

Problem



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Using the arguments of Modigliani and Miller, explain what action you would take to improve your financial position if you owned 4% of the ordinary shares of Fall. Estimate by how much your financial position is expected to improve.

Part A: Capital Structures

Crumble

Fall

Long-term debt

0

Long-term debt at 12%

25000000

Common stock

20000000

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Common stock

25000000

Share premium account

45000000

Share premium account

8000000

Retained earnings

36500000

Retained earnings

44000000

Total liabilities and equity

101500000

Total liabilities and equity

102000000

Common shares outstanding

80000000

Common shares outstanding*

25000000

Part B: Projected EPS Levels

EBIT

25000000

EBIT

25000000

Less: interest expense

0

Less: interest expense

-3000000

Earnings before taxes (EBT)

25000000

Earnings before taxes (EBT)

22000000

Less: taxes at 35%

-8750000

Less: taxes at 35%

-7700000

Net income

16250000

Net income

14300000

Earnings available to common

16250000

Earnings available to common

14300000

EPS

0. 203125

EPS

0. 572

Stock price (EPS/roe)

1. 4

Stock price (EPS/roe)

4

r debt

0

r debt

0.12

r equity

0.145089286

r equity

0.143

tax rate

0.35

tax rate

0.35

$d/(d+e)$

0

$d/(d+e)$

0.245098039

$e/(d+e)$

1

$e/(d+e)$

0.754901961

Total corporate value

112000000

Total corporate value

125000000

WACC

0.14508929

WACC

0.12706863

Fall

Long-term debt at 12%

0

Long-term debt

0

Common stock

50000000

Common stock

2000000

Share premium account

8000000

Retained earnings

44000000

Total liabilities and equity

102000000

Total liabilities and equity

2000000

Common shares outstanding*

50000000

Common shares outstanding*

2000000

EBIT

25000000

Less: interest expense

0

Earnings before taxes (EBT)

25000000

Less: taxes at 35%

-8750000

Net income

16250000

Earnings available to common

16250000

Earnings

650000

EPS

0. 325

EPS

0. 325

Stock price

4

Estimated financial position

8000000

If Modigliani and Miller's argument holds true that the firm's financing mix does not have any impact on the value of the company, then as an investor I can prescribe Fall to issue stock split, sell the other half to gain an amount to buy back debentures. This way, if I own 4% of the original shares, I now own 2, 000, 000 shares of the company, which if the market price prevails at \$4,

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will increase my financial position by less than half.

Financial position to increase by less than half: Of course, the recommendation assumes that the stock split will not have effect on the price, but it does have an effect because the price is a factor of the demand and supply in the market. And while perfect information is assumed under Modigliani and Miller argument, the price is supposed to drop. Although this drop in market price cannot be estimated fully as to how much, the increase in financial position with at least the amount of stock that is traded, by undertaking this decision on capital structure, the financial position will increase at least by less than half.

Discuss the impact of increasing debt on a company's cost of capital. What implications would this suggest for a company's choice of capital structure? Modigliani and Miller proposes that debt policy should not matter, as in a tax-free economy and well-functioning markets, dividing the capital structure between debt and equity will have no effect on the total value of the company. But in the real world where taxes are prevalent, taxes provide tax shield or tax deductions for interest expenses. This gives a firm advantages of utilizing debt for its capital structure.

The effect of increasing debt results in what has been called financial leverage. This is apparent in the computation of cost of capital; by computing the relative weights of debt and equity as proportions to the overall capital mix, multiplied by their returns cost of capital is computed. However, the computation is not complete unless the tax deductions for interest expenses, hence the tax rate is subtracted from the return of debt, which is then multiplied to the proportion of debt in the capital structure. Given this, increase in debt, as it gives tax advantages, lowers the cost of

capital for the firm.

Because of this implication, it seems to be beneficial for financial managers to increase debt in order to decrease the cost of capital for the firm. The cost of capital for the firm has a serious implication on the corporate value, as the decision to undertake most projects for the firm will be based whether or not they exceed this weighted average return demanded by investors. Thus, the lower the cost of capital, the more projects a firm can undertake to increase corporate value in the process.

Modigliani and Miller's theory of capital structure is sometimes considered to be unrealistic. Discuss the problems with this theory that might concern a financial manager who wishes to ascertain the appropriate capital structure for his company.

Modigliani and Miller's theory of capital structure is sometimes considered to be unrealistic, for the reason that in real life, debt can only increase up to a certain extent which will be beneficial to a firm. In reality, the more debt a firm undertakes, the more it is perceived to be riskier.

Increasing the debt in relation to its proportion to a firm's financing mix lowers the cost of capital of the company, but only to a certain extent. The cost of debt as debt proportion increases will increase in the long run—debt investors will see that the firm will have little equity financing, which makes the firm a riskier investment.

Real-life concerns about this theory centers on the fact that firms which have higher debt proportions will lead to a bigger probability of the firm not meeting its financial obligations, i. e. payment for its borrowings. This could lead to bankruptcy due to insufficient equity, which results in liquidation of assets to repay the obligations. The main issue with increasing debt relative

to equity, in real life depends on the shareholders' risk tolerance and conservatism; although a certain capital structure that intends to maximize their wealth is prescribed, companies can still fail, and ability of the investors to tolerate risk of financial losses should still be considered.

Bibliography

Keown, A. J., Martin, J. D., Petty, J. W., Scott, Jr., D. F. (2005) Financial Management: Principles and Applications. New Jersey: Pearson Education, Inc.