THE TREASURY
Kaitohutohu Kaupapa Rawa

Pre-election Economic and Fiscal Update 2017
Medium-term Projection Assumptions

23 August 2017

The economic and fiscal forecasts, from 2016/17 to 2020/21, are detailed in the 2017 *Pre-election Economic and Fiscal Update* (PREFU). The projection period begins in 2021/22 and extends a decade to 2030/31. These post-forecast fiscal projections are based on the long-run technical and policy assumptions outlined below.

The Fiscal Strategy Model (FSM) that produces the projections can be found on the Treasury website at www.treasury.govt.nz/government/fiscalstrategy/model

Economic projections and assumptions

Table 1 – Summary of economic projections[1]

Year ending 30 June	2017	2018	2019	2020	2021	2022	2023	2024	2025	...	2031
			Forecasts					Projections			
Labour force	5.2	2.6	1.8	1.3	1.0	0.8	0.8	0.8	0.8	...	0.6
Unemployment rate[2]	5.0	4.9	4.6	4.4	4.3	4.3	4.3	4.3	4.3	...	4.3
Average weekly hours worked	33.7	33.7	33.7	33.7	33.6	33.6	33.6	33.6	33.6	...	33.6
Average weekly hours paid	33.1	32.8	32.8	32.8	32.8	32.7	32.7	32.7	32.7	...	32.7
Labour productivity growth[3]	(2.4)	0.4	1.7	1.3	1.3	1.5	1.5	1.5	1.5	...	1.5
Real GDP[4]	2.8	3.2	3.7	2.8	2.3	2.2	2.3	2.3	2.3	...	2.1
Nominal GDP[5]	6.2	5.1	4.9	4.7	4.1	4.3	4.4	4.4	4.4	...	4.1
Consumers Price Index (CPI) (annual percentage change)	1.7	1.3	1.9	2.1	2.1	2.0	2.0	2.0	2.0	...	2.0
Government 10-year bonds (average percentage rate)	2.9	2.9	3.3	3.8	4.2	4.4	4.6	4.8	5.0	...	5.3
Nominal average hourly wage	1.5	2.3	2.9	2.7	2.7	3.5	3.5	3.5	3.5	...	3.5

Notes:

1 Annual average percentage change unless otherwise stated

2 Total unemployed as a percentage of the labour force (annual average)

3 Hours worked measure

4 Production measure, 2009/10 base

5 Expenditure measure

Sources: The Treasury, Statistics New Zealand

Forecasts attempt to predict future outcomes by using wide-ranging resources, comprehensive modelling and expert opinion and knowledge. Projections, which arise from and are heavily influenced by their forecast base, are potential paths. These paths are based on trend or long-run averages for growth rates or levels of key economic, fiscal and demographic variables, and generally assume no policy changes beyond those built into their forecast base.

While most economic variables are at, or very close to, their assumed long-run trend growth rates or levels by the end of the forecast, a few require transition over the early years of projections. In these cases, the annual convergence rate assumed is based on recent actual and forecast performance.

In the 2017 PREFU projection, labour productivity annual growth and the government 10-year bond rate are not at their long-run assumed value by 2021/22, which is the first projected year (although, for labour productivity growth, this is not reflected in Table 1 due to rounding). In the projections, labour productivity growth stabilises by 2022/23 and the government bond rate stabilises by 2026/27.

Projected real GDP grows from its forecast base via the annual combined change in the size of the employed labour force, the average hours they work and their productivity. The average hours worked grows in line with the average weekly hours paid. By 2022/23, the unemployment rate, average hours worked and labour productivity annual growth have all reached their assumed stable levels or rates. Beyond this point, annual real GDP growth is derived from growth in the labour force for that year coupled with the long-run annual labour productivity growth assumption of 1.5%.

Nominal GDP is projected using a growth rate produced by combining those of real GDP and CPI. The stable projection assumption for annual growth in CPI is 2%, which is the midpoint of the 1% to 3% target in the Reserve Bank's Policy Targets Agreement. Nominal GDP growth is used to project many fiscal variables, including tax revenue. Also, nominal GDP is the denominator for most major fiscal indicators, such as net core Crown debt to GDP.

Fiscal projections and assumptions

Table 2 – Summary of fiscal projections, as percentages of nominal GDP

Year ended 30 June	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	Forecasts					Projections									
Core Crown revenue	30.4	29.9	29.6	29.8	29.9	30.0	30.3	30.4	30.5	30.7	30.8	31.0	31.0	31.1	31.1
Core Crown expenses	28.6	28.7	28.2	27.7	27.7	27.3	27.4	27.4	27.4	27.4	27.5	27.6	27.6	27.6	27.7
Core Crown residual cash	0.6	-0.5	-0.5	0.6	0.3	1.3	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.4	0.1
Total Crown revenue	38.8	38.1	37.8	37.9	37.9	38.2	38.4	38.5	38.6	38.8	39.0	39.1	39.2	39.2	39.3
Total Crown expenses	37.3	37.0	36.5	35.9	35.8	35.6	35.6	35.6	35.6	35.7	35.8	35.9	35.9	35.9	35.9
Total Crown OBEGAL[1]	1.4	1.0	1.2	1.9	2.0	2.4	2.6	2.7	2.9	3.0	3.1	3.1	3.2	3.2	3.2
Total Crown operating balance[2]	4.3	2.0	2.2	3.0	3.1	3.4	3.7	3.9	4.0	4.2	4.3	4.4	4.5	4.5	4.6
Core Crown GSID[3]	34.6	31.7	30.4	29.0	26.2	24.4	23.0	21.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Net core Crown debt[4]	22.5	22.0	21.5	20.0	18.8	16.7	14.9	13.2	11.6	10.1	8.7	7.5	6.5	5.8	5.4
Total Crown net worth	42.7	42.6	42.8	43.8	45.2	46.8	48.5	50.3	52.2	54.3	56.4	58.5	60.6	62.7	64.8
Net worth attributable to the Crown[5]	40.5	40.5	40.9	42.0	43.5	45.0	46.8	48.7	50.6	52.7	54.9	57.0	59.2	61.3	63.4

Notes:
1 Operating balance before gains/(losses)
2 Excludes minority interests
3 Gross sovereign-issued debt (floor set to 20% of GDP)
4 Excludes financial assets of the NZS Fund and core Crown advances
5 Excludes assets and liabilities belonging to minority interests
Source: The Treasury

Fiscal projections have changed from those published as part of the 2017 *Budget Economic and Fiscal Update* (BEFU) and this reflects changes in the economic and fiscal forecast bases of the projections.

Table 3 – Summary of fiscal assumptions

Tax revenue	Linked to growth in nominal GDP. All tax categories change at a rate of 0.05 percentage points of GDP per year from their end-of-forecast percentage of GDP, either upward or downward, until they reach a long-run stable percentage of GDP. These stable assumptions are based on historical data, taking into account tax rate and policy changes that could affect them. • Source deductions (mainly PAYE tax on salary and wages) track towards a stable percentage to nominal GDP of 11.0%. In the PREFU 2017 projections, the achievement of a stable percentage of 11.0% of GDP occurs outside the projection horizon, with source deductions to GDP reaching 10.8% in 2030/31. • The stable percentage for corporate tax (dominated by company tax) is 4.2%. The corporate tax to GDP ratio in 2030/31 is 4.3% and is projected to reduce to 4.2% outside the projection horizon. • The assumption for GST is 7.4%, which is achieved inside the projection horizon. • Hypothecated transport taxes, used to fund most transport-related operating and capital expenditure, stabilise at 1.3% of GDP. • All remaining tax types are aggregated into the other taxes category, which uses a long-run stable assumption of 4.4% of GDP. The elimination from core Crown tax to total Crown tax applies a long-run stable assumption of 0.3% of GDP.
New Zealand Superannuation (NZS)	Demographically adjusted and linked to net wage growth, via the "wage floor". The latter refers to the net (after-tax) weekly NZS rate for a couple as set in legislation to lie between 65% and 72.5% of net average weekly earnings. NZS eligibility age increases to 67 and the residency requirement increases to 20 years.
Other benefits	Demographically adjusted and linked to inflation.
Health and education	Held constant at the end-of-forecast values, because their growth is assumed to come from a share of the projected operating allowance annual increment.
Other expenditure	Held constant at the end-of-forecast values, because their growth is assumed to come from a share of the projected operating allowance annual increment.
Finance costs	A function of debt levels and interest rates.
Operating Allowance	$2 billion in 2021/22. Operating allowances continue to grow at 4% per budget from this value in later projected years.
Capital Allowance	$4 billion in 2021/22. Capital allowances continue to grow at 20% per budget from this value in later projected years.
NZS Fund	Contributions to the Fund suspended until 2019/20. Contributions begin again in 2020/21, at a level consistent with the New Zealand Superannuation and Retirement Income Act 2001. The assumed resumption year is determined by the Government's policy of restarting capital contributions once net core Crown debt is no higher than 20% of nominal GDP.
Gross sovereign issued debt	Gross sovereign-issued debt (GSID) stabilises at 20% of nominal GDP, reflecting the policy to maintain core Crown borrowings at around this percentage of GDP once debt has been reduced from current levels.