The Allen Consulting Group

MEMORANDUM

To: Essential Services Commission of South Australia

From: Dr. Michael Lawriwsky, Director, The Allen Consulting Group

Date: 14 September, 2006

Re: Preliminary response to SFG report on the value of distributed imputation credits

The Brief

You have asked us to respond in brief to the report by Strategic Finance Group (SFG) titled, "Value of distributed imputation credits implied by large, high-yield firms from 2000-2005".[1]

ACG's empirical analysis in context

At the outset it must be stressed that the results of ACG's own empirical analysis was just one of many sources of evidence about the value of distributed imputation credits that was taken into account, together with the existing practice of regulators and the benefit from creating stability across regulatory decisions, to form our view that maintaining a gamma estimate of 0.50 is appropriate for regulatory purposes. As was stated in our advice, the numerous changes in tax laws and market conditions over the last decade, combined with empirical issues with all of the methods, makes it difficult to place sole reliance on any individual study irrespective of the methodology applied.

Therefore, ACG has advised that ESCOSA should apply a gamma of 0.50 consistent with the dominant of Australian economic regulators as a matter of caution, given that it has not been demonstrated that a WACC based on a Market Risk Premium of 6% and a gamma of 0.50 has provided inadequate returns to investors.

Data issues

SFG states that the ACG sample contained 12 cases of double-counting, 'two timing errors in which a dividend event was matched with the price change in the underlying security exactly one year hence' and 'a number of mis-classifications of fully franked dividends as unfranked.'

ACG obtained the data on dividend yields and franking from a reputable data source, Aspect Huntley, and share prices were also obtained from a reputable data source, Bloomberg.

ACG has reviewed the data that was used in estimating theta (the value of distributed imputation credits in the hands of investors). We found that there were 10 cases in

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[1]   SFG (18 August, 2006), *Value of distributed imputation credits implied by large, high-yield firms from 2000-2005*, Report prepared for Envestra.

which there was a duplication of observations, but when this was corrected, the resulting estimate of theta for the period 2004-2005 became 0.70 (with a t-statistic of 3.75) compared with 0.74 previously. In other words, the two estimates were not statistically different, which is a result of the low standard errors observed during this period. For the 2000-2003 sample, the theta estimate remained not significantly different from zero.

As a result of SFG's statement that there had been a number of mis-classifications of franking, for the period 2004-2005 we undertook a thorough review of ex-dividend dates, dividends per share and franking levels that was included in the information that was provided to us from Aspect Huntley by checking manually the Aspect Huntley data against comparable data from Bloomberg. This process uncovered a number of cases where the franking level was mis-specified in the Aspect-Huntley data. However, in the process we also uncovered 18 instances of systematic error in the Aspect-Huntley data. In particular, there were a number of observations where a dividend date was recorded as 22 December 2004, which should have been recorded as 23 December 2004.

The effect of taking out the doubled-up observations was not material (reducing the estimate of theta from 0.74 to 0.70). However, remedying the systematic error in the Aspect-Huntley data was material. Re-estimating theta for 2004-2005 for the 'cleaned sample' we found the mean dividend drop-off (DOR) for the 100% franked sample remained at 1.07, which is close to the original estimate. However, the DOR for unfranked distributions became 0.86 (up from 0.77), and the resulting theta estimate was 0.49 (with a t-statistic of 2.96).

Other matters

SFG also claims that there is no economic reason why there should have been a difference in the theta estimates after July 1, 2000, and alleges that ACG has engaged in 'data mining' to obtain a desired outcome. This is not correct. Looking within a period of study as ACG has done is not unusual in the context of dividend drop-off studies. This approach was used in the academic study by Brown and Clarke (1993)[2] and Bruckner Dews and White (1994)[3]. Both these studies traced a rising gamma over time.

Furthermore, it is not clear that, as claimed by SFG, there was no economic difference between the 2000-2003 period and the 2004-2005 period. In the earlier comment SFG incorrectly claimed that the imputation rebate provision that came into effect on 1 July 2000 did not affect superannuation funds.[4] When we examined the latest

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[2]   Brown, P. and A. Clarke (1993) 'The Ex-Dividend Day Behaviour of Australian Share Prices Before and After Imputation', *Australian Journal of Management*, Vol. 18.

[3]   Bruckner, K. N. Dews and D. White, (1994), *Capturing Value from Dividend Imputation*, McKinsey & Company.

[4] SFG (21 July, 2006), *Response to Final Decision, Access Arrangements for SA Gas Distribution: Cost of Capital Issues*, Report prepared for Envestra.

Taxation Statistics summary published by the Australian Taxation Office (ATO) we found that there has in fact been a significant shift in 'refundable imputation credits' recorded by Australian superannuation funds, which have risen from zero in 1999-2000 to $982 million in 2000-01 and $2,225 million in 2003-04. Hence, the value that financial institutions have been obtaining from imputation credits has been rising.

Summary

A review of the period 2004-2005 for large market capitalisation firms has shown that there were errors in the data that was provided to ACG, notwithstanding that the source is widely used and very credible, and which was relied on to undertake the analysis of dividend drop-off rates. The theta estimate with the errors eliminated for the 2004-2005 period is 0.49, which compares to 0.74 derived in our earlier analysis. However, as we noted above, our analysis was but one piece of evidence among many (including the standard practice of regulators) that was considered in our judgement that 0.50 is an appropriate gamma to apply in conjunction with a market risk premium of 6%. The application of a regulatory gamma can never be based on a single piece of evidence, and cannot be based on a mechanical interpretation of statistics. Just as judgement is applied in deriving an appropriate regulatory beta, so too must judgement be applied in the derivation of an appropriate gamma that is consistent with other regulatory WACC parameters. Thus, our original recommendation that a gamma estimate of 0.50 is appropriate for regulatory purposes stands.