1. What is going on at M&M Pizza?

* Moe Miller, the new managing director at M&M Pizza, is considering substituting Debt for Equity capital in order to reduce the cost of capital. The proposal is to issue F$500 million in new debt at @4% and to use the proceeds to repurchase F$500 million in company shares. As per Miller, the cost of debt is 4% and cost of equity is 8%, hence the substitution is justified. Moreover, the recapitalization will create sustained value for M&M owners as the plan would have no impact on assets, profits and operations of business.
* The other proposal would be unleveraged capital structure with tax as the government is considering altering the tax policy by introducing a 20% corporate income tax.

1. How do the financial statements for M&M Pizza vary with the proposed repurchase plan? Do the alternative policies improve the expected dividends per share?

* Proposed Financial Statements for M&M Pizza:

|  |  |  |  |
| --- | --- | --- | --- |
| **Income Statement** | **Debt=0** | **Debt=500** | **Debt=500**  **(with tax)** |
| Revenue | 1500 | 1500 | 1500 |
| Operating expenses | 1375 | 1375 | 1375 |
| operating profit | 125 | 125 | 125 |
| Interest Payments | 0 | 20 | 20 |
| Taxes | 0 | 21 | 21 |
| Net Income | 125 | 84 | 84 |

|  |  |  |  |
| --- | --- | --- | --- |
| Dividends | 125 | 84 | 84 |
| Shares Outstanding | 62.5 | 42.5 | 39.4 |
| DPS | 2 | 1.98 | 2.13 |

|  |  |  |
| --- | --- | --- |
| **Balance Sheet** | **Debt=0** | **Debt=500** |
| CA | 450 | 450 |
| FA | 550 | 550 |
| **Total** | **1000** | **1000** |
|  |  |  |
| Debt | 0 | 500 |
| Equity | 1000 | 500 |
| **Total** | **1000** | **1000** |

* As per the above information, we can say that the expected dividends per share does not improve, rather it decreases by 1% in levered structure.

1. What impact does the repurchase plan have on M&M’s weighted-average cost of capital?

* The repurchase decision has caused the WACC of the company to go down by 0.5%. The beta given in the question is un-levered which means that there is no debt impact in it and hence we need to calculate levered beta for the repurchase decision.
* Levered Beta= Unlevered Beta\* [1 + (1-t)\* D/E]
* Where, T= Corporate tax, D= Debt Value and E= Equity value
* Hence, levered beta = 0.8\*[ 1 + (1-0.20)\* 0.471] = 1.10
* Cost of Equity is calculated using CAPM approach.
* Ke = 4% + 1.1\*5% = 9.5%
* WACC (without tax) = [D/V\*Kd] + (E/V\*Ke)
* = 7.74%

|  |  |  |
| --- | --- | --- |
| **Particulars** | **Without Debt** | **With Debt** |
| Cost of Debt | 4% | 4% |
| Beta | 0.8 | 1.10 |
| Cost of Equity | 8% | 9.50% |
| WACC | 8% | 7.74% |

1. What are the debt and equity claims worth under the alternative scenarios? You may note that the present value of a perpetual cash flow stream is equal to the expected payment divided by the associated required return.

* Under the current situation, the following is the value of debt and equity:
* Value of Equity= No. of shares outstanding X Market price of Share
* = 62.5\*25
* = F$1562.5
* Value of Debt = 0
* Hence**, Firm Value is F$1562.5**
* In the repurchase scenario (leveraged), the values will be:
* Value of Debt = Interest Payment/ Cost of Debt
* = 20million/4%
* = F$500 million
* Firm Value = F$1562.5
* Therefore, Value of Equity= Firm Value- Value of Debt
* = F$1562.5 – F$500
* = F$1062.5

1. Which proposal is best for investors? What do you recommend that Miller do?

* The objective of the company is to increase the wealth of its shareholders through capital gain or dividend. As it can be seen that the dividend per share has decreased, it would reduce the wealth of shareholders. Furthermore, introduction of debt would increase the risk for shareholders as the debt is secured and given priority. When a company pays full dividend to its shareholders, there are two disadvantages to this situation. First, company is not keeping any amount aside as a reserve for future purposes and second, shareholders have to pay a large amount of tax on dividend.
* Hence we can conclude that Miller should come up with a proper capital structure policy for long-term growth rather than repurchasing shares.

1. How would your analysis in questions 2 and 3 and recommendation in question 4 change if the new tax law is implemented? Please note that, with corporate taxes, the expected debt-to-equity ratio under the share repurchase plan is 0.588, and the number of remaining shares outstanding is 39.4 million.

* the analysis in question 2 would change as we can see the dividend per share increases to F$2.13 from F$2, hence the repurchase option seems feasible.
* Analysis in question 3 will change as below;
* WACC (with tax) = [D/V\*Kd\*(1-t)] + (E/V\*Ke)
* = 7.48%
* WACC reaches close to the original cost of equity of 8% when corporate tax is introduced.
* The recommendation as to whether the repurchase plan be carried forward or not:
* The question mentions that the debt to equity ratio would change to 0.588 with the introduction of corporate tax, hence we will calculate levered beta.
* Levered Beta= Unlevered Beta\* [1 + (1-t)\* D/E]
* Where, T= Corporate tax, D= Debt Value and E= Equity value
* = 0.8\*[1 + (1-0.2)\*0.588]
* = 1.18
* This shows that our Beta will surge from 0.8 to 1.18 i.e. by 47.5% which indirectly means that the company’s risk will increase by 47.5%.