APPENDIX III

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ACCC Draft Decision – Moomba to Adelaide Access Arrangement
Comments from Hastings Funds Management Limited

Hastings Funds Management (Hastings) is making this submission as a specialist infrastructure fund manager. Hastings has a 11.1 per cent equity interest in Epic Energy through its funds.

Introduction

On 17 August 2000, the Australian Consumer and Competition Commission (ACCC) issued a draft determination with respect to Epic Energy's proposed access arrangement for the Moomba to Adelaide Pipeline (MAP) System. In particular, the draft determination used the post-tax rate of return approach to estimate tax and applied a post-tax nominal return on equity of 13 per cent, well below investor expectations. Our submission relates to some fundamental problems rising from this approach.

We have consistently argued, in past determinations relating to Victorian gas distribution businesses in 1998, the decision relating to the Victorian electricity businesses in 2000, as well as in this determination, that regulators achieve low outcomes by substantially discounting the arguments presented by market practitioners and businesses. The ACCC continues to bias its calculation by using market data and theoretical notions in an inconsistent manner to minimise the revenue requirement. It has magnified this bias by introducing a highly subjective post-tax methodology, providing an outcome which lies at the extreme low end of the range of justifiable revenue requirements. Unlike the ORG, which provided spreadsheet models of its post-tax modelling approach for each of the five electricity businesses, the ACCC determination has not been transparent. We are unable to fathom how the Commission arrived at its calculations except noting that it undertook a cash-flow analysis. The Commission should make these workings available to all interested parties if it intends to have a meaningful dialogue about regulation.

We also note that the cuts proposed by the Commission upon the asset base and revenue forecasts put forward by Epic are significant. However, we understand that the business will be dealing with these issues in a separate submission and therefore the problems that we have identified mainly relate to the rate of return calculation.

1. Asset Beta

The Commission has gone through a consultation process and developed a methodology for calculating the rate of return requirements for the MAP. The Commission concludes in its determination that a nominal cost of equity of 13 per cent would be well within the range to attract investors.

Hastings, as an active investor in regulated infrastructure assets, does not share this view. We believe that there is a fundamental flaw in a regulatory rate of return which is based on the Capital Asset Pricing Model (CAPM). One of the key assumptions of the CAPM is that there are no transaction costs and the market has perfect liquidity. In the case of the regulated utilities in Australia, this is not true. The market is relatively ill-liquid. Except for AGL and United Energy, none of the electricity businesses are listed. Similarly, none of the Victorian gas businesses are listed. As we have seen in the sale of Citipower in 1998 and GPU GasNet and PowerNet in 2000, a sale requires several months to accomplish during which time the seller incurs high transaction costs. If the liquid public trading market is not available then there are insufficient price signals to predict how long it will take to sell or what the price will be relative to what the owner paid.

The typical procedure to reach a value in an ill-liquid market is to assume as if a liquid market existed and then take a percentage discount for the lack of liquidity. There is considerable market evidence, particularly in the US market, which shows that the price discount for an ill-liquid business compared to a publicly traded counterpart is in the order of 35-50 per cent[i]. In other words, investors add an ill-liquidity premium of 5 to 10 per cent in their discount rates. Extended forms of the CAPM have been developed which include a factor for the ill-liquidity premium[ii].

The Commission does not appear to have reviewed the considerable body of academic work relating to ill-liquidity. It has ignored this premium in its calculation of the CAPM. Admittedly, the ill-liquidity premium is difficult to quantify and our review suggests that unlike the equity premium, sufficient research has not been done on the ill-liquidity premium to merit using an absolute figure. In the absence of an empirically verifiable figure however, we use a higher asset beta, typically in the order of 0.55, to make investment decisions in an ill-liquid market. In contrast, the Commission has used an asset beta of 0.50 as a starting point, which is at the lowest end of the comparable asset beta spectrum. We believe that a higher asset beta is justified given the lack of liquidity in the sector.

We recommend that the Commission adopt an asset beta in the order of 0.55, as is the market practice for investors valuing assets in ill-liquid infrastructure businesses, and review this figure at the next regulatory reset.

2. Risk Free Rate

The Commission has used the redemption yield on the moving average of the five-year index-linked bonds as a proxy for the real risk-free rate. The problem with this approach is that the five-year indexed bonds do not represent the true opportunity cost for businesses borrowing money. In Australia, the market of indexed bonds is relatively ill-liquid and the market on any day is impacted by small amounts of buying and selling. This market has not developed sufficiently outside the government market to make it attractive for utilities.

In our experience, the bank market is providing the majority of funding to the sector at present. Bank funding is provided on a 90 or 180 day floating rate basis. The utilities are

then using the swap market to obtain fixed rate funding. For example, the 5-year swap rate trades currently at 50 basis points higher than the 5-year nominal government bond. We have used a 5-year (and not 10-year) example because utilities are limited to borrowing in the 3 to 5 year market due to regulatory risk.

Therefore, we would argue that the nominal bank bill market is a better proxy for estimating a risk-free rate. We would recommend using the longer end of the bank bill market as investors use long-term bond rates when pricing investment projects with long paybacks. The real risk free rate may then be taken as the difference between the redemption yield on the 10-year nominal bond and the Reserve Bank inflation target band. The relationship between the nominal bond and the real risk free proxy can be written as:

Real risk free proxy = 10-year nominal bond yield – expected inflation

We recommend that the Commission adopt a nominal risk-free rate equal to the current ten year bond rate, as is common practice in the Australian market, and adjust for expected inflation to get to an implied real rate.

Notwithstanding this issue, we also note that the Commission has used 5-year indexed bonds whereas the ORG used 10-year indexed bonds in its electricity determination. We query why there is an inconsistency of approach between the two regulators. An alignment in the methodology used across the different jurisdictions will help in restoring some investor confidence in the regulatory process.

3. Debt Premium

The Commission has ignored swap costs in its calculation of the debt premium. As we have stated above, utilities borrow in the bank market and use swaps to obtain fixed rate funding. The swap market trades at a premium to the nominal bond market. To lock into a five-year funding instrument, a utility will have to pay 50 basis points above the 5-year nominal bond. The credit margin will be priced over the swap rate. Therefore, the cost of debt is not 1.2 per cent, but closer to 1.7 per cent. The effective cost of debt for a utility can be written as:

Cost of debt = yield on nominal bond + swap premium + credit margin

On this basis, we recommend that the Commission should include swap costs in the calculation of its debt premium. Our estimate is that an all inclusive debt premium is in the order of 1.7 per cent.

4. Equity Risk Premium

Hastings uses a risk premium of 6 percent, which is based on historical evidence in the Australian market. Recent evidence collected over the period 1974 – 1996 suggests that the equity premium may have declined in real terms to between 4 and 5 percent. We note however that it is widespread market practice to use a risk premium in the order of 6 to 8 percent. Most investors are price-takers in the market. A change, forced or otherwise, by any one investor towards using a lower risk premium will only penalise the investor because the rest of the market will not change its practice unless the investor has sufficient market power. There has not been enough academic research to date on this issue in Australia to suggest that a reduction in the risk premium is advisable. The uncertainty in quantifying the risk premium is apparent in the standard deviation of the results which, over a long enough sample period, remains high. Moreover, the risk premium is not an absolute figure. It varies between 6 to 8 per cent depending on whether the geometric or arithmetic mean is used [iii].

We recommend that the Commission adopt a minimum risk premium of 6 percent.

5. Cost of Tax

The post-tax approach undertaken by the Commission makes implicit assumptions about optimal capital structure, asset values and tax and depreciation allowances. The modelling of revenue requirement and taxation relies on the fundamental premise that the market value of the asset is equal to its regulated asset base, or in this instance, the optimised depreciated replacement cost (ODRC) adjusted for inflation and capital expenditure.

The problems we identified with this approach include:

5.1 Leverage

The determination uses a 60 per cent debt/asset ratio as a benchmark financing structure for the MAP. This gearing level has a well established precedent in the Australian regulatory determinations. However, the regulators continue to ignore empirical evidence in the public market relating to leverage. Unlike the ORG, the Commission has not even taken the trouble to cite the typical debt/asset ratios of global electricity and gas utilities, reverting instead to a text book argument which states that the capital structure is not material according to the Modigliani-Miller theorem.

We note that the Modigliani-Miller theorem only applies to a perfectly liquid market with no taxes and transaction costs. The market for regulatory assets is neither liquid nor does it have zero taxes or costs. We also note that in cash-flow modelling, gearing is a key variable as it determines the tax shield of the business. For example, the modelling outcome would be notably different if the Commission uses 30 per cent gearing of the regulatory asset base compared to, say, 60 per cent. We merely ask the Commission to demonstrate that over a large sample of global electricity and gas utilities, the typical debt/asset ratio is 60 per cent. Unless the Commission chooses to 'data-mine' only those utilities which meet this test, it will find that the typical ratio is 30 to 40 per cent debt/asset. We know that many of the listed companies have trading and retail components in addition to their regulated businesses, however, as the Commission is using their equity beta numbers to derive its asset beta, it should also use their gearing levels. Surely this evidence is a better indicator of 'benchmark financing structures'.

Otherwise the Commission (and other regulators) are dictating to the market that Australian utilities be geared at 60 percent with investment grade debt in order to minimise tariffs. In light of the recent credit warning by Standard & Poor, we believe that this attitude is merely going to increase the credit risk on regulated utilities and most Australian utilities under this decree will remain unlisted.

We have recommended in the past and continue to suggest that the Commission remain neutral on capital structuring. It should neither reward nor penalise a company for its capital structure as the market does not put a premium on leverage, and the cost of capital is essentially a market-determined cost. Therefore, to be accurate, the Commission should choose a gearing level that relates to the sample of listed entities from which it is also calculating its equity beta. In our view, this level is in the order of 30 to 40 per cent.

5.2 Asset Values

Although the Commission has not disclosed the details of its post-tax cash flow modelling, our work suggests that it is calculating the tax wedge by gearing the asset at 60 per cent of

its regulated asset base. This implies that the asset is not worth more than its ODRC value, adjusted for inflation and capital expenditure. If this is the case, then the Commission does not justify or give any market evidence why ODRC and market values should converge in theory or in practice. In the instance of the ODRC debate, market evidence indicates that the enterprise value of listed utilities and/or purchase prices of utilities tend to include a premium over ODRC. For example, GPU PowerNet, which is a purely regulated business, was recently sold at around 1.5 times its ODRC value. United Energy is trading at more than 2 times its regulatory asset base, although we know that its enterprise value includes a premium for its retail and trading businesses. Similarly, in the UK, regulated utilities such as National Grid trade cyclically, sometimes below and sometimes above their regulated asset base. However, the regulated asset base in the UK is not the ODRC but the purchase price.

Our view is that the premise that ODRC and market values should align is fundamentally flawed. The ODRC of an asset is essentially an accounting value, adjusted for depreciation, capital expenditure and inflation. The market value of a regulated asset is the discounted income stream that investors expect to earn over the life of the asset. The market value is determined by expectations on efficiency gains and outperforming incentives. Without perfect foresight of all future regulatory decisions, it is impossible for businesses and regulators to have the same view about asset values. Despite this paradox, the Commission and its advisers have recently commented that businesses which paid more than ODRC at the time of an asset sale will not be allowed to recover their costs[iv].

We believe that such comments show how narrow mindedly the regulators are interpreting their regulatory mandate. Investors paid high prices for the regulated businesses because they assumed a light-handed incentive based regime, as was promised to them even by the ACCC, when Allan Asher espoused the need for bringing about light-handed regulation as recently as in 1998[v]. *Ex ante*, the sale prices were therefore justifiable. *Ex post*, the regulators apparently misled investors, as the actual regulatory regimes on federal and state levels have turned out to be anything but light-handed.

The Commission presumably calculates a tax wedge based on the assumption that Epic is geared to 60 per cent of its regulated asset base. Given the fact that the gearing level of companies from which the Commission is calculating its beta is around 30 to 40 per cent, this calculation artificially lowers the tax wedge. The approach of using the regulated asset base also appears to be wrong as most companies have a market value greater than their regulated asset base.

5.3 Further Comments on the Post-Tax Approach

In view of these observations, we remain sceptical of the post-tax approach. When the gas and electricity businesses were privatised, regulation was done on a pre-tax, real basis. Prices paid to the government were calculated on the premise that this approach would continue. Subsequently, the ACCC changed its methodology and moved to a post-tax approach. As the revenue requirement for a business falls under the post-tax basis, businesses are effectively being penalised for past investment decisions. Assets are now under threat of being stranded since new investors, who will assume a post-tax approach in their valuation, would pay less than the initial investors, who assumed a light-handed, pre-tax approach. We see evidence of this trend in the recent sale of GPU PowerNet to Singapore Power, in which GPU suffered an equity write down of $450 million over less than three years, primarily due to perceived regulatory risk. In addition, the failure of GPU to sell GasNet at the time of writing clearly demonstrates that there are few buyers in the market for regulated assets. The regulators are therefore perversely prevailing upon the market and attempting to force an alignment of market values with regulated asset bases,

but as this trend continues, regulation is failing the primary objective of promoting a competitive and thriving infrastructure market in Australia.

Put another way, investors would never have paid the same prices if they had known that regulation would change to an intrusive post-tax approach. This approach is highly subjective and makes implicit assumptions about optimal capital structure and an alignment between regulated asset bases and market values. Most significantly, the high debt/asset gearing artificially reduces the tax wedge and results in a lower revenue requirement than the businesses would be getting if the gearing was set at the level of listed entities. Under these assumptions, we believe that the ACCC will misjudge the tax wedge and adversely affect Epic investors.

Our opinion is that the best measure for gauging the cost of tax is the forward transformation at the statutory tax rate. Investors use long-term assumptions when pricing investment projects with long paybacks. The forward transformation, with its long term focus, reconciles with the benchmark gearing and rate of return assumptions, all of which assume that businesses reverts to market-determined profiles over the long term.

Hastings recommends the ACCC use the forward transformation at the statutory tax rate to convert a post-tax nominal WACC to a pre-tax real WACC, and apply this WACC to the MAP. This is the simplest and least intrusive of all approaches to measure tax.

6. Calculation

We have not calculated a cost of equity in our submission, as the Commission has not made available its cash flow modelling analysis to market participants. We note that arguing for a high cost of equity in isolation is meaningless until we know what variables are driving the revenue requirements modelled by the Commission. For example, a lower debt/asset ratio reduces the cost of equity and therefore the revenue requirement, other things being equal, also falls. However, if the tax wedge is calculated from the regulated asset base, then a lower debt/asset ratio, other things being equal, actually increases the revenue requirement. Therefore, we would like to emphasise that the Commission should not take our comments out of context.

7. Conclusion

The Commission has adopted a highly subjective ‘black-box’ approach to post-tax modelling. Moreover, the Commission keeps shifting the goal-posts at each regulatory review, by reducing beta figures, making changes to gearing formulae and drawing highly subjective conclusions on issues such as the alignment of the regulated asset base and enterprise value. In this environment, investors cannot make investment decisions unless they have perfect foresight of all future regulatory decisions, because at each rate reset the Commission can pre-empt the management prerogatives. The approach imposes high transaction costs on all participants, and penalises management for investment and financing decisions made in the past. It raises barriers to entry into the market due to its inherent uncertainty and sends the wrong price signals to incumbents. Despite a lengthy consultation process with Epic, the Commission has systematically discounted its proposals. The Commission has done this at the cost of ignoring the political and investment implications for the infrastructure sector.

Finally, we note that in the UK, the water regulator, Ofwat, has recently been forced by the Competition Commission to increase its cost of capital for water companies. We have little doubt that a review of the Commission's determination will suffer a similar fate.

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[i] Pratt, Shannon P., 'Valuing a Business – The Analysis and Appraisal of Closely Held Companies', 2nd edition, 1989.

[ii] Beiner, N and Gibson, R., 'A theoretical analysis of the liquidity risk premium embedded in the prices of voting and non-voting stocks', Journal of Corporate Finance, Vol. 5, No. 3, Sept 1999

[iii] Pratt, Shannon P., 'Valuing Small Businesses and Professional Practices', 1993.

[iv] Rod Shogren, Commissioner, ACCC commenting at the Asset Valuation Forum, Melbourne, 16 June 2000.

[v] A. Asher, Network Industry Regulation and Convergence in Service Delivery, APPEA Journal, 1998.