# Regulatory inflation and return on debt allowances

Note prepared for New Zealand Commerce Commission

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17 May 2021

## Overview

Representatives from the Commerce Commission met with Chairs from some of the EDBs and their advisers on 27 April 2021.

During the discussion, one issue that was raised was the inter-relationship between the regulatory approach to inflation and the allowance for the return on debt. This was referred to as the "debt compensation problem."

This note fleshes out the nature of the debt compensation problem and addresses a number of questions raised by the Commission during our meeting last week.

## Background and context – promoting the objectives of the regulatory regime

The central purpose of Part 4 of the Act is to promote the long-term benefits of consumers, by providing EDBs with the appropriate incentive to innovate and invest, to improve efficiency, and to share efficiency gains with consumers. Part 4 recognises that the long-term benefits of consumers are best achieved by promoting outcomes that are consistent with those produced in competitive markets.[1]

It is broadly accepted that the objectives of s 52A are best achieved by seeking to replicate the outcomes of a workably competitive market.[2] In this regard, the High Court has considered the nature of workable competition in relation to Part 4 of the Act and concluded as follows:

> *Prices in workably competitive markets may never exactly reflect efficient costs, including a normal rate of return.*
>
> *But the tendencies in workably competitive markets are towards such returns and prices. By themselves, these tendencies will also lead towards incentives for efficient investment (investment that is reasonably expected to earn at least a normal rate of return) and innovation. That is to say, the prices that tend to be generated in workably competitive markets will provide incentives for efficient investment and for innovation.*
>
> *The same tendencies towards prices based on efficient costs and reasonable rates of return will lead also to improved efficiency, provision of services reflecting consumer demands, sharing of the benefits of efficiency gains with consumers, and limited ability to extract excessive profits.* [3]

[1] Commerce Act, s 52A.
[2] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC [11 December 2013], paragraph 233.
[3] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC [11 December 2013], paragraphs 19-21.

That is, the objectives of Part 4 of the Act are best promoted by setting regulatory allowances (and consequently consumer prices) in a manner that best reflects efficient costs and reasonable rates of return.

Within this framework, the role of the regulator is conceptually straightforward. The regulator begins by setting out how it considers an efficient benchmark firm would behave. The regulator then determines what it considers to be the efficient level of costs and the reasonable rate of return that would apply to the efficient benchmark firm. And, finally, the regulator sets the regulatory allowance to reflect its estimate of the efficient costs and a reasonable rate of return. The long-term interests of consumers are best achieved by matching the regulatory allowance to the Commission's estimate of the efficient cost.

In relation to the allowed return on debt, the Commission's 2017 Input Methodologies, the Commission's estimates of the return on debt, and the treatment of interest tax deductions in the Commission's models are based on the efficient benchmark firm issuing nominal debt. There is no suggestion that it would be efficient, or even possible, for a firm to issue debt that was linked to New Zealand inflation.

Thus, the Commission estimates the cost of debt for the efficient benchmark firm as being the cost of servicing nominal debt. However, the regulatory allowance does not reflect the Commission's estimate of the efficient cost of debt. This mis-match between the Commission's estimate of the efficient cost of debt, and the Commission's regulatory allowance for the cost of debt is the essence of the "debt compensation" issue discussed in the recent workshop.

## A brief summary of the debt compensation problem

The basic nature of the debt compensation problem is that there is a mis-match between:

a. The cost that would be incurred by the benchmark efficient entity servicing a prudent and efficient debt portfolio (as estimated by the Commission); and

b. The regulatory allowance for the return on debt.

In particular:

a. A prudent and efficient benchmark firm would issue nominal debt, which creates a contractual obligation to pay nominal interest each year. The nominal interest rate reflects:

    a. The real rate of return that lenders require; plus

    b. The rate of inflation that lenders expect; whereas

b. Under the current regulatory approach, the allowance for the return on debt is set equal to:

    a. The real rate of return that lenders require; plus

    b. Observed outturn inflation in each year of the regulatory period.[4]

Thus, to the extent that outturn inflation differs from expected inflation, there will be a difference between the regulatory allowance and the prudent and efficient cost incurred by the benchmark firm.

This differential is symmetric:

a. In some cases, actual inflation will exceed expectations, the benchmark firm is over-compensated and consumers will pay more than the efficient cost of debt; and

[4] In this analysis we assume that the Commission and the market both share the same expectations about future inflation. That is, this note assumes away any "inflation forecasting problem" such that the focus is squarely on the debt compensation problem.

b. In other cases, the reverse will occur.

## A framework for consideration

### The regulatory regime should compensate for the efficient costs that would be incurred by a prudent and efficient benchmark firm

In our view, analysis of the debt compensation problem is straightforward if one adopts the principle that the long-term interests of consumers are best promoted by compensating the firm for the efficient costs that would be incurred by a prudent and efficient benchmark firm; as discussed above.

The corollary of that principle is that consumers should only pay the efficient costs that would be incurred by a prudent and efficient benchmark firm.

Application of that principle to the debt compensation problem produces a straightforward analysis:

a. The Commission would begin by determining what it considers to be the debt management strategy that would be employed by a prudent and efficient benchmark firm.

b. The Commission would then estimate the cost that would be incurred by the benchmark firm employing that prudent and efficient strategy; and

c. The regulatory compensation would then be set to match the prudent and efficient cost.

In our view, this approach is consistent with the long-term interests of consumers and with the NPV=0 principle. Setting the regulatory allowance equal to the efficient cost preserves the incentives for efficient investment and ensures that consumers pay only the efficient cost of the service that is provided to them.

In the case at hand, it seems clear that the prudent and efficient debt strategy involves the benchmark firm issuing nominal debt. This is because there is no feasible market for inflation-indexed corporate debt in New Zealand.[5] That is, a debt management approach cannot be considered to be the prudent and efficient approach if it is impossible to implement.

Thus, the nature of the debt compensation problem is that:

a. The prudent and efficient cost of debt involves the payment of nominal interest each year; but

b. The regulatory allowance is for something different – sometimes too high and sometimes too low.

## Who bears the costs of the mis-match?

### Quantum of under-compensation over recent years

The presentation on 27 April included the figure below, which quantifies the extent of the difference between:

a. The nominal interest payments that would be made by the benchmark efficient firm (using nominal interest rates determined by the Commission); and

b. The regulatory allowance for the return on debt.

The figure shows that, over the period since 2013-14, the total under-compensation across the industry is approximately $250 million. This raises the question of who bears the costs and benefits of this mis-match.

[5] That is, there is no market for corporate debt that is linked to the rate of inflation in the New Zealand economy.

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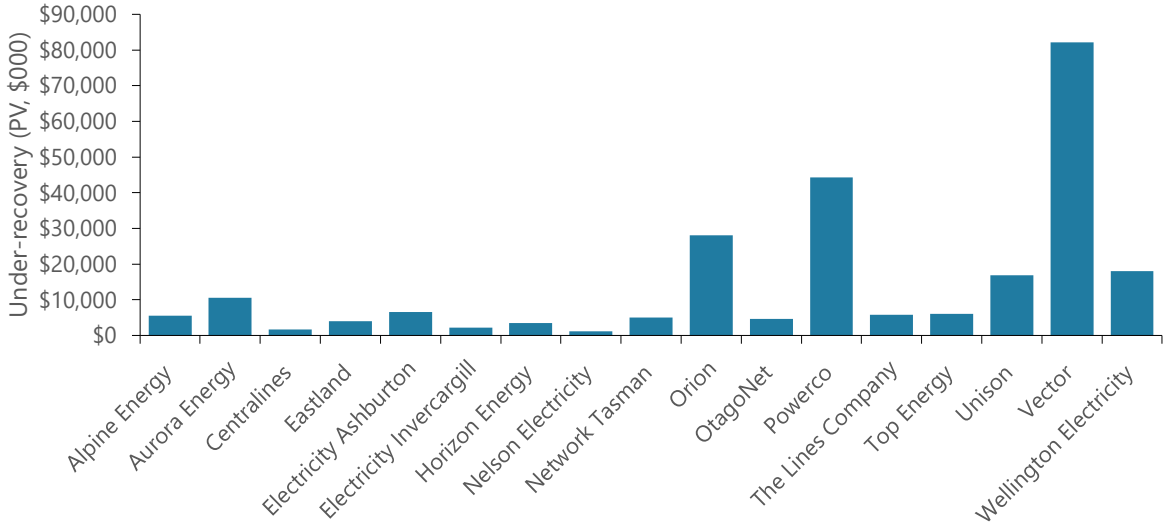


## No gain or loss for debt holders – they simply receive the compensation that the Commission deems to be fair

It is important to note that, in the absence of some sort of default, debt holders are always appropriately compensated. The benchmark efficient firm issues nominal debt (at the rate deemed to be appropriate by the Commission in its regulatory decision) and meets its contractual obligation to pay its nominal interest bill each year. The benchmark debt holders receive the nominal interest payments that were allowed by the Commission and to which they are contractually entitled – no more and no less. That is, the benchmark debt holders are just made whole – their investment is NPV=0 in the sense that they receive just the return that they required (and which the Commission allowed), and which they inserted into the loan agreement.

The under-compensation in the figure above arises because actual inflation (which is part of the regulatory allowance) turned out to be lower than expected inflation (which is built into the efficient [nominal] cost). During the presentation on 27 April, this raised the question of whether this might amount to some sort of windfall gain for debt holders.

There are two scenarios to consider here:

a. The first scenario is one in which the debt holders are assumed to issue inflation-indexed debt. In this case, the debt holders would require compensation for a real rate of interest plus actual inflation. If they, in fact, received compensation for (higher) expected inflation, that would indeed amount to a windfall gain. But debt holders will never receive anything other than the compensation that they bargained for. Thus, if debt holders issue inflation-indexed debt, they will receive the real return plus actual inflation – precisely in accordance with the contractual obligations of each party.

b. The second scenario is one in which debt holders are assumed to issue nominal debt. In this case, the debt holders bear the risk that inflation might turn out to be lower or higher than expected and they build that into the rate of nominal interest that they require. Again, the debt holders then receive precisely what they bargained for – payments in accordance with the contractual obligations of each party.

In both cases, the debt holders receive compensation that is just in line with what they require given the risk that they bear. By definition, these arrangements are NPV=0 and the debt holders are just made whole.

It would be inconsistent and inappropriate to conclude that there is some form of windfall gain because the compensation paid on nominal debt (which reflects the return that is required for the risk

of issuing nominal debt) turns out to be greater than the return that would be required on inflation-indexed debt.

That is, it would be inappropriate to conclude that issuers of nominal debt (who bear the risk of issuing nominal debt) would not require the contracted return on nominal det, but would instead be happy to receive the return that would have been paid to issuers of inflation-protected debt (which reflects the risk of issuing inflation-protected debt).

Such inconsistent comparisons can be avoided by following the framework and principles set out above. Once the Commission has made a determination about the prudent and efficient debt management approach, the regulatory allowance should simply match the costs that would be incurred under that approach.

In the case at hand, debt is issued in nominal terms. The debt holders bear the risk of issuing nominal debt and receive a return in accordance with that risk – a return in accordance with the contractual obligations of each party. However, since 2013-14, there has been a shortfall in the regulatory compensation required – the regulatory allowance has not been sufficient to meet those contractual obligations. This shortfall falls on the equity holders, who receive insufficient regulatory compensation to meet the contractual debt requirements that were deemed to be prudent and efficient in the Commission's regulatory determination.

Thus, since 2013-14:

a. Debt holders have just been made whole, receiving just those payments to which they are contractually required; and

b. There has been a wealth transfer of $250 million from equity holders to consumers – consumer payments have been insufficient to meet the contractually required interest payments by $250 million.

### Impact on consumers

In its 2016 IM review decision, the Commission was not persuaded that the debt compensation problem was sufficiently material to warrant a change of approach. The cumulative losses to EDBs over the most recent regulatory period demonstrate that the effect of the debt compensation problem is material.

Under the Commission's approach:

- EDBs will incur losses in some regulatory periods (i.e., when actual inflation turns out to be lower than the Commission's estimate of expected inflation). It would be unreasonable for the Commission to consider that EDBs should simply absorb these losses because they may have more financial capacity to do so than individual consumers may have to pay the efficient cost of regulated services; and

- consumers will incur losses (by paying more than the efficient amount for regulated services) in other regulatory periods (i.e., when actual inflation turns out to be higher than the Commission's estimate of expected inflation).

The Commission's rationale for not setting a nominal return on debt allowance appears to be underpinned by an assumption that unders and overs would likely cancel out over time, or that any variances over time would be immaterial.

However, our view is that the objectives of Part 4 of the Act are best served by setting the regulatory allowance to match the Commission's estimate of the efficient cost in *every* regulatory period, rather than by having 'unders' for some regulatory periods and 'overs' for others. This is because:

- Neither EDBs nor consumers can manage or mitigate the unders and overs that arise in any given year, or over any given regulatory period. Consumers and EDBs alike are exposed to

losses and gains under the Commission's approach—the two parties are simply on opposite sides of the same risk.

- There is no guarantee under the Commission's approach that the unders and overs will even out over time. Such an outcome would occur only by pure chance. Therefore, the assumption that gains and losses will cancel out over time is simply that—an assumption. Moreover, it is an unnecessary assumption, because it is possible for the Commission to alter its regulatory approach so that *neither* consumers *nor* EDBs are exposed to unders and overs in any period. This could be achieved by ensuring that EDBs are allowed to recover their efficient costs *in every regulatory period*. If the Commission does that, it would simultaneously ensure that consumers pay efficient prices *in every regulatory period*.
- Any evening out of unders and overs is likely to occur only over the long-run. This is because inflation can remain persistently low, or persistently high, for prolonged periods of time—as it has over the last decade. This means that some generations of consumers may pay less than the efficient price for extended periods of time, and other generations of consumers may pay more than the efficient price for extended periods of time. That is, consumers may face long cycles of under/over-payment of the efficient cost of delivering regulated services, which raises questions of intergenerational equity.

In summary, the principle that the long-term interests of consumers are best promoted by setting the regulatory allowance equal to the efficient costs applies to *every* regulatory period and *every* generation of consumers. That is, the benefits of competitive outcomes that are identified in s 52A of the Act are best achieved by *always* seeking to replicate competitive outcomes rather than allowing (potentially long) cycles of over- and under-compensation.

## An additional timing issue

We also note that a timing issue remains even if the regulatory allowance matches the Commission's estimate of the efficient cost of debt – if part of the regulatory allowance is provided via RAB indexation. This issue arises because:

- The interest on nominal debt must be paid in full during each regulatory year; whereas
- Part of the regulatory allowance is provided via RAB indexation, leaving equity holders to fund the shortfall.

By way of example, suppose the Commission estimates the cost of debt to be 4.2% p.a. and forecasts inflation to be 2% p.a. In this case, the cash regulatory allowance each year will be sufficient to pay a return to debt holders of 2.2%, with the other 2% provided via RAB indexation. The equity holders must provide the shortfall of 2%, which reduces their cash return by 3% (because there are 50% more debt holder than equity holders at a 60/40 capital structure). This materially curtails the ability of the regulated firm to pay any distributions.

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