifying portfolio risk.

There has been a significant increase in borrowing requirements since the 2019-20 Budget, with a corresponding increase in future interest expense sensitivity. Government has continued to lengthen the maturity profile of its borrowings in order to lock in the current historically low rates for as long as possible. TCorp has also focussed on diversifying its investor base, particularly by accessing the rapidly growing demand for sustainable bond offerings.

B.2 Balance sheet risks and sensitivities

Risks to the State's balance sheet include unanticipated changes:

- to the value of existing assets and liabilities (those already on the balance sheet), and
- from the potential recognition of contingent assets and liabilities (those not shown on the balance sheet as the accounting recognition criteria are not yet met).

The significant market volatility caused by COVID-19 has had more impact on those funds with a higher weighting to growth assets – for example, equities. The easing of monetary policy and the unprecedented fiscal policy response to the crisis have introduced new risks to each of the investible asset classes. The risks and performance of funds are monitored closely, with risk appetites and asset allocation strategies reviewed annually to ensure they remain appropriate.

Liabilities for superannuation and long service leave are estimated with reference to a range of factors, including but not limited to assumed rates of investment returns, salary growth, inflation and discount rates. Changes in any parameter can affect the liability for defined benefit superannuation and long service leave.

The State faces potential obligations that are non-quantifiable, but which can be broadly grouped into commercial transactions and other contingent liabilities. As an example, the Government provided limited general warranties to purchasers and lessees under several energy transactions and has also retained responsibility for the costs associated with remediating pre-existing contamination at several power station sites.

Investments

The State holds several investment funds which are managed by TCorp, including the NSW Generations Fund (NGF), NSW Infrastructure Future Fund (NIFF), Social and Affordable Housing Fund (SAHF) and the Treasury Managed Fund (TMF).

These Funds have varying levels of exposures to growth assets (assets with higher levels of risk). The NIFF, for instance, has a relatively small allocation to equities (at 26 per cent) and keeps around two-thirds of its portfolio in liquid cash and bonds, which are defensive assets, so it can meet the State's short- to medium-term infrastructure expenditure. On the other hand, the NGF has a high allocation of growth assets because of its long-term investment horizon, with about 40 per cent of its portfolio invested in Australian and internationally listed shares. This is in line with its strategic policy objective of helping ease the debt burden on the State's future generations.

Under the *NSW Generations Funds Act 2018*, funds in the NGF can only be directed towards the repayment of the State's debt. Both Moody's and S&P Global recognise the balance of the NGF Debt Retirement Fund as an offset to the State's debt metrics. Accordingly, market volatility that impacts the balance of the NGF carries additional risks to the State's debt metrics. Treasury manages this risk through the NGF investment strategy (the mix of assets it is invested in) which remains aligned to a long-term investment horizon. The NGF is invested in a diverse range of assets including domestic and international equities, bonds, property and infrastructure. Under the existing governance arrangements, NSW Treasury recommends the risk appetite and the NGF Advisory Board endorses and recommends the investment strategy to the Treasurer.

The forward outlook for financial markets is highly uncertain. There is uncertainty on further COVID-19 outbreaks, vaccine development timelines, the extent and the duration of Government support, future employment growth and other risks. Each can impact business and investor confidence and therefore asset values.

During this period of increased uncertainty, NSW Treasury continues to work alongside TCorp to closely monitor and manage the risk exposures of the State's investment funds. TCorp is set to begin the transition of its funds management to using a Total Portfolio Approach from 2020-21 to optimise the construction and management of these portfolios. This approach facilitates a more systematic diversification of risk within each portfolio, allowing the State to better manage its total risk exposure across the various asset classes under investment.

Superannuation and long service leave liabilities

Forecast liabilities for superannuation and long service leave are based on a wide range of parameters. These include assumptions around salary growth, inflation, investment returns and discount rates. A change in any of these parameters may affect the actual liabilities of superannuation and long service leave. The long service leave liability is also subject to variations in the rate of employee retention.

Table B.8: Superannuation liabilities sensitivities^(a)

Factors affecting superannuation liabilities ^(b)	2020-21 Budget	2021-22	2022-23	2023-24	Sensitivity
	\$m	\$m	\$m	\$m	
Change in public sector wages and salaries	(140)	(270)	(350)	(410)	Single percentage point increase in factor
Change in Sydney CPI	(830)	(1,660)	(2,390)	(3,180)	
Change in investment return	330	670	1,030	1,410	
Change in discount rate	12,300				
Change in public sector wages and salaries	140	270	360	390	Single percentage point decrease in factor
Change in Sydney CPI	830	1,780	2,510	3,340	
Change in investment return	(330)	(660)	(1,010)	(1,370)	
Change in discount rate	(14,100)				

(a) A positive number in the table indicates a decrease in the size of the liabilities, and vice versa. For example, a single percentage increase in public sector wages increases net liabilities, which weakens the financial position.

(b) For producing superannuation liabilities sensitivities, AASB 119 Employee Benefits, is used.

Any change in the growth of public sector salaries will affect the superannuation entitlements of those employees on a defined benefit scheme that are still in the workforce, while a decrease in CPI will lower the benefit payments to all members as their pension is indexed by the Sydney CPI. An increase in the investment return on superannuation assets will increase the funding level of the superannuation liability and improve the budget result. For further information on the unfunded superannuation liability, refer to Chapter 6 of this Budget Paper.

B.3 Specific fiscal risks

The coronavirus pandemic

COVID-19 has triggered the most severe recession since the Great Depression. Over 10 per cent of the national labour force became unemployed or had working hours reduced to zero during the peak of the April lockdown. Unprecedented forms of monetary and fiscal policy have been implemented to support the economy.

The most significant fiscal risk for New South Wales is a further outbreak. As seen in Victoria, this would have a direct impact on key economic drivers such as employment and business and consumer confidence.

Natural Disasters

Between September 2019 to March 2020 bushfires were widespread across the State. The scale and intensity of the fires were unprecedented. Further bushfires would present greater downside risk to the Budget, particularly as the current relief effort is still underway and many towns have not yet fully recovered.

National Redress Scheme for survivors of institutional child sexual abuse

On 9 March 2018, the NSW Government announced it would opt into the National Redress Scheme for survivors of institutional child sexual abuse. The forecast liabilities for the Scheme are based on a wide range of assumptions and parameters. These include assumptions about the exposure and latency of reporting abuse in New South Wales, and the number of applicants. Adjustments may be made to these parameters once more applications are received or as more data becomes available. In turn this could affect the actual liabilities and expenses of redress over the 10-year life of the Scheme.

Infrastructure related risks

Infrastructure projects

The cost of the State's total estimated infrastructure program is \$107.1 billion but this could vary during the project life cycle, particularly if there are renewed COVID-19 restrictions. Factors such as availability of expert labour and capital equipment, weather and cost escalations can also impact project cost estimates.

Restart NSW

This Budget includes the estimated impact of expensing funds from the Restart NSW Fund to government agencies (capital expenditure) and non-government proponents, principally local councils (recurrent expenditure in the form of grants). These estimates are informed by assumptions around the expenditure profiles of approved projects and unapproved projects (on the assumption that a formal approval will be forthcoming).

Changes to the timing of these approvals and project delivery schedules may affect the profile of actual expenditure. Unreserved balances in Restart NSW are not reflected in the Budget until a reservation or commitment is made. See Chapter 3 of Budget Paper No. 3 *Infrastructure Statement* for more information.