Australian energy regulator rethinks how to set the allowed returns for the network sector

AUSTRALIA

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Australian power and gas network assets are valued at over $75bn and average network asset lives are 50 to 100 years. A fair return on current and future capital is therefore the key driver of business profitability and efficient investment incentives. The Australian Energy Regulator (AER) has recently reconsidered its whole basis and approach to how capital allowances, for both equity and debt, are set by issuing Rate of Return Guidelines as part of its Better Regulation Programme.

To assess the significance of this rethink, it is important to explain how the prevailing regulatory structure had developed prior to the current decision.

In the mid-1990s, Australia adopted a Thatcherite framework for the regulation of the power and gas industries. A key element of that framework is that businesses operating natural monopoly gas and electricity networks are subject to 'incentive based' or RPI-X regulation. Since network investments are capital intensive, long-lived assets that can last for 50 to 100 years, the single most important element of this regulation is to set a 'fair' allowance for equity and debt capital.

Originally, the market rules encouraged state and federal regulators to use base equity allowance decisions on the Sharpe-Lintner Capital Asset Pricing Model (SL-CAPM), which was the state-of-the-art finance theory at the time, but allowed the regulators extensive discretion over how to implement the model and where to obtain securities market input data. After 20 years of rule changes aimed at improving predictability and hard fought court and tribunal appeals into ever more detailed controversies over imperfections in finance markets and statistical methodologies, almost all flexibility in the regulatory system had been removed. The merger of the seven main state and federal regulators into a single national body also removed the subtle differences of approach when applying the rules.

Ironically, while the approach to applying the SL-CAPM had almost completely ossified, the actual allowed returns for network businesses had become highly unstable because capital markets are volatile and regulatory discretion was no longer able to act as an informal shock absorber. From the industry's perspective, the system had also proved itself to deliver significant downwardly biased allowances.

Meanwhile, there had also been important developments in finance theory. When the regulatory framework was initially adopted, the conventional mantra recited by businesses and regulators alike was that 'the SL-CAPM is deeply flawed… but it is the only theory we have.' However, in 2011 when the AER formally triggered a rule change process to seek significant additional discretion in how it could apply the SL-CAPM, the network industry openly called for an intellectual revolution: that the adherence the SL-CAPM itself should be re-thought.

The Australian Energy Markets Commission (AEMC), who is responsible for drafting the National Electricity Rules and the National Gas Rules, granted each party what it was wishing for: the AER was granted its wish to be given full discretion over how to set

regulatory allowances for equity and debt capital subject only to 'broad brush' principles; industry was granted its wish that all references to the SL-CAPM were removed from the National Electricity Rules and the National Gas Rules and that the AER launch a process by which it would consider any and all theoretical models that interested participants might propose, and data from multiple sources.

The immediate lesson for all parties was 'be careful what you wish for'…

Not only did the AEMC's decision effectively invite the AER to reconsider 20 years of rule reforms, tribunal appeal and court cases concerning the SL-CAPM, but it also required the AER to compare in equivalent minutiae all the alternative models. The decision also suggested that the optimal approach may not be to select a single model or data source but instead to adopt a blended solution.

Throughout 2013, tens of thousands of pages of expert reports, analytical submissions and advocacy material were put to the AER from a wide range of participants. The AER itself also procured a large number of expert reports and in many cases mandatory consultative timeframes were over-shot by all parties in the process.

Industry proposals centred round the combined use of an updated suite of finance theories including the Black CAPM, the Fama–French three-factor model and the Dividend Growth model, which has a moreor-less equivalent incumbency amongst US energy network regulators.

However, as regulators often do, the AER reacted with a high degree of conservatism. It wrote its own set of extra-legislative decisionmaking criteria in determining which models were appropriate to use and how much weight they should be accorded such as whether the models were 'well accepted' and whether other Australian regulators were using the proposed models. On this basis the AER's draft decision reinstated the primacy of the SL-CAPM model as a 'foundation model' and alternatives such as the Black CAPM and the Dividend Growth model accorded only secondary weight, despite the latter's widespread use by regulators in America.

The draft decision reserved particular derision for the Fama–French model, which was accorded no weight at all, in part because it was said to lack a purely theoretical pedigree in that it was developed from detailed empirical studies and with theories emerging only after the model was developed.

Shortly after the AER's draft decision according his work no weight at all, the University of Chicago's Eugene Fama was awarded The Sveriges Riksbank Prize in Economic Sciences (aka the Nobel Prize for Economics). On that occasion the Swedish Royal Academy of Sciences stated:

> 'Eugene Farma, Lars Peter Hansen and Robert Shiller have developed empirical methods and used these methods to reach important and lasting insights about the determination of asset prices. Their methods have shaped subsequent research in the field and their findings have been highly influential both academically and ractically.'

Even so, the AER's final decision aintained the approach of adopting an extra-legislative set of decision making criteria and the same hierarchy of methodologies: a 'foundation' SL-CAPM model, secondary Black CAPM and Dividend Growth models and zero weight accorded to the Fama-French model. In another move of conservatism, the AER considerably restricted the potential role of the Dividend Growth model to the Australian context:

> 'We also note some US economic regulators use the DGM extensively in estimating the return on equity. However, the DGM is not yet well accepted for use in the Australian context.'

Meanwhile, in the US, the Federal Energy Regulatory Commission (FERC) is also being asked to revisit the material they use to set the return on equity. FERC has traditionally relied on a version of the DGM known as the Discounted Cash Flow (DCF) as the principal

method for estimating the return on equity for electric utilities. Our American colleague, James Beh (partner, Energy Regulation, Washington) reports that electric utilities are questioning the continuing reliance on the DCF because under current capital market conditions certain applications of that method may estimate returns on equity that are below the appropriate level. The returns on equity should ensure that utilities are able to fairly compensate capital invested in the utility, to enable the utility to attract capital, to maintain the utility's financial integrity, and to satisfy FERC's policies to encourage investment in utility infrastructure. In a case now before FERC, James is representing a utility that has relied on a blend of DCF, risk premium and Empirical CAPM methods to support a 10.25 per cent return on equity, while opponents continue to use a simple DCF to support their request for a return on equity at least one per cent lower. We expect that sooner or later FERC will need to address this issue on a generic basis.

The AER decision is also significant in three other respects: first, the AER rejected evidence submitted by industry showing that electricity businesses should be given an additional reward for risk given that there is now the prospect of widespread distributed generation.

Secondly, on account of the Australian system of dividend imputation, the regulatory allowance for tax is reduced by the value that shareholders receive in tax free dividends. The quantum of this reduction is highly contentious because market data indicates it is of little value to shareholders while it costs the tax office a great deal. The AER consistently favours (and has reinstated) a valuation based on a cash flow analysis and taxation statistics while tribunals and policy makers have repeatedly overturned the AER on that point.

Finally, all parties agreed that the method for setting the allowance for debt should be changed from a single 'on the day' approach where the rate is set for five years at the time of the AER's regulatory decision to a system where the allowance is established on a continuously rolling average. Although the substance is agreed, the transition from the 'on the day' to the rolling method is contentious which in itself is a billiondollar issue because of how interest rates have moved in recent years. Although the AER's decision to adopt the rolling average methodology is in large part based on evidence that this is what many businesses already do, it has refused to jump immediately to the rolling average and instead has set allowances as if each business has to phase in the new hypothetical debt portfolio.

Given the high stakes for network businesses and their customers, it is almost certainly the case that AER decisions applying these new Rate of Return Guidelines will be appealed to the Australian Competition Tribunal, which is the body responsible for reviewing the AER's work. The irony is that it is the highly conservative approach adopted by the AER, and the evident reluctance to be open to change, that makes this decision so very vulnerable to challenge.