

SUGGESTED SOLUTION

Key:

R/W	= Mark as right or wrong (but allow for rounding differences)
C	= Consequential mark (mark through)
D	= Mark for appropriate discussion

Part (a)

Working capital management of OKAY (Pty) Ltd

Analysis and calculations

(Amounts in R'm)

Working capital ratio

Total current assets: Total current liabilities	54,0- 1,3 NRV adj:	R76,3	R/W 1
	=	R52,7: R76,3	
[without NRV adj: 0,71:1]	=	0,69: 1	C 1

Quick ratio

Total current assets (excl. inventory):	(19,7+ 1):	R76,3	
Total current liabilities	=	0,27: 1	R/W 1

Cash as % of current liabilities

	= R1,0 / R76,3	
	= 1,3%	R/W 1

Inventory days

= Inventory (@NRV)/ COGS x 365	= $\frac{(33,3 - 1,3 \text{ NRV adj})}{(474,0 + 1,3 \text{ NRV})} \times 365$ (or 360)	R/W 1
[without NRV adj: 25,6 days]	= 24,6 days (or 24,2 days)	C 1

Receivable days

= Receivables / Revenue x 365	= 19,7 / R585,2 x 365 (or 360)	
	= 12,3 days (or 12,1 days)	R/W 1

Payable days

= Payables / COGS x 365	= $\frac{74,0}{(474,0 + 1,3 \text{ NRV})} \times 365$ (or 360)	R/W 1
[without NRV adj: 57,0 days]	= 56,8 days (or 56,0 days)	C 1

Cash conversion cycle (operating cycle)

	= (24,6 + 12,3 - 56,8) days	
	= -19,9 days	C 1

Other valid

Maximum: $\frac{\text{Max: 1}}{5}$

Based on student's
calc:

Discussion:

Discussion of findings	Levels are typical / low / high for the industry	Possible reasons for your findings, considering the industry
<ul style="list-style-type: none"> The working capital management seems very aggressive due to the low working capital ratio (or quick ratio). High inventory levels, but most items are expected to sell within a relatively short period (in this case a low/typical 25,6 days). Trade receivables appears low in absolute terms (equivalent of 12,3 days), but high for a supermarket group. Payables are a high 57 days, but typical for a supermarket group. Cash as a percentage of current liabilities is low at 1,3% offering very little security should inventory turnover slow down. The cash conversion cycle is negative: therefore accounts payable finances more than only current assets 	<ul style="list-style-type: none"> Typical (1C) Low/ Typical (1C) High (1C) Low/ Typical (1C) Low (1C) High/ Typical (1C) 	<ul style="list-style-type: none"> The unique circumstances of the food retail industry allows for an aggressive working capital management (in terms of the investment into working capital and the financing thereof). (1D) A supermarket group will typically carry high inventory levels that have a high rate of turnover due to the nature of goods: fresh produce and baked goods are expected to have a very high turnover (but high levels of spoilage); other goods, such as household goods may have a lower turnover (but low levels of spoilage).(1D) A supermarket group should not have high levels of trade receivables as most customers pay cash (1D) Or pay with bank cards (which should reflect in the bank account of the supermarket within 1-3 days). (1D) Trade receivables should be low where not operated on a franchise-basis (1D) A supermarket group will typically purchase all inventory and other trade items on credit and normally pay within 60 days. Trade payables therefore provide effective free financing to the business. (1D) A supermarket group will usually carry a larger % cash, especially considering that most sales are on a cash-basis and cash-floats will have to be kept. (1D) A supermarket group has specific circumstances allowing a high level of current liabilities relative to current assets. (1D)

Maximum: 8

Part (b)

Analysis of OKAY's expenditure and cost behaviour

(No adjustment for net realisable value of inventory based on wording of required.)

As a % of revenue -	2011 (draft)	2010 (audited)	2009 (audited)	
Revenue	100,0%	100,0%	100,0%	
Gross profit / Cost of goods sold	19,0%/81,0%	18,9%/81,1%	19,4%/80,6%	R/W 1
Trading expenses	14,7%	15,1%	15,1%	R/W 1
Depreciation	3,4%	3,6%	3,8%	R/W 1
Employees, occupancy & other	11,3%	11,5%	11,2%	R/W 1
			(Rounding difference)	

Alternative: using financial calculator to perform regression analysis – steps shown

Cost of goods sold

Intercept (fixed cost component)	(positive)	15.3	R/W 1
Slope (variable cost component)		-0.8369	R/W 1
Correlation		-0.9998	

Depreciation

Intercept (fixed cost component)		-16.3	R/W 1
Slope (variable cost component)		-0.0061	R/W 1
Correlation		-0.9707	

Employees, occupancy and other

Intercept (fixed cost component)	(positive)	4.2	R/W 1
Slope (variable cost component)		-0.1212	R/W 1
Correlation		-0.9858	

Maximum: 9

Discussion

- **COST OF GOODS SOLD (COGS)** is a very large portion of total costs and has a very large component that is **variable** to revenue, which is to be expected for a food retail company where small margins are expected to be the order of the day / COGS increased by a greater % than revenue in 2010 (almost the same in 2011), indicating **declining margins in 2010** in-line with S&S (**margins maintained in 2011** – better than S&S). D 1
- **DEPRECIATION** is largely a **fixed** cost and a rough indication is that assets are replaced every 4 years (1/26,5%), which according to the information provided, is below that of a similar listed company / The increases in depreciation are lower than the increases in revenue due to its (predominant) **fixed** cost nature D 1
- **EMPLOYEES, OCCUPANCY AND OTHER (EO&O)** trade expenses is **largely variable** to sales, but with a fixed-element / EO&O increased by a greater % relative to the increase in revenue in 2010 (lower in 2011), indicating **improved cost management in 2011** – possibly supporting the better results relative to S&S in this year. D 1
- Based on the high/low analysis (or linear regression analysis) the costs include fixed and variable components (strangely, the results show an fixed income portion; this is possibly due to scale advantages). In actual fact the expenditure might include **stepped-fixed** cost and **semi-variable** costs. D 1
- Should OKAY **expand** by opening new supermarkets, the high/low analysis might not accurately reflect the capital investment required (e.g. increase in depreciation). D1
- Unlike the similar listed company, the variable component in trade expenditure of OKAY is higher due to
 - a greater variable proportion of **rentals** (2% vs. <=1,5% linked to sales) and D1
 - the **vehicle fleet** which must be predominantly under operating lease. D1
- The **effective tax** rate differs from the tax rate on companies (28%) possibly due to permanent differences (and / or STC component) D1
- The effect of the **economic crisis** on the reported expenditure (any, if logical) D1

Maximum: 8

Part (c)

Reason for the JSE requirement to calculate Headline Earnings:

- Aim is to offer an earnings figure that is more reflective of **operating/trading performance** of a company (SAICA, 2009). D 1
- For valuation purposes, the “**normalised**” version of the earnings per share is a better basis than basic earnings for **valuing** the company’s shares / makes results of listed SA companies more **comparable**. D 1
- Adjustments relate to items affecting the performance of the **current period** that could be extrapolated into the future (SAICA, 2009). D 1
- Headline Earnings should preferably be used to calculate **P/E multiples** of companies, in which case it could offer a more consistent picture of operating performance. D 1

Typical types of adjustments made and not made to EPS:

- Re-measurements of a **capital nature** are ignored (SAICA, 2009), e.g. gains on the disposal of plant and equipment, impairment of these types of assets, etc. D 1
- Re-measurements relating to the **operations** of the entity (SAICA, 2009), e.g. impairment of the carrying value of inventories, etc. D 1

Maximum: 3

Part (d)

Key shareholding levels

For % in bold

Typical key-shareholding level		Reason	
0,01% - 25%	R/W ½	Lowest level of control for shareholder	R/W ½
25,01% - 50%	R/W ½	Shareholder does not control the company, but has enough votes to stop a special resolution .	R/W ½
50,01% - 74,99%	R/W ½	Shareholder controls the entity and has enough votes to pass ordinary resolutions . ¹	R/W ½
75% - 100%	R/W ½	Shareholder has the highest level of control of the company as has enough votes to pass a special resolution .	R/W ½
Additionally:			
0,01% - 19,9%	R/W ½	Lowest level of control for shareholder	R/W ½
20,00% - 34,9%	R/W ½	Shareholder typically has significant influence over the entity. ¹	R/W ½
35,00% - 50,00%	R/W ½	Indication of control (typical level of % of shareholders attending shareholders’ meetings in the SA environment).	R/W ½

¹ Not ‘associate’ or ‘subsidiary’, which merely represents a resulting financial accounting classification, based on a reason.

Maximum: 4

Effect of the Companies Act 71 of 2008: it allows for -

- Changes to the Memorandum of Incorporation (**MOI**) (Section 65) whereby the:
 - Minimum 50,01% votes to pass an **ordinary resolution** may be increased; D 1
 - and the
 - Minimum 75% votes to pass a **special resolution** may be increased or decreased; but D 1
 - There must remain a **10% margin** between the minimum voting-levels required to pass an ordinary and special resolution D 1
- More power to minority shareholders as each shareholder has a **claim for** D 1

- **damages** in case of fraud or gross negligence (Section 20).
- Increased **power for directors** to increase/decrease number of shares, change classification of shares. D 1
- Existing shareholders have a **pre-emptive right** to, within a reasonable time, subscribe for the percentage of shares equal to the shareholder's percentage voting rights (Section 39). D 1
- Shareholders to **apply to the court** for an order where their interest is affected by an unfair or prejudicial act (Section 163) **or refer the matter** to the Companies Tribunal (or accredited entity) for conciliation, mediation or arbitration (Section 166). D 1
- Dissenting shareholders' shares to be **bought by the company at fair value**. D 1
- The lodging of complaint to the Takeover **Regulation Panel** regarding takeover-issue contraventions (section 168). D 1

Maximum: 3

Part (e)

Relevance of a control premium when performing valuation using –

P/E multiple method:

- A P/E multiple method calculates the value of a company relative to a comparator listed entity. Where the published closing price per share (incorporated in the **comparator** P/E multiple) is not reflective of a controlling share (which could often be the case), it is appropriate to add a control premium for shareholdings of **50,01% and up**. D 1
- If relevant, the control premium will be **higher in steps** relative to shareholdings with greater powers of control (e.g. higher for a 75% - 100% shareholding relative to a 50,01% - 74,99% shareholding). D 1

Enterprise Discounted Cash Flow Model, based on Free Cash Flow (FCF):

- This model entails projection of **enterprise FCF** and therefore **implies** a **control-**perspective. D 1
- It is therefore **not appropriate** to add a control premium when applying this model (however, a minority discount might be called for in appropriate cases) D 1

4

Part (f)

1) Net asset value (NAV) based on carrying values

Carrying value of total shareholder's equity	= carrying NAV	R'm	
Adjustment: Inventory to be shown at lowest of cost & NRV		16,2	R/W 1
		(1,3)	Bonus:1
		<u>14,9</u>	

2) NAV based on replacement cost

		R'm	
Equipment		50,0	R/W ½
Vehicles		5,0	R/W ½
Other non-current assets	(assume same as carrying value)	1,0	
Inventory		33,8	R/W ½
Trade receivables	(assume same as carrying value)	19,7	
Cash and equivalents	(assume same as carrying value)	1,0	
Current liabilities	(assume same as carrying value)	(76,3)	
		34,2	R/W ½
			2

3) Net asset value based on a liquidation-basis

		R'm	
Equipment		33,0	R/W ½
Vehicles		2,9	R/W ½
Other non-current assets	(assume same as carrying value)	1,0	
	<i>(Reduce if this includes assets such as a deferred tax asset)</i>		R/W ½
Inventory		32,0	R/W ½
Trade receivables	(assume same as carrying value)	19,7	
	<i>(Possibly reduce by a margin as debtors less willing to pay in case of liquidation)</i>		R/W ½
Cash and equivalents	(assume same as carrying value)	1,0	
Current liabilities	(assume same as carrying value)	(76,3)	
Contingent liability		(3,8)	
	60%	6,0	R/W ½
	40%	0,5	R/W ½
Other liabilities: Severance pay / lease penalties		?	D ½
		9,5	
		Max	4

4) Fair market value based on Gordon's Dividend Growth Model

(Amounts in R'm)		2011	2010	2009	
Profit for the year	(A)	R18,3	R14,6	R15,6	
Profit for the year	with NRV adjustment (A)	R17,0	R14,6	R15,6	
Dividends paid	(B)	(R14,9)	(R13,9)	(R13,0)	
Dividend cover	(A)/(B)	1,14 times / 1,23 times	1,05 times	1,20 times	R/W 1
Growth in dividends paid		7,2%	6,9%		R/W 1
Growth in profit		16,4% / 25,3%	-6,4%		R/W 1

Conclusion

- OKAY does **not** maintain a **constant dividend-cover** / Growth in dividends does **not relate** to growth in profit. D 1
- OKAY's dividends growth is between 6,9 and 7,2% per annum – assume future growth in dividends will equal the average growth of ≈ 7% (**deduction explained**) / growth must be **sustainable** into the future. D 1

Gordon Growth Model

$P_0 = D_1 / (ke - g)$, or	
$P_{2011} = D_{2012} / (ke - g)$,	
= $\frac{R14,9m \times (1+0,07)}{(13\% - 7\%)}$	C 1
= <u>R265,7m</u>	C 1
	4

Part (g)

1) Fair market value based on a forward P/E multiple

Determine maintainable projected earnings (from an operating perspective)

	2012	2011	2010	2009	For figure(s) in bold:
	R'm	R'm	R'm	R'm	
Revenue R585,2x1,07	626,2	585,2	549,9	501,4	R/W 1
COGS b): (R626,2x -0,8353)+R14,9	(508,2)	(474,0)	(445,8)	(404,0)	C 1
Impairment adjustment – Inventory (33,3 – 32,0)		(1,3)			R/W 1
<i>Adjustment made for impairment of an operating/trading nature only</i>					D 1
Gross profit	118,0	109,9	104,1	97,4	
Depreciation					
- existing b): (R626,2x -0,0060)-R16,3	(20,1)	(19,8)	(19,7)	(19,3)	C 1
- Additional x 0,06	(1,2)	(1,2)	(1,2)	(1,2)	R/W 1
<i>Adjustment made in order for state of assets to be comparable to S&S</i>					Any yr D 1
Emp, occ b): (R626,2x -0,1193)+R3,6	(71,1)	(66,2)	(63,5)	(56,2)	C 1
Adjust salary of top management	(1,1)	(1,0)	(0,9)	(0,8)	R/W 1
					Any yr
	R1x1,1		R1,0/1.1	R1,0/1.1 ²	
<i>Adjust salaries to market-related level</i>					D 1
Adjusted earnings before tax	24,5	21,7	18,8	19,9	
Interest paid at 6% (or > 6% for increased risk)					1
% x adjusted earnings before tax	(1,5)	(1,3)	(1,1)	(1,2)	C 1
<i>Adjust interest to match D:E of S&S</i>					Any yr D 1
Interest received (valued separately)		-	-	-	
Adjusted earnings before tax	23,0	20,4	17,7	18,7	
Taxation – resulting new effective %	Say 30,4%	30,4%	33,3%	32,6%	
- given		(7,5)	(6,8)	(7,0)	
- on adjustments x 28%	(7,0)	1,3	0,9	0,9	C 1
<i>Assuming depreciation = tax benefit and other deductible for tax</i>		4,8x28%	3,2x28%	3,2x28%	Any yr D 1
Profit for the year	16,0	14,2	11,7	12,6	
Growth in profit	12,7%	21,4%	(7,15)		C 1

Option 1

Due to increasing trend (ignoring 2010), the estimated figure for 2012 should be maintainable.

Maintainable earnings - 2012 16,0 C 1

Option 2

Due to varying growth rate use weighted average to determine maintainable earnings (also possible to ignore exceptional year 2010):

Weight	10	2012 4	2011 3	2010 2	2009 1	
Maintainable earnings - 2012	14,3					C 1

Adjust the comparator P/E multiple for differences in risk and growth factors

Key:				Forward PE
(X)	large negative adjustment	X	large positive adjustment	
(x)	negative adjustment	x	positive adjustment	
-	no adjustment			
COMPARATOR FORWARD PE MULTIPLE			425c/21c	20,2 R/W 1
Adjusted for entity-level differences:				
DIFFERENCES IN ENTITY-LEVEL RISKS				
				Description and direction:
• Level of excess cash	OKAY less	(x)		1
• Size of the entity / level of competition / market dominance	OKAY smaller	(X)		1
• Access to financing	OKAY less	(x)		1
• Reliance on key-employees (few members of founding family)	OKAY more	(x)		1
• Reputational risk attached to condoning of actions of supplier and OKAY's waste-disposal practices	OKAY only	(x)		1
• Level of operating leverage (delivery trucks owned/leased; variable portion of rent)	OKAY lower	x		1
• Credit risk	OKAY more risky	(x)		1
Alternative:				
• Level of gearing (if not adj. at earnings and/or below)	Okay not at target	(x)		1
• Age of assets (if not adj. at earnings)	Okay assets older	(x)		1
ADJUSTED FOR DIFFERENCES IN GROWTH EXPECTATIONS				
• Growth expectations	Same	-		1
<i>Similar growth is expected for years following 2012.</i>				D 1
Alternative: also adjusted for shareholder-level differences				
<i>An allowed, but non-suggested treatment is to include the following adjustments here, but only if not adjusted again below.</i>				
• Marketability of shares	OKAY shares less	(x)		1
• Control premium	OKAY controls	X		1
ADJUSTED PE MULTIPLE			Acceptable range: <u>10-18</u>	Within range: 1
DETERMINE VALUE OF A 100% EQUITY SHAREHOLDING:				
All amounts in R'm				
Maintainable earnings incorporating 2012 earnings x adjusted P/E multiple	Say R16,0 x 15	R240,0		C 2 (Not if based only on hist. earnings)
Excess cash		<u>R1,0</u>		C 1
		R241,0		
Adjustment for difference in D:E; inflow of new debt (interest accounted for at earnings)	0,08 debt level x R241	R19,3		C 1 If not adj at PE
Value of 100% equity (assuming no shareholder-level differences)		<u>R255,5</u>		
Control premium	Say 23% x R255,5	58,8		1 Added (but not also at PE)
		<u>314,3</u>		
Marketability discount	Say 5% x R314,3	(15,7)		1 Deducted (but not also at PE)
Market value of 100% shareholding adjusted for shareholder-level differences		<u>298,6</u>		
Value of cost synergies available to market participants		5,0		R/W 1
Value contingent liability (60% x R6,0 + 40% x 0,5)		<u>(3,8)</u>		R/W 1
Fair market value of a 100% shareholding (adjusted)		<u>299,8</u>		
		<u>Maximum</u>		<u>22</u>

Part (h)

STRENGTHS	WEAKNESSES
1. Net asset value based on carrying values	
<ul style="list-style-type: none"> • None in this case. 	<ul style="list-style-type: none"> • These carrying values represent predominantly its depreciated historical cost, which has very little bearing on probable purchase price here. D 1
2. Net asset value based on replacement cost of items included in AFS	
<ul style="list-style-type: none"> • This gives the cost of setting up a similar business, but only if tangible and intangible assets are considered. D 1 • May serve as a reasonability test here. D 1 	<ul style="list-style-type: none"> • In this case intangible assets and leased tangible assets are not included, understating the true replacement cost. D 1 • Will go into competition with existing business and long-term lease contracts make it difficult to replicate a similar business as new areas will have to be found. D 1
3. Net asset value on a liquidation-basis	
<ul style="list-style-type: none"> • None in this case. 	<ul style="list-style-type: none"> • This represents the value to be realised in a forced-sale scenario and should give a poor indication of price for a going-concern business. D 1
4. Value based on the Gordon Dividend Growth Model	
<ul style="list-style-type: none"> • May serve as a reasonability test here. D 1 	<ul style="list-style-type: none"> • Will provide an indication of value for a non-controlling share, but in this case we require value of a controlling share. D 1 • Value of a non-controlling share might be overstated in this case, as the dividends might not be sustainable. D 1
5. Value determined using a method based on a P/E multiple	
<ul style="list-style-type: none"> • This method will give an indication of fair market value and probable price D 1 	<ul style="list-style-type: none"> • Adjustments made to comparator PE multiple to account for differences are subjective and have a large influence on the price determined. D 1 • Method on its own usually also excludes the value of specific synergies between acquirer and target, which may be factored into the price where there is demand from several potential buyers. D1
Maximum <u>5</u>	

Part (i)

Net benefit of savings after expenditure

Discount rate after tax (say 12,3%)

Any calc (except $12,5\% \times 0,72 = 9\%$) 1

	2011	2012	2013	2014	2015	
	R'm	R'm	R'm	R'm	R'm	
Expected savings (pre-tax)		0,8	1,2	1,5		
					1,6	R/W 1
					1,5x1,05	
Taxation (at 28%)		(0,2)	(0,3)	(0,4)	(0,4)	R/W 1
		0,6	0,9	1,1	1,2	
$P_{2014} = \text{Saving}_{2015}/(\text{WACC}-g)$				$\frac{1,2}{12,3\%-5\%}$		C 1
				=16,4		Incl in yr 2014 (or n=3) 1
Expected costs		(4,0)	(1,0)	(0,3)		R/w 1
Taxation (at 28%)		1,1	0,3	0,1		R/w 1
Net		(2,3)	0,2	17,3		
Discounted	10,3					Discount factors or calculator steps shown: C1
						Maximum: 4

Part (j)

RAPS MAY FACE SIMILAR DIFFICULTIES, INCLUDING:

- The deal might be subject to approval by the **Competition Authorities** – locally and/or in other African countries. D 1
- Possible **conditions** to the approval by the competition authorities, including:
 - **Limitation on retrenchments** for a certain time-period D 1
 - Entrenching the power of existing **labour unions** for a certain time-period D 1
 - Forced development programme of **local suppliers** for a certain time-period D 1
- Even without competition-concerns or conditions, RAPS may face **labour action** and labour union opposition. D 1
- Other (max one) D 1

RAPS MAY OBTAIN SIMILAR SYNERGIES (OTHER THAN ALREADY ESTIMATED), SUCH AS:

- Cost synergies from renegotiation of **supplier contract terms** afforded by larger **volumes**. D 1
- Cost synergies from consolidation and increased scale of **private-label offerings**. D 1
- Revenue synergies as a result of increased sales and margins through offering of **increased choice** and better **in-store presentation** to customer. D 1
- Cost synergies from **savings in logistics**, including: better inventory management and fill-rate improvement. (Distribution savings were already identified, but might result from improved distribution centre productivity and savings from shared regional distribution centres.) D 1
- Cost synergies from operational savings from improved **price communications** and **store productivity**. D 1
- Cost synergies from **import** product-substitution resulting in lower cost, and revenue synergies from increased choice as a result of imports. D 1
- More effective advertising campaigns could result in growth in revenue. D1
- Cost synergies from **disintermediation**, whereby larger scale might facilitate direct relationships with suppliers, without intermediaries. D 1
- Expedited entry into the growing **Africa market**. D 1

Maximum: 8

Part (k)

Six foremost activities of a supermarket group that could serve as the first step in operating an ABC system (1 each):

- Negotiating supplier contracts and terms
- Ordering goods from various suppliers
- Checking inventory levels on shelves
- Receiving goods at distribution centres
- Managing distribution centre / warehouse
- Transferring goods to stores (despatching)
- Receiving goods at stores
- Placing goods on shelves
- Pricing goods (bar-code based or stickers)
- Customer assistance / service
- Cleaning of store
- Management of inventory sell-by date and waste disposal
- Facilitating payment at registers / packing
- Customer dispute resolution / exchanges
- Other relevant action (maximum one)

Maximum: 6