

## Appendix C: Revenue and expense assumptions and sensitivity analysis

The Queensland Budget, like those of other jurisdictions, is based in part on assumptions made about parameters, both internal and external to the state, which can impact directly on economic and fiscal forecasts.

The sensitivity of revenue and expense forecasts to movements in underlying assumptions is particularly relevant in the current context of the almost unprecedented uncertainty in global and national economic conditions and key economic parameters in the context of the coronavirus (COVID-19) crisis.

This appendix outlines the assumptions underlying the revenue and expense estimates and analyses the sensitivity of the estimates to changes in the economic and other assumptions. This analysis is provided to enhance the level of transparency and accountability of the government.

The forward estimates in the budget are framed on a no policy change basis. That is, the expenditure and revenue policies in place at the time of the budget (including those announced in the budget) are applied consistently throughout the forward estimates period.

**Table C.1 Taxation and royalty revenue<sup>1</sup>**

|                                       | 2018-19<br>Actual<br>\$ million | 2019-20<br>Actual<br>\$ million | 2020-21<br>Budget<br>\$ million | 2021-22<br>Projection<br>\$ million | 2022-23<br>Projection<br>\$ million | 2023-24<br>Projection<br>\$ million |
|---------------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Payroll tax                           | 4,160                           | 4,211                           | 3,896                           | 4,304                               | 4,611                               | 4,923                               |
| Transfer duty                         | 3,195                           | 3,041                           | 2,694                           | 2,953                               | 3,157                               | 3,381                               |
| Other duties                          | 1,549                           | 1,583                           | 1,613                           | 1,690                               | 1,780                               | 1,876                               |
| Gambling taxes and levies             | 1,333                           | 1,258                           | 1,477                           | 1,495                               | 1,553                               | 1,622                               |
| Land tax                              | 1,334                           | 1,406                           | 1,493                           | 1,617                               | 1,643                               | 1,661                               |
| Motor vehicle registration            | 1,850                           | 1,910                           | 1,948                           | 2,022                               | 2,098                               | 2,176                               |
| Other taxes                           | 745                             | 1,175                           | 1,208                           | 1,266                               | 1,288                               | 1,329                               |
| <b>Total taxation revenue</b>         | <b>14,165</b>                   | <b>14,585</b>                   | <b>14,330</b>                   | <b>15,347</b>                       | <b>16,130</b>                       | <b>16,967</b>                       |
| <b>Royalties</b>                      |                                 |                                 |                                 |                                     |                                     |                                     |
| Coal                                  | 4,372                           | 3,517                           | 1,643                           | 2,372                               | 2,761                               | 2,951                               |
| Petroleum <sup>2</sup>                | 454                             | 466                             | 308                             | 467                                 | 635                                 | 702                                 |
| Other royalties <sup>3</sup>          | 393                             | 549                             | 535                             | 506                                 | 507                                 | 515                                 |
| Land rents                            | 159                             | 154                             | 146                             | 172                                 | 174                                 | 176                                 |
| <b>Total royalties and land rents</b> | <b>5,378</b>                    | <b>4,686</b>                    | <b>2,631</b>                    | <b>3,517</b>                        | <b>4,077</b>                        | <b>4,345</b>                        |

Notes:

1. Numbers may not add due to rounding.
2. Includes impact of liquefied natural gas (LNG).
3. Includes base and precious metal and other mineral royalties.

The following discussion provides details of some of the key assumptions, estimates and risks associated with revenue and expenditure and, where a direct link can be established, the indicative impact on forecasts resulting from a movement in those variables.

### **Taxation revenue assumptions and revenue risks**

The rate of growth in tax revenues is dependent on a range of factors that are linked to the rate of growth in economic activity in the state. Some taxes are closely related to activity in specific sectors of the economy, whilst others are broadly related to the general rate of economic growth, employment, inflation and wages. A change in the level of economic activity, resulting from economic growth differing from forecast growth, would impact upon a broad range of taxation receipts.

#### **Wages and employment growth - payroll tax collections**

Wages and employment growth have a direct impact on payroll tax collections. The budget assumptions are for an increase in wages of 1¼% and an increase in employment of 1% in 2020-21. The composition of the payroll tax base is also important as businesses in sectors such as tourism, retail and hospitality are often outside the tax base because they are below a threshold. A one percentage point variation in either Queensland wages growth or employment would change payroll tax collections by approximately \$39 million in 2020-21.

#### **Transfer duty estimates**

Transfer duty collections in 2020-21 are expected to decrease by 11% compared with 2019-20 actuals, largely due to the weak outlook for the non-residential sector generally and for large commercial transactions.

Across the forward estimates period, annual average growth of around 3% is expected in total transfer duty.

A one percentage point variation in either the average value of property transactions or the volume of transactions would change transfer duty collections by approximately \$27 million in 2020-21.

## Royalty assumptions and revenue risks

Table C.2 below provides the 2020-21 Budget assumptions regarding coal royalties, which represent the bulk of Queensland's royalty revenue.

**Table C.2 Coal royalty assumptions**

|   | 2019-20<br>Actual | 2020-21<br>Budget | 2021-22<br>Projection | 2022-23<br>Projection | 2023-24<br>Projection |
|---|-------------------|-------------------|-----------------------|-----------------------|-----------------------|
| Tonnages – crown export <sup>1</sup> coal (Mt)  | 206               | 188               | 211                   | 220                   | 234                   |
| Exchange rate US\$ per A\$ <sup>2</sup>   | 0.67              | 0.72              | 0.72                  | 0.72                  | 0.72                  |
| <b>Year average coal prices (US\$ per tonne)<sup>3</sup></b>  |                   |                   |                       |                       |                       |
| Hard coking   | 152               | 109               | 132                   | 139                   | 140                   |
| Semi-soft   | 111               | 78                | 94                    | 101                   | 102                   |
| Thermal   | 88                | 68                | 66                    | 69                    | 70                    |
| <b>Year average oil price</b>   |                   |                   |                       |                       |                       |
| Brent (\$US per barrel) <sup>4</sup>  | 65                | 39                | 50                    | 57                    | 60                    |
| Notes:  |                   |                   |                       |                       |                       |
| 1. Excludes coal produced for domestic consumption and coal where royalties are not paid to the government, i.e. private royalties. The 2020-21 estimate for domestic coal volume is approximately 25.5 Mt and private coal is 10.8 Mt. |                   |                   |                       |                       |                       |
| 2. Year average.  |                   |                   |                       |                       |                       |
| 3. Price for highest quality coking and thermal coal. Lower quality coal can be sold below this price with indicative average prices for 2020-21 as follows: Hard coking US\$102/t and thermal US\$63/t.                                |                   |                   |                       |                       |                       |
| 4. Published Brent oil prices are lagged by one quarter to better align with royalty revenue.   |                   |                   |                       |                       |                       |

### Exchange rate and commodity prices and volumes

Estimates of mining royalties are sensitive to movements in the A\$-US\$ exchange rate and commodity prices and volumes.

Contracts for the supply of commodities are generally written in US dollars. Accordingly, a change in the exchange rate impacts on the Australian dollar price of commodities and therefore expected royalties collections.

### Potential impact on coal royalty revenue

For each one cent movement in the A\$-US\$ exchange rate, the annual impact on royalty revenue would be approximately \$37 million.

A 1% variation in export coking and thermal coal volumes would lead to a change in royalty revenue of approximately \$16 million. A 1Mt variation would lead to a change in royalty revenue of approximately \$8 million.

A 1% variation in the average price of export coal would lead to a change in royalty revenue of approximately \$26 million.

## **Parameters influencing Australian Government GST payments to Queensland**

The Queensland Budget incorporates estimates of GST revenue grants to Queensland based on Australian Government estimates of national GST collections and Queensland Treasury assumptions of Queensland's share. The estimates of collections are primarily determined by the value of national consumption subject to GST.

Since the Australian Government payments are based on the amount actually collected, it is Queensland's Budget that bears the risks of fluctuations in GST collections. As with all other tax estimates, there is a risk of lower collections than estimated if economic growth and consumption are weaker than expected.

Due to the complexities associated with the GST base, the information provided in the Australian Government Budget Papers is not sufficient to prepare indicative forecasts of the sensitivity of GST estimates to key variables.

## **Sensitivity of expenditure estimates and expenditure risks**

### **Public sector wage costs**

Salaries and wages form a large proportion of General Government Sector operating expenses. Increases in salaries and wages are negotiated through enterprise bargaining agreements.

The 2020-21 Budget and forward estimates reflect wage increases consistent with existing agreements and the government's wages policy where outcomes are yet to be finalised.

A general 1% increase in wage outcomes in one year would increase expenses by around \$262 million in that year. The impact would compound and be much larger in the later years.

### **Interest rates**

The General Government Sector has a total debt servicing cost estimated at \$1.725 billion in 2020-21. The current average duration of General Government Sector borrowing with the Queensland Treasury Corporation is 6.7 years. The majority of General Government Sector debt is held under fixed interest rates and therefore the impact of interest rate variations on debt servicing costs in 2020-21 would be relatively modest, with the impact occurring progressively across the forward estimates.

### **Actuarial estimates of superannuation and long service leave**

Liabilities for superannuation and long service leave are estimated by the State Actuary with reference to, among other things, assumed rates of investment returns, salary growth, inflation and discount rate. These liabilities are therefore subject to changes in these parameters. Similarly, the long service leave liabilities are subject to the risk that the actual rates of employee retention will vary from those assumed in the liability calculation.