

## Five steps to valuing a business

### I. Collect the relevant information

The starting point for Valuecruncher valuing a business is the latest financial statements. The business' accountant should be able to provide you with a copy of these. In **Appendix I** we have a glossary of all the terms we use in the valuation process.

Financial statements include:

#### **1. Profit & Loss Statement    2. Statement of Cash Flows    3. Balance Sheet**

Some accounting jurisdictions don't require a Statement of Cash Flows – that isn't a problem. The profit and loss statement and balance sheet are the key starting point for completing the input sheet for a Valuecruncher valuation. The only component we require from the Statement of Cash Flows is the capital expenditure for the business. If there are any questions about the relevant information required – please don't hesitate to contact the Valuecruncher team (<http://www.valuecruncher.com/feedback/new>).

### 2. Input relevant information into the Valuecruncher I-page input sheet

#### **Profit and Loss Statement**

We start with the Profit and Loss Statement. We are interested in four inputs from the Profit and Loss Statement and information on capital expenditure: revenues, profitability, depreciation and amortisation charges, and capital expenditure.

#### **Compiling the Valuecruncher valuation input sheet: Profit and Loss Statement items**

Profit & Loss Template		Extract from Valuecruncher Input Sheet
Sales	1,000	Revenue
COGS	600	
<b>Gross Profit</b>	<b>400</b>	<b>Profit and Loss</b>
Expenses		<b>Revenues</b> <b>C</b> \$1,000.0
Selling, General & Administration		<i>Top line sales.</i>
Rent	30	
Wages	50	<b>OR</b>
Power + Phone	10	<b>Compound Annual Growth Rate (CAGR)</b>
Travel	20	<i>Amount of growth anticipated each year after Actuals.</i>
Administration	30	
Miscellaneous	10	<b>Earnings Before Interest and Tax (EBIT)</b> <b>D</b> \$150.0
Total Selling, General & Administration	150	<i>Operating earnings before interest and taxes but including depreciation.</i>
Depreciation	75	<b>OR</b>
Amortisation	25	<b>Compound Annual Growth Rate (CAGR)</b>
Interest		<i>Amount of growth anticipated each year after Actuals.</i>
Interest Income	(5)	
Interest Expense	25	<b>Expense Break-Out</b>
Net Interest Expense (Income)	20	<b>Depreciation + Amortisation Expense</b> <b>E</b> \$100.0
<b>Total Expenses</b>	<b>270</b>	
<b>Net Profit Before Tax (NPBT)</b>	<b>130</b>	
Tax @ 33%	43	
<b>Net Profit After Tax (NPAT)</b>	<b>87</b>	

## Cash Flow Statement

### Compiling the Valuecruncher valuation input sheet: Cash Flow Sheet items

Cash Flow Template		Extract from Valuecruncher Input Sheet	
<b>Cash Flows from Operating Activities</b>		<b>Capital Expenditure</b>	<b>F</b> <b>\$77.0</b>
Cash payments from customers	1,000	<i>Capital expenditure (or capitalised research and development) costs for the periods.</i>	
Cash receipts	(750)		
Interest Received	5		
Interest Paid	(25)		
Tax Paid	(43)		
<b>Total cash from (applied to) operating activities</b>	<b>187</b>		
<b>Cash Flows from Investing Activities</b>			
Sale of fixed assets	15		
Purchase of fixed assets	(80)		
Research & Development	(12)		
Forward exchange rate contracts	(10)		
<b>Total cash from (applied to) investing activities</b>	<b>(87)</b>		
<b>Cash Flows from Financing Activities</b>			
Proceeds from term liabilities	0		
Dividends paid	(90)		
<b>Total cash from (applied to) financing activities</b>	<b>(90)</b>		
Cash carried forward	10		
Increase (Decrease) in cash	10		
Ending cash balance	20		
Represented by			

## Projections

The next step is then projecting forward key numbers – revenues, EBIT, depreciation and capital expenditure. Valuation is a forward-looking exercise, even if the business mature and stable it is still important to compile projections. Valuation is based on future performance of the business. This may be the same as the current performance but it can also be materially, or slightly, different – either better or worse. For a Valuecruncher valuation the Profit and Loss Statement projections are the key input. The key projections required for valuation purposes are revenues, profitability, depreciation and capital expenditure.

Each business is different and has different expectations of future performance. If the business is stable and not expecting to grow significantly then making projections is reasonably straightforward. When the business is going through significant growth or the market the business operates in is uncertain – then the process is slightly more difficult. It is however a good process for a business to look at what financial results it expects over coming years. Making financial projections is subjective exercise that reflects the best estimate of an uncertain future. Don't be intimidated by the uncertainty involved in compiling projections, they are only meant to represent the best estimate. Valuecruncher valuation reports provides sensitivity analysis that illustrates how alternative projections impact on the business valuation.

At Valuecruncher we often see a reasonably high-level approach taken to valuation – which is just fine. It is typical for a business owner to say something like “we expect revenues to grow at 10% per annum over each of the next three years with profitability (at the EBIT level) margin (as a percentage) remaining the same as it is today. We expect depreciation and amortisation to remain about where they are today. We will be spending an additional \$50,000 in capital expenditure next year but then expect capital expenditure to remain at the current level”. With information even at

that simplified level – the Valuecruncher input sheet can be completed. If a business has detailed financial projections then these should be utilised. Most businesses do not however have detailed projections. High-level assumptions are all that is required for completing the Valuecruncher input sheet.

*Some more tips for making projections*

**Revenue projections** – a simplified approach to revenue projections involves estimating the short-term (next 3 years) revenue growth as a percentage. The estimated percentage growth can be based on historic growth rates or incorporate any expansion plans the business has. Valuecruncher can assist to covert projected growth rates into actual revenue figures if required.

**Profitability projections** – the best starting point for projecting profitability is the current levels. If the business is planning to introduce new technology or has recently increased production capacity it is possible that profitability will increase in the future – but there is usually an increase in costs associated with additional profitability. If a business has an owner that works in the business at a below market salary – this should be adjusted to market levels.

**Businesses run at break-even** – Valuecruncher often sees businesses that are run at break-even. Our approach to valuation with these companies is to look what the level of profitability that companies in the industry typically operate at. Then we will extrapolate that industry average profit performance to the business’ sales. This approach provides a reasonable assessment of the value of the business even when the business is operating at break-even. In **Appendix 2** we have a table of average industry EBIT margins. If you are unsure or have questions about the appropriate EBIT margin to potentially use Valuecruncher is happy provide assistance.

**Capital expenditure projections** – when estimating capital expenditure required by a business it is important to consider the current status of the business’ assets and any investment that may be required for replacements or upgrades. Other examples of potential capital expenditure include research and development expenses. The Valuecruncher input sheet also requires a terminal capital expenditure amount – this is simply the “typical” level of capital expenditure that the business would anticipate into the future. We include this amount to ensure that capital expenditure figures do not get inflated by current spending and truly reflect the on-going capital expenditure of the business.

**Depreciation** – the starting point for projecting the depreciation charge is the current amount. If the business plans to invest in fixed assets the depreciation charge can be expected remain constant and potentially increase. If the business has no plans to invest in its assets the depreciation charge can be expected to decrease.

Profit and Loss	
<b>Revenues</b> <i>Top line sales.</i>	<b>C</b> <input type="text"/>
<b>OR</b> <b>Compound Annual Growth Rate (CAGR)</b> <i>Amount of growth anticipated each year after Actuals.</i>	<input type="text"/> <small>NB: If Actual and Forecasts are submitted these will be used over the CAGR.</small>
<b>Earnings Before Interest and Tax</b> <i>Operating earnings before interest and taxes but including depreciation.</i>	<b>D</b> <input type="text"/>
<b>OR</b> <b>Compound Annual Growth Rate (CAGR)</b> <i>Amount of growth anticipated each year after Actuals.</i>	<input type="text"/> <small>NB: If Actual and Forecasts are submitted these will be used over the CAGR.</small>
<b>Expense Break-Out</b>	
<b>Depreciation Expense</b> <i>Total depreciation expenses for the periods - From the forecast numbers. This should have been INCLUDED as expenses in calculating Earnings Before Interest and Tax.</i>	<b>E</b> <input type="text"/>
<b>Capital Expenditure</b> <i>Capital expenditure (or capitalised research and development) costs for the periods.</i>	<b>F</b> <input type="text"/>
<b>Terminal Capital Expenditure</b> <i>The amount of annual capital expenditure that the company would anticipate going into the future.</i>	<b>G</b> <input type="text"/>

The projections go into these cells in the input sheet.

If there are any questions about the projections – please don’t hesitate to contact Valuecruncher.

## Balance Sheet

The Balance Sheet inputs for the Valuecruncher valuation are only historic numbers – there are no projections required.

Balance Sheet Template		Extract from Valuecruncher Input Sheet	
<b>Assets</b>		<b>Balance Sheet</b>	
Current Assets		<i>NB: Only the most recent balance sheet numbers are required - i.e. no forecasts.</i>	
Cash	20	<b>Total Assets</b>	<b>H</b> \$660.0
Short-term Investments	10	<i>Total Assets per the Balance Sheet.</i>	
Accounts Receivable	75	<b>Intangible Assets</b>	<b>I</b> \$75.0
Inventory	150	<i>Assets without a physical nature - i.e. brands, intellectual property, etc.</i>	
Other Receivables	5	<b>Liabilities</b>	<b>J</b> \$350.0
<b>Total Current Assets</b>	<b>260</b>	<i>Total Liabilities per the Balance Sheet.</i>	
Non-Current Assets		<b>Specific Balance Sheet Items</b>	
Fixed Assets	300	<b>Cash</b>	<b>K</b> \$20.0
Goodwill	75	<i>Cash balances (negative if in overdraft).</i>	
Long-term Investments	25	<b>Investments</b>	<b>L</b> \$35.0
<b>Total Non-Current Assets</b>	<b>400</b>	<i>Investments in other companies carried on the balance sheet that are not included in the financial results.</i>	
<b>Total Assets</b>	<b>660</b>	<b>Long-Term Debt</b>	<b>M</b> \$250.0
		<i>Long-term borrowings made by the business - bank loans, bonds, etc. Not working capital items (i.e. accounts payable etc).</i>	
<b>Liabilities</b>			
Current Liabilities			
Overdraft	5		
Accounts Payable	85		
Other Payables	10		
<b>Total Current Liabilities</b>	<b>100</b>		
Non-Current Liabilities			
Long-term Debt	250		
<b>Total Non-Current Liabilities</b>	<b>250</b>		
<b>Total Liabilities</b>	<b>350</b>		
<b>Net Assets</b>	<b>310</b>		
<b>Shareholders Funds</b>			
Shareholders Capital	100		
Retained Earnings	210		
<b>Total Shareholders Funds</b>	<b>310</b>		

### 3. The valuation calculation

Valuecruncher incorporates the projections and balance sheet values supplied by client (via the input sheet) into a **discounted cash flow (DCF) model**. Valuecruncher estimates the long-term growth rate and the required rate of return for the business. Valuecruncher will calculate the sensitivity of the valuation to the projected revenue and profitability supplied by the client. The sensitivity analysis provides an indicative valuation range. The DCF valuation is supplemented by comparable company analysis and an asset based valuation.

**Comparable Company Analysis** – Valuecruncher has an extensive database of information on companies in a wide range of industries around the world. Using the database Valuecruncher will compare the DCF valuation output with the implied valuation based on prices comparable companies have sold for and trading prices of publicly listed companies. Comparable company analysis is a relative measure of value that provides a check for the DCF valuation. The comparable company analysis does not incorporate the unique features and opportunities of a business but provides a market-based estimate of value.

**Asset Analysis** – Valuecruncher calculates the value of the business' net tangible assets (NTA). This is a purely accounting based measure that incorporates the current book value of the business'

assets. NTA is not a forward-looking approach and it does not evaluate the earning potential of the assets. The NTA methodology is often impacted by the accounting treatment of assets (i.e. depreciation policies).

These three valuation methodologies form the cornerstone of the valuation frameworks used in global investment banks and major accounting firms.

#### **4. Valuecruncher review the valuation**

Upon completing the valuation calculations a member of the Valuecruncher team will independently review the valuation including the projections and inputs provided by the client and the assumptions applied.

Common issues identified with valuations include:

- Client revenue projections are overly optimistic reflecting a “best case” scenario opposed to an expected case.
- EBIT margins are too high because all costs are not being incorporated. Often the “actual” owner’s salary is not fully reflected in the financial statements.
- EBIT margins are too low because the company is being run at breakeven point with the owner expensing items through the business that are not part of the business’ operations.
- Projected capital expenditure does not reflect the investment required to generate the projected growth.

If Valuecruncher identifies an issue that materially impacts the valuation the client will be contacted to clarify the issue before the valuation report is generated.

#### **5. Valuecruncher provide the valuation report**

Valuecruncher compiles the inputs provided and the valuation outputs into a five-page valuation report. The valuation is expressed as an indicative range based on the DCF sensitivity analysis with a mid-point reflecting the inputs and projections supplied by the client; this is supplemented by the implied comparable company and NTA valuations. The report includes a summary of the valuation outputs and highlights any assumptions that may need to be reviewed. If after inspecting the report and assessing any potential issues raised by Valuecruncher the client wishes to revise the initial inputs provided, Valuecruncher will provide an updated valuation report for no additional fee.

## **Appendix I – Glossary**

**Revenue** – Operating revenues (top-line sales) for the business.

**Earnings before interest and tax (EBIT)** – EBIT is a measure of a company's profitability. The EBIT measure has the advantage of expressing the profitability of the business independent of its borrowings (i.e. before the interest expense is deducted) and any unique tax factors. EBIT is calculated as Net Profit before Tax + Net Interest Expense (Interest Expense – Interest Income).

**Capital Expenditure** – Capital expenditure represents the investment required to replace or upgrade a business' assets. For the purpose of the Valuecruncher valuation any research and development that is amortised is also considered capital expenditure.

**Depreciation and amortization** – These are accounting measures that spread the cost of the assets over their useful life (physical assets are depreciated [i.e. plant and machinery] and intangibles are amortised [i.e. goodwill]). Depreciation and amortisation figures are based on historic costs.

**Total assets** – The sum of your of the business' current assets and non-current assets.

**Intangible assets** – An intangible asset is something that does not physically exist but has value. Examples of intangible assets include goodwill, brands, franchises, trademarks, patents and licenses.

**Total liabilities** – The total estimated value of the company's legal debt or obligations.

**Long-term debt** – Long-term debt typically represents loans and financial obligations that are longer than one year. Overdrafts and credit card liabilities are not considered long-term debt.

**Cash and cash equivalents** – Cash represents the net cash position of the company. If the company has an overdraft the cash value should be negative reflecting the total amount overdrawn the company is after considering any positive cash balances in other accounts. Cash equivalents represent liquid (there is a readily available market at a fair price) financial instruments such as shares and short-term bonds.

**Investments** – Investments are claims that are not represented in the company's profit and loss statement. For example if a company held shares in another the company these shares would not contribute to the operating revenue but their value would be recognized in the balance sheet. Investments should include both short-term and long-term investments.

## Appendix 2 – Indicative industry EBIT margins

Industry	Sample Size	EBIT Margin	Industry	Sample Size	EBIT Margin	Industry	Sample Size	EBIT Margin
Advanced Medical Equipment	13	12%	Environmental Services	8	11%	Restaurants	31	9%
Advertising/Marketing	10	11%	Fishing & Farming	8	5%	Retail - Apparel & Accessories	32	8%
Air Freight & Courier Services	3	3%	Food Distribution & Convenience Stores	15	2%	Retail - Catalog & Internet Order	6	4%
Airlines	8	8%	Food Processing	17	5%	Retail - Catalog & Internet Order	6	4%
Aluminum	2	10%	Footwear	13	10%	Retail - Computers & Electronics	1	12%
Apparel & Accessories	18	9%	Healthcare Facilities	33	8%	Retail - Department Stores	1	5%
Appliances, Tools & Housewares	2	8%	Heavy Electrical Equipment	7	7%	Retail - Discount Stores	2	2%
Auto & Truck Manufacturers	3	11%	Home Furnishing	12	7%	Retail - Drugs	2	3%
Auto/Truck/Motorcycle Parts	17	2%	Homebuilding	11	7%	Retail - Specialty	32	4%
Beverages - Brewers	1	10%	Hotels, Motels & Cruise Lines	9	13%	Semiconductor Equipment & Testing	15	9%
Beverages - Distillers & Wineries	1	10%	Household Products	1	16%	Semiconductors	49	12%
Beverages - Non-Alcoholic	4	8%	Industrial Machinery & Equipment	38	10%	Software	32	13%
Broadcasting	16	17%	Integrated Telecommunications Services	20	15%	Steel	15	7%
Casinos & Gaming	14	14%	Investment Services	27	26%	Textiles & Leather Goods	1	15%
Chemicals - Agricultural	4	6%	IT Services & Consulting	80	8%	Tires & Rubber Products	2	2%
Chemicals - Commodity	14	7%	Leisure & Recreation	11	8%	Utilities - Electric	18	13%
Chemicals - Specialty	14	8%	Leisure Products	14	5%	Utilities - Multiline	2	13%
Commercial Printing Services	9	10%	Managed Health Care	5	6%	Utilities - Natural Gas	11	8%
Commercial Services & Supplies	77	8%	Marine Transportation	4	17%	Utilities - Water & Others	4	18%
Communications Equipment	21	9%	Media Diversified	1	3%	Wireless Telecommunications Services	7	17%
Computer Hardware	20	7%	Medical Equipment, Supplies & Distribution	38	9%			
Construction - Supplies & Fixtures	16	7%	Office Equipment	2	4%			
Construction & Agricultural Machinery	7	9%	Paper Packaging	1	5%			
Construction Materials	5	9%	Paper Products	11	5%			
Consumer Electronics	4	10%	Personal Products	10	10%			
Consumer Financial Services	14	20%	Personal Services	14	11%			
Containers & Packaging	4	10%	Pharmaceuticals - Generic & Specialty	24	11%			
Electrical Components & Equipment	36	9%	Publishing	11	13%			
Engineering & Construction	16	5%	Rails & Roads - Freights	20	8%			
Entertainment Production	4	8%	Real Estate Operations	17	22%			

**NOTE: These EBIT margins are indicative only. The specific characteristics of individual businesses may result in EBIT margins different to those shown.**