Financial Modeling Templates

Company Share Price Valuation using Free Cash Flow To Equity

http://spreadsheetml.com/finance/valuation_freecashflowtoequity.shtml

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ConnectCode's Financial Modeling Templates

Have you thought about how many times you use or reuse your financial models? Everyday, day after day, model after model and project after project. We definitely have. That is why we build all our financial templates to be reusable, customizable and easy to understand. We also test our templates with different scenarios vigorously, so that you know you can be assured of their accuracy and quality and that you can save significant amount of time by reusing them. We have also provided comprehensive documentation on the templates so that you do not need to guess or figure out how we implemented the models.

All our template models are only in black and white color. We believe this is how a professional financial template should look like and also that this is the easiest way for you to understand and use the templates. All the input fields are marked with the '' symbol for you to identify them easily.*

Whether you are a financial analyst, investment banker or accounting personnel. Or whether you are a student aspiring to join the finance world or an entrepreneur needing to understand finance, we hope that you will find this package useful as we have spent our best effort and a lot of time in developing them.

ConnectCode

1. Company Share Price Valuation

1.1 Company Share Price Valuation using Free Cash Flow to Equity

This spreadsheet values a company's share price by using the Free Cash Flow to Equity model. The Free Cash Flow to Equity is defined as the sum of the cash flows to the equity holders in the firm.

1.2 Valuation Summary

The Free Cash Flow to Equity (FCFE) is calculated as follows:

FCFE = EBIT * (1-Tax rate) + Depreciation - Capital expenditure - Change in Working Capital + New debt issued – Debt repayments

The terminal value of the firm's equity beyond the projection horizon is also estimated and added to the cash flow. The final cash flow discounted with the cost of equity provides the equity value.

1.3 Comparisons with Free Cash Flow to Firm

The main difference between Free Cash Flow to Equity (FCFE) and Free Cash Flow to Firm (FCFF) is the treatment of debt. FCFE can be thought of as follows:

FCFE = FCFF + New debt issued – Debt repayments

1.4 Assumptions

The following are inputs to be entered into the spreadsheet as assumptions. The values will be used by other parts of the spreadsheet.

	A	B	C	D	E	F	G	H	I
1						Free Cash Flow to Equity			
2									
3	Assumptions								
4		Cost of Equity*					16.00%		
5		Tax Rate*					34.00%		
6		Growth rate of Cash Flow after projection horizon(at terminal)*					0.00%		
7		Value of Non Operating Assets*					$0.00		
8		Number of Common Shares*					10,000.00		

- Cost of Equity - This is used to discount the cash flow to equity.
- Tax Rate - Company's Tax Rate
- Growth rate of Cash Flow after projection horizon - A fix growth rate after the projection horizon. This growth rate is used in the estimation of the Terminal Value of the company.
- Value of Non Operating Assets - The Discounted value of the Free Cash Flow to Equity yields the value of the operating assets. The equity value can be derived by adding the value of the **Non Operating Assets** from the value of the operating assets.
- Number of Common Shares - The equity value will be divided by the number of common shares to determine the price per share.

1.5 Projected Income

The Earnings before Interest & Taxes (EBIT) is calculated as follows:

Earnings before Interest & Taxes(EBIT) = Net Sales - Total Variable Costs - Total Fixed Costs – Depreciation

Net income is calculated as follows:

Net income = EBIT - Taxes

9	Projected Income							
10				0	1	2	3	4
11		Price per Unit*			$100.00	$100.00	$100.00	$100.00
12		Unit Sales*			2,000.00	3,000.00	4,000.00	5,000.00
13		Net Sales			$200,000.00	$300,000.00	$400,000.00	$500,000.00
14		Variable costs						
15			Material Cost per Unit*		$10.00	$10.00	$10.00	$10.00
16			Selling Expenses per Unit*		$10.00	$10.00	$10.00	$10.00
17			Others (per Unit)*		$10.00	$10.00	$10.00	$10.00
18			Total Costs per Unit		$30.00	$30.00	$30.00	$30.00
19			Total Variable Costs		$60,000.00	$90,000.00	$120,000.00	$150,000.00
20		Fixed Costs						
21			Lease payments*		$5,000.00	$5,000.00	$5,000.00	$5,000.00
22			Administration*		$5,000.00	$5,000.00	$5,000.00	$5,000.00
23			Others*		$5,000.00	$5,000.00	$5,000.00	$5,000.00
24			Total Fixed Costs		$15,000.00	$15,000.00	$15,000.00	$15,000.00
25		Depreciation*			$100,000.00	$100,000.00	$100,000.00	$100,000.00
26		Earnings before Interest & Taxes (EBIT)			$25,000.00	$95,000.00	$165,000.00	$235,000.00
27		Taxes			$8,500.00	$32,300.00	$56,100.00	$79,900.00
28		Net income			$16,500.00	$62,700.00	$108,900.00	$155,100.00

1.6 Net Debt

Net Debt is calculated as follows:

Net Debt = New Debt Issued – Interest * (1 – Tax Rate) – Existing Debt Principal Repayments

The reason for multiplying the Interest with (1- Tax Rate) is because Interest can be used as a Tax Shield.

35	Net Debt							
36				0	1	2	3	4
37		New Debt Issued*			$0.00	$0.00	$0.00	$0.00
38		Existing Debt Interest payments*			$500.00	$500.00	$500.00	$500.00
39		Existing Debt Principal payments*			$1,000.00	$1,000.00	$1,000.00	$1,000.00
40		Interest * (1 - Tax Rate)			$330.00	$330.00	$330.00	$330.00
41		Net Debt			($1,330.00)	($1,330.00)	($1,330.00)	($1,330.00)

1.7 Net Working Capital and Investment (Capital Spending)

The Net Working Capital and Investment (Capital Spending) are taken into account in these two sections.

The Net Working Capital at Year 0 can be entered directly into the spreadsheet. From Year 1 onwards, it is calculated as a function over Net Sales as follows:

Net Working Capital = Net Working Capital over Sales * Net Sales

Net Working Capital cash flow is calculated as follows:

Net Working Capital cash flow = -(Current Year Net Working Capital - Previous Year Net Working Capital) + NWC Recovery at end

42	**Net Working Capital**						
43			0	1	2	3	4
44		Net Working Capital*	$20,000.00	$32,000.00	$48,000.00	$64,000.00	$80,000.00
45		NWC Recovery at end*		$0.00	$0.00	$0.00	$0.00
46		Net Working Capital cash flow	($20,000.00)	($12,000.00)	($16,000.00)	($16,000.00)	($16,000.00)
47	**Investment (Capital Spending)**						
48			0	1	2	3	4
49		Initial Investment*	($1,000,000.00)	$0.00	$0.00	$0.00	$0.00
50		Salvage value*		$0.00	$0.00	$0.00	$0.00
51		Aftertax salvage value		$0.00	$0.00	$0.00	$0.00
52		Net Capital Spending	($1,000,000.00)	$0.00	$0.00	$0.00	$0.00

Aftertax salvage value is calculated as follows:

Aftertax salvage value = Salvage value * (1 - Tax Rate)

Net Capital Spending is calculated as follows:

Net Capital Spending = Initial Investment + Aftertax salvage value

1.8 Projected Free Cash Flows

This section uses the value from the Net Working Capital, Investment (Capital Spending), EBIT and Depreciation to calculate the Free Cash Flow to Equity.

Free Cash Flow to Equity (FCFE)

FCFE = EBIT * (1-Tax rate) + Depreciation + **Net Debt** - Capital expenditure - Change in Working Capital

53	**Projected Free Cash Flows**						
54			0	1	2	3	4
55		Operating cash flow		$116,500.00	$162,700.00	$208,900.00	$255,100.00
56		Net Debt		($1,330.00)	($1,330.00)	($1,330.00)	($1,330.00)
57		Net Working Capital cash flow	($20,000.00)	($12,000.00)	($16,000.00)	($16,000.00)	($16,000.00)
58		Net Capital Spending	($1,000,000.00)	$0.00	$0.00	$0.00	$0.00
59		Total Free cash flow	($1,020,000.00)	$103,170.00	$145,370.00	$191,570.00	$237,770.00
60		Cumulative cash flow	($1,020,000.00)	($916,830.00)	($771,460.00)	($579,890.00)	($342,120.00)
61		Discounted cash flow	($1,020,000.00)	$88,939.66	$108,033.59	$122,730.79	$131,318.25

1.9 Equity Valuation

1.9.1 Terminal Value

The Terminal Value of the Firm’s Equity is estimated as follows:

Terminal Value = Final Year Cash Flow * (1+Growth rate of Cash Flow after projection horizon) / (WACC Discount Rate - Growth rate of Cash Flow after projection horizon)

1.9.2 Operating Value

Operating Value is calculated as follows:

Value of Operating Assets = Net Present Value of Cash Flows + Discounted Terminal Value

1.9.3 Equity Value

Equity Value is calculated as follows:

Equity Value = Value of Operating Assets + Value of Non Operating Assets

62	**Equity Valuation**				
63		Projection Horizon			
64			Net Present Value		$134,640.40
65			Internal Rate of Return		18.71%
66		Terminal Value			$2,511,062.50
67		Discounted Terminal Value (PV)			$569,216.70
68		Add : Value of Non Operating Assets			$0.00
69		Equity Value			$703,857.09
70		Equity Value per share			$70.39