

## Notes on the Group assignment

**MBAC 813 - 2019**

**Marks** for the assignment allocated according to the following:

Introduction and general comments on risk and the affecting variables: **10 marks**

**Section 1 Capital structure and sustainable growth. 20 marks**

*Calculations 10 marks discussion 10 marks*

$$g^* = \frac{m(1-d)A/E}{A/S - m(1-d)A/E}$$

*The calculation and general discussion on possible future growth should pivot around this equation.*

*Variables to be discussed in a management context should be the determinant variables in the equation and the underlying determinant variables to the determinant variables. Apply the 80:20 rule.*

*Another equation that could have been use is the so called RETENTION GROWTH rate model (Retention Rate X ROE. There are others as well – we have not done them will not discriminate if correct. Although less obvious what the determinant variables are the same process as given above could have been used.*

*Given the assignment question that capital structure should be considered any other determined growth rate should be discussed in this context.*

**Section 2 a) Share price and b) Manage share price into equilibrium 30 Marks**

*Calculations 20 marks discussion 10 marks*

### **a) Share price**

*This assessment has to be done in line with the SML procedure. a) determine required return via CAPM b) determine expected return as per the probabilities provided. NB to note is that the last year sales had a negative return therefor adjustment to the process of determining a more realistic return might have been needed. Also please note that a negative growth in sale is not sustainable. Related to the data there were two years 2017 and 2012 carrying outlier data points. The impact might or should have been*

*accounted for because as per the financial information there are specific reason attached.*

*From a stand-alone point of view compare the Market rate of return (as via the CRI index) Coefficient of variation to the Share price rate of return Coefficient of variation. Although not used directly in determining a probable share price it gives an indication of the Share return riskiness in relation to that of the market. It also gives an idea of whether the Share's rate of return should be higher or lower than that of the market.*

*Determine required return as per CAPM determine Expected Growth rate and compare it. Using the SML and determination of Beta graphs might have helped in the discussion of the issue to be considered. For determining of Beta probably the graphic approach is best but the equation route will do as well. In case the equation  $Cov_{(market,share)} / \text{Variance market}$ , is used without showing the process, and the value is incorrect it is difficult to allocate marks.*

*Adjust the Current share price in the relation Expected return / Required return X Current Share price*

## **b) Manage share price into equilibrium**

*Variables to be discussed in a management context should be the determinant variables in the equation and the underlying determinant variables to the determinant variables. Apply the 80:20 rule.*

*It may include variable affecting the probabilities related to sales growth; factors affecting sales; regarding the CAPM approach the manageable determinant variables as per the CAPM equation.*

*Then make an adjustment to determine probable in equilibrium price as follows: Expected return (realized return) / Required return X Current share price*

## **Section 3 a) Optimal Capital structure and b) intrinsic value 30 marks**

**Because of lagging behind in time this was optional for the Potchefstroom and Vanderbijlpark groups.**

### **a) Optimal capital structure**

*The process to be followed to determine optimal capital structure includes as per the slides the following:*

*Optimum capital structure is where cost of capital (WACC) is at its lowest.*

| $w_d$       | 0%       | 20%      | 30%             | 40%      | 50%      |
|-------------|----------|----------|-----------------|----------|----------|
| $r_d$       | 0.0%     | 8.0%     | 8.5%            | 10.0%    | 12.0%    |
| $w_s$       | 100%     | 80%      | 70%             | 60%      | 50%      |
| <b>b</b>    | 1.000    | 1.150    | 1.257           | 1.400    | 1.600    |
| $r_s$       | 12.00%   | 12.90%   | 13.54%          | 14.40%   | 15.60%   |
| <b>WACC</b> | 12.00%   | 11.28%   | <b>11.01%</b>   | 11.04%   | 11.40%   |
| $V_{op}$    | \$250.00 | \$265.96 | <b>\$272.48</b> | \$271.74 | \$263.16 |
| <b>D</b>    | \$0.00   | \$53.19  | \$81.74         | \$108.70 | \$131.58 |
| <b>S</b>    | \$250.00 | \$212.77 | \$190.74        | \$163.04 | \$131.58 |
| <b>n</b>    | 10       | 8        | 7               | 6        | 5        |
| <b>P</b>    | \$25.00  | \$26.60  | <b>\$27.25</b>  | \$27.17  | \$26.32  |

**b) What should the intrinsic value of the company be?**

Use any discounted cash flow approach just motivate why a specific approach is used – The Gordon equation for operating value  $V = FCF_1 / (r_s - g)$  might be the easiest to use. Be aware that the last year will render a negative FCF which means specific assumptions or calculus adjustments ( i.e. using Avg for number of years) around determining FCF is needed. NB Also note that a negative FCF in a specific year is not necessarily a problem but prolonged negative cash flows is in many industries and specifically in this one may be a problem.

**Section 4 Based on NPV; IRR and MIRR**

**30 marks**

The question requires that one should put oneself back to 10 years earlier and then do NPV, IRR and MIRR analysis.

Do the calculations as required keep in mind IRR cannot be done without adjustment since the Cash flows (it is suggested that the FCF values be used- this means a FCF values need to be determined for each year) over the years are non-normal (some are positive and some are negative).

**NPV approach:** To determine whether it was a “good investment divide the NPV value by the number of share issued and compare it to the share price at the time.

**MIRR approach:** To do MIRR get the present value of all the cash outflows and the future value of all the cash inflows the so called terminal value - then find the rate of return that will make the present value of the terminal value equal to the present value of the cash out flows for the period as indicated. Check whether the MIRR value is bigger than the optimal WACC determined earlier. If it is it was a “good” investment.

IRR should be used with circumspect for the reason given above as a matter of fact it will tend to give questionable answers.