



The Commerce Commission's treatment of inflation when setting EDBs' allowed revenues



Discussion of issues | 27 April 2021

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economics

The Commission's current approach



01

The Commission sets EDBs' allowed returns in two steps



Step 1

Set a real allowed return on capital to be earned within each regulatory period – the 'cash' return

- Determine nominal return on capital allowance (i.e., allowed nominal WACC x forecast RAB).
- Subtract forecast inflationary gain in the RAB from nominal return on capital allowance (i.e., forecast inflation x forecast RAB). Intended to prevent compensating twice for inflation (Step 2).
- Step 1 provides EDBs a real cash return on equity and real cash return on debt in each regulatory period.

Step 2

Index RAB using actual inflation

- Opening RAB for each period established by rolling forward RAB using outturn inflation.
- Step 2 provides compensation for inflation – to preserve the allowed returns to investors provided in Step 1.

It is important to 'take out' in Step 1 what we expect to 'put back' in Step 2: NPV=0 principle.

Two concerns with the Commission's current approach

Concern 1

The inflation forecasting problem

- If the Commission's inflation forecast is a biased estimate of investors' true expectation of future inflation, then EDBs will not receive the efficient real return on equity required in order to attract equity capital.
- **There is a problem if we do not 'take out' in Step 1 what we expect to 'put back' in Step 2.**
- The inflation forecasting problem arises when the Commission adopts a forecast of inflation **that differs from investors' inflation expectations (and, therefore, what is expected to be 'put back in')**.

Concern 2

The debt compensation problem

- EDBs issue nominal debt and are contractually required to pay nominal interest costs, but the regulatory framework delivers only a real return on debt capital in each regulatory period.
- **The efficient cost of debt reflects expected inflation** (part of the nominal interest cost) **but the regulatory allowance reflects actual inflation** (via RAB indexation)
- The mismatch between the efficient cost of debt and the regulatory allowance flows through to EDBs and customers.

These are two distinct problems, each requiring a separate solution.

Concern 1: The inflation forecasting problem



02

The Commission's approach to forecasting inflation



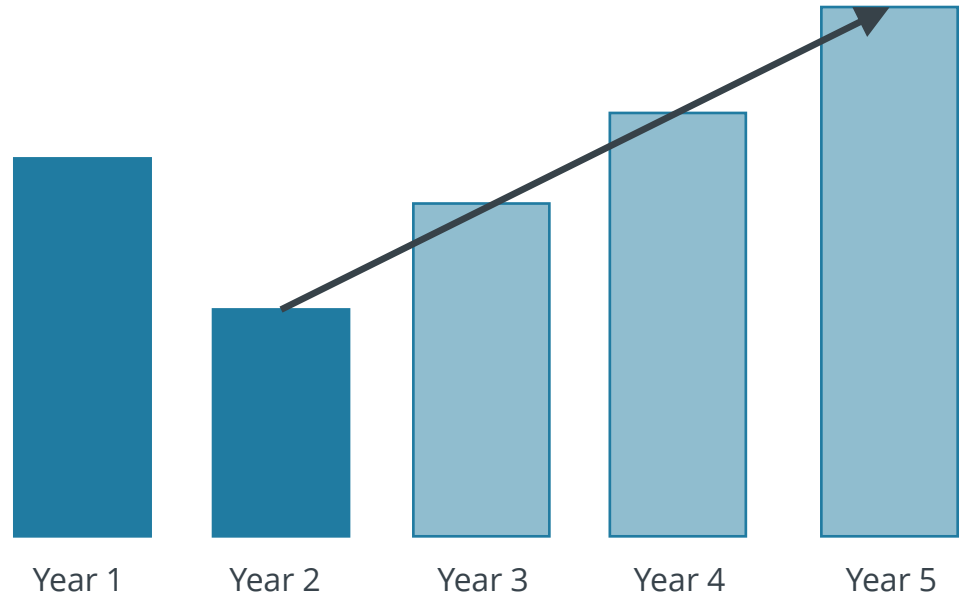
The Commission forecasts inflation over a 5-year regulatory period by:

- Adopting the RBNZ's 1-year ahead and 2-year ahead forecasts for years 1 and 2.
- *Assuming* inflation will be 2.0% in year 5—regardless of prevailing economic conditions.
- Interpolating linearly between years 2 and 5.

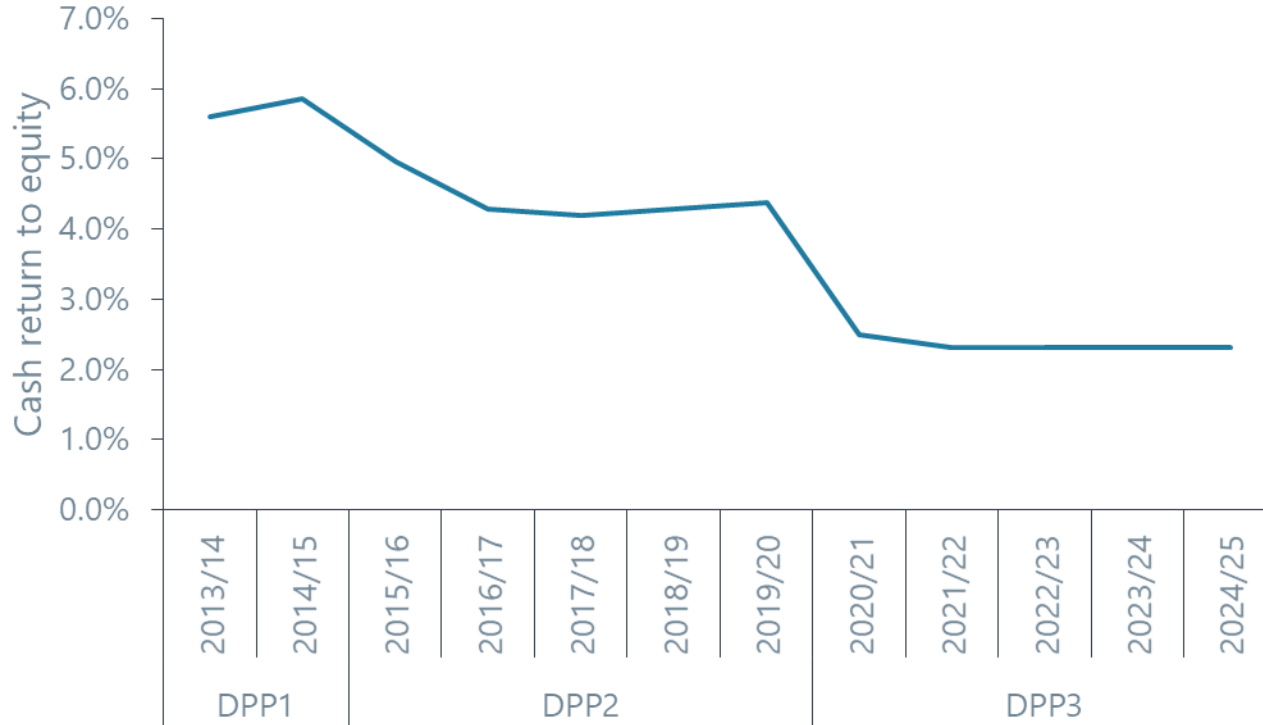
RBNZ's 1-year ahead forecast

RBNZ's 2-year ahead forecast

2.0% - midpoint of RBNZ's inflation target range



The cash return on equity allowance has never been lower



- The nominal return on equity allowance has declined over time as interest rates have fallen.
- The Commission's inflation forecasts have remained consistently high (~2.0%).
- Consequently, the cash (real) return on equity allowance provided in each regulatory period has dropped to the lowest level since DPP1.
- Is it plausible that investors' inflation expectations have remained stable, while the real return required by equity investors has dropped so significantly?

This issue is symmetric and cannot be hedged by EDBs or consumers



This issue is symmetric...



- If forecast inflation is too high, EDBs are under-compensated and **customers pay less than the efficient cost**.
- If forecast inflation is too low, EDBs are over-compensated and **customers pay more than the efficient cost**.

...and it cannot be hedged



- Inflation swaps (even if available in sufficient volumes) pay off the difference between the **market expectation** and **actual inflation**.
- But the problem here is that there is a difference between the **market expectation** and the **regulatory forecast**. That difference cannot be hedged by EDBs or consumers.
- It is not feasible for consumers to do anything to hedge the risk that they might overpay (relative to the efficient cost) when the Commission's approach over-states expected inflation.

Concern 2: The debt compensation problem



03

Concern 2: The debt compensation problem



The issue



- EDBs issue nominal debt and are contractually required to pay nominal interest costs, but the regulatory framework delivers only a real return on debt capital in each regulatory period.
- EDBs cannot match their cost of debt to the real regulatory allowance by issuing inflation-indexed debt—because no market for inflation-indexed corporate debt exists in New Zealand.
- The mismatch between the efficient cost of debt and the regulatory allowance flows through to EDBs and customers.

Consequences for EDBs



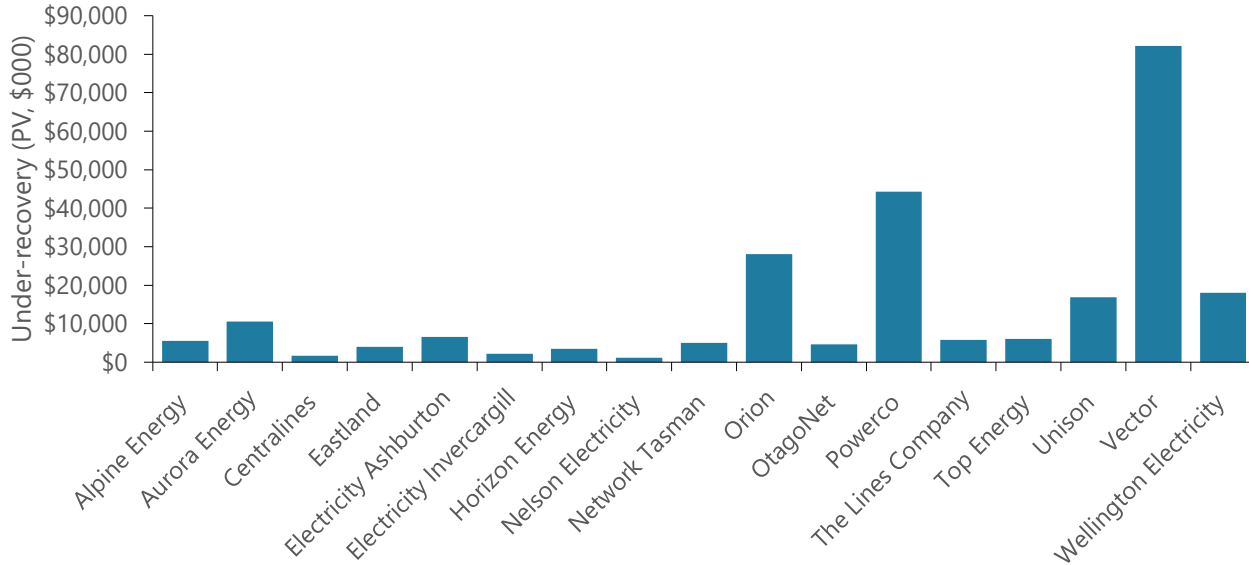
- EDBs will under-recover the efficient real return on equity if the Commission's inflation forecast $>$ actual inflation—because actual RAB growth will be less than the forecast inflationary gain deducted when the Commission sets the return on capital allowance.
- And vice versa.

Consequences for consumers



- Consumers will pay less than the efficient cost of delivering regulated services if Commission's inflation forecast $>$ actual inflation.
- And vice versa.

The under-recovery incurred by EDBs as a consequence of the debt compensation problem has been material



- The efficient equity returns under-recovered by EDBs since 2013-14 as a consequence of the debt compensation problem totals nearly \$250 million.
- This implies that consumers have underpaid the efficient cost of delivering regulated services since 2013-14.
- Consumers could overpay (relative to the efficient cost) in future if actual inflation turns out higher than forecast by the Commission.

This issue is symmetric and cannot be hedged by EDBs or consumers



This issue is symmetric...



- The Commission's approach is designed to deliver the efficient real return on debt.
- But the efficient firm issues nominal debt and is contractually bound to pay nominal interest.
- So there is a mismatch if actual inflation (which the EDB receives via RAB indexation) differs from expected inflation (which the EDB pays as part of the nominal interest bill).
- **This mismatch can go in either direction.**

...and it cannot be hedged



- Nominal debt is the only feasible option available to EDBs.
- There is no instrument that pays off the difference between the **average market expectation of inflation over the previous 5 years** (which the benchmark firm pays in its nominal interest bill) and **actual inflation over the subsequent 5 years** (which the EDB receives via RAB indexation).
- It is also infeasible for consumers to hedge the risk that they might overpay (relative to the efficient cost) in circumstances where the mismatch goes against them.

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