The cost of capital essay example

Business, Company

1. The Cost of Capital

1. 1 Relationship between the Cost of Capital and Hurdle Rates

The cost of capital is an expected rate of return on the investment. It helps define if the investment is worthwhile. The expected return on investment is supposed to be greater than the cost of the capital. It can also be described as the risk-adjusted return on capital. The cost of the capital consists of two parts: the cost of debt and the cost of equity. The cost of the capital is often used as a discount rate when calculating the projected cash flow to determine net present value (NPV) (Driver & Temple, 2009).

The hurdle rate can be defined as the minimum rate of return on investment. It can also be applied in discounted cash flow analysis when making an investment decision. To accept an investment project, the hurdle rate must be equal to the incremental cost of capital. It is also known as “ hurdle rate” because the return shows if the investor has overcome the “ hurdle” mark in order to make positive investment decision (Driver & Temple, 2009).

1. 2 Cost of Capital Calculation

Given: Assume that 40% of Company A’s capital structure is in the form of bonds and other debt. Total common stockholder equity provides 50% of the capital. Preferred stock provides 10% of the capital. The company has determined that the after-tax cost of its bonds and other debt is 6. 2%. The cost of preferred stock is 8%. The cost of common stock and retained earnings is 12. 4%.

For the calculation of the weighted average cost of capital (WACC) formula was used:

WACC = Xd*Kdaftertax + Xps*Kps + Xcs*Kcs,

Where Xd – share of bonds and other debt in the capital structure, Kdaftertax – cost of bonds and other debt, Xps – share of preferred stock in the capital, Kps – cost of preferred stock, Xcs – share of common stock in the capital, Kcs – cost of common stock (Parrino & Kidwell, 2009).

Working notes:

Xd = 0. 4 (40% in bonds, at an after-tax cost of 6. 2%): 0. 4*0. 062= 0. 0248;

Xps = 0. 1 (10% in preferred stock at 8%): 0. 1*0. 08 = 0. 008;

Xcs = 0. 5 (50% in common stock at 12. 4%): 0. 5*0. 124 = 0. 062.

Thus, WACC in this case will be as follows:

WACC = 0. 0248 + 0. 008 + 0. 062 = 0. 0948, or 9. 48%

2. WACC Utilization

2. 1 WACC utilization in NPV Analysis

The weighted average cost of capital (WACC) is commonly used in the net present value (NPV) analysis or in assessing the value of an asset. It is also called the discount rate. The value of debt and the value of equity are the components of net present value formula which are used for the firm valuation. They are very important for NPV calculation which is the central tool in discount cash flow analysis (Parrino & Kidwell, 2009).

2. 2 WACC utilization in IRR Analysis

Usually, WACC is used in IRR analysis to compare the cost of capital to the expected rate of return. Basically, WACC is used as an indicator to assess

investment opportunities.

IRR is used in capital budgeting which makes the NPV of all cash flows equal zero. The higher IRR the more desirable is an investment. On the basement of comparing IRR to WACC a conclusion about the profitability of the project can be made. IRR must be greater that WACC in order to cover the cost of debt and equity and achieve profitability of the company (Parrino & Kidwell, 2009).

References

Driver, C. and Temple, P. (2009). Why do hurdle rates differ from the cost of capital? Cambridge Journal of Economics, Retrieved from http://cje. oxfordjournals. org/content/34/3/501. abstract

Parrino, R. and Kidwell, D. S. (2009). The Cost of Capital. In Fundamentals of Corporate Finance (chapter 13). Retrieved from http://www. slideshare. net/parksiteat/chapter-13-the-cost-of-capital