

2019
Memo random and notes to the Examination 31/05/2019

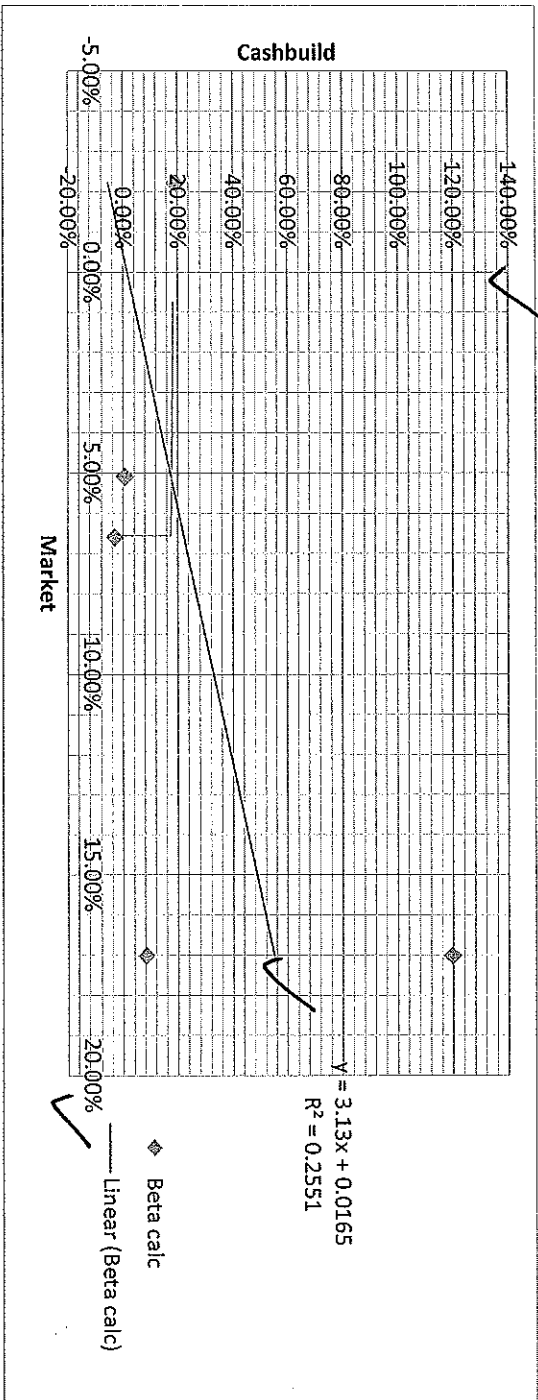
Question 1 This assessment has to be done in line with the SML procedure. a) determine required return via CAPM b) determine expected return as per the expected dividend approach where $E(R) = D_1 / P_0 + g$. NB to note is that the return for 2017 in share price was very high it might have been referred to or adjusted in the process of determining a more realistic return might have been considered (number of variations possible like avg for other years etc. Also please note that a negative growth in sale is not sustainable)

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 $\text{Cov}(\text{market, share}) / \text{Variance market}$, 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

Year	Share price	Rate return	CRI Index	CRI Rate return	Graph input	
					CRI	Share
2013	R 122.60		43560			
2014	R 132.78	8.30%	50973	17.02%	17.02%	8.32%
2015	R 291.68	119.67%	49839	17.02%	17.02%	119.58%
2016	R 349.69	19.89%	52380	-2.22%	-2.22%	18.96%
2017	R 348.93	-0.22%	55828	5.10%	5.10%	0.58%
2018	R 338.26	-3.06%	56709	6.58%	6.58%	-3.07%
AVG					9.23%	36.86%
					Average return without	
					119.28%	
					6.20%	

Find beta



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Beta per graph	3.13	Beta Rise / Run	3.20
Rise / Run	Y1	18	18
	Y0	2	5
	X1	5	0
	X0	0	

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①

FCF Solution			
Year	2017	2018	
Turnover	R 9,729,640	R 10,207,603	
Profit Before Interest And Tax (EBIT)	R 619,997	R 543,326	
Tax rate (Assume)	30%		
NOPAT	R 433,998	R 380,328	

✓

Current Assets			
	2017	2018	
Total Inventory	R 1,289,491	R 1,512,823	
Debtors	R 141,209	R 143,359	
Short Term Loans Advances	R 0	R 0	
Cash And Bank	R 801,420	R 952,929	
Other Current Assets	R 0	R 0	
Tax Receivables	R 0	R 0	
Total Current Assets	R 2,232,120	R 2,609,111	

Current liabilities			
	2017	2018	
Short Term Borrowings	R 0	R 0	
Creditors	R 1,768,942	R 2,070,688	
Bank Overdraft (Short term interest bearing)	R 1,191	R 936	
Provision For Taxation	R 61,664	R 74,174	
Provision For Distribution	R 0	R 0	
Total Current Liabilities	R 1,831,797	R 2,145,798	

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Long-term Assets	2017	2018
Total Long Term Assets (Non-Current Assets)	R 1,481,122	R 1,663,396
Free cash flow		2017
NOPAT	R 380,328	
Operating Current assets		R 2,232,120
Operating Current liabilities		R 1,768,942
NOWC		R 463,178
Change in NOWC	-R 75,245	-R 75,245
Change in total long term assets	-R 182,274	-R 182,274
FCF	R 122,809	

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2) The constant growth model: Value = $FCF_{new} / (r - g)$				NB: Play around with the assumed growth rate and see what happens to the value per share	
We calculated FCF_{old} to be	✓ R 122,809	Required return		11.84%	
Expected FCF_{16}	✓ R 135,024	Growth rate		9.95%	R 122,809 X (1+ 0.0995)
Expected FCF_{17}	✓ R 148,455	Growth rate		9.95%	R 135,024 X (1+ 0.0995) ²
Expected FCF_{18}	✓ R 163,220	Growth rate		9.95%	R 148,455 X (1+ 0.0995) ³
Expected FCF_{19}	✓ R 176,278	Growth rate		8.00%	R 163,220 X (1+ 0.08)
Present Value FCF_{16}	✓ R 120,728	R 135,024 / (1+0.1184)			
Present Value FCF_{17}	✓ R 118,682	R 148,455 / (1+0.1184) ²			
Present Value FCF_{18}	✓ R 116,671	R 163,220 / (1+0.1184) ³			

Present Value FCF ₁₉	R 3,279,922	R 4,588,543	/(1+0.1184) ⁴	Terminal value
			R 4,588,543	R 176278 / (0.1184 - 0.08)
Shares issued	2018	22730	✓	
Value per share Constant growth model		R 3,279,922		
Value per share		R 144		
Company value Variable Growth model		R 3,636,004		
Value per share		R 159.96		

Current calculate share price	✓ R 159.96	=PV remember to switch to negative
Expected share price	✓ R 319.93	=FV
Sustainable growth rate	✓ 13.05%	=I/Y
Period to double price	✓ 5.65	=N in years

Arguments:

Question 3

To solve the problem, use the sustainable growth equation substitute the values from the financial statements into the equation and solve then compare to the target of Current sales growth plus 8%. The challenge here is to find an appropriate sales growth value. Then a discussion needs to follow as to what to manage and how to enable the target growth rate.

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

The retention growth equation (Retention rate X ROE) or any other could have been use provided that for the discussion the determination variables needed be broken-up into its determination and determination of determination variables.

Question 3

Sustainable Growth Rate	R 425,248		
Net profit	R 10,207,603		
Sales	R 3,839,040		
Assets	R		
Equity	1,921,484		
Retention Rate	52.16%		
Assets / Equity	2.00	R3839040 /	R 1,921,484
Assets / Sales	0.38	R3839041 /	R 10,207,603
Payout ratio (1 - Retention rate)			
Net Profit margin	4.17%	R425248 /	R10207603

(m (1-d) A/E / A/S - m(1-d) A/E			
Net Profit Margin (m)			4.17%
Retention rate = (1 - d)			52.16%
Assets / Equity			2.00
Assets / Sales			0.38
Sustainable Growth rate			13.05%

Current sales growth

Sales	Growth		
2018	R 10,207,603	4.91%	10207603 / 9729640

2017	R 9,729,640		
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Suggested Sale growth rate	4 year Average	2018	2017	2016	2014
Current Growth rate	4.91%	R 10,207,603	R 9,729,640	R 8,669,643	R 6,781,274
Additional	8.00%	4.91%	12.23%	12.70%	
Total	12.91%				

2 Average sales growth: 2014 to 2018 = 4.91% ✓ Sales growth suggested as per question = 4.91% + 8% = 12.91% ✓
 Growth rate is achievable: Actions to achieve, what went wrong in last year, what are management challenges?

Arguments: 8

Possible actions 1) Increase Net profit margin by either decreasing cost to sales and or fixed cost to sales ratios. 2) Increase asset to equity ratio in other words increase gearing the precondition is must earn more on debt than interest paid for debt (positive gearing)
 3) Decrease Assets to sales ratio meaning that assets has to be used more efficiently 4) decrease dividend payout percentage it leave more money (equity) in the company to invest.

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Question 4

Stand-alone business risk (SD of some EBIT related variable) to Stand-alone risk share price return (SD of some share price return variable ROE not the correct approach)

Business risk as indicated is normally created by the factors that influence the operating effectivity of an entity. Business risk in the context of the Statement of Comprehensive Income is a result of the operating activities that influence and is numerically reflected in the section from Sales to EBIT.

Share price risk is related to either changes in share price or changes in rates of return of share price. Return will mostly be considered to be capital gains only or capital gains plus dividend yield

Compare Business risk to Share price risk on standalone basis:

- 1) Calculate Standard Deviation (SD) and specifically Coefficient of Variation (CV) for an operating profit/EBIT related variable. What could work well is percentage change in operating profit, Operating profit margin (EBIT/Sales); ROIC (EBIT/Total Operating Capital) can also work and there are other approaches as well.
- 2) Do the same as in 1 above for either change in Share price or change in share Rate of return or any variable related to share price rate of return.
- 3) Then compare values determined in 1 and 2 specifically look at CV because it is a "standardize" measure of volatility/risk
- 4) Offer your arguments to rectify the situation in case of differences or what to do to sustain situation if no differences
- 5) Management factors to consider for Business risk – the most relevant variables (80:20 principle) from Sales to EBIT that directly or indirectly influence EBIT or variability of EBIT
- 6) For Share price risk follow the same recipe as in 5 above but in this case variables that influence Share Price.

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Operating profit margin					
Year	Operating Profit	OPM % Change	AVG		
		A	B	A - B	(A-B) ²
2013	R 322,540				
2014	R 357,566	10.86%	✓ 11.90%	✓ -1.04%	✓ 1.09
2015	R 464,503	29.91%	✓ 11.90%	18.00%	✓ 324.12
2016	R 548,524	18.09%	✓ 11.90%	6.18%	✓ 38.25
2017	R 619,997	13.03%	✓ 11.90%	1.13%	✓ 1.27
2018	R 543,326	-12.37%	✓ 11.90%	-24.27%	✓ 589.03
Avg		11.90%	✓		238.4

Standard deviation	15.44
Coefficient of variation	2.63

Arguments:

Conclusion in terms of CV Share price return is less volatile than change in Operating profit. A factor might be the transfer of the negative change in Operating profit over the past year and the relative high increase in 2015. The latter might have caused the huge increase in share price in 2015.