Statement of Sim Buck Khim

Head of Treasury - Jemena

1 Position

1.1 In August 2008 I moved to Melbourne from Singapore to head the Treasury department at Jemena.

1.2 One of my roles includes the management of Jemena's debt portfolio. I have three people working for me in the Treasury Department, one each in the front office, middle and back office. I report to the company's Chief Financial Officer.

2 Educational background and professional experience in the finance sector

2.1 In 1989 I completed my Bachelor of Business Administration with honours from Acadia University in Canada and have been working in banking and debt markets for the last 18 to 19 years. My first job was as a dealer in the Securities Trading and Distribution Unit of Citicorp Investment Bank in Singapore.

2.2 In 1993 I became the manager of Global Derivatives at the Standard Chartered Bank in Singapore, where I was responsible for structuring and marketing financial risk management products to corporates and financial institutions in South East Asia.

2.3 After completing my Masters in Finance at Macquarie University in 1994, I became a teaching fellow at Macquarie University, where I instructed Master of Applied Finance students in conjunction with the Institute of Banking and Finance and served as an advisory member of the Applied Finance Program in Singapore.

2.4 From 1995, I was the Vice President of Derivative Marketing South East Asia, a division within ABN AMRO Bank, Singapore, where I was responsible for generating revenue through the delivery of derivative based risk management solutions and capital advisory services to the bank's corporate and financial client base. I started the unit in 1995, developing the middle and the front office policies and procedures.

2.5 In 2000, I became the Head of Debt Capital Markets at Deutsche Bank, Singapore. Here I had responsibility for Deutsche Bank's Debt Capital Markets (DCM) product line. My responsibilities expanded in 2007 to include the Financial Institutions Group (FIG) . In this expanded role I was also responsible for bank and insurance capital issuance by FIG entities in Asia. The DCM group focuses on providing tailor made funding and risk management solutions to its top tier clients through the packaging of capital market solutions with derivative products including interests rate, foreign exchange and credit derivatives. I was also involved in assisting clients with capital structuring and ratings advisory, which focused on optimising a company's long term debt/equity mix, short vs. long term debt mix, dividend payout policy and optimal ratings levels.

2.6 Whilst at Deutsche Bank in Singapore, I was the Vice-Chairman and Treasurer for the Singapore Investment Bankers Association ("SIBA"), which was a collection of all investment banks in Singapore, representing the industry in its consultation with the regulators and other government bodies.

2.7 I have been on the Debt Capital Market Committee of SIBA since 2004. This Committee is concerned with promoting Singapore as a leader in capital raising for issuers in the debt market, and working closely with other relevant associations to promote the bond markets. I keep up to date with financial publications such as the UK Financial Times, the Wall Street Journal, Bloomberg and in the domestic environment through the Australian Financial Review.

2.8 Attached at **Attachment A** is my full CV which outlines the key debt deals including energy and non-energy sectors that I have worked on when in my previous roles.

3 My experience with the Capital Asset Pricing Model (CAPM)

3.1 During the course of my studies I learnt about the CAPM. I'm very familiar with the Sharpe model.

3.2 My view is that when you are talking about finance, a key requirement is the understanding of the concept of the time value of money and the valuation of cash flow streams. Finance in my world means the economic side of finance, understanding the net present value of an asset more so than the accounting and reporting aspects of finance which is equally important. I focus on interest rates in different markets across different countries over time in order to analyse cashflows from both an asset and a liability perspective and then discount them back to work out its net present value. In this context, CAPM provides the basis for determining the discount rate used in all these analyses.

3.3 We use the CAPM as a valuation tool to value cashflows and to make informed investment decisions. Since my studies I have used the CAPM model to help structure capital issuances, to work out what return insurance businesses and banks should get on their investments.

3.4 To date my roles have mostly allowed me to use the CAPM in a corporate context; however, I understand that the reason the CAPM is used in a regulatory context is to estimate the rate of return that should accrue to an asset if it was otherwise in a competitive market because that rate of return is similarly unobservable.

4 Jemena

4.1 Jemena's key assets were purchased from Alinta in 2007. Jemena owns the Eastern Gas Pipeline, VicHub, the Queensland Gas Pipeline, Jemena Gas Networks (NSW) and Jemena Electricity Networks (Vic) which are either regulated or unregulated energy network businesses.

4.2 In addition to these assets, Jemena also has an interest in:

- the ActewAGL distribution partnership (50%) which operates the regulated gas and electricity distribution networks in the ACT;
- AquaNet (100%), a recycled water joint venture;
- United Energy Distribution Electricity Network (34%) which is another regulated Victorian distribution business; and
- the TransACT telecommunications company (6.8%) which is an unregulated telecommunications and cable television business.

4.3 Jemena is wholly owned by SPI Australia Assets Pty Ltd which is in turn wholly owned by Singapore Power International Pte Limited ("SPI"). SPI, in turn, is a wholly owned subsidiary of Singapore Power Ltd ("SP").

5 Debt raising

Controls and reporting

5.1 We try not to have too much debt maturing in any one year because that would increase our "refinancing risk", meaning the risk that we couldn't obtain sufficient financing and run the risk of going into default.

5.2 Theoretically, there is a vast array of sources of funding alternatives outside of shareholder equity for a business like Jemena. One option is "perpetuals" or preference shares that can be either structured either with a call (meaning that the issuer is empowered to call and investors are returned their funds) or as a non-call (meaning that they cannot). For instance, a non-call 10 means that that the preference share will not mature within 10 years i.e. it cannot be called until at least 10 years after issuing and may even remain outstanding for a longer period of time. If no calls are made, the instrument stays on foot indefinitely and this is why these instruments are called "perpetuals".

5.3 Another instrument available is a "hybrid" meaning that it has a mixture of characteristics of both debt and equity. Debt because of a maturity date, but rather than paying interest it pays a dividend. A hybrid also ranks behind debt and before equity in terms of priority in a foreclosure or liquidation.

5.4 Then there is a wide array of bonds available. When issuing bonds you have a number of different options but basically you consider who you want to sell the bonds to, i.e. in which market or investor base. The nomenclature refers to which regulatory or documentary disclosure the bonds will be issued under. For instance bonds issued in the 144A market are subjected to US regulations applying to "Qualified Institutional Buyers", not individuals. These bonds are issued in US Dollars.

5.5 The Reg S market is used to sell bonds to investors residing or domiciled outside the US, predominantly in the Euro zone, Asia and the Middle East. The next most significant for issuers is the Sterling market. Then you can also target more specific markets such as the Japanese Yen market (which we call the "Samurai market"), the Singapore Dollar market and the Australian Dollar market (which, when you are sitting in a treasury outside Australia, are often called "Kangaroo Bonds" or in Australia "Aussie domestic bonds"). By going to markets that are in different jurisdictions simultaneously, you create cross market pricing tension amongst the various investors.

5.6 Take for instance, the Kangaroo market or Aussie domestic market. There are a number of variations including different terms and whether the bond is issued by a local issuer or a foreign issuer. Jemena is a local issuer, but if someone like General Electric from the US wants to tap into the Kangaroo market they would likely pay a small premium.

5.7 In choosing between the various markets, price would be one dimension that you would have to consider; another would be the size of the debt raising; and "tenor" which means the term to maturity of the bond. A bond's tenor can range from 2 years to 30 years; however, different markets are likely to be 'deep' in different tenors. By 'deep' I mean that there will be a larger number of investors that want to buy bonds at that particular tenor. This is also called a 'sweet spot'. The 'sweet spot' is where you'll find substantial pools of investors in a particular maturity who can absorb larger quantities of debt issued before the appetite becomes exhausted and the cost rises for the issuer. Any market will have a range of investors each of whom has a particular preference for a bond with a particular tenor.

5.8 Looking first at the US market, banks dominate the shorter end of the debt markets and they are willing to lend from an over-night term up to about 5 years. 5 years is a "sweet spot" because that is also where US asset managers who invest in bonds are willing to begin to participate in a substantial way so at 5 years you have access to both banks and asset managers as buyers of your bonds. Asset managers manage substantial funds for superannuation funds and other parties and they prefer to purchase bonds with a tenor of 5 to 10 years. At about 10 years and

longer you will likely find insurance companies, pension funds, and super funds with very long-term liabilities which will prefer bonds with a longer tenor that matches their liabilities. So 10 years is another "sweet spot". They typically receive funds from young employees who will not access the money again until they reach retirement. There are also further "sweet spots" at 20 and 30 years.

5.9 Now looking more broadly at other countries outside of the US that remains the largest, deepest and most developed market is UK (or "Sterling" market). Although it is not as deep as the US, it is a market that offers issuers the ability to issuer longer dated bonds. The Singapore market has a sweet spot of around 10 years although you can issue 15 year bonds as well. Investors in the Aussie market do not buy longer dated bonds beyond 10 year bonds being the longest dated in the past. In the current market which is affected by the Global Financial Crisis, the tenor is probably more like 3-5 years.

Factors that determine how much to issue in any given market

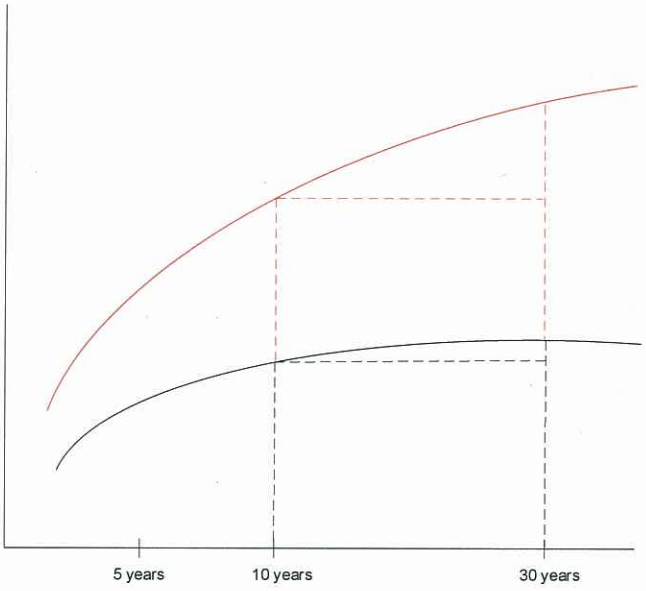
5.10 I have discussed the range of tenor and "sweet spots" above. Also, the size of the bond issue is important. If you were looking to refinance a large amount in the next 6 months or a year, and there is no credit available then you've got a big problem. So your strategy would be to break up the amount to be refinanced into benchmark sizes and spread them out over time. Each market will have a different propensity to purchase different benchmark sizes. The Australian market is an example of a market that very quickly exhausts its appetite for large bond issues so there is a limit of only about 200 million -300 million at any one point in time. Other markets are deeper but if you were not careful and locked yourself into having to raise substantial debt in the US market, even though it is the deepest market in the world, an issuer may still be subjecting itself to market risk. So, if you had $1 billion to refinance you might want to break it up and issue $500 million in one market and $500 million in another market, or you could got to the US market where you could refinance the whole lot all in one go. There is also a minimum efficient scale for a debt offering which varies from market to market. For instance, you wouldn't go to a market that has a benchmark size expectation of a minimum of $500 million if you are only looking to refinance $100 million.

5.11 In order to work out what markets you are going to go to, you will need to talk to the "book runner" at the bank(s) arranging the sale of your company's bonds. "Book running" was one of my previous roles at Deutsche Bank.

5.12 As a book runner, I was also often asked what is the appropriate timing to issue bonds which is the next important consideration when raising debt. Wherever possible, you don't want to be issuing a bond into a market at the same time as what other similar business with a similar rating are doing their issue. Seasonality also effects the demand for bonds. For instance you don't want to issue a bond in the US during their summer holidays, or on a day when the US Federal Reserve Bank is about to make a release because investors will be focused on what the Fed says and not on your bond issue. Similarly you would not want to issue a large quantity of Kangaroo bonds during the Christmas to Australia Day period when some investors are typically away.

5.13 Generally speaking in normal market conditions, the longer the term of the bond the higher the interest rate, so for a 30 year bond you would usually have to pay additional cost over the 10 year bond. This can be graphed for all maturities in a given market as a "yield curve" (see Figure 1 below). Over time, though, how much more you have to pay for additional tenor will vary. In some circumstances for limited periods of time the relativities reverse and a long dated bond can actually be cheaper than a short dated bond. This may occur when, say, a country's central bank is seeking to dampen an over-heated economy by raising short term interest rates.

Figure 1 – Yield curves



5.14 As noted above, the longer the term the better for a company like Jemena because it reduces refinancing or roll-over risk. However, because long dated bonds are more expensive than short dated bonds, I will always compare the pricing for different durations against my sense of the value over time and decide if locking in a longer term offers Jemena 'relative value for money' in extending the term to maturity.

5.15 In practice we take readings of price indications from several sources. We look at published prices for recent issues as well as secondary trading levels of our outstanding bonds or bonds of other issuers in the same industry to get a feel of what our issuance cost will be.

Jemena's current position and an optimal debt portfolio

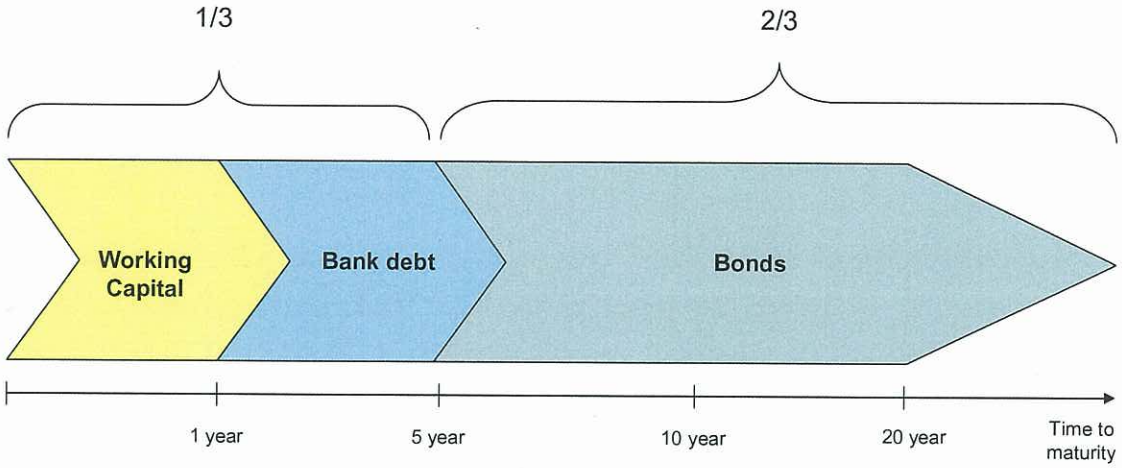
5.16 When a company undertakes a significant acquisition it is usually funded initially by bridge financing. Bridge finance is short term finance – typically up to 1 year. This provides an important degree of flexibility: if the business succeeds in obtaining the asset then it can enter into more permanent funding arrangements once the acquisition is complete. If, however, the deal is unsuccessful (as may be the case) then the company does not draw down the funding and the costs are much less than would be the case if it had raised long term debt by issuing bonds that was then not needed.

5.17 The portfolio of assets owned by Jemena has only recently been acquired and our current debt portfolio has not yet been finally structured post the acquisition.

5.18 I will describe the ideal portfolio of debt for this business that I would seek to enter if I had a "clean slate" with respect to the debt funding of this business.

5.19 If I was to create an "ideal" debt portfolio for Jemena, I would stretch out the average length of maturity of the debt as long as I could (subject to price) by refinancing using longer term bonds because this gives me certainty of funding and reduces my refinancing risk. Ideally I would have about a third of my portfolio financed through short term loans such as working capital bank loans. This provides me with both working capital and a buffer around my larger, long term bond issues so that I can look for a suitable time to issue long dated bonds rather than being locked in to issuing a new long term bond exactly when the previous one had to be re-paid. The remainder of my portfolio would be financed through instruments with longer terms to maturity. This is set out in the diagram below.

Figure 2: Ideal debt portfolio



5.20 Of my total debt, a relatively small portion would be facilities with a maturity of up to 1 year.

5.21 In terms of allocating the longer term portion of my debt, say I was looking at $2 billion, well I know the Aussie market wouldn't be able to digest an issue greater than $200-$300 million at one go and at the moment it would be difficult to get a term to maturity of greater than 5 years. So I might only put up to a maximum of $300 million with a 5 year maturity into the Aussie market.

5.22 The longer term debt could usually be sourced from the US Dollar, Euro or Sterling markets in lots of say US$500 million equivalent. I could try to issue the entire remaining amount in one particular market but I keep the price down by reducing the size in any one market. In other words, in order to minimize the cost of the issue I'll issue bonds where investors are hungry by maintaining cross jurisdiction pricing tension. When I am issuing bonds, meeting the regulatory re-set period is not a key issuance objective. The key objectives will be certainty of execution, size of issue, timing, tenor and price.

5.23 In summary, an ideal portfolio (not the only possible ideal portfolio) would, say, be comprised of the following instruments:

Instrument	**$A equivalent**	**%**
364 Day Working Capital	$100m	2.8
Bank debt ($400m: 3 yrs $400m: 5 yrs)	$1000m	28.75%
Australian bond (5 year)	$300m	8.5%
US bond (10 year)* EUR bond (10 year)* * *These would ideally be maturing at different times, say 5 years apart from each*	$1,000m	28.5%

Instrument	$A equivalent	%
other		
UK bond (20 year)	$500m	14.0%
US bond (30 year)	$600m	17.0%
Total	*$3,500m*	*100.0%*

5.24 On that basis the weighted average of the value of debt in each maturity bracket is greater than 12 years.

Hedging

5.25 We also undertake hedging. Hedging is like an insurance policy against certain risks. For example we have currency hedges when we issue bonds in currencies other than Australian dollars. Similarly we also hedge against interest rates moving away from that forecast. In hedging interest rates one of the factors that we consider for that part of our asset base that is regulated is when the AER sets our revenue reset because our regulated revenue cashflows are derived from the interest rate used for the regulatory reset.

5.26 One point to note with interest rate hedging, we can hedge the risk that the Australian Bank Bill Swap Rate moves up or down but Jemena does not borrow at that rate and there is an additional premium that we pay above the bank bill rate which is linked to our credit rating (discussed at paragraphs 5.13 to 5.15 above). Although we can hedge movements in the bank bill rate, we cannot effectively hedge changes in the premium payable above the bank bill rate as this is driven by market forces such as investor demand.

Deloittes Report

5.27 I am aware that the Australian Energy Regulatory (**AER**) commissioned Deloittes to produce a report which is annexed to the AER's Explanatory Statement that I understand makes some observations on debt raising for energy network companies. I understand that Deloittes spoke to a number of "market makers" in putting the report together but Deloittes did not contact me either about Jemena specifically or about debt markets generally in connection with their report.

6 Credit ratings

6.1 I am involved in briefing credit ratings agencies because the ratings agencies are interested in our treasury operations and in particular, ratings agencies are interested in understanding our financing strategies. Jemena has an A- credit rating with Standard & Poors and an A3 rating with Moody's.

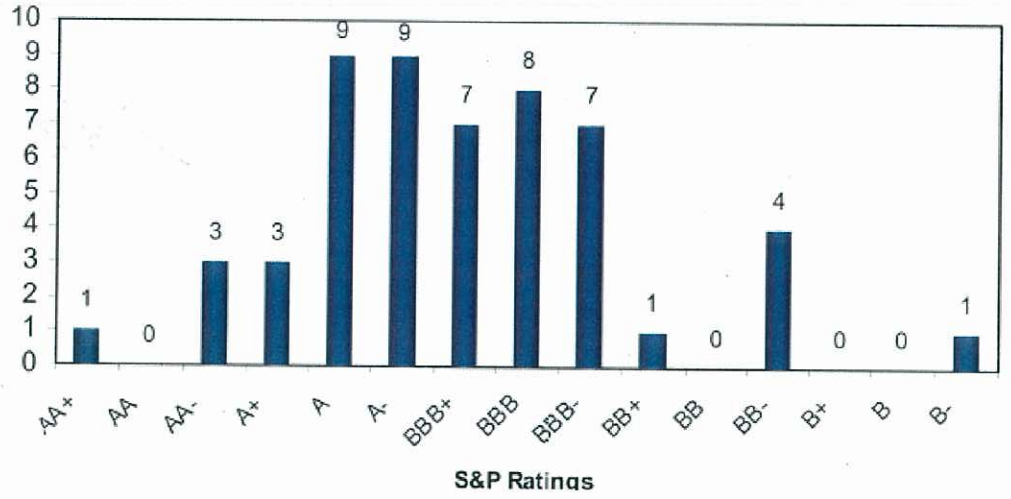
6.2 I have read what they have written about us. I also read their reports that summarise credit ratings in particular sectors such as the RatingsDirect document **Attached**. Our credit rating is based on the business that we are in (the regulated energy network industry) and an assessment of whether we are managing our exposures as well as others in that industry. However, the rating is also partly a result of the ownership structure. As set out above, Singapore Power (AA-/Aa3) ultimately has a 100% holding in Jemena. I understand from their ratings reports that we have the benefit of a ratings uplift that takes into account our ownership by a more highly rated parent.

6.3 Below is a list of companies in the utilities sector in Asia Pacific and their credit ratings and is also reproduced in Graph 1.

Electric Utilities Names	Country	S&P
AGL Energy	Australia	BBB / Stable
Cheung Kong Infrastructure Holdings Ltd.	HK	A- / Stable
CitiPower Trust (The)	Australia	A- / Stable
CLP Holdings Ltd.	HK	A- / Stable
CLP Power Hong Kong Ltd.	HK	A / Stable
Contact Energy Ltd.	NZ	BBB / Stable
DUET Group	Australia	BBB- / Stable
ElectraNet Pty. Ltd.	Australia	BBB+ / Neg
Electricity Generating Authority of Thailand (EGAT)	Thailand	BBB+ / Neg
Energy Partnership (Gas) Pty. Ltd.	Australia	BBB- / Stable
Envestra Ltd.	Australia	BBB- / Negative
Envestra Victoria Pty. Ltd.	Australia	BBB- / Negative
Ergon Energy Corp. Ltd.	Australia	AA+ / Stable
ETSA Utilities Finance Pty. Ltd.	Australia	A- / Stable
GasNet Australia (Operations) Pty. Ltd.	Australia	BBB / Stable
Genesis Power Ltd.	NZ	BBB+ / Stable
Hong Kong Electric Finance Ltd.	HK	A+ / Stable
Hongkong Electric Co. Ltd.	HK	A+ / Stable
Hongkong Electric Holdings Ltd.	HK	A+ / Stable
Korea Electric Power Corp.	Korea	A / Stable
Korea Gas Corp.	Korea	A / Stable
Korea East-West Power Co. Ltd.	Korea	A / Stable
Korea Hydro & Nuclear Power Co. Ltd.	Korea	A / Stable
Korea Midland Power Co. Ltd.	Korea	A / Stable
Korea South East Power Co. Ltd.	Korea	A / Stable
Korea Southern Power Co. Ltd.	Korea	A / Stable
Korea Western Power Co. Ltd.	Korea	A / Stable
Manila Electric Co. (Meralco)	Philippines	B- / Stable
Meridian Energy Ltd.	NZ	BBB+ / Stable
Mighty River Power Ltd.	NZ	BBB+ / Stable
National Hydroelectric Power Corp. Ltd. (NHPC)	India	BBB- / Stable
National Power Corp. (Napocor)	Philippines	BB- / Stable
National Thermal Power Corp. (NTPC)	India	BBB- / Stable

Powerco Ltd.	NZ	BBB / Stable
Powercor Australia LLC	Australia	A- / Stable
Powerdirect Australia Pty. Ltd.	Australia	BBB / Stable
PT Perusahaan Listrik Negara (Persero)	Indonesia	BB- / Stable
PT Perusahaan Gas Negara (Persero) Tbk.	Indonesia	BB- / Stable
Samchully Co. Ltd.	South Korea	A- / Stable
Singapore Power Ltd. (SingPower)	Singapore	AA- / Negative
SPI Australia Holdings (Partnership) L.P.	Australia	A- / Negative
Snowy Hydro Ltd.	Australia	BBB+ / Stable
SP PowerAssets Ltd. (SPPA)	Singapore	AA- / Negative
SPI Electricity & Gas Australia Holdings Pty. Ltd.	Australia	A- / Negative
SPI PowerNet Pty. Ltd.	Australia	A- / Negative
Tata Power Co. Ltd.	India	BB- / Stable
Tenaga Nasional Berhad (Tenaga)	Malaysia	BBB / Stable
Towngas China Co. Ltd.	China	BBB- / Stable
Transpower Finance Ltd.	NZ	AA- / Stable
TRUenergy Holdings Pty. Ltd.	Australia	BBB / Negative
United Energy Distribution Pty. Ltd.	Australia	BBB / Stable
Vector Ltd.	NZ	BBB+ / Stable
XinAo Gas Holdings Ltd.	China	BB+ / Stable

Graph 1: Asia Pacific Utilities Ratings Distribution



7 The effect of the Global Financial Crisis

7.1 Above I outlined my ideal debt structure in a perfect world, however, this is not the economic environment that we are currently operating in.

7.2 The credit crisis started in late 2007 but the height of the crisis came in the last quarter of 2008 when businesses like AIG and Merrill Lynch and a host of other banks got into difficulties. At the height of the crisis the debt market in Australia was shut. Other markets were shut by varying degrees.

7.3 This has changed since the government guarantees have propped up the banking system. There was a little trickle of life where the banks started getting the guarantees from the central banks but this started to take effect in Australia only in December. Most of the banks were AA or AA- rated but with the government backing their bond issues are AAA rated.

7.4 The credit markets started easing up as a result of the government intervention. In the UK they reopened in November – December because the banks started getting funds and were able to lend those funds out. The Aussie banks were a little later in easing up. This was the result of uncertainty surrounding how the federal guarantee structure would work. Once that was resolved, Aussie banks started issuing both domestically and internationally. At the moment it is only the five year bond market that is open but this will become longer as asset managers and insurance companies start coming back into the market. Prices are likely to remain high for some time because there is a lot of pent up supply and this will take a while to dissipate.

8 Conclusion and observations

8.1 I understand that regulators choose a single benchmark tenor when considering our cost of debt. I have explained that we have a portfolio of different debt instruments with some being shorter and some being longer so what the regulator does if they chose a single number is a gross over simplification that does not take into account the dynamics and characteristics of the markets that are providing us with the capital. If I was to choose a single number:

(a) I would start by considering what are the "sweet spots" in the capital markets. As noted above, the sweet spots are: 5 years; 10 years; 20 years or 30 years (depending on the particular market).

(b) I would be most comfortable using the 10 year benchmark because it is a reasonably long tenor to fund our long term assets and is also the part of the market with the deepest pool of investors in most of the major debt markets – US$, EURO, Sterling etc.

Sim Buck Khim

Head of Treasury, Jemena