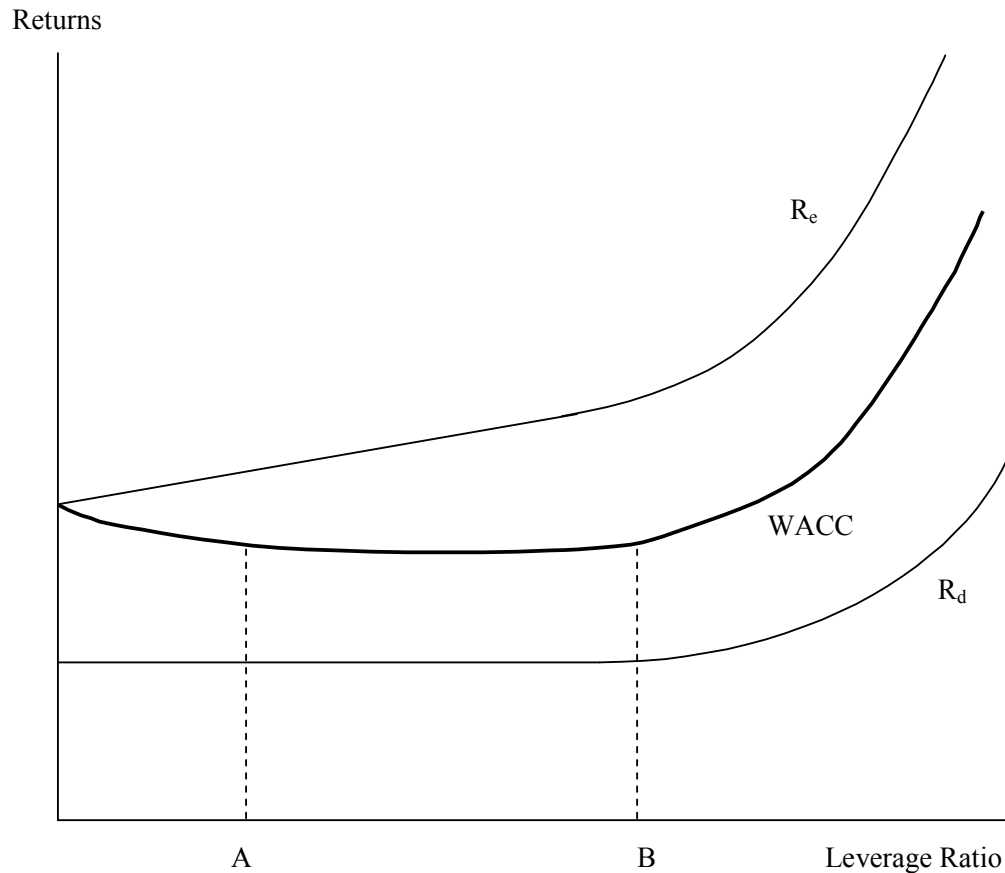


Appendix C

Estimating the Appropriate Leverage

- 1 The debt and equity proportions, also referred to as leverage or gearing, are important to a number of measurement issues for WACC. The relationship between the two sources of capital and the cost of capital is illustrated in the figure below.
- 2 A company has economic incentives to maintain an optimal capital structure. The process of determining the optimal capital structure for a firm is complex. The major factors to consider are the tax advantages of debt, the risk of bankruptcy that debt creates and an advantage to investors from the lender monitoring the company's performance. Interest paid on debt is deductible as an expense in determining a company's tax liability. The more debt that a firm has, the more tax benefit it derives from the debt. The dividend imputation system in Australia, which I discuss in Appendix E, substantially lessens this advantage because the corporate tax has the characteristic of a withholding tax for the investor.
- 3 While there is a tax advantage that rewards higher levels of debt, the more debt a company has, the higher is the probability that it will encounter financial distress and perhaps fall into bankruptcy. The result of these factors means the capital structure decision involves a trade-off between the tax advantage and the bankruptcy risk disadvantage, with an initial advantage of increased monitoring.
- 4 The figure below shows the impact of increasing leverage on the cost of equity (R_e), the cost of debt (R_d) and the WACC (the weighted average of the two sources of capital). As discussed in my report, the cost of equity always increases as leverage increases.
- 5 The value of the company is maximised where the WACC is minimised. The impact of debt in the capital structure depends upon the amount of debt used. At low amounts of debt, there is a benefit (up to point A on the horizontal axis of the leverage ratio). At some higher use of debt, the advantage turns to a disadvantage (at about point B on the horizontal axis).

Figure C1: Optimal Capital Structure

- 6 There is an initial advantage of debt to the company's WACC from the monitoring and the tax advantage of debt. Lenders to the company will engage in monitoring the performance of management. There may be a tax advantage to the deductibility of the interest payments on the debt, although this is mitigated by the dividend imputation system in Australia. Then the WACC becomes flat over a wide range of leverage. Where the WACC curve is flat, there is little advantage to changes in the level of debt. This is between the points A and B on the horizontal axis. But as leverage continues to increase, the risk of bankruptcy begins to increase at an accelerating rate. Both the cost of equity and the cost of debt increase.
- 7 The lesson illustrated by this figure is that there is an advantage to debt at low levels. Then over a wide range of leverages, there is minimal impact on the WACC as leverage increases. Finally, the disadvantages of debt take over and WACC increases with more debt. The optimal capital structure lies somewhere on the flat portion of the WACC curve, where WACC is minimised.
- 8 In terms of estimating an appropriate leverage ratio for ULLS and SSS, what this figure shows is that over quite a wide range, one leverage ratio is virtually as good as another in terms of its impact on WACC.
- 9 Although regulators may have views about capital structure for a firm, they do not have to face the economic consequences of their views. It seems presumptuous for

a regulator to set policy based on an assumption that the management of a company does not know how to make capital structure decisions that are in the best interests of the company. Although there may be isolated cases where management are not acting wisely, I believe the burden of proof should be on the regulator, not the company, to establish that this is the case. I see no reason to assume that Telstra is not acting in its best interests in determining its capital structure, including its choice of maturities.

- 10 From Telstra's Annual Report as of 30 June 2005, I obtained the total debt and shareholders' equity. However, these are book (accounting) values. The debt and equity proportions used in the calculation of WACC should be measured in current market values. I assume that the book value of Telstra's debt approximates the market value of its debt. This assumption is supported because interest rate conditions and inflation have been fairly stable recently. I then deduct the amount of short-term marketable securities (from footnote 8) to get net debt. From the Annual Report I obtained the total number of shares outstanding, and from the Australian Financial Review I obtained its closing share prices on 30 June 2005. With this data I calculated the market value of equity. I then calculated the market value debt proportion (net debt divided by net debt plus equity) assuming the book value of debt is a reasonable proxy for the market value of debt.

Table C1: Telstra's debt and equity data

	<u>30 June 2005</u>
Debt – book value	\$12.011 billion
Equity – book value	\$14.881 billion
Debt – market value	\$12.011 billion
Equity – market value	\$62.961 billion
Debt proportion – market value	16.02%

- 11 Since 30 June 2005, the share price of Telstra ordinary shares has fallen by nearly 20%, which increases the market value debt ratio. However, interest rates have increased over the same period, which depresses the value of fixed interest debt. Thus, both the numerator and denominator in the debt ratio have decreased. I do not have data on Telstra's debt subsequent to 30 June 2005. Assuming it has not changed, the market value debt ratio of Telstra will have increased slightly, perhaps to about 18%.
- 12 The correct measure to use in the WACC calculation is the company's optimal leverage ratio. However, the optimal leverage for a company is very difficult to assess, and even more so for an external observer. Therefore, in my opinion it is appropriate in this case to use the company's target proportions. The target proportions are usually close to, but not necessarily the same as, the current proportions. Perhaps more to the point, it is Telstra's responsibility to determine its target proportion. This proportion should be the gearing that Telstra management intends to pursue in the future.

- 13 I am advised that Telstra's market measured, target debt proportion is in the range [c-i-c]. This target range is based on its intentions given an extensive analysis of market-based measures of its current gearing and of a comparison of gearings of comparable companies. In the case of Telstra, it is possible to evaluate whether the company actually is pursuing the gearing that they state is their target. Although the actual ratios are volatile through time, they are currently in the target range. The target debt ratio range is consistent with observed actual ratios. I see no reason to question the validity of the stated target debt ratio range of [c-i-c] for Telstra.
- 14 Although I favour using the target leverage ratio for a company, in this case the relevant leverage ratio is the ratio for ULLS and SSS. Because these services are only a small part of Telstra's activities (rather than a separate entity), it is not possible to observe its actual leverage ratio. Therefore, the target ratio cannot be compared to the actual ratios. In estimating the leverage ratio for a portion of a company rather than the entire company, the process will necessarily involve some amount of subjectivity.
- 15 ULLS and SSS assets are largely intangible and would have little value outside of the specific use of Telstra. As such the assets provide almost no collateral value to a lender. Such assets and activities generally attract little or no debt financing.
- 16 It is my opinion that the leverage ratio for ULLS and SSS should be lower than that of the rest of Telstra. In my opinion, the appropriate estimation for the leverage for ULLS and SSS is 10%.