

Comments on the Commerce Commission's Approach to Estimating the Cost of Capital

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Report to
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Blenheim

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Qualifications

This report was written by Edward A Hudson, Managing Director, *e-dec* Ltd. Dr Hudson has a Ph.D. in Economics from Harvard University. Dr Hudson has taught economics and management at the John F Kennedy School of Government, Harvard University, at the Graduate School of Business Administration, Northeastern University and at Victoria University of Wellington. Dr Hudson has more than 15 years experience in strategy and public policy consulting in the United States and 20 years experience in economic, strategy, policy and management consulting in New Zealand. Dr Hudson has been a partner at KPMG in Wellington and Deputy Chairman of the Commerce Commission. He has advised a wide range of public sector, business and non-profit sector clients on strategy, regulatory, investment, governance and management issues.

Estimating the Cost of Capital

This report comments on the Commerce Commission's revised draft guidelines - The Commerce Commission's Approach to Estimating the Cost of Capital, 19 June 2009.

Developing procedures to estimate the cost of capital should start by asking: what is the purpose of estimating the cost of capital? This follows the best practice approach of starting with the purpose and then selecting the tool the best meets that need.

The problem being tackled is to restrain lines businesses from using their market power to earn excess profits. The purpose of estimating the return on capital is to monitor and if need be regulate the rate of return earned by lines businesses.

Restraining profits does not mean eliminating profits. The regulator has the power to eliminate profits and, from an economic point of view, could do so since existing infrastructure assets are irretrievable and will continue to provide service regardless of the profits earned. Such an approach, though, would destroy the incentive for new investment. The system would at best remain static. Customer demands would soon exceed the capacity of the system and service levels would deteriorate. If this is a

problem, and most people would see this as a problem, then regulated businesses must be given the incentive to invest.

The Crown is well aware of the need for investment. The Crown released on 7 August 2006 a Government Policy Statement, pursuant to s26 of the Commerce Act. This Statement spoke of the need to incentivise investment in infrastructure industries and stated the need for “. . . regulated rates of return being commercially realistic . . .”.

The regulator cannot force investment. All the regulator can do is to provide sufficient incentives that lines companies willingly carry out the desired level of investment. The only way to provide this incentive is to allow a reasonable rate of return on investment. The revenue from the investment should cover costs, including interest on debt, and leave a reasonable profit. Therefore, the requirement is for a reasonable rate of profit or return on equity (ROE).

A reasonable rate of return should be concerned simply with motivating the owners of a lines business to undertake investment in the business rather than putting their equity to some other use. That other use might be returning earnings to the owners (dividends or a capital distribution), it might be leaving new equity in the hands of the owners rather than asking them to inject it into the business, or it might be to invest in an unregulated project or business. The return on equity that satisfies this requirement is the opportunity cost of equity. This opportunity cost is the highest expected return that could be earned by the owners of the business from other uses of their equity.

Opportunity cost of equity is the correct concept for the regulated rate of return. Allowing this rate of return will provide incentive for new investment while preventing profits in excess of this level needed for the long term well-being of customers.

Commerce Commission view

This view of the rate of return is somewhat different from that of the Commerce Commission. The Commission, in Release no 142, Issued 19 June 2009, says: “The

cost of capital is the expected rate of return that businesses require on their investments in order to compensate them for the risks that they bear.”

We submit that this Commerce Commission objective does not recognise the main point. If the point were to compensate businesses for risk then why have regulation at all? The very fact that there is regulation means that there is an absence of market discipline and that the Crown has decided to introduce instead regulatory discipline. The point of such regulation can only be to restrain profit-maximising behaviour. This purpose is not achieved by simply compensating business for risk.

The regulatory cost of capital, or more accurately the allowed return on equity, should not be directed to compensating for risk, it should be directed to providing a reasonable motivation for investment while preventing profits in excess of those needed to stimulate investment.

The weighted average cost of capital (WACC) and the Capital Asset Pricing Model (CAPM) have been under consideration by the Commission for several years and underlie the present revised draft guidelines. These tools are consistent with the Commission’s view that the allowed rate of return should compensate businesses for risk. We now evaluate, relative to the underlying purpose of regulation, the case for using WACC and CAPM.

WACC is not appropriate as it is not return to capital (debt plus equity) that needs to be regulated but just return to equity. Interest on debt is a cost, it is not characterised by absence of competition and its restraint is not the purpose of regulation. ROE is the object of the regulator’s interest so the regulator should focus on it directly.

The CAPM is a financial tool that generates a numerical value for the return on equity. The CAPM looks at expected returns in the sharemarket for equity investments of the same sharemarket risk as the business being considered. Unfortunately, this focus of the CAPM is a problem. Measuring the rate of return on equity should look at the opportunity cost of equity. Instead, the CAPM looks at a restricted subset of returns to equity. Sharemarket investment is just one of the opportunities available to owners of equity, it is not the only opportunity available. Furthermore, the CAPM focuses on sharemarket risk and restricts comparison to

investments of the same sharemarket risk whereas the opportunity cost of equity is not risk-restricted in this way.

The CAPM asks about sharemarket ROE for investments of the same sharemarket risk. This question is too restricted in its focus, too narrow in its coverage to address the opportunity cost of equity. The CAPM indicates the expected return from one type of investment but this does not necessarily represent the best investment opportunity available. Other investment opportunities are available. The opportunity cost could well exceed the ROE thrown up by the CAPM and it can never be less than the ROE of the CAPM. Accordingly, the CAPM is a downward biased indicator of the opportunity cost of equity.

There is, furthermore, serious concern about whether the CAPM properly achieves even its purported objective. The CAPM is an academic construct but the veracity and utility of the CAPM are subject to intense debate even within the academic world. This debate has been raging for years. The Commission's own panel of experts, experts of good academic standing, could not agree on which model to recommend. Fama and French have led the criticism of the CAPM. Their scepticism is empirically based – they cannot find empirical evidence sufficient to prove the case for the CAPM. This is fundamental – the case for any scientific methodology must be proved. A methodology cannot be accepted simply on the basis of theoretical elegance, it must be corroborated empirically. The CAPM has not been so corroborated.

The Commission, including its panel of experts, has been worrying about the internal details of the CAPM, details such as: what is the appropriate risk free rate of return, what is the best way of incorporating New Zealand's tax structure, what beta to use, and how to measure the debt ratio. These details might be of interest in an academic sense but they should not drive the Commission's considerations. It is unproductive to try to refine a tool when that tool is not the proper one to use in the first place.

Objectives and instruments

A related issue concerns the objectives of regulation. The Commission has been concerned about promoting operating efficiency in the electricity lines industry. Few would argue that this is anything but a laudable objective. The problem, though, arises in pursuing this objective in practice. What instrument is to be used? The Commission has hinted that rate of return regulation can be used to pursue this objective. The Commission's panel of experts have noted their view that this objective should be borne in mind in setting rate of return guidance.

We differ from the position that rate of return regulation should be used to promote operating efficiency. The reason we differ is that rate of return regulation cannot be used to pursue two different objectives. It is a fundamental principle of policy design that one instrument has one objective only. In baking a cake one needs two separate controls – one for temperature (a heat setting) and one for baking time (a clock). One cannot bake a cake using just a heat setting. And, the Commerce Commission cannot modify two dimensions of lines company behaviour by using just rate of return regulation.

One instrument can do just one job. The job of rate of return regulation is to restrain profits. It cannot also encourage efficiency. If the Commerce Commission wishes to encourage operating efficiency it needs to find another instrument.

Asset base

We note one further implication of the design of rate of return regulation. The allowed rate of return must be sufficient to motivate lines businesses to carry out reasonably needed investments. This requires that lines businesses have the reasonable expectation of a sufficient rate of return on their capital expenditure. The notion of a sufficient rate of return has been considered above. What is relevant now are the words “on their capital expenditure”. This requires the return to be on what businesses actually spend. It is not a reasonable rate of return on some artificial definition of what the investment might be worth, it is a reasonable return on what the business actually spends.

It should not be difficult to work out what a business spends on a project. The accounting profession has spent centuries developing systems for measuring such things. There is no need for the Commerce Commission to formulate a specialised, in-house and peculiar set of measurements. Furthermore, it is counterproductive to use an artificial measurement system. Even if the measurement system has an impressive name such as Optimised Deprivation Value the efficacy of regulation is lost the moment it departs from relating the allowed return to what businesses actually spend on investment.

Measurement should use generally accepted accounting principles. Investor owned companies make decisions based on standard accounting metrics. If rate of return regulation is to be effective it must be formulated using these same metrics. The Commission should dispense with any proprietary measurement systems.

Conclusions

We now state our conclusions concerning the Commerce Commission's draft rate of return guidelines.

The Commerce Commission has been investigating WACC and the CAPM for some time and the draft guidelines try to refine the CAPM. But, instead of trying to fine tune the CAPM, the Commission should step back, ask what it is trying to achieve and then ask how best to achieve this. The Commission should examine whether to use the CAPM rather than how to use it. Our first conclusion is that the CAPM is not the appropriate tool for estimating the cost of capital and should be dispensed with.

Our second conclusion is to suggest the approach that the Commission should use in estimating the rate of return. The general principle is that the allowed rate of return should be the opportunity cost of equity. This is the highest expected ROE available to the owners of a lines business from any investment open to them. Estimating the opportunity cost of equity is an empirical matter (rather than a theoretical matter) and there are empirical procedures available for estimating this ROE. This is the

direction in which the Commission should travel in formulating new guidelines for estimating the cost of capital.