

QUESTION 1.A**Managerial Finance page 287-288**

| | | | |
|-------|-------------------------------------|---|---|
| a.i) | <u>Debt management ratio</u> | | |
| | Debt ratio | = | $\frac{\text{Total debt}}{\text{Total assets (excl. Goodwill)}}$ <i>Current + Non-Current liabilities</i> |
| | | = | $\frac{388\,039}{735\,020}$ |
| | | = | 52.79% |
| | Debt to equity ratio | = | $\frac{\text{Long-term debt (excl. Def tax)}}{\text{Total shareholder's interest}}$ |
| | | = | $\frac{129156}{349138}$ |
| | | = | 36.99% |
| | Interest cover | = | $\frac{\text{EBIT}}{\text{Interest expense}}$ |
| | | = | $\frac{129094}{13628}$ |
| | | = | 9.47 times |
| a.ii) | Gearing | = | $\frac{\text{Total long-term debt}}{\text{Total long-term debt + Total equity}}$ Managerial Finance page 81-82 |
| | | = | $\frac{129156}{478294}$ |
| | | = | 27.00% |

b) Debt ratio: Measures the percentage of assets financed by borrowings
 Fast and Furious debt ratio is slightly higher than the industry averages, which might indicate too much debt which could lead to financial difficulties in the future

Debt to equity (D:E) ratio: Assess whether a company has high financial leverage (financial risk) or is capable of taking on additional debt finance.
 It indicates the extent to which debt is covered by equity (shareholder's funds).
 Fast and Furious D:E ratio is much lower than the industry averages, which indicates that the company is not highly geared and thus reduces its financial risk.

Interest cover: shows how likely the company is to default on the debt interest payment. A high ratio shows that the company can easily meet its debt obligations.
 A low ratio means that the company is at risk of defaulting on interest repayment should sales drop even marginally.
 Fast and Furious interest cover is better/higher than the industry averages, which indicates that the company can easily cover their interest repayments

Gearing ratio: Measures the proportion of debt to proportion of equity financed. It is a measure of financial leverage, showing the degree to which a firm's operations are funded by debt as opposed to equity. High financial gearing means that a company places a heavy reliance on debt financing, while low financial gearing means that firm is heavily reliant on equity financing
 Fast and Furious gearing is lower than the industry average, which means they are more reliant on equity financing vs. debt financing.

QUESTION 1.B

| | NOTE | MARKET VALUE (R' 000) | % OF TOTAL | COST | WACC |
|-------------------|------|-----------------------|------------|-------|-----------------|
| Ordinary shares | 1 | 400 000 | 75.76% | 20.0% | 15.15% |
| Preference shares | 2 | 27 500 | 5.21% | 10.0% | 0.52% |
| Debentures | 3 | 16 627 | 3.15% | 8.0% | 0.25% After tax |
| Long term loan | 4 | 83 855 | 15.88% | 12.0% | 1.91% After tax |
| | | <u>527 982</u> | | | <u>17.83%</u> |

ANSWER: 18.00%

NOTE

| | | | |
|---------------------|---|---------------------------------|-----------|
| 1 Ordinary shares: | = | Market price x Issued shares | |
| | = | R400 x 1 000 000 | |
| | = | <u>R 400 000 000</u> | |
| 2 Preference shares | = | 11% x R25m | |
| | = | R 2 750 000 | |
| | = | R2.75m / 10% | |
| | = | <u>R 27 500 000</u> | |
| 3 Debentures | = | PV of coupon + PV of redemption | |
| Annual coupon: | = | R15m x 12.5% x 0.72 | After tax |
| | = | <u>R 1 350 000</u> | |
| PV factor | = | 5 years at 8% (after tax) | (Table B) |
| | = | 3.993 | |
| PV of coupon | = | R1.35m x 3.993 | |
| | = | <u>R 5 390 550</u> | |
| Redemption value | = | R15m + 10% | |
| | = | R16.5m | |
| PV factor | = | 5 years at 8% (after tax) | (Table A) |
| | = | 0.681 | |
| PV of redemption | = | <u>R 11 236 500</u> | |
| TOTAL VALUE | = | <u>R 16 627 050</u> | |

| | | |
|--------------------|---|---|
| 4 Long term loan | = | PV of interest + PV of redemption |
| Annual interest | = | R89.156m x 15% x 0.72 After tax |
| | = | R 9 628 848 |
| PV factor | = | 8 years at 12% (after tax) (Table B) |
| | = | 4.968 |
| PV of interest | = | <u>R 47 836 117</u> |
| Redemption value | = | R 89 156 000 |
| PV factor | = | 8 years at 12% (after tax) (Table A) |
| | = | 0.404 |
| PV of redemption | = | <u>R 36 019 024</u> |
| TOTAL VALUE | = | <u>R 83 855 141</u> |

- c) **Managerial Finance - Page 201**
Will the new buses still be "usable" after 5 years? Will the realisable value be achieved at the end of the project?
Where will the new buses be sourced from and will the full order be delivered in time?
Availability of diesel of 50ppm? Where will it be sourced from?
Service of the new buses?
Will the new buses really make such a big impact on the company's reputational risk? It still uses fossil fuels and releases CO2.
Competition from other companies?
Will the new buses be fuel efficient if they travel midst the traffic from Pretoria to Johannesburg?
The company is expanding into public transport - are they skilled and equipped to manage this new market (ticket sales, queries)?
Health and safety and legal compliance: qualified drivers to transport people and just goods

- d) **Managerial Finance - Page 174**
Investors are rational - which is not true in the real world
Capital markets are perfect - in the real world it is not
The discount rate assumes that all cash received before the end of the project can be re-invested at the discount rate
Investors are risk averse
Investors seek to maximise their wealth in terms of cash

QUESTION 1.D

Convertible preference shares

These shares can be converted into equity at a later stage or paid out - depending who has the right to decide

These preference shares can be included in equity or liabilities

If they are included as part of equity, it will lower the gearing of the company

Issues of equity might dilute the control and EPS of the company

Company are not obliged to pay out preference dividends in years where there might be a shortage of cash

Preference dividends (19%) are not tax deductible

Will increase the WACC of the company compared to bonds

Bonds

Bonds are an obligation to the company, they have to pay back the bond and interest, no matter if there might be a shortage of cash flow

Bond interest/coupon of 16% are tax deductible - which will reduce the tax bill of the company.

After tax cost of 11.52% (assumption tax = 28%) will decrease the WACC of the company compared to convertible preference shares

Issues of bonds will not dilute the control of the company, and might even increase the EPS of the company

Bond and other long-term liabilities will increase the gearing of the company, which might affect any covenants with the company

Conclusion:

I will issues bonds:

- No loss of control
- Interest on bonds are tax deductible
- Cheaper option than the convertible preference shares (after tax 19% vs. 11.52%)
- Might be less admin to manage compared to convertible preference shares

QUESTION 2

(Study Guide page 160)

a)

| | CURRENT POLICY | | NEW POLICY | | |
|-------------------------------|----------------|----------------------|------------|----------------------|-------------------------|
| | | Current Credit Sales | | Current Credit Sales | Additional credit sales |
| Credit sales | R | 15 750 000 | R | 15 750 000 | R 1 500 000 |
| Discount rate | | 2% | | 5% | 5% |
| Discount on % of credit sales | | 40% | | 70% | 65% |
| Pay in | | | | | |
| 10 days | | 40% | | 70% | 65% |
| 30 days | | 60% | | | |
| 45 days | | | | 30% | |
| 60 days | | | | | 35% |
| Bad debt | R | 472 500 | R | 472 500 | R 50 000 |
| WACC | 20% | | | | |
| Contribution rate | 35% | | | | |
| Increase in inventory | | | | R | 950 000 |
| Increase in trade payables | | | | R | 500 000 |

| NOTE | CURRENT POLICY | | NEW POLICY | | | | |
|------------------------------------|----------------|----------------------|------------|----------------------|-------------------------|--------------|---|
| | | Current Credit Sales | | Current Credit Sales | Additional credit sales | | |
| Contribution | R | 5 512 500 | R | 5 512 500 | R 525 000 | Contribution | = Credit sales x Contribution |
| Discount | R | -126 000 | R | -551 250 | R -48 750 | Discount | = Credit sales x % making use of credit x discount rate |
| Bad debts | R | -472 500 | R | -472 500 | R -50 000 | | |
| Debtor holding costs | R | -189 863 | R | -176 918 | R -22 603 | Holding cost | = (Credit sales x sales proportion on days x WACC) |
| Inventory holding cost | | | | | R -190 000 | Holding cost | = Increase in inventory x WACC |
| Creditors - saving in holding cost | | | | | R 100 000 | Saving | = Increase in trade payables x WACC |
| | R | 4 724 137 | R | 4 311 832 | R 313 647 | | |
| | R | 4 724 137 | | | R 4 625 479 | | |

| | | | | |
|---|-----------------|--|----------|----------------|
| Decrease in annual cash flow before tax | | | R | -98 658 |
| Annual after-tax cash flow cost | (R98 658 x 72%) | | R | -71 033 |

Conclusion: **The company should not implement the new policy, as it results in an decrease of annual cash flow before tax**

b)

ANNUAL COST OF MISSED DISCOUNTS:

$$= \frac{\text{Cash discounts \%}}{100 - \text{Cash disc. \%}} \times \frac{365 \text{ days}}{\text{No. of days payment made after disc. period}} \times 100$$

$$= \frac{3\%}{97\%} \times \frac{365}{(30-10)} \times 100$$

$$= \underline{\underline{56.4\%}}$$

QUESTION 3.1***(Study Guide page 179)***

a) Forward rate = Spot rate x $\frac{1 + \text{interest rate in ref currency country}}{1 + \text{interest rate in base currency country}}$

$$= 16.5404 \times \frac{1 + (9\% \times 90/360)}{1 + (1.5\% \times 90/360)}$$
$$= 16.5404 \times \frac{1.0225}{1.00375}$$
$$= 16.5404 \times 1.01867995$$

= **R 16.8494**

b) Forward rate = Spot rate x $\frac{1 + \text{inflation rate in ref currency country}}{1 + \text{inflation rate in base currency country}}$

$$= 16.5404 \times \frac{(1 + (6.8\%))^2}{(1 + (2.5\%))^2}$$
$$= 16.5404 \times \frac{1.140624}{1.050625}$$
$$= 16.5404 \times 1.085662344$$

= **R 17.9573**

QUESTION 3.2

= 5 500 / 100 x 2.5

= 137.5

= **137** scrip dividends

QUESTION 3.3*(Study Guide page 185)*

| | | |
|-------------------------------------|-----|---|
| Price paid for the treasury bill | = R | 2 400 000 |
| Value of treasury bills on maturity | = R | 2 500 000 |
| Discount = interest for the period | = R | 100 000 |
| Effective yield | = | $\frac{R\ 100\ 000}{R\ 2\ 400\ 000} \times \frac{365}{91} \times 100$ |
| | = | <u>16.71%</u> |

NOT REQUIRED:**Sells in 30 days**

| | | |
|-------------------------------|-----|--|
| Price paid for treasury bills | = R | 2 400 000 |
| Selling price | = | $R\ 2\ 500\ 000 - (R\ 2\ 500\ 000 \times 17.30\% \times 61/365)$ |
| | = R | 2 427 719 |
| Interest for the period | = R | 27 719 |
| Effective yield | = | $\frac{R\ 27\ 719}{R\ 2\ 400\ 000} \times \frac{365}{30} \times 100$ |
| | = | <u>14.05%</u> |

Sells in 61 days

| | | |
|-------------------------------|-----|--|
| Price paid for treasury bills | = R | 2 400 000 |
| Selling price | = | $R\ 2\ 500\ 000 - (R\ 2\ 500\ 000 \times 18.90\% \times 30/365)$ |
| | = R | 2 461 164 |
| Interest for the period | = R | 61 164 |
| Effective yield | = | $\frac{R\ 61\ 164}{R\ 2\ 400\ 000} \times \frac{365}{61} \times 100$ |
| | = | <u>15.25%</u> |