Australian Energy Regulator

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APA submission on energy network debt data

APA Group (APA) has reviewed the draft working paper, *Energy Network debt data*, which was published by the Australian Energy Regulator (AER) in June 2020.

We appreciate the AER's need to better understand regulated service provider debt costs for the purpose of applying an incentive approach to regulation. We are, however, very concerned by the suggestion, in the draft working paper, that the Energy Infrastructure Credit Spread Index (EICSI), developed for the AER by its advisor Chairmont, be used in setting a benchmark cost of debt. The EISCI does not, in our view, lead to an efficient cost of debt which can be applied in a scheme of incentive regulation. In the following paragraphs we explain why we believe this to be the case. If the AER continues to benchmark the cost of debt, it should do so using data from a large sample of similar debt issues, as it does at present using RBA, Bloomberg and Thomson Reuters data.

Incentive regulation

Setting regulated prices using a service provider's own costs provides only weak incentives for the service provider to control its costs. Service provider incentives for cost control can be strengthened by the regulator setting prices using an efficient cost benchmark, rather than the service provider's own costs, and allowing the service provider to respond to accordingly. As the draft working paper notes (on page 5):

- if the service provider is able to keep costs below the regulator's forecast of efficient costs, it can retain the benefits

- equally, if the service provider allows its actual costs to exceed the efficient benchmark, it bears the consequences of reduced returns available to equity investors.

Setting the efficient cost benchmark

One way of setting the efficient cost benchmark is as an average of the observed costs of each of a large number of similar businesses. This seems to be the approach the AER has in mind when proposing use of the EICSI for benchmarking service provider debt costs.

Suppose the market price of an input to service provision is p. A service provider must expend effort in ascertaining p. If the service provider perceives it has some scope to set its service price (and does not have to take that price as being set in the market for the service), then it need not expend much effort in ascertaining p. The service provider may accept a price from an input supplier which is higher than p by some amount e_i. The greater the effort expended, the smaller is e_i, and the closer the price accepted is to p.

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Furthermore, some service providers may be able to purchase the input at a price lower than p because input supplier costs, and hence p, may rise and fall over time, or because the service provider is of sufficient scale to command a quantity discount from the supplier. In these circumstances, the service provider may accept a price from an input supplier which is lower than p by some amount e_i reflecting either the circumstances of the supplier, or of the service provider, at the time the input is purchased.

If these variations, positive and negative, from the market price are random samples from a probability distribution of e which has mean zero, then a benchmark calculated as the average of the prices $p_i = p + e_i$ paid for the input by a large number of service providers will be close to the market price p. Setting the benchmark as the average of observed prices will provide an incentive for low cost service provision. Businesses which might otherwise not expend much effort in seeking out input supply at price p, and for which e_i is positive, will bear the consequences of reduced returns. Businesses which, because of their particular circumstances, are able to negotiate input supply at a price less than p (businesses for which e_i is negative) will seek to do so because they are able to retain the benefits.

Ideally, the benchmark set for a particular business:

- should be calculated from a fairly large sample of otherwise comparable businesses (facing similar economic and technical opportunities) to ensure business specific effects are eliminated

- should not include the price the business in question pays for the input, thereby eliminating any business-specific effects from the benchmark.

These practical matters in applying incentive regulation have been well recognised for a long time.[1]

An efficient cost benchmark for debt cannot be set in this way

This simple method of establishing an efficient cost benchmark is not applicable in the case of debt.

We explain why.

The cost of debt is determined as the product of the quantity of debt outstanding (the product of the capital base and the gearing), and the allowed rate of return on debt. We may think of the allowed rate of return on debt as replacing the input price p in the argument above. More specifically, if the allowed rate of return on debt is the sum of a base rate common to all businesses (the swap rate for an appropriate term) and a credit spread, then we can confine our thinking to the credit spread.

This appears, to us, to be the way in which the AER is thinking about using the EICSI as a benchmark credit spread. The AER seems to be reasoning as follows.

A service provider must expend effort in ascertaining the credit spread, cs. If the service provider perceives it has some scope to set its service price (and does not have to take that price as being set in the market for the service), then it need not expend much effort in ascertaining cs. The service provider may accept a spread in its cost of debt which is higher than cs by some amount e_i, where e_i is indicative of the effort expended in ascertaining cs (greater effort lowers e_i). Furthermore, some service providers may be able to raise debt at spreads lower than cs because debt supplier

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[1]   See, for example, Paul L Joskow and Richard Schmalensee (1986), "Incentive Regulation for Electric Utilities", Yale Journal on Regulation, 4(1), pages 1 - 49.

financing costs, and hence cs, rise and fall over time, or because the service provider is able to negotiate a lower spread with a debt supplier. In these circumstances, the service provider may accept a credit spread which is lower than cs by some amount e_i reflecting either the circumstances of the debt supplier, or of the service provider, at the time debt is raised.

If these variations, positive and negative, from cs are random samples from a probability distribution of e which has mean zero, then a benchmark calculated as the average of spreads $cs_i = cs + e_i$ accepted by service providers will be the market credit spread cs. Setting the benchmark as the average of observed credit spreads will provide an incentive for low cost service provision. Businesses which might otherwise not expend much effort in seeking out debt at a spread cs, and for which e_i is positive, will bear the consequences of reduced equity returns. Businesses which, because of their particular circumstances, are able to negotiate credit spreads less than cs (businesses for which e_i is negative) will seek to do so because they are able to retain the benefits.

On this reasoning, the EICSI, which is an average of regulated service provider credit spreads, can provide the measure of cs for the AER's application of incentive regulation to those service providers.

Unfortunately, the argument is unsound.

There is no "market" credit risk premium, cs, equivalent to the market price p in our earlier discussion, which can be measured as the average of the observed credit spreads of regulated service providers (measured by the EICSI). Even if there were no random component (e_i) in spreads arising from service provider failure to seek out the lowest cost of debt, credit spreads would vary because each of the regulated service providers is perceived by debt suppliers (lenders) as having its own firm-specific credit risks.

The contractual structure of a business – the set of contracts with suppliers of inputs, including suppliers of finance, and the buyers of its outputs – allocates the underlying risks of the business among the different stakeholders.

Debtholders, like other input suppliers (but not shareholders), contract for rights to a predetermined part of the income stream of the business. Unlike other input suppliers, they also contract for rights to make certain decisions about the business in the event of default. Shareholders have rights to the residual income stream, and retain rights of control over the business, as long debtholders' entitlements to the income stream are satisfied. Ultimate rights of control may rest with shareholders and, in specific circumstances of default, with debtholders, but senior management has considerable discretion over the direction of the business and in key decisions. The potential for agency problems between shareholders and senior managers, and between shareholders and debtholders, and the ways in which these can be at least partially controlled by contracts, are now relatively well understood.

In the case of debt, these contracts are negotiated between management and prospective lenders. The pricing of debt – the credit spread negotiated – reflects the allocation of risk to those debtholders. Debt contracts and pricing for small businesses are standardised. For larger businesses – for energy infrastructure businesses – debt negotiation involves prospective lenders closely examining the business and its contractual structure to ascertain risks and to determine the way in which those risks are to be allocated and managed. The parties have considerable discretion in specifying cash flow rights, control rights, other rights (for example, in relation to collateral and options), and in specifying the contingencies under which these rights are exercised.

In a small sample of businesses, like the sample which underpins the EICSI, credit spreads will differ, not because service providers fail to expend effort on minimising those spreads, but because the underlying risks of the businesses are different, lender perceptions of those risks (based on specific inquiry) are different, and there are different options available for managing them. With different technologies (electricity transmission, electricity distribution, gas transmission gas and distribution), different scales of operation (electricity distribution businesses are often much larger than gas transmission and distribution businesses), different equity financing arrangements (private, or publicly listed), and different market risks and contracting (regulated and partly implicit contracts with large numbers of end-user in the case of electricity and gas distribution; small numbers of large end users in the case of transmission), the credit spreads will be different.

We can observe APA's credit spread. We cannot observe the credit spreads of other regulated service providers, but observing that APA's credit spread is above the EICSI, we know that some service providers must have negotiated debt financing at credit spreads below the EICSI. Probably, some service providers have credits spreads above the EICSI. (The AER could reduce uncertainty around this issue without disclosing confidential information, by reporting standard deviations and ranges for credit spreads around the EICSI, in a way similar to the way in which it currently reports, in the discussion paper, standard deviations and ranges for term at issuance and credit rating.)

Each of the credit spreads which goes into calculation of the EICSI represents an assessment of the credit risk of a particular service provider, by a particular debt supplier, at the time debt is raised. (We note that benchmark credit ratings have little or no role to play here.)

A regulated service provider with a credit spread which is above the EICSI may be able to reduce that spread by expending more effort in debt raising negotiations but the principal reason for that higher spread will be lender assessment and pricing of the risks to which it expects to be exposed when financing that particular business. The business, in these circumstances, cannot lower its credit spread to the EICSI. The EICSI is not, then a benchmark for the efficient cost of debt. It is unattainable by service providers with credit spreads above the EISCI, and cannot provide an incentive for those businesses to lower their debt costs to the efficient level.

Should a regulated service provider have a credit spread below the EICSI, that is also a consequence of the assessment and pricing of the specific risks to which a lender expects to be exposed when financing that particular business. Using the EISCI does not signal to that business, an efficient cost of debt and the reward for superior performance in contracting for a lower credit spread. Using the EICSI simply provides a windfall gain to those businesses which lenders perceive to be relatively low risk.

We understand why the AER is seeking to benchmark the cost of debt as part of its approach to incentive regulation (although we have doubts about whether, in the case of debt, benchmarking is entirely feasible). If the cost of debt is to be benchmarked, the EICSI cannot be used in that benchmarking for the reasons we have set out above. If the cost of debt is to be benchmarked, an index calculated from a large sample of similar debt issues must be used. If the index is based on a large sample, inefficiencies in the credit will be averaged out as intended, and there will be averaging across the wide range of contractual responses to risk management. This averaging across a wide range of contractual responses will reduce, but not entirely eliminate, the problem that some businesses are more risky than others, and have to accept higher credit spreads in the pricing they negotiate for debt.

If the AER is to continue to benchmark the cost of debt, it should do so using data from a large sample of similar debt issues, as it does at present using the RBA, Bloomberg and Thomson Reuters data.

APA would be pleased to elaborate on any of the views in this submission. Our work on rate of return is being undertaken by ████████████ who is in our Perth office and can be contacted directly on ████████████ or at ████████████████████████ .

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