

ASSIGNMENT

Student's Name

Institutional Affiliation

Assignment

1.1 Calculate Aztec Ltd.'s beta. (

$$\text{Aztec Ltd beta} = (0.60 * 0.70) + (0.25 * 0.90) + (0.10 * 1.30) + (0.05 * 1.50) = 0.85$$

Thus, the beta of Aztec Ltd is = 0.85

1.2

$$r(e) = 4\% + (5\%) * 0.85 = 8.25\%$$

Thus, the required rate of return is 8.25%

1.3 The Aztec Ltd is considering changing its strategic focus, the directors are concerned that it has too much reliance on the hotel management sector and wishes to reduce the risk associated with this. As such consideration is being given to redistributing the resources allocated to the Hotel Management and Location Fit-outs businesses, which would

1.4

The Aztec Ltd.'s new beta after these changes is:

$$\text{New Beta of company} = (0.50 * 0.70) + (0.25 * 0.90) + (0.10 * 1.30) + (0.15 * 1.50) = 0.93$$

New Beta of company = 0.93,

The required rate of return (re) is:

$$r_e = r_f + (\text{Market risk premium}) * \text{Beta}$$

$$r_e = 4\% + (5\%) * 0.93$$

$$r_e = 8.65\%$$

So the new required rate of return (re) after the changes is 8.65%

Furthermore, if the company's beta doubles, that is $0.93 * 2 = 1.86$

$$r_e = 4\% + (5\%) * 1.86$$

$$r_e = 13.3\%$$

1.1

1.5. The Aztec Ltd.'s beta doubles while the required rate of return only increases but not by double digits. The increase of required rate of return increases by almost 50% which is the same as 13.3%

Question 2

2.1

Method or formula for consumption	Source of capital interest bearing Debt	Range of new financing \$0-\$350,000	After-tax cost 9%	Before Tax cost 12%
Annual Dividend/(Issue price - Floatation cost)	Preferred shares (PS)	\$350,000 and above \$0 and above	5.80% and 11.89%	18% and 11.89%
Annual Dividend/(Price of ordinary shares after netting and floatation cost) + Growth	Ordinary shares	\$0-\$650,000	23.80%	23.80%

Method or formula for comp				

2.2. Calculate the Weighted Average Cost of Capital for each range of new financing.

Methods or formula for computation	Source of capital	Range of new financing	Weight	Cost of capital	WACC	
DEBT cost after tax = $I(1-r)$	interest bearing Debt	350001	25%	10.80%	2.7%	
Annual Divided	Preferred shares	14000.4	10%	27.89%	1.79%	
Dividend/ (price of equity shares) + Growth	Ordinary shares	960002.6	65%	26.00%	16.90%	
Total		1,400,004	100%		21.39	

2.3

I will choose option D because it has high IRR and the initial investment needed is low when compared with others.

2.4

Method or formula for computation	Source of capital	Range new financial	Range of new financing	Range of new financing	Range of new financing	Weight	Cost of capital	
DEBT cost after tax = Interest (1-Tax Rate)	interest bearing Debt	350,001	375,001	40001.0	425001	50%	10.8%	5.4%
Annual Dividend (issue price-Floatation)	Preferred shares	140,000.20	145000.2	150000.2	1150000.	10%	17.89%	1.79%
Dividend (Price of shares after getting and floatation cost) + Growth	Ordinary shares	560,000.8	580000.8	60000.8	62000.8	40%	23.80%	9.52%
Total		1400002	1450002	1500002	1550002	100%		16.71%

2.5

The option dran in 2.4. seems to be better in terms of WACC but it will add fixes payment such as debt needed to be paid in comparison to the capital maintained by the organization and it will decrease capital raised by the organization. However, the prior capital structure seems better.

Question 3

3.1

1. Annual interest deductible for tax purposes for each of the three financial years					
			Tax Deductible		

Opening Principal	Year	Instalments	Interest	Principal	O/S Principal
\$3,000,000	1	\$1,249,050	\$360,000	\$889,050	\$2,110,950
\$2,110,950	2	\$1,249,050	\$253,314	\$995,736	\$1,115,214
\$1,115,214	3	\$1,249,050	\$133,826	\$1,115,214	\$(0)
		\$3,747,150		\$3,000,000	

2. After tax cash outflow

Year	Interest	Depreciation	Service Cost	Total Expenses	Tax Savings	Net expenses	Actual Outflows	Cash
(a)	(b)	(c)	(d)	(e=b+c+d)	(f = (b+c+d)*40%)	(g)	(h= g-c)	
1	\$360,000	\$930,000	\$45,000	\$1,335,000	\$534,000	\$801,000	\$129,000	
2	\$253,314	\$930,000	\$45,000	\$1,228,314	\$491,326	\$736,988	\$193,012	
3	\$133,826	\$930,000	\$45,000	\$1,108,826	\$443,530	\$665,295	\$264,705	

Working Note:

1	Cost of the new chemical waste disposal system	\$3,000,000
	Residual Value	\$210,000
	Deprecialbe Value	\$2,790,000
	Annual Depreciation	\$930,000
2	No terminal value since in the question it is mentioned that the company will keep the disposal system beyond three years.	

3. Present Value of cash flows

Year	Actual Cash Outflows	PVF @ 7%	PV of Cash Flows
1	\$(129,000)	0.935	\$(120,561)
2	\$ (193,012)	0.873	\$(168,584)
3	\$(264,705)	0.816	\$(216,078)
			\$(505,222)

II Lease Alternative:

1. After tax cash outflow

Year	Lease Rent	Tax Saving	Net Cash Outflow
1	\$1,200,000	\$480,000	\$720,000
2	\$1,200,000	\$ 480,000	\$720,000
3	\$1,200,000	\$480,000	\$720,000

2. Present Value of Cash Outflows

Year	Net Cash Outflow	PVF @ 7%	PV of Cash Flows
1	\$720,000	0.935	\$672,897
2	\$720,000	0.873	\$628,876
3	\$720,000	0.816	\$587,734
3	\$220,000	0.816	\$179,586

III. Comparison of the two (i.e., Cash flow streams)

Particulars/year	Borrow and buy out	Lease
Cost	\$3,000,000	
1	\$120,561)	\$672,897
2	\$(168,584)	\$628,876
3	\$(216,078)	\$587,734
Cost		\$179,586