3.6.1 Debt Structuring Case Study Exercise[1]

Unit: Unit 1 – Treasury Strategy

Module: Module 3 – Financial strategy

Date: 1 March 2012

Summary: Practical Case Study - given four years' data on a company plus market information, you are asked to calculate the WACC, determine an appropriate beta (given changes to the underlying riskiness of the business) and advise on whether the capital structure is appropriate. A good practical application of the key concepts.

Keywords: capital structure, WACC, beta

Business Supplies plc

You have four years' data on Business Supplies PLC. After a period of earlier losses followed by disposals of loss-making businesses in project contracting and large plant engineering, the company's performance has stabilised. The main areas of business are now port operations, warehousing and waste services. You also have selected statistics on comparable companies which are broadly in the same line of business.

You have been asked to calculate the weighted average cost of capital for the company, which is now investing heavily again in various capital projects, and to advise whether the debt/equity capital structure is appropriate given the level of risk in the re-shaped business. The timescale of the company's capital projects is 5 to 10 years.

Subject to the normal constraints the company manages to borrow predominantly in its high-tax-paying legal entities in the USA, France and elsewhere. Its effective P&L tax rate is thereby significantly reduced.

Question 1

Calculate the company's after-tax WACC in both nominal and real terms, based on:

- the company's current and recent capital structure,
- the company's actual borrowing costs,
- current interest rate prospects,
- the latest considered opinion on the market equity risk premium,
- the tax shelter rate on corporate debt, assuming it is the US and France and
- the company's actual betas.

[1] This exercise is used in the Unit 1 Interim tutorial (all groups), and your **answer to Question 1 should be completed in advance** of the tutorial. Question 2 is addressed in the tutorial. Please see instructions on the Module 3 activity webpage.

Comment on all the data and assumptions used in your calculation. You should give particular consideration to what has happened to the underlying riskiness of the business, as measured by the ungeared beta, as a result of the strategic changes that have been made over the last four years. Base the WACC on an appropriate ungeared beta and an appropriate measure of the company's capital structure before considering the optimal capital structure in question 2. One approach could be to use the ungeared beta based on the latest data together with an average or prospective debt/equity levels.

Notes:

1. The market value of equity should include the market capitalisation of ordinary shares, preference shares plus book value of minority interests.
2. When calculating enterprise value, use average share values over the relevant year (as we are not given closing prices).

Question 2

Having regard to:

- the brief description of the nature of the business
- the stability or otherwise of its financials
- the relevant credit measures of the company
- the WACC from question 1
- the share-price based risk metrics
- the comparable company data, and
- the wider data on bond ratings and financial ratios

Advise on whether you think the present debt/equity mix is optimal, based around the risks of the business and how lenders will assess it, and judging their return required for lending.

Give your evidence and reasoning on all relevant considerations.

Business Supplies plc
Profit and Loss Account

Accounts data	**20AA***	**20BB**	**20CC**	**20DD**	**Total**
Currency /units	**£ mill**	**£ mill**	**£ mill**	**£mill**	**£mill**
Sales Revenue	207.7	165.5	217.6	231.1	821.9
Operating expenses before exceptional items	(196.1)	(152.8)	(201.0)	(216.9)	(766.8)
Operating Profit before exceptional items	11.6	12.7	16.6	14.2	55.1
Non-operating Income & Expenditure					
Exceptionals etc			(0.3)	2.4	
Amortisation of Goodwill			(0.6)	(0.8)	
Investment Income	5.6	5.0	3.0	2.3	
EBIT	17.2	17.7	18.7	18.1	71.7
Finance					
Finance income	1.1	0.7	0.4	0.5	
Finance expense	(7.0)	(3.8)	(3.7)	(4.0)	
Profit before Tax	11.3	14.6	15.4	14.6	55.9
Current Tax	(2.9)	(3.9)	(4.3)	(3.5)	14.6
Profit after Tax	8.4	10.7	11.1	11.1	41.3
Minority Interests	(2.4)	(2.5)	(2.7)	(2.4)	
Preference Dividends	(0.1)	(0.1)	(0.1)	(0.1)	
Net Income / Earnings for Ordinary shareholders	5.9	8.1	8.3	8.6	30.9
Ordinary Dividends	(1.0)	(1.6)	(1.7)	(1.9)	6.2
Retained Profit for Year	4.9	6.5	6.6	6.7	24.7

*20AA data oldest, 20DD data is most recent.

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Cash Flow Analysis

Accounts data	**20AA**	**20BB**	**20CC**	**20DD**	**Period**
Currency /units	**£ mill**	**£ mill**	**£ mill**	**£ mill**	**Total**
Operating Activities					
Operating Profit	11.6	12.7	16.0	13.4	53.7
Tangible Asset Depreciation	6.2	6.0	7.3	7.3	26.8
Amortisation & Other Non-cash Items	(10.4)	(4.3)	(2.4)	0.1	(17.0)
(Increase) / Decrease in Net Working Assets	2.8	-	(1.1)	(4.0)	(2.3)
Investment Income	1.9	2.7	0.9	1.6	7.1
Cash generated from Operations	12.1	17.1	20.7	18.4	68.3
Net Capital Expenditure	0.6	(9.9)	(19.1)	(15.3)	(43.7)
Free Operating Cash Flow (rating definition)	12.7	7.2	1.6	3.1	24.6
(Tax Paid)	(1.0)	(0.3)	(2.6)	(1.9)	(5.8)
(Dividends Paid)	(2.3)	(5.1)	(2.7)	(4.4)	(14.5)
(Net Interest Paid)	(9.4)	(3.1)	(3.4)	(4.2)	(20.1)
Net Cash Flows from Operating Activities	0.0	(1.3)	(7.1)	(7.4)	(15.8)
Financing Activities					
(Acquisitions), Disposals, (Investments)	50.3	7.6	(2.1)	(2.1)	53.7
Increase / (Decrease) in Share Capital	(1.3)	-	-	-	(1.3)
Increase / (Decrease) in Debt	(45.9)	(12.4)	12.7	4.7	(40.9)
(Increase) / Decrease in Cash	(3.1)	6.1	(3.5)	4.8	4.3
Net Financing Cash Flow	0.0	1.3	7.1	7.4	15.8

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Balance Sheet

Accounts data	**20AA**	**20BB**	**20CC**	**20DD**
Currency /units	**£ mill**	**£ mill**	**£ mill**	**£ mill**
ASSETS				
Non-current Assets				
Intangible Fixed Assets		11.0	13.7	16.7
Tangible Fixed Assets				
Property, Land & Buildings - net	32.3	30.5	27.5	47.0
Other Fixed Assets - net	74.6	81.7	98.6	86.7
Financial Fixed Assets (Long-term Investments)	7.0	3.7	4.6	4.6
Total Fixed Assets	113.9	126.9	144.4	155.0
Current Assets				
Stocks, Inventories, Work in Progress	5.6	3.6	1.9	1.0
Debtors, Prepayments, Receivables etc	29.8	36.4	40.3	46.7
Cash and Short-term Investments	16.1	9.7	13.2	8.4
Other Current Assets	33.2	34.0	34.1	32.7
Total Current Assets	84.7	83.7	89.5	88.8
Total Assets	198.6	210.6	233.9	243.8
LIABILITIES				
Current Liabilities (Creditors < 1 Year)				
Creditors, Accruals, Payables etc	36.7	51.0	51.7	49.0
Short-term Debt	53.2	41.6	8.8	13.5
Income Tax Payable	1.6	3.1	2.5	1.9
Dividend Payable	1.0	1.1	1.2	1.3
Other Current Liabilities				
Total Current Liabilities	92.5	96.8	64.2	65.7
Non-current Liabilities (Creditors > 1 Year)				
Medium & Long-term Debt	0.6	4.0	50.0	52.9
Medium-term Trade-related Liabilities		0.2	2.1	2.2
Deferred Tax, Pension & Other Long-term Provisions	17.4	16.1	17.1	15.8
Total Non-current Liabilities	18.0	20.3	69.2	70.9
Share Capital & Reserves				
Issued Share Capital	41.2	41.2	41.2	41.2
Share Premium Account / Paid-in Surplus	5.8	5.9	5.9	5.9
Revaluation Reserve	32.9	32.0	31.3	30.6
Other Reserves	15.3	17.2	17.2	17.2
Retained Earnings / Profit and Loss	(30.8)	(25.5)	(18.0)	(11.0)
Total Capital and Reserves	64.4	70.8	77.6	83.9
Minority Interests	23.7	22.7	22.9	23.3
Total Shareholders' Funds	88.1	93.5	100.5	107.2
Accumulated depreciation	21.0	29.9	29.9	37.1

Note that these financial statements are consolidated. The parent company has adequate reserves to support the dividends shown.

Share Price Data

Accounts data	**20AA**	**20BB**	**20CC**	**20DD**
Currency /units	**£ mill**	**£ mill**	**£ mill**	**£ mill**
Number of Shares, Eps & Dividends per share				
Earnings per Share (pence or equivalent)	380	520	530	550
Dividends per Share (pence or equivalent)	64	100	110	120
Average number of common shares	156.5	156.5	156.5	156.9
Average number of preference shares	1.622	1.622	1.622	1.622
Share Price (pence or equivalent)				
Common Share Price - High	49.5	74.0	82.0	75.0
Common Share Price - Low	31.5	38.0	36.5	40.0
Common Share Price - Average	40.50	56.00	59.25	57.50
Preference Share Price - High	100	100	100	100
Preference Share Price - Low	100	100	100	100
Preference Share Price - Average	100	100	100	100
Risk Rating				
Variability %	60	39	40	42
Beta	1.10	1.11	0.96	0.84

Comparative Company Data

Company	Net Debt/ Net Debt+ Equity	Net Debt/ EV	EBIT/ Interest	Net Debt/EBIT	ROCE	EV/Book Capital	Beta	Variability%
A	0.43	0.17	2.17	5.20	8.3	2.53	0.98	36
B	0.47	0.22	5.36	2.80	16.8	2.19	0.92	33
C	0.20	0.24	2.34	5.03	4.0	0.84	0.91	36
E	0.30	0.15	6.52	2.05	14.5	2.01	0.88	36
G	0.43	0.26	2.39	2.65	16.0	1.66	0.90	35

Note: None of the comparable companies are rated.

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Assumptions / Inputs:
You will need the following data to complete the exercise. Some you will have to complete yourself.

Medium-dated gilt yield (the risk free rate for UK investors)	4.8%
Relatively stable interest rate prospects for next 10 years (Government bond yields for US, UK and Europe similar over the yield curve)	
Company's effective interest rate on average cash	Calculate based on 20DD figures
Company's effective interest rate on average debt	Calculate based on 20DD figures
Company's average effective tax rate (income statement)	Calculate based on 20AA-20DD figures
Tax shelter rate on debt (Estimated for US, France)	use 35%
UK Inflation currently (RPI)	3.0%
UK Inflation currently (CPI)	2.2%
UK Equity Risk Premium (historical data, considered view)	4.5%
Company (ungeared) beta	Calculate based on 20AA–20DD figures

Student Notes

Recall that Damodoran has a table of credit rating indicators and supporting definitions (page 91).

The style of this case is representative of exam style questions. To give you practice in creating "pen and paper"-style answers, we have deliberately not presented the case data in spreadsheet format. (You should avoid using a spreadsheet because you will not have one available in the exam.)