QUESTION A

Answer

Cost of equity

= Using a dividend growth model (Siregar and Sylvia 120)

The cost of equity is the implied opportunity cost or implied cost of capital and represents the return on shareholders. It gets used to compensate investors for the risk of investing in the stock. In this context, we shall use the dividend growth model with the expected dividend to be paid of $1.5 and per share and price of the stock of $20 per share with the annual growth rate of 5%. Therefore using the dividend growth, the cost of equity of Bad Boys Inc. will get calculated as follows.

= Dividend expected/ (price of the stock) + growth rate

= 1.5/ (20) +0.05 = 12.5%

Cost of debt

= Cost \* (1-T)

The tax rate is 35%, and the cost of debt before tax is 8%

Interest expense has additional tax implications, and they are typically deductible; therefore, we take into account the amount of tax savings the company will be able to take advantage of by making its interest payments represented by the equation, Cost\*(1-T)

= 8 %( 1- 35%) = 5.2%

The coupon rate is equal to the required rate of return since the debt gets sold at par

Cost of preferred stock

= dividend paid/market price of the stock

The common equity differs with the preferred stock in many ways. The benefit is that preferred shareholders are the first individual to receive dividend payments. In the event of liquidation, the preferred shareholders will be the first to receive payments after bondholders but before common shareholders. Because of its nature, they get sometimes known as a perpetuity. For this reason, the cost of preferred stock formula resembles the perpetuity formula as indicated above. Therefore, the cost of preferred stock for Bad Boys Inc. is as shown below.

= 2.5/25 = 10%

Weight of the components

Debt = 45% or 0.45

Equity = 50% or 0.5

Preferred stock = 5% or 0.05

The Weighted Average Cost of Capital = Weight of debt \* after tax cost of debt + Weight of Equity stock \*Cost of equity stock + Weight of Preferred stock \*Cost of Preferred stock

(Zhou and Qing 140)

Tax rate =35%

The weighted average cost of capital (WACC) for Bad Boys Inc.

= 0.45\*5.2% + 0.5 \* 12.5% + 0.05 \* 0.1

= 8.595%

The weighted average cost of capital for bad boys Inc. = 8.595%

QUESTION B

If Bad Boys, Inc. raises capital using 30% debt, 5% preferred stock, and 65% common stock, what is Bad Boys, Inc.’s cost of capital?

Assume cost of each component remains same

Cost of the components

Debt = 5.2%

Equity = 12.5%

Preferred stock = 10%

Weight of the components

Debt = 30% or 0.3

Equity = 65% or 0.65

Preferred stock = 5% or 0.05

The Weighted Average Cost of Capital = Weight of debt \* after tax cost of debt + Weight of Equity stock \*Cost of equity stock + Weight of Preferred stock \*Cost of Preferred stock

Tax rate =35%

WACC = 5.2%\*0.3 + 12.5%\*0.65 + 10%\*0.05 = 10.185%

The weighted average cost of capital for bad boys Inc. after adjustments = 10.185%

Works cited

Siregar, Sylvia Veronica. "Value relevance of earnings, cost of equity, and cost of debt." International Accounting Conference. 2017.

Zhou, Qing, et al. "Deviation from target capital structure, cost of equity and speed of adjustment." Journal of Corporate Finance 39 (2016): 99-120.