

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)		<i>Managerial Finance page 81-82</i>	
Gearing	=	$\frac{\text{Total long-term debt}}{\text{Total long-term debt + Total equity}}$	
	=	$\frac{129156}{478294}$	
	=	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
		527 982			17.83%

ANSWER: 18.00%

NOTE

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

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	=	R	<u>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	=	R	<u>36 019 024</u>
TOTAL VALUE	=	R	<u>83 855 141</u>

QUESTION 1.C

a) To: Managers
From: Accountant
Date: May/June 2014

Below the analysis of my findings:

INVESTMENT POSSIBILITIES

PROJECT B

R' 000	Year 0	Year 1	Year 2	Year 3
Cost price	-(49 750)			
Wear-and tear tax benefit		4 480	4 480	4 480
Realisable value				9 500
Recoupment				-(2 660)
Working capital	-(80)			80
Operating cash flow		23 500	23 500	23 500
Tax on operating cash flow		-(6 580)	-(6 580)	-(6 580)
Net cash flow	-(49 830)	21 400	21 400	28 320
Disc. Factor 18%	1.000	0.847	0.718	0.609
Present value	-49 830	18 126	15 365	17 247

NPV **907.880**

PROJECT A

R' 000	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cost price	-(85 000)					
Wear-and tear tax benefit		4 760	4 760	4 760	4 760	4 760
Realisable value						15 000
Recoupment						-(4 200)
Working capital	-(100)					100
Operating cash flow		29 500	29 500	29 500	29 500	29 500
Tax on operating cash flow		-(8 260)	-(8 260)	-(8 260)	-(8 260)	-(8 260)
Net cash flow	-(85 100)	26 000	26 000	26 000	26 000	36 900
Disc. Factor 18%	1.000	0.847	0.718	0.609	0.516	0.437
Present value	-85 100	22 022	18 668	15 834	13 416	16 125

NPV **965.300**

Conclusion The company can invest in any of the two projects, because the NPV is positive!

Not required!!

b) Annualized equivalents are used to enable a comparison to be made between the NPV of projects with different durations.

NPV at r % A
Cumulative discount factor r % B
Annualised equivalent **A / B**

PROJECT A: R'000
NPV: 965
Cum discount factor (18%) 3.127
Annualised equivalent **309**

PROJECT B: R'000
NPV: 908
Cum discount factor (18%) 2.174
Annualised equivalent **418**

Project to be selected: Project B - it has the higher annualised equivalent NPV

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%
	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

CURRENT POLICY		NEW POLICY	
NOTE	Current Credit Sales	Current Credit Sales	Additional credit sales
Contribution	R 5 512 500	R 5 512 500	R 525 000
Discount	R -126 000	R -551 250	R -48 750
Bad debts	R -472 500	R -472 500	R -50 000
Debtor holding costs	R -189 863	R -176 918	R -22 603
Inventory holding cost			R -190 000
Creditors - saving in holding cost			R 100 000

Contribution = Credit sales x Contribution
Discount = Credit sales x % making use of credit x discount rate
Holding cost = (Credit sales x sales proportion on days x WACC)
Holding cost = Increase in inventory x WACC
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:

$$\begin{aligned}
 &= \frac{\text{Cash discounts \%}}{100 - \text{Cash disc. \%}} \times \frac{365 \text{ days}}{\text{No. of days payment made after disc. period}} \times 100 \\
 &= \frac{3\%}{97\%} \times \frac{365}{(30-10)} \times 100 \\
 &= \underline{\underline{56.4\%}}
 \end{aligned}$$

QUESTION 3.1*(Study Guide page 179)*

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

$$= 16.5404 \times \frac{1 + (9\% \times 90/360)}{1 + (1.5\% \times 90/360)}$$
$$= 16.5404 \times \frac{1.0225}{1.00375}$$
$$= 16.5404 \times 1.01867995$$
$$= \mathbf{R \ 16.8494}$$

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

$$= 16.5404 \times \frac{(1 + (6.8\%))^2}{(1 + (2.5\%))^2}$$
$$= 16.5404 \times \frac{1.140624}{1.050625}$$
$$= 16.5404 \times 1.085662344$$
$$= \mathbf{R \ 17.9573}$$

QUESTION 3.2

$$= 5\,500 / 100 \times 2.5$$

$$= 137.5$$

$$= \underline{\mathbf{137}} \quad \text{scrip dividends}$$

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	= R2 500 000 - (R2 500 000 x 17.30% x 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	= R2 500 000 - (R2 500 000 x 18.90% x 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>