TE TAI ŌHANGA
THE TREASURY

CPI inflation assumption review for 30 June 2021

Assumptions for Accounting Valuations

5 July 2021

New Zealand Government

The Treasury URL at 5 July 2021 for this document is

https://www.treasury.govt.nz/information-and-services/state-sector-leadership/guidance/reporting-financial/discount-rates/discount-rates-and-cpi-assumptions-accounting-valuation-purposes

CPI inflation assumption review

Background

A number of government reporting entities use discounted cash flow models to value various assets and liabilities for financial reporting. To ensure consistency and efficiency across accounting valuations, the Treasury produce a central table of risk-free discount rates and CPI assumptions that must be used for reporting to the Crown for consolidation in the Financial Statements of the Government.

The methodology used to determine these CPI assumptions is set out in our report *Methodology for Risk-free Discount Rates and CPI Assumptions for Accounting and Valuation Purposes – July 2019*, and is as follows:

- Forecast inflation: Consider the forecasts in the short term (4 years) and in the medium term use the RBNZ mid-range target of 2.0% pa.
- Breakeven inflation: Determine the rate of breakeven inflation through to the maturity date of the last inflation-indexed bond, which is currently 2040, with an additional inflation-indexed price adjustment of 0.30% pa.
- Give a 50% weighting to each of the forecast inflation and (adjusted) breakeven inflation.

The forecast inflation and whether to vary from the flat breakeven inflation will be determined every six months (30 June and 31 December).

At 30 June 2020 the expectations for inflation in the short-term were lower than the medium-term assumption of 2.0% pa, largely due to the economic uncertainty resulting from COVID-19. This remained the case at 31 December 2020.

The purpose of this paper is to review the CPI inflation assumption:

- for use at 30 June 2021 and for the six months commencing 1 July 2021, and
- to decide whether to vary from the flat breakeven inflation assumption.

Forecast Inflation

The readily available CPI inflation forecasts are summarised in the following table. These forecasts are published at different times of the year and for different projection periods.

Table 1: Forecasts of CPI inflation

Source (date of release)	Year ending	2022 (% pa)	2023 (% pa)	2024 (% pa)	2025 (% pa)
NZIER Consensus Forecasts (June 2021)	June	1.9	2.0	2.2	-
NZIER Quarterly Predictions (May 2021)	March	1.6	1.7	2.0	2.0
Treasury (May 2021, BEFU)	June	1.7	1.8	2.0	2.1
RBNZ inflation expectations survey (May 2021)	June	1.9	2.1	-	-
RBNZ Monetary Policy Statement (May 2021)	June	1.4	2.0	2.2	-

The first forecast in the above table is the consensus forecast produced by the New Zealand Institute of Economic Research (NZIER). The figures quoted are an average of the views of different selections of participants.

The above table shows that expectations for inflation in the short term are largely in line with the medium-term assumption of 2.0% pa. The forecasts are between 1.4% and 1.9% for the first year, between 1.7% and 2.1% for the second year, 2.0% and 2.2% for the third year, and between 2.0% and 2.1% for the fourth year.

Selecting an appropriate assumption is highly subjective and actual CPI is likely to differ from what is assumed, especially in such a volatile economic environment. For determining the forecast inflation assumption, we typically put the most weight on the consensus forecasts.

Given none of the short term inflation forecasts deviate significantly from the medium-term assumption of 2.0% pa, we recommend the short-term forecast inflation assumption to be constant at 2.0% pa.

Under the current methodology, 50% of the forecast inflation will be included in the overall CPI inflation assumption, as it is weighted 50/50 with the adjusted breakeven inflation.

The selected short-term forecast inflation assumptions are shown in the following table, along with the previous assumption. These assumptions will apply from 30 June 2021 rates and will be reassessed in December 2021, in accordance with the published methodology.

Table 2: Forecast inflation chosen assumptions (% per annum)

	Year 1	Year 2	Year 3	Year 4
Previous assumption	1.1	1.6	1.9	2.0
Selected assumption	2.0	2.0	2.0	2.0

Breakeven Inflation

The methodology allows the assumed breakeven inflation to not be a flat assumption if the data indicates a slope is more appropriate than a flat assumption. The incremental breakeven inflation implied by the index-linked bonds at 30 June 2021 were as follows:

Table 3: Breakeven inflation at 30 June 2021

Period	2021 - 2025	2025 - 2030	2030 - 2035	2035 - 2040
Term	4 years	5 years	5 years	5 years
Break-even inflation	1.63%	1.46%	1.47%	0.96%

The breakeven decreases over the period to 2040, resulting in a discontinuity when matched to the long term inflation of 2.0% pa. At 31 May 2021, breakeven inflation showed an increasing and then decreasing pattern. There is no particular pattern that persists from month to month. Hence, we have adopted the flat assumption of 1.76% pa (1.46% pa with a 0.30% pa inflation-indexed price adjustment). This is based on a weighted average of the four inflation-linked bonds on issue, as all four bonds have at least $4 billion on issue.

Conclusion

The resulting inflation rates until 2041 are shown in the following table and are calculated as an average of the forecast inflation and the adjusted breakeven inflation (breakeven plus the 0.3% pa inflation-indexed price adjustment).

Table 4: Resulting CPI inflation (% per annum)

	Year 1	Year 2	Year 3	Year 4	Year 5+
Forecast inflation	2.0	2.0	2.0	2.0	2.0
Adjusted 30 June breakeven inflation	1.76	1.76	1.76	1.76	1.76
Resulting CPI (50/50 weighted)	1.88	1.88	1.88	1.88	1.88