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Valuing a business in 30 minutes for quick insights

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Although valuation is complex, in some situations a quick review is adequate to get an idea of the company's value, key drivers to increase value or what is fundamentally expected of a business' performance given a certain value, for example an asking price of a business up for sale. This article discusses the approach for conducting a quick basic valuation of a business.

Knowing a company's value is something that is very important to managers and investors alike. Understanding value and its drivers is crucial for making sound business decisions both on a strategic and operative level. In situations where a company is bought or sold as a whole, determining the value is naturally of vital importance, but investors are also interested in knowing the value of companies in other situations. It is impossible to make educated decisions on which companies or development initiatives to invest in if you do not have an idea of their fundamental value. Also, paying too high a price when acquiring a business will hit profitability and can jeopardize a company's existence for years to come. However, defining the value of a company is often time-consuming, complex and at times more of an art than a science. The amount of inputs to a valuation calculation is virtually endless, and it is impossible to take all factors into account. It is also quite subjective as assets are of different value to different owners.

Although valuation is complex, in some situations a quick review is adequate to get an idea of the company's value, key drivers to increase value or what is fundamentally expected of a business' performance given a certain value, for example an asking price of a business up for sale. This article discusses the approach for conducting a quick basic valuation of a business. We start by discussing the overall challenges of the valuation process, then move on to giving tips on how to accomplish a 30 minute valuation and to discussing the applicability and limitations of this approach. If you are interested in the theory and details, in the end we

have reviewed the main valuation methods and the logic behind them. For those of you interested in how to conduct a quick valuation to support decision-making or help in focusing analyses, please read along.

Typically business valuation is complex and requires extensive data analysis

Valuation methods can be divided into two main types: multiple-based and fundamental value, or discounted cash flow (DCF), based methods. Although other ways exist, these dominate the practice. The multiple-based models are based on market data or on data for precedent transactions. The idea behind these models is that you calculate a multiple like company value to sales on comparable public companies or precedent transactions and then multiply this multiple with the valued company's sales. It is thus a very simplistic approach where the market is assumed to value companies correctly and it is not based on company-specific forecasts. The DCF models on the other hand, are based on company-specific forecasts and no comparable companies or precedent transactions are necessarily needed. The company value that is generated by these approaches is called the enterprise value (EV). The enterprise value is simplistically defined as market capitalization + debt – cash items. The reason for deducting cash is that it could be used to repay some of the debt.

Multiple-based models are widely used even by practitioners since they have the advantage of essentially using the market's wisdom to infer value from the current situation and all information available. Comparing price-to-earnings (P/E) ratios and such across companies in an industry is also a rather simple exercise provided the information is available, and the relative differences are easy to understand. The challenge is that multiples produce a wide range of value estimates based on which measures are used, in what industry, and in which timeframe. Especially for larger corporations, it is also very difficult to define the industry and find the right reference companies as most corporations have very different business portfolios. Although fundamentally based on mere market sentiment, multiples are the easiest way to justify the business' value as they do not require forecasts about the future.

DCF valuation models, as their name suggests, derive the value of a company from the estimated concrete cash flows a company generates in the future. In other words, the more free cash flows a company generates the more valuable it is. It is also good to note that these models are not based on the profit or loss found on the profit and loss statement. The reason for this is that a company can make accounting decisions that affect the bottom line in a desired direction and therefore these figures do not illustrate a company's ability to generate positive cash flows. The cash flow based DCF-model is thus the theoretically correct way to calculate the company's value, but the array of inputs and their correct estimation is hard; estimating a company's revenue generation, profitability, investment schedule and the discounting rate is needed, to name a few. A big uncertainty factor is usually the terminal value (TV) of a company, which is the part of a company's value expected to form of the cash flows after a period of individually forecasted years (usually 5-10 years). It depends on market growth rates and interest rates, and more importantly, on the company's ability to continuously evolve to keep up with the market.

All in all, valuation is a challenging task requiring extensive input, and making correct

forecasts is impossible. Due to this it can be very informative to do a quick and rough valuation where you get some an estimate of a company's value that is in the ballpark, compared to trying to do an exhaustive valuation where you still have to do several simplifications and assumptions.

Even with its limitations, the 30 minute valuation has many uses

While limited in depth, the 30 min valuation approach can still be applied in the fast screening of acquisition targets and making a quick estimate for indicative offers when a bid is requested. It is also beneficial in estimating the fundamental value of own businesses in their existing forms, understanding the value impact of improvements in own business units and questioning or verifying existing valuations. In essence, the approach can be used both to get indicative valuations of external targets and to internally assess the value of own business and development initiatives, as well as to identify the most important value drivers. All of these can be one-time or continuous efforts.

For screening, the approach comes in handy when there is an existing short list of potential targets, but no valuation numbers for all of them. The method can be used to quickly compute initial valuations in a simple and comparable way; if the process would be too heavy, it might end up not being used at all or existing valuations from a range of sources could be used, which would not be comparable with one another. The method can also, to an extent, be used to come up with rough figures for indicative offers in a situation where a potential target comes up and a bid must be left quickly. In this case, extra caution is needed.

When it comes to internal use, one can use this method to see what value it gives for the own business, and whether this is in line with the expectations. The resulting differences and their sources can then be examined: are they the result of shortcomings in the approach, is there a discrepancy between your expectations and those of the market or is there something wrong in the strategy of the business? The results can prove valuable. We also suggest using the method to see how operative improvements affect individual BUs' values. You might, after splitting the company into BUs and valuating them separately, realize that some investments are unwise given their profitability and cash flow impact. Or there might be for example overinvestment in some Bus, when taking their revenue streams into account.

The multiple valuation is very rough, but even the DCF model has its limitations

Different valuation methods obviously have different pitfalls. Multiples, in general, are simple to use and to understand but can be too simplistic, and can create an illusion of accuracy. The "bullshit in – bullshit out" principle should never be forgotten: the multiple-based valuation is only as good as the judgment when choosing companies for peer groups and adjusting the multiple values that managers often intentionally try to sugar-coat.

DCF-models, on the other hand, require a pretty deep understanding of financial analysis and the operations of the company that is being valued. They also neglect all facets of value that are not reflected in cash flow generation, mainly non-operative assets such as spillover

patents, recreational facilities, art and exceptionally valuable property. The models also do not take into account the physical condition of the assets. DCF models require simplification, and one variable where this is apparent is the treatment of interest tax shields on debt: in a straightforward DCF valuation, the tax shields' benefits are modeled into a reduced WACC, assuming constant profitability and a stable capital structure during the forecast period. This is especially true in leveraged buy-outs where the capital structure is built to change. Information availability can also become an issue: SMEs for instance are seldom listed on stock exchanges and it can be hard to separate business units' financials from the consolidated financial statements of their parent companies.

While there are many limitations, these limitations also imply increased ease of use. To make the valuation as easy as possible, there is now a "30 minute valuation" toolkit available in Reddal Share. The model is constructed using the methodology presented in this article and we challenge the interested readers to estimate the value of a business, be it your own or a company that you are interested in investing in. To further help you, we have the WACC toolkit that helps you estimate the WACC for a business to be used in the DCF model.

The theory of valuation is quite simple but estimating the inputs is not

When conducting a quick valuation, most of the needed input data can be found from the profit and loss statement and the rest can be found from the balance sheet. In multiple valuation, the most commonly used measures are the enterprise value to Earnings Before Interest, Taxes, Depreciations and Amortizations (EBITDA) or the enterprise value to Earnings Before Interest and Taxes (EBIT). When calculating free cash flows, the starting point is usually EBIT or EBITDA. What this naturally implies is that the figures needed from the profit and loss statement are those related to the operational costs and income and other figures like financial costs and income found below the EBIT are not of great importance in this simplistic approach.

Multiple analysis

To start off with the most simple approach, when conducting a multiple analysis you will have to gather the operational performance measures EBITDA and EBIT. In a multiple valuation analysis typically both of these are used to calculate the enterprise value of the company by multiplying the EBITDA or EBIT with suitable multiples. Other multiples that are frequently used in valuation situations are the Price to Earnings (P/E) ratio and EV/Sales to name but a few. Of these multiples, however, the EBITDA and EBIT multiples are more commonly used as the EV/Sales multiple generally yields very differing results and the P/E ratio includes financial and extraordinary items that are not related to the operative performance.

Extracting the EBITDA and EBIT is usually not a difficult task, especially if the operations have been stable without larger structural changes or one-off costs or income. These can naturally be cleaned out to represent operational figures so you do not have to use the figures from the profit and loss statement as they are given. The more difficult task is finding suitable multiples for the analysis. The EV/EBITDA and EV/EBIT multiples are industry-specific and getting a suitable multiple range can be tedious. Generally, multiples are obtained by

calculating the multiple values for several publicly listed companies in the same industry. Other multiples can be obtained from precedent transactions where similar companies have been acquired or divested and the transaction value and financials are known. The challenge with both of these approaches is that the data is rarely available to private persons or companies that do not subscribe to related financial databases. A call to an investment banker might thus be the easiest approach to get some multiple estimates for the company or a business unit. In a quick valuation the multiple range only needs to be indicative and a large amount of time should not be spent on this. After the multiple range is determined, you just need to multiply the EBITDA or EBIT values with the multiple to get a preliminary valuation for the company. Considering figures of different years or an average may be helpful especially if performance has varied a lot.

In the table below you will find some examples of industry-specific EV/EBITDA multiples based on material from Valmetrics, which is an independent business valuation company serving parties in the M&A field. As these multiples are industry averages in very broadly defined industries, individual cases can vary a lot, especially if there are valuable intangible assets such as brands or IPR involved.

Industry	Median EV/EBITDA multiple
Global	7.09x
Consumer	7.27x
Technology	7.15x
Infrastructure	8.94x
Materials	6.04x
Producer	6.33x

Valmetrics, EV/EBITDA multiples

In the Valmetrics reports you will find further break-downs into specific industries. These multiples serve as an excellent starting point and by applying a range of +/- 1 or 2, you will have a good multiple range. For other multiple estimates, including EV/EBIT multiples, please refer here (under updated data).

DCF valuation

The multiple approach will yield a preliminary value for the valued entity and it is a good starting point and sanity check for the discounted cash flow analysis. The DCF analysis requires some more data from the balance sheet in addition to the data acquired for the multiple analysis. The formula used for calculating the free cash flow can take a variety of forms, but in a simplistic form it can be modeled as follows:

Variable	Calculation
EBIT	Based on the estimated future growth and profitability
Net Operating Profit Less Adjusted Taxes	EBIT x (1 – corporate tax rate)
Change in Net Working Capital (- increase/+ decrease)	(Inventories Y1 + Receivables Y1 – Payables Y1) – (Inventories Y0 + Receivables Y0 – Payables Y0)
Net investments	+ Depreciations – Investments
Free cash flow	NOPLAT – growth in NWC – net investments

Calculation model, free cash flow

As mentioned earlier, these metrics give a better view of the company's ability to create value compared to the profit or loss figure on the profit and loss statement. The EBIT illustrates the company's ability to run its core operations efficiently and profitably. By deducting the taxes straight from this item and not after deducting interest expenses and extraordinary items you assume that the company only pays taxes on the profit generated solely from its core operations. The change in Net Working Capital (NWC) implies that if you increase your inventories or give customers more favorable payment terms or your suppliers require quicker repayment, more capital will be tied up. This will thus be financed by the cash flows from profits, and an increase in the NWC will thus decrease the free cash flows. The Net Investments imply that if new investments exceed the depreciations there will be a cash outflow as non-current assets are being increased.

The free cash flows must be explicitly forecasted some 5 to 10 years into the future and this is a very difficult part of the DCF analysis. When conducting a simple 30 minute valuation the best estimates can be found in internal budget figures or forecasts if available. When forecasting the NOPLAT you basically need to know two components; the sales growth and the profitability level or EBIT margin. Base case estimates for these can be found in the historical figures and you can for instance calculate the historical sales growth over a couple of years and the EBIT margin for these years. The averages or medians for these figures can then be used in the forecast. In order to get an estimate for the change in NWC you need to calculate the NWC a couple of years back. Then it is straightforward to calculate the historical NWC as percent of sales and this figure can then be used in the future estimates. The net investments can be calculated easily by comparing the investments to the Depreciation and Amortization (D&A). If you expect the company to grow significantly the investments should exceed the D&A and if the company is not expected to do any major investments these can be estimated to equal the D&A.

Discounting the future values to the present

As the forecasted cash flows are in the future it is vital to account for the time value of money by discounting the cash flows to the present with a suitable discount rate. The rate used to discount the free cash flows is the weighted average cost of capital, or WACC. WACC represents the rate of return that the shareholders and bondholders (creditors) of the

company should get as remuneration for the money they have put in the company, and is calculated as an average of these two components – hence the name. WACC is calculated as follows:

$$\text{WACC} = \frac{\text{Equity}}{\text{Equity} + \text{Debt}} * \text{Cost of Equity} + \frac{\text{Debt}}{\text{Equity} + \text{Debt}} * \text{Cost of Debt} * (1 - \text{tax rate})$$

Calculation model, WACC

As you can see, estimating the WACC requires several input parameters, of which the cost of equity is the most challenging to estimate. The proportions of debt and equity out of total financing can be found in the balance sheet, and the cost of debt is just the average interest rate the company is paying, which you know already (in the case of your own company) or can infer from credit ratings and current debt costs. The applicable tax rate is also easy to plug in.

When conducting a 30 minute valuation, you do not really have time to estimate a theoretically correct WACC as it requires some effort if it has not been done previously. For some WACC estimates, here you can calculate the cost of capital by industry sector. Based on the material on the above mentioned site a good WACC range could be 7-10% with current interest rates. Keep in mind that publicly available data is based on publicly listed companies and that SME's and unlisted companies tend to have higher costs of both equity and debt and thus higher WACC.

Estimating the cash flows beyond the explicit period

After the explicit forecast has been made for the period of 5-10 years, the company's terminal value must be estimated. The terminal value is based on the fact that the company most often is assumed to generate cash flows in perpetuity and a value for this time period has to be estimated. The methods for doing this are numerous but in our model we have chosen two methods; namely the perpetual growth method and the exit multiple method.

The terminal growth is formulated as follows:

$$\text{Terminal value (TV)} = \frac{\text{FCF of last estimated year} * (1 + \text{growth rate})}{\text{WACC} - \text{growth rate}}$$

Calculation model, terminal growth

Of these parameters all but the growth rate have been covered and this is a very critical input when calculating the company's enterprise value. Since it is a terminal growth rate, the rate should not exceed the long-term economic growth as that would imply that the company would grow larger than the entire economy in perpetuity. Thus, the rate should as a rule of thumb lie in the range of 0-3 % as a larger growth rate would clearly outpace the economy in the long-term. Having estimated the growth rate it is straightforward plug and play, but note

that the terminal value still must be discounted to the present.

The other method is the exit multiple method. This model is based on the assumption that the company is sold after the explicit forecast period at a given multiple. In our quick valuation toolkit you can make an assumption that the company is sold after the explicit period at a multiple of your choice. The method is thus basically a multiple valuation approach but with an added explicit forecast period. As is the case with the terminal growth, the estimated terminal value must be discounted to the present.

Having estimated the terminal value and discounted it to the present, it is just a matter of adding everything up. Thus, the present values for the explicit forecast period are added to the present value of the terminal growth estimate.

Sensitivity analysis

As you have probably noticed, the required input for the forecast model is far from easy to obtain and there are no correct answers. Therefore, it is vital that you do a sensitivity analysis where the valuation is done by using different estimates of the key parameters. In this way you will not get one single correct answer but rather several ranges of the company values and by calculating an average or median of these you will get a more robust figure. You can even consider estimating different scenarios and giving probabilities to them, and calculating the weighted average of the results.