creditreports.dk

Company Valuation Report:

Demo Company

VAT No: 87654321

August 28, 2020

Link to Online View

Demo Company

87654321

August 28, 2020

creditreports.dk

Summary

Summary

The estimated value of the company is in the range of 9019 - 13528 mDKK. The valuation is based on the following methods:

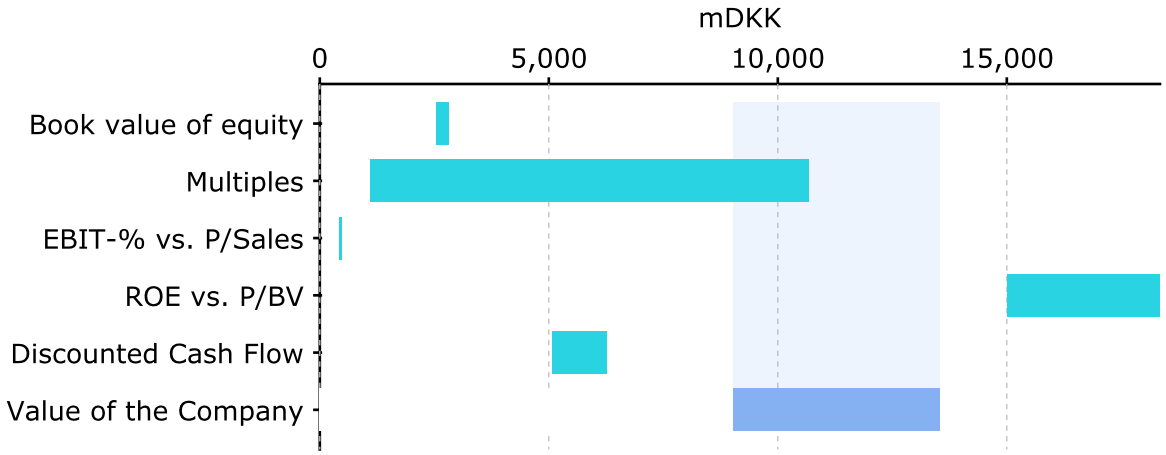
- Multiples
- ROE vs. P/BV
- Discounted Cash Flow

** Our empirical evidence shows that with a confidence level of 42%, the actual valuations (on stock market or within published deals data) fall in the range of ±20% and thus we have received the estimated range of 9019 - 13528 mDKK.*

*** Some valuation methods presented in this report are omitted from the final company valuation, as they are not considered relevant for this company. Read more about each valuation method on the following pages. The whole 'valuation path', i.e. which valuation methods are used in each case, is presented in appendix x.*

Valuation Methods

In the table below, company values from different methods are presented with relative weights (the reasoning behind weights is presented in appendix x.) of how individual



Picture 1: Results for separate valuation methods.

Book value of equity	Weight*	0.0%	2675.2	mDKK
Multiples	Relative Weight	30.0%	7494.4	mDKK
P/E	*Relative Weight*	*67%*	*10687.1*	*mDKK*
EV/EBITDA	*Relative Weight*	*33%*	*1109.1*	*mDKK*
EBIT-% vs. P/Sales	Relative Weight	0.0%	451.5	mDKK
ROE vs. P/BV	Relative Weight	35.0%	16676.3	mDKK
Discounted Cash Flow	Relative Weight	35.0%	5595.5	mDKK
Value of the Company			**11273.3**	**mDKK**

** Weight meaning in this case the weight that the individual multiple value contributes to the final multiple valuation.*

creditreports.dk

Table of Contents

Summary

Demo Company 11273.3 mDKK

The estimated value of the company was calculated using weighted average of the following valuation methods: Discounted Cash Flow (DCF) calculation, industry multiple valuation, and Return on Equity vs. P/BV method. The valuation is based on both past and estimated future performance of the company. Methods relying solely on past financial performance are book value of equity, multiple valuation, industry EBIT-% vs. P/S and ROE vs. P/BV whereas DCF-method uses automatically generated future estimates. The weight of each valuation result is depicted in the table above. Please note that the valuation estimates are based on various assumptions that may not necessarily hold for this particular company. The methods and assumptions are elaborated further below.

Book value of equity 2675.2 mDKK

Book value of equity is the accounting value of company's share capital, retained earnings, reserves and other similar items. It represents the value that is left to the shareholders when the liabilities are deducted from the assets; thus it can be seen as the liquidation value of the company. Another way to interpret the book value of equity is to see it as the portion of the company's assets that are financed (meaning investments and retained earnings) by the owners of the company.

Multiples 7494.4 mDKK

Multiple valuation is a method in which some financial key figure of a company is multiplied by a constant that is derived from average valuation of the company's industry. For example, by multiplying a company's earnings by 15 we get the value of a company, the number 15 being the average multiplier representing how companies are valued by the markets compared to their earnings.

Multiple valuation is probably the single most used valuation method, especially in valuation of publicly traded companies, mainly because it is easy to utilize and it gives reasonably accurate results. Moreover, multiple valuation is not as sensitive to assumptions about the future of the company than DCF valuation. The flip side of using this method is the generality: multiple valuation does not consider any company specific factors but instead tries to value all companies with industry averages. Basically this means that companies with above the average future prospects get lower values than they should. And on the other hand, companies with not that bright a future get valuations that are too high.

Summary

EBIT-% vs. P/Sales

null

ROE vs. P/BV

16676.3 mDKK

Fundamentally ROE vs. P/BV is a multiple valuation method, but it can also be seen as a hybrid where DCF valuation and P/E multiple are combined together. The multiplier for ROE vs. P/BV method is estimated empirically from the valuation of publicly traded companies with ordinary least square (OLS) estimator. The concept behind this method relies on the idea that ultimately the price that should be paid on the company's equity depends on how much return the equity is generating to the owners. Thus, higher ROE means higher multiplier for the book value of equity, which leads to higher valuation.

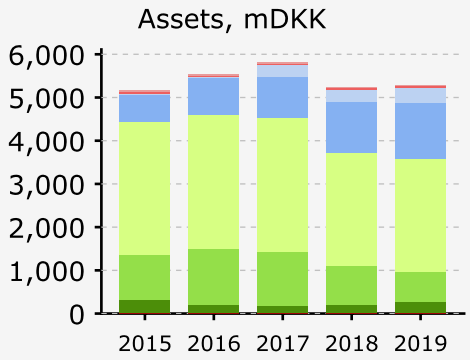
Discounted Cash Flow

5595.5 mDKK

Discounted cash flow (DCF) value is the net present value of company's expected future cash flows. In other words the company's net cash flows are estimated in going concern basis, and these cash flows are discounted to the value of present day.

Book value of equity

Assets



Picture 2: Division of assets and historical development.

Intangible assets total
Tangible assets total
Current assets total
Long term receivables total
Short term receivables total
Investments total
Cash equivalents total
Cash and bank deposits

Balance sheet represents company's financial position at the end of the fiscal year. Assets side of the balance sheet presents the capital that is engaged to company's activities. Assets are typically divided into four groups, intangible and tangible assets, receivables, and cash and cash equivalents. Intangible assets are assets that are not physical in nature. Some examples about intangible assets are intellectual property, such as patents, copyrights, and trademarks. Other fairly common form of intangible assets is goodwill, which is a result of an acquisition where premium is paid compared to the book value of the acquired company.

Tangible assets on the other hand are property that has a physical form, for example inventories, machinery, equipment, and buildings. Tangible assets can be further divided to two groups depending on the asset's profit turning time-frame. Assets that are expected to be generate turnover only within the next 12 months are called current and assets that are generating profits longer than a year are non-
Receivables denotes something that company has already delivered by has not yet received compensation. Receivables can be also divided to current and non-current groups. The last main group is cash and cash equivalents, which includes investments, bank deposits, and other similar items.

The importance of assets in valuation

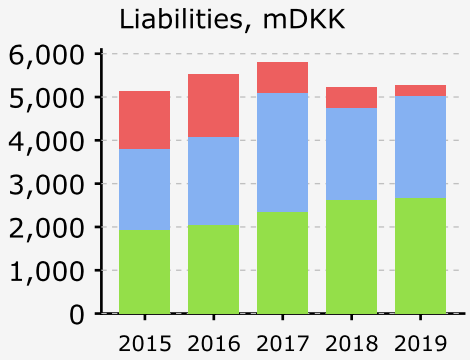
In a company valuation it is crucial to know what kind of assets the companys has, because that is basicly what the one is buying. In the following table assets are presented in order based on the expected liquidity. This means that the first row of the table denotes an item that is the hardest one to liquiditate. This kind of ordering helps to outline an economic substance of company's assets. In the graph left, the historical developement of the assets are also presented.

Assets (mDKK)

	2015	2016	2017	2018	2019
Intangible assets total	27.0	26.0	24.8	22.1	20.1
Tangible assets total	28.1	34.7	37.2	35.6	34.8
Current assets total	0.0	0.0	0.0	0.0	0.0
Long term receivables total	28.0	4.2	288.2	295.0	346.9
Short term receivables total	626.6	873.3	936.0	1172.1	1286.5
Investments total	3090.4	3104.5	3104.1	2624.5	2633.6
Cash equivalents total	1036.6	1281.3	1238.3	894.8	687.5
Cash and bank deposits	316.0	211.7	191.1	203.4	269.5
Balance sheet total	**5152.8**	**5535.8**	**5819.8**	**5247.4**	**5278.9**

Book value of equity

Liabilities



Picture 3: Division of liabilities and equity capital and historical development.

Interest-bearing liabilities
Non-Interest Bearing Liabilities Total
Shareholders' equity total

Liabilities and equity side of the balance sheet presents how assets of the company are financed. Equity is the capital that owners are invested to the company. In this context investment means, not only initial investment as a form of share capital, but also capital that is not distributed to the owners as dividend's but left to the company as retained earnings. Liabilities can be classified in two different ways. In a financial statement, liabilities are divided to current and non-current, where current means holding period under one year and non-current period of over year. Even though this is the most common classification method, probably more relevant way to classify liabilities, in company valuation, is to divide them based on whether a liability is interest bearing or not.

The importance of liabilities in valuation

In the following table the company''s liabilities are divided into interest bearing and non-interest bearing ones. Knowing wich part of the liabilities are interest bearing wich part is not is very important in company valuation. The amount of interest bearing liabilities is used when enterprise value of the company is calculated, meaning that higher the amout of interst bearing liabilities, lower the enterprise value. On the left is graph where historical development of liabilities and equity is presented.

Liabilities (mDKK)

	2015	2016	2017	2018	2019
Interest-bearing liabilities	1333.5	1451.2	708.3	474.8	253.2
Non-Interest Bearing Liabilities Total	1876.0	2011.2	2736.8	2139.8	2337.6
Shareholders' equity total	1931.2	2062.6	2361.7	2619.5	2675.2
Balance sheet total (liabilities)	**5152.8**	**5535.8**	**5819.8**	**5247.4**	**5278.9**

Discounted Cash Flow

Discounted cash flow calculation is a financial analysis tool which is used to value projects, assets, or companies, by using concept of time value of money. All of the future cash flows, both in and out of the company, are estimated and discounted to the present value. The sum of these values is called the net present value, and by making some adjustments (presented in the DCF calculation table) to this figure we get the price of the company.

One of the most important things in DCF calculation is the discount factor, and usually figure used is the weighted average cost of capital (WACC) of the company. Estimating the WACC correctly is crucial, because even slightest changes in this value might change the valuation dramatically. Other important factor in this method is operational profit margin, and especially in the terminal period. To illustrate the effect of changes in these figures a sensitivity analysis is presented in this page. From this table, the reader can see how different assumptions change the calculated DCF value.

The garbage in, garbage out principle applies to the DCF just like in any other analysis which relies on estimation of the future. DCF is accurate valuation tool only when the assumptions about the future are relevant. In this report the estimation of the figures are made automatically and this requires extra caution from the reader when interperting these figures.

In the following table, the most relevant financial statement items to the DCF valuation are presented. First three lines represent income statement items, next four are from balance sheet and the last one is calculated by using both income statement and balance sheet figures.

BASE FIGURES (mDKK)

	2018	2019	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e
Net sales	593.0	681.0	715.2	787.1	846.1	891.5	926.8	956.7	986.0	1015.9	1046.6	1078.2
EBITDA	93.8	136.6	152.1	217.4	279.2	337.3	393.2	448.7	505.2	562.7	621.1	680.4
EBIT	93.8	136.6	152.1	217.4	279.2	337.3	393.2	448.7	505.2	562.7	621.1	680.4
Tangible Assets	35.6	34.8	38.8	42.7	45.9	48.4	50.3	51.9	53.5	55.1	56.7	58.4
Shareholders' equity total	2619.5	2675.2	2143.0	2226.0	2317.5	2415.9	2521.8	2636.3	2760.6	2895.0	3039.5	3194.7
Interest-bearing liabilities	474.8	253.2	1418.3	1306.9	1192.2	1076.0	956.2	830.0	694.1	548.1	391.5	253.2
Balance sheet total (assets)	5247.4	5278.9	6073.8	6295.5	6477.5	6617.2	6725.7	6817.6	6907.4	6999.0	7093.2	7219.5
Gross capex	-477.2	58.3	5.0	6.0	4.9	3.8	2.9	2.5	2.4	2.5	2.6	2.6

Key ratios that are used in the estimation of the future are presented below. Basic assumptions are: 1. Eventually revenue growth (net sales growth) stabilizes to the long term GDP grown rate, which is expected to be 3%. 2. Company's operational profitability (EBIT-%) is expected stay at relatively same level as in the near history and it is calculated as weighted average of the figures from last four years.

KEY RATIOS

	2018	2019	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e
Net sales growth	-4.4%	15.3%	5.0%	10.0%	7.5%	5.3%	3.9%	3.2%	3.0%	3.0%	3.0%	3.0%
EBITDA - %	18.3%	22.1%	21.2%	27.5%	32.9%	37.7%	42.3%	46.7%	51.1%	55.2%	59.2%	63.0%
EBIT - %	15.8%	20.0%	21.2%	27.5%	32.9%	37.7%	42.3%	46.7%	51.1%	55.2%	59.2%	63.0%
Assets turnover	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
ROI-%	33.2%	27.0%	5.6%	7.0%	8.9%	10.6%	12.3%	14.0%	15.7%	17.5%	19.3%	21.0%
ROE-%	41.9%	31.4%	6.0%	9.1%	11.0%	12.6%	14.0%	15.1%	16.2%	17.1%	17.9%	18.6%
Equity ratio (%)	49.9%	50.7%	35.3%	35.4%	35.8%	36.5%	37.5%	38.7%	40.0%	41.4%	42.9%	44.3%

Discounted Cash Flow

Calculations of the discounted cash flow method are presented below. The basic idea of DCF is to calculate cash inflows and outflows, discounted them to the present day and sum every year together. Basically the calculations starts from operating profit, EBIT. This figure presents companys profit before taxes and interest payments. To convert this figure to actual operating cash flow some adjustments needs to be made. At first depreciations are added back to the EBIT. This is due to the fact that depreciations are only accounting item and it is not actual cash flow, meaning that company is not paying

CH. in working cap. denotes the changes in company's working capital. If the working capital is increasing it means that company needs more assets to run its operations and these assets needs to be funded in some way, which requires cash outflow. After the actual operating cash flow is caluculated, the amount that non-interest bearing liabilities increases are added back and gross capital expenses (capex) are deducted. The gross capex denotes the amount that company has invested to assets in this period,

At the end of this page is also presented basis for WACC calculations. More detailed formula for this is presented in methodoly part of this report. Sensitivy analysis illustrates how changes in terminal period wacc and EBIT marging are effecting to the DCF value of the company. Sensitivity analysis is probably the most important table of this chapter because it is the basis for DCF valuation range of this report.

Cash Flow

	2018	2019	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e
EBIT	93.8	136.6	152.1	217.4	279.2	337.3	393.2	448.7	505.2	562.7	621.1	680.4
+ Total depreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Paid taxes	-33.2	-43.7	-36.3	-49.8	-62.7	-74.8	-86.3	-97.7	-109.2	-121.0	-132.9	-145.1
- Tax, fin. expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Tax, fin. income	30.1	36.4	5.9	6.3	6.9	7.3	7.7	7.9	8.2	8.4	8.7	9.0
- Ch. in working cap.	-833.1	83.4	141.7	207.3	170.1	130.7	101.4	86.0	83.9	85.6	88.1	90.8
Operating cash flow	-742.4	212.7	263.4	381.2	393.5	400.5	416.0	444.9	488.1	535.8	585.0	635.1
+ Inc. in nib. l-t liab.	0.5	-0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Gross capex	477.2	-58.3	-5.0	-6.0	-4.9	-3.8	-2.9	-2.5	-2.4	-2.5	-2.6	-2.6
Free cash flow	-264.6	153.5	258.4	375.2	388.6	396.7	413.0	442.4	485.6	533.3	582.5	632.5
Discounted FCFF			248.2	321.1	296.1	269.2	249.6	238.1	232.8	227.6	221.4	214.1
Cum. disc. FCFF			**4891.8**	**4643.5**	**4322.5**	**4026.4**	**3757.2**	**3507.6**	**3269.5**	**3036.7**	**2809.1**	**2587.7**
- Int-bear. debt	0.0	0.0	0.0	0.0								
+ Cash at bank	0.0	0.0	956.9	1726.3								
+ Mkt. value of assoc. companies	0.0	0.0	0.0	0.0								
- Market Value minorities	0.0	0.0	0.0	0.0								
Value of equity			**5595.5**	**5522.2**								

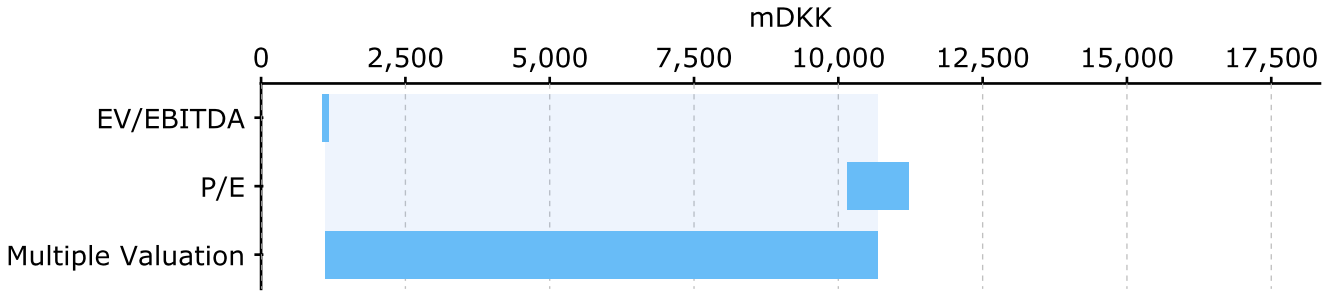
WACC

Tax rate (WACC) %	20.0%
Target D/(D+E)	30.0%
Cost of debt (%)	6.0%
Equity Beta	2.5
Equity market risk premium (%-points)	6.0%
Risk-free interest rate	0.5%
Cost of equity (%)	15.5%
Weighted average cost of capital	**12.3%**

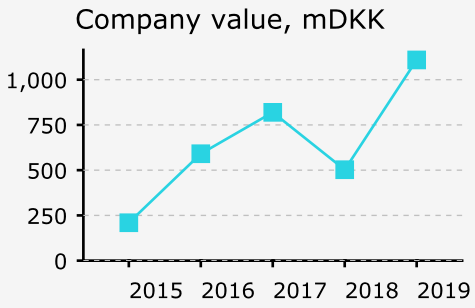
Sensitivity analysis

		Terminal WACC				
		10.3%	11.3%	12.3%	13.3%	14.3%
Terminal EBIT-%	19.2%	6920.4	6140.2	5530.6	5041.6	4641.1
	20.2%	6969.3	6179.8	5563.1	5068.6	4663.7
	21.2%	7018.2	6219.3	**5595.5**	5095.6	4686.4
	22.2%	7067.1	6258.8	5627.9	5122.5	4709.0
	23.2%	7116.0	6298.3	5660.4	5149.5	4731.6

Multiple Valuation



Picture 4: Results from Multiple Valuation



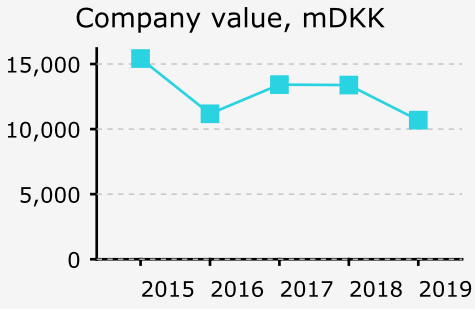
Picture 5: EV/EBITDA-method, historical value development

	Multiplier	EBITDA	Value	
EV/EBITDA	9.0	136.6	1362.2	
- Int-bear. debt			*253.2*	
EV/EBITDA value converted to price			**1109.1**	**mDKK**

In 2019, Demo Company's earnings before interest, taxes, depreciation and amortization (EBITDA) was 136.6 million euros. In the same year the average selling price of similar companies was 9.0 times EBITDA.

EV/EBITDA ratio indicates the number of years that it takes for a company to earn operating profits equal to the enterprise value (debtless value) of the company. EV/EBITDA is widely used multiple in acquisitions because it counts in the amount of debt held by the company, which is relevant because the liabilities of the target company are transferred to the acquirer. One problem with using EBITDA in valuation is that even though it might be somewhat good proxy for operating cash flow, it does not equal free cash flow to firm. By leaving depreciation out of the valuation, capital-intensive

To be able to compare EV/EBITDA valuation with other valuation methods in this report, it needs to be presented in terms of price.



Picture 6: P/E-method, historical value development

	Multiplier	Net	Value	
P/E	12.8	832.3	**10687.**	**mDKK**

In 2019, Demo Company's net earnings was 832.3 million euros. In the same year the average selling price of similar companies was 12.8 times net earnings.

P/E ratio indicates how many years it takes for a company to generate net earnings equal to the amount of the price (debt not included, i.e. market price of publicly traded companies) of the company. In low-growth companies and industries P / E ratio is usually lower than average value. Th greater the growth opportunities, higher the P/E ratio beucase investors are ready to pay for the future earnings.

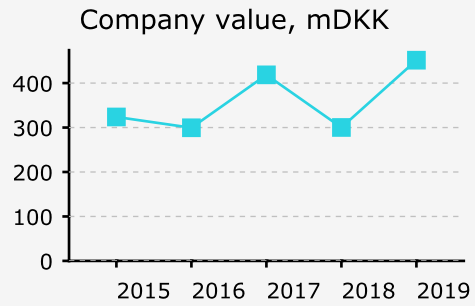
Demo Company

87654321

August 28, 2020

EBIT-% vs. P/Sales

Operating profit margin and P/Sales-multiple



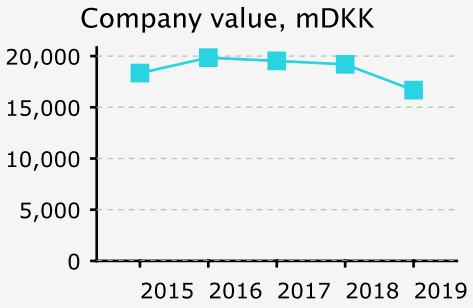
Picture 7: EBIT vs. P/Sales, historical development

	2015	2016	2017	2018	2019
Value (mDKK)	324	299	419	300	452
Industry Median EBIT-%	5.5%	4.4%	6.2%	4.6%	6.1%
Net sales (mDKK)	543	615	621	594	685

null

ROE vs. P/BV

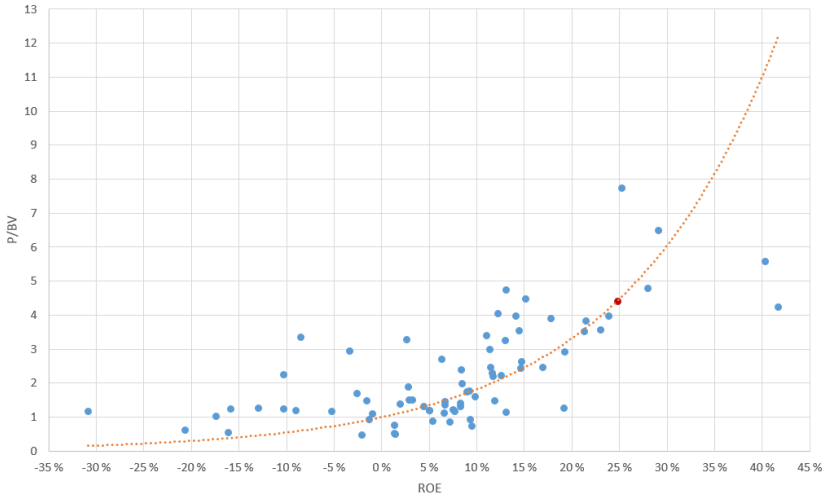
Return on equity and price-to-book ratio



Picture 8: ROE vs. P/BV, historical development

	2015	2016	2017	2018	2019
Value (mDKK)	18344	19846	19532	19193	16676
Book value of equity (mDKK)	1931	2063	2362	2619	2675
ROE-% Flattened *	54.3%	55.0%	47.2%	41.9%	35.6%

** For more information about calculating return on equity and the ROE vs. P/BV method, see appendix.*



Picture 9: Graphic illustration of the ROE vs. P/BV model

ROE (Return on Equity) vs. P/BV (price to book value of equity) is a valuation method where the relationship between ROE and book value of equity is estimated empirically, and then applied to valuation as a multiple. Theoretically, it can be argue that the price that should be paid of the company's equity depends on the quantity of the equity and how much the equity is generating returns. This method includes both of these aspects.

Why does it matter?

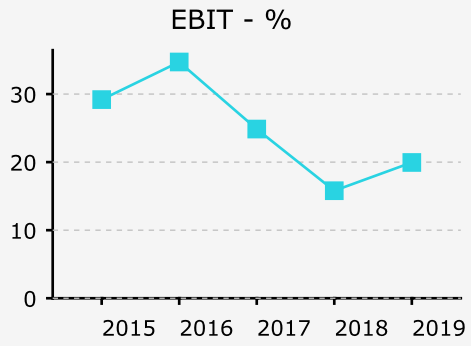
This method takes into account both company specific multiples (P/BV, ROE) and the general market-based valuation law between company book value and ROE. It is quite clear that the better return a company generates on its equity, the higher price would the investor be willing to pay for it.

An example

A company has capital (equipment, machinery) worth of EUR 1000. It has financed it partially by debt, worth EUR 500. Therefore company's book value is EUR 500. Company's annual net profit is EUR 100. Its return on equity (ROE) is therefore 100/500 = 20 %. Let's say it is empirically determined that companies with ROE around 20 % tend to generally have price-to-book (P/BV) valuation of around 2. Therefore we can estimate the company valuation to be around EUR 500 * 2 = EUR 1000.

Value Drivers

EBIT - %



Picture 10: EBIT-%, historical development

	2015	2016	2017	2018	2019
Demo Company	29.2%	34.7%	24.9%	15.8%	20.0%
Industry median	null	null	null	null	null

Earnings before interest and taxes (EBIT) as a percentage of revenue is an indicator of a company's operational profitability, calculated as revenue minus expenses, excluding tax and interest, divided by revenue. Higher EBIT margin means the greater share of revenues, after deducting costs, are left to cover interest payments, taxes, and eventually distributed to shareholders.

Why does it matter?

EBIT margin (EBIT percentage) can be used as a measurement when comparing operational profitability of companies within the same industry. EBIT margin is particularly useful in intra industry comparison because it eliminates the differences in capital structures and optimization of taxes, and thus it makes companies much more comparable with each other. With operational profits (EBIT), companies must cover their taxes, interest payments, and profit sharing to the

Differences between industries

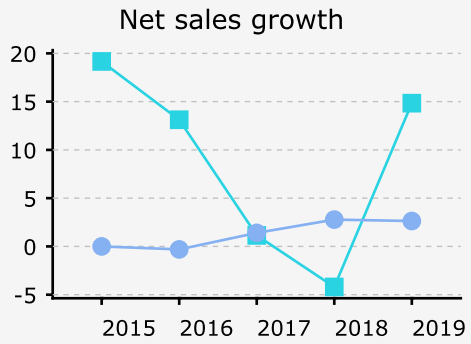
EBIT margins may vary widely across industries. For some industries an EBIT margin of five percent is seen as good, whereas in other industries that could be extremely bad. An example of an industry which has low ebit margins by nature is whole sales. In this industry a competition is usually fierce and profits are made through volumes not by margins.

An example

Company A and B both have annual revenue of 100 €. A's operational expenses (including possible capital amortization and depreciation) are 80 € and B's operational expenses are 90 €. A's EBIT is then 100€-80€ = 20€ and B's EBIT is 100 € - 90 € = 10 €. Hence their EBIT margins are 20 % and 10 % respectively. If everything else is equal between these two companies, A is more profitable than B. But if A is an energy company and B is a grocery store, the comparison isn't very reasonable.

Value Drivers

Net sales



Picture 11: Net sales growth, historical development

	2015	2016	2017	2018	2019
Demo Company	19.7%	13.2%	0.9%	-4.4%	15.3%
Industry median	-0.0%	-0.3%	1.4%	2.8%	2.6%

Net sales growth is a measurement of relative change in net sales or revenues, compared to the previous fiscal year. Naturally positive net sales growth figure indicates that a company is growing and negative means that company is

Why does it matter?

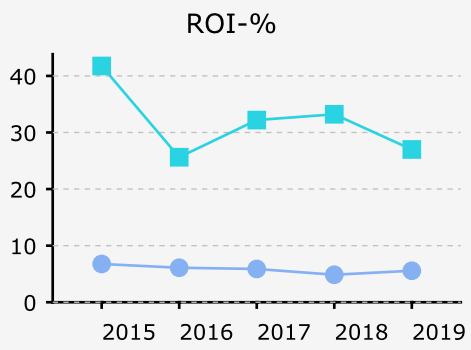
When interpreting net sales growth it is usually good to compare it to the average growth of the industry. As a simplification it can be said that above the industry average growth rate indicates that the company is winning market share, and on the other hand below the average figure means declining market share. However, on the long run it can not be expected that companies can grow indefinitely, but it is more reasonable to assume that the growth rate would start to approach the average GDP growth rate when the company matures. Usually high growth rates are obtained by young companies and growth rates of mature companies are much

Differences between industries

There might be significant differences in net sales growth within an industry but also the growth rate might vary considerably across industries. For example, in some industries the most important growth factor is price changes. In industries that are highly dependable on the world market price of some material usually gain high growth rates when the market price is high. One example of this kind of industry is oil related activities. Other example could be information tehchnology hardware manufacturers which face continual downward presure on prices, in these kind of industries the growth is usually slow.

Value Drivers

ROI-%



Picture 12: ROI-%, historical development

	2015	2016	2017	2018	2019
Demo Company	41.8%	25.6%	32.2%	33.2%	27.0%
Industry median	6.8%	6.1%	5.9%	4.9%	5.6%

Return on Investment (ROI) measures company's ability to generate profits from it's invested capital. In this occasion the ROI is calculated as earnings before financial expenses and taxes divided by invested capital, but depending on the source it can be also defined differently.

Why does it matter?

The profitability of an investment should always be measured as a terms of rate of return not as an absolute earnings. From this reason ROI is widely used measurement when comparing different investments with each other. This is also useful in company valuation because the level of ROI can be easilly compared between companies and industries.

Differences between industries

There might be difference in return on investment between industries, however an advantage in ROI is that it measures profitability and thus it can be used ot compared companies from totally different industries.

An example

A company has machinery and other assets worth of total EUR 1000. Its annual net profit is EUR 100. Hence company's ROI is 10 %. It doesn't matter how the company has financed its investments.

Demo Company

87654321

August 28, 2020

Industry Comparison

Demo Company

64.20 Activities of holding companies

Comparison group

64.20 Activities of holding companies

N = size of the comparison group in each year

mm/yyyy = fiscal year end (company), yyyy = fiscal year (comparison group)

Company	
Upper quartile	The number above which lies the top 25% of the data (largest values)
Median	The midmost observation (or average of two observations) in the data set, i.e. 50% of
Lower quartile	The number below which lies the bottom 25% of the data (smallest values)

Demo Company

87654321

August 28, 2020

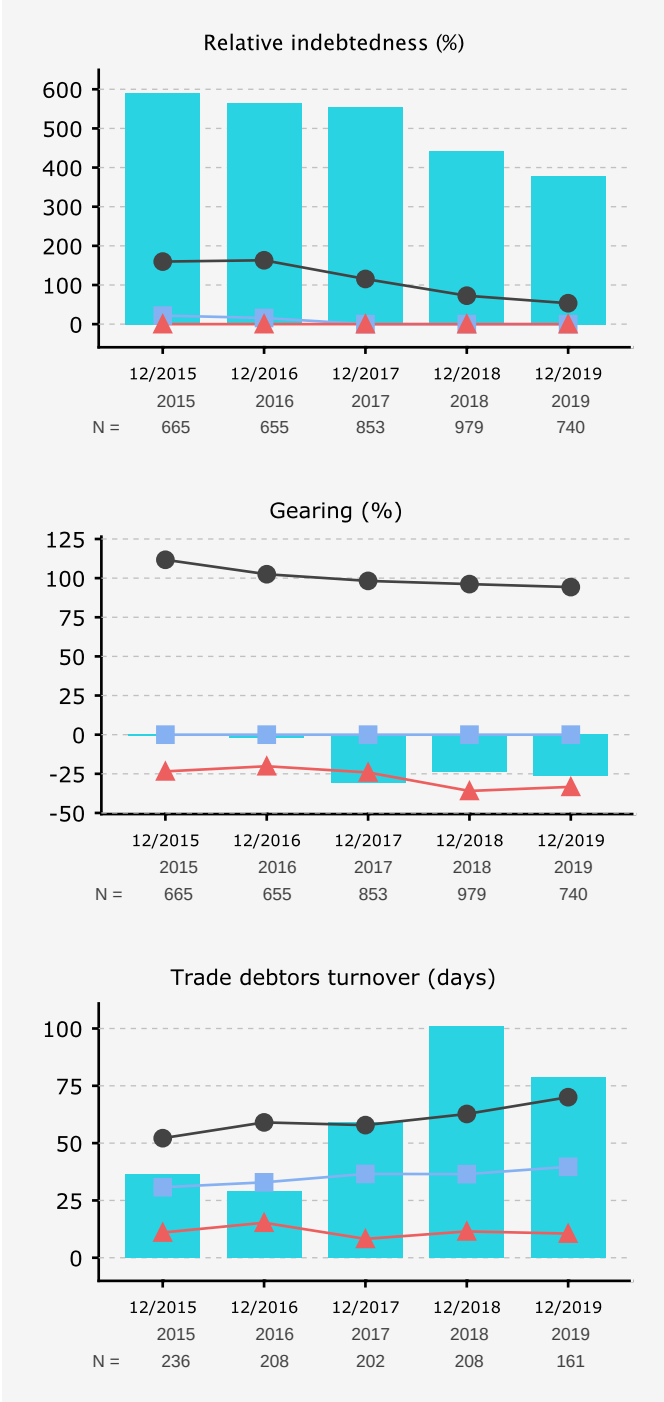
Industry Comparison

Demo Company

64.20 Activities of holding companies

Comparison group

64.20 Activities of holding companies



N = size of the comparison group in each year

mm/yyyy = fiscal year end (company), yyyy = fiscal year (comparison group)

Company	
Upper quartile	The number above which lies the top 25% of the data (largest values)
Median	The midmost observation (or average of two observations) in the data set, i.e. 50% of
Lower quartile	The number below which lies the bottom 25% of the data (smallest values)

Demo Company

87654321

August 28, 2020

Company Overview

Key Ratios

Profitability

	2015	2016	2017	2018	2019	2020e	2021e	2022e
EBITDA - %	31.6%	36.9%	27.4%	18.3%	22.1%	21.2%	27.5%	32.9%
EBIT - %	29.2%	34.7%	24.9%	15.8%	20.0%	21.2%	27.5%	32.9%
Net Earnings %	221.0%	141.5%	168.3%	175.5%	121.6%	20.2%	25.2%	29.5%
Profit before dep. and eo. items (%)	25.4%	36.8%	24.3%	178.0%	123.8%	20.2%	18.9%	22.1%
Pre tax profit less eo. %	219.1%	141.6%	171.3%	173.1%	119.3%	25.3%	31.5%	36.9%
ROA-%	25.3%	16.3%	18.7%	18.6%	15.5%	3.2%	4.0%	4.9%
ROI-%	41.8%	25.6%	32.2%	33.2%	27.0%	5.6%	7.0%	8.9%
ROE-%	72.0%	43.6%	47.2%	41.9%	31.4%	6.0%	9.1%	11.0%

Solvency

	2015	2016	2017	2018	2019	2020e	2021e	2022e
Equity ratio (%)	37.5%	37.3%	40.6%	49.9%	50.7%	35.3%	35.4%	35.8%
Relative indebtedness (%)	590.6%	562.7%	554.7%	440.3%	378.5%	545.2%	513.2%	488.2%
Relative net indebtedness (%)	341.7%	320.1%	324.6%	255.3%	238.7%	305.0%	272.9%	247.9%
Gearing (%)	-1.0%	-2.0%	-30.5%	-23.8%	-26.3%	-14.4%	-26.6%	-36.6%
Net interest (mDKK)	0.0	0.0	0.0	934.5	679.9	29.4	31.6	34.4
Financing costs (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Liquidity

	2015	2016	2017	2018	2019	2020e	2021e	2022e
Quick ratio	1.1	1.2	0.9	1.1	1.0	1.2	1.2	1.2
Current ratio	1.1	1.2	0.9	1.1	1.0	1.2	1.2	1.2
Cash and cash equivalents (mDKK)	1352.6	1493.1	1429.4	1098.1	956.9	1004.6	1105.1	1187.6

Capital use efficiency

	2015	2016	2017	2018	2019	2020e	2021e	2022e
Trade debtors turnover (days)	36.2	29.2	59.0	100.8	78.5	78.5	78.5	78.5
Trade creditors turnover (days)	7187.1	8083.6	11187.	31986.	10451.	10321.	11223.	12119.
Current assets / Net Sales (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net working capital (mDKK)	-933.3	-926.1	-1609.	-764.3	-781.6	-188.2	-294.9	-382.6
Net working capital (%)	-171.7	-150.5	-259.2	-128.7	-114.2	-26.2%	-37.3%	-45.0%

Financial statements

Income statement (mDKK)

	2015	2016	2017	2018	2019	2020e	2021e	2022e
Net sales	543.4	615.2	621.0	593.8	684.5	718.6	790.5	790.5
Other operating income	8.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0
Purchases during the financial year	-2.9	-3.1	-2.3	-1.2	-3.2	-3.4	-3.4	-3.4
Wages and salaries	-78.9	-96.4	-111.2	-129.4	-139.6	-148.4	-150.2	-149.4
Other operating expenses	-298.0	-303.2	-337.5	-354.5	-390.1	-414.7	-419.5	-417.5
Depreciation	-13.1	-13.7	-15.6	-14.9	-15.0	0.0	0.0	0.0
EBIT	**158.6**	**213.6**	**154.4**	**93.8**	**136.6**	**152.1**	**217.4**	**279.2**
Interest income	0.0	0.0	0.0	934.5	679.9	29.4	31.6	34.4
Other financial income	1032.1	657.8	909.4	0.0	0.0	0.0	0.0	0.0
Pre tax profit less extra ordinaries	**1190.7**	**871.4**	**1063.8**	**1028.3**	**816.5**	**181.6**	**249.1**	**313.6**
Extraordinary income	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pre-tax profit (PTP)	**1234.7**	**871.4**	**1063.8**	**1028.3**	**816.5**	**181.6**	**249.1**	**313.6**
Change in cumulative accelerated depreciation	-1.7	50.2	43.0	45.5	59.2	0.0	0.0	0.0
Change in tax debt	0.0	0.0	0.0	1.8	0.3	0.0	0.0	0.0
Income taxes	-32.1	-51.2	-61.9	-33.2	-43.7	-36.3	-49.8	-62.7
Net earnings	**1201.0**	**870.4**	**1044.9**	**1042.3**	**832.3**	**145.3**	**199.3**	**250.9**

Financial statements

Balance sheet - Assets (mDKK)

	2015	2016	2017	2018	2019	2020e	2021e	2022e
Other capitalised longterm expenditures	27.0	26.0	24.8	22.1	20.1	21.1	23.3	25.0
Intangible assets total	**27.0**	**26.0**	**24.8**	**22.1**	**20.1**	**21.1**	**23.3**	**25.0**
Other tangible assets	28.1	34.7	37.2	35.6	34.8	38.8	42.7	45.9
Tangible assets total	**28.1**	**34.7**	**37.2**	**35.6**	**34.8**	**38.8**	**42.7**	**45.9**
Holdings in group member companies	3088.0	3102.0	3101.7	2622.1	2631.2	2631.2	2631.2	2631.2
Other non-current investments	2.4	2.5	2.5	2.5	2.5	2.6	2.8	3.1
Investments total	3090.4	3104.5	3104.1	2624.5	2633.6	2633.8	2634.0	2634.2
Current assets total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Non-current loans receivable	28.0	4.2	288.2	295.0	346.9	346.9	346.9	346.9
Long term receivables total	**28.0**	**4.2**	**288.2**	**295.0**	**346.9**	**346.9**	**346.9**	**346.9**
Current trade debtors	54.0	49.2	100.4	164.1	147.3	154.6	170.1	182.8
Current loans receivable	376.6	615.0	646.0	790.5	879.3	879.3	879.3	879.3
Current other receivables	13.2	9.1	23.7	25.0	21.5	22.6	24.8	26.7
Prepayments and accrued income	182.9	200.1	166.0	192.5	238.4	250.3	275.3	295.9
Short term receivables total	**626.6**	**873.3**	**936.0**	**1172.1**	**1286.5**	**1306.8**	**1349.6**	**1384.7**
Other current investments	1036.6	1281.3	1238.3	894.8	687.5	721.7	793.9	853.2
Cash equivalents total	**1036.6**	**1281.3**	**1238.3**	**894.8**	**687.5**	**721.7**	**793.9**	**853.2**
Cash and bank deposits	316.0	211.7	191.1	203.4	269.5	1004.6	1105.1	1187.6
Cash (generated)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Balance sheet total (assets)	**5152.8**	**5535.8**	**5819.8**	**5247.4**	**5278.9**	**6073.8**	**6295.5**	**6477.5**

Financial statements

Balance sheet - Liabilities (mDKK)

	2015	2016	2017	2018	2019	2020e	2021e	2022e
Share capital	65.7	65.8	65.9	66.0	66.2	66.2	66.2	66.2
Share premium account	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3
Other reserves	0.0	0.0	0.0	237.7	298.1	298.1	298.1	298.1
Retained earnings	423.6	867.0	942.0	1147.4	1363.7	1533.1	1562.1	1602.0
Profit of the financial year	1201.0	870.4	1054.6	1068.0	846.9	145.3	199.3	250.9
Other un-restricted equity	140.7	159.1	198.9	0.0	0.0	0.0	0.0	0.0
Shareholders' equity total	**1931.2**	**2062.6**	**2361.7**	**2619.5**	**2675.2**	**2143.0**	**2226.0**	**2317.5**
Cumulative accelerated depreciation	7.3	7.8	9.6	10.1	9.2	9.2	9.2	9.2
Provisions	4.7	3.0	3.4	3.3	3.7	3.7	3.7	3.7
Appropriations total	**7.3**	**7.8**	**9.6**	**10.1**	**9.2**	**9.2**	**9.2**	**9.2**
Other non-current creditors	1333.5	1451.2	708.3	474.8	253.2	253.2	253.2	253.2
Non-current liabilities total	**1333.5**	**1451.2**	**708.3**	**474.8**	**253.2**	**1418.3**	**1306.9**	**1192.2**
Current trade creditors	56.4	68.0	71.4	108.1	91.4	95.9	105.5	113.4
Other current creditors	1704.4	1809.2	2543.2	1886.1	2135.2	2284.9	2513.4	2701.0
Accruals and deferred income	115.1	134.0	122.3	145.5	111.0	118.8	130.7	140.4
Current liabilities total	**1876.0**	**2011.2**	**2736.8**	**2139.8**	**2337.6**	**2499.6**	**2749.6**	**2954.9**
Balance sheet total (liabilities)	**5152.8**	**5535.8**	**5819.8**	**5247.4**	**5278.9**	**6073.8**	**6295.5**	**6477.5**

Valuation Path Appendix

Ultimately the valuation methods used depends on the company's current situation. Some of the methods suit poorly or not at all in specific situations, whereas other methods give very reliable valuations. Some factors affecting the choice of valuation methods are presented next.

The methods used in valuing a company must be selected case by case. Roughly these cases can be divided into three classes:

Positive net profit

This is the normal case where the latest net profit of the company is positive, i.e. the company is generating profit. In this case we use methods which statistically produce the most accurate estimate of the value of the company.

When a company generates profits, there are no restrictions on which valuation methods can be used. Therefore the methods to be used are chosen so that they statistically produce the most accurate and reliable estimates. The different valuation methods and their strenghts and weaknesses are presented comprehensively in this report. However, it should be explained why some methods should not be used in the case of positive net profit.

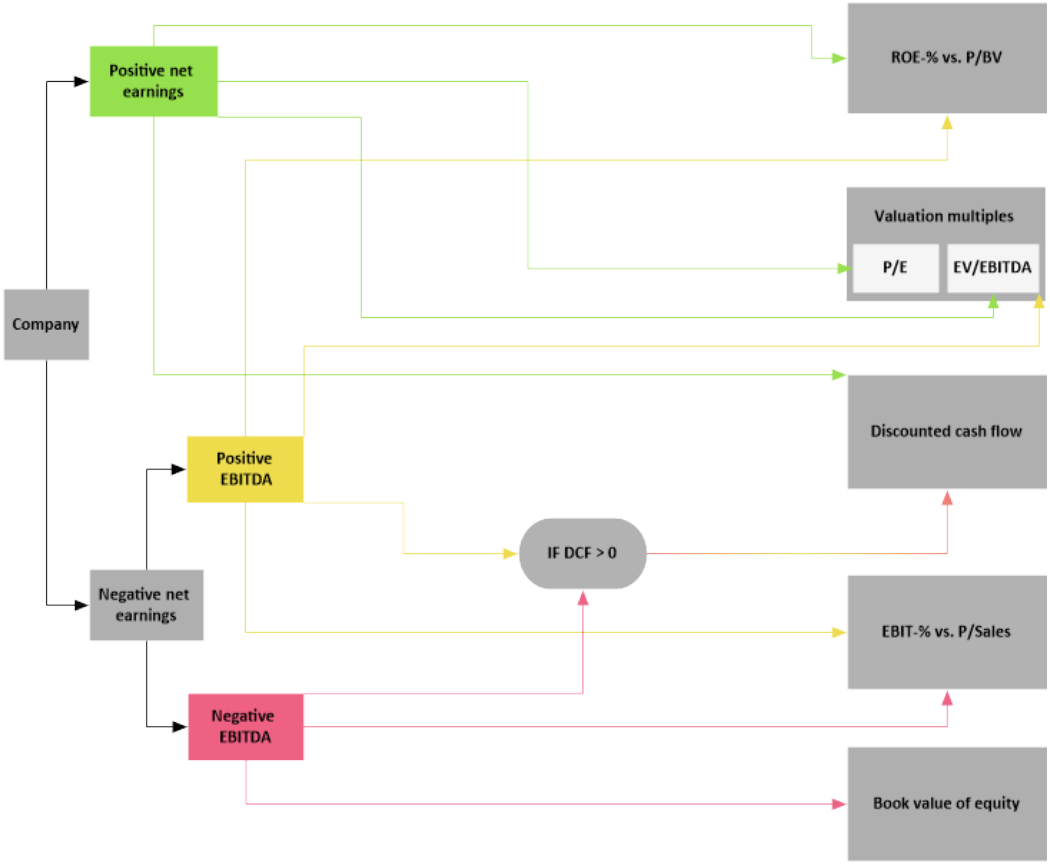
As mentioned earlier in this report, the book value of the company is not a reasonable method for estimating the value of a company which is generating profit. The book value is an estimate of the price at which a company's assets could be sold. It does not take into account the value created by its operations. Therefore, this method suits best situations, where an unprofitable company is run down and the assets are sold.

Another method which is not used when valuing a profit-generating company is EBIT-% vs. P/Sales. It is assumed that the EBIT-% of the company will set in the industry average level in the future. This is a reasoned assumption in the case of a company which is currently making losses but for a profitable company the EBIT-% may be higher than the average, and in that case using this valuation method would result to an estimation too low. Using a strong generalized assumption is not in any case the optimal way to value a company - company specific diffences will not be taken into account. Therefore, this method should only be used when the other methods are not suitable.

Therefore, the valuation of profitable companies is based on four different methods, which are ROE vs. P/BV, the discounted cash flow method (DCF) as well as valuation multiples EV/EBITDA and P/E. The value of the company is calculated by weighting the individual results from these four methods with certain factors. In the graph below these methods are marked with green.

Negative net profit, positive EBITDA

This situation is the same as the case of a negative EBITDA but thanks to positive EBITDA the multiple EV/EBITDA can be used. If the company generates positive cash flow, discounted cash flow method can also be used.



Picture 13: Valuation path illustrated

creditreports.dk

Valuation Path Appendix

In the case of negative net profit the valuation follows mainly the same principles as in the case of positive profit. However, when a company is making losses, the methods which can be used in valuation are limited. Some methods would give the company a negative value and that is why they shouldn't be used. In addition, the weights of the used methods are decided according to the situation. Depending on the situation, some methods can be more important and accurate than others.

The P/E multiple is based directly on net profit and when a company is making losses its value is negative according to this method - using this method is not reasonable in this case. The multiple EV/EBITDA on the other hand can be used because EBITDA is positive.

Even if a company is making losses, it may be able to generate positive cash flow. In such case, it may be possible to use DCF as part of the valuation but only when also the company's cumulative discounted cash flow is positive.

When a company is making losses its ROE-% is negative but the ROE vs. P/BV method can still be used: The method utilizes data from other companies and it is based on statistical comparison of companies. The material also includes companies which have positive value even though they are making losses. Because the valuation is made on the basis of reliable data it can be assumed to be relatively accurate.

In addition to the methods which are already mentioned, the EBIT-% vs. P/Sales method is also used. A negative net result usually implies negative, or at best only slightly positive, operating profit. Therefore in most cases the profit margin can be expected to be lower than the industry average. The company value can be estimated by assuming that the company will eventually reach the average EBIT-% of the industry. As stated before in the report it is justified to use this assumption - if the operating profit margin is not expected to improve, a bankruptcy is inevitable.

When net profit is negative and EBITDA is positive the valuation uses mostly same methods as in the case of positive net profit. The difference is that P/E multiple is not used but the ratio EBIT-% and P/Sales is used instead. The valuation path in these cases is marked in orange in the picture.

Negative net profit, negative EBITDA

The company is making loss and its EBITDA is negative. This limits the use of those valuation multiples which utilize EBITDA. When EBITDA is negative the business can not generate positive cash flow, which means that the DCF method can not be used. Even the methods based on net profit of the company would not be meaningful because in this case they would produce negative values.

When both net profit and EBITDA are negative, the available valuation methods are very limited. On the other hand, such companies are rarely interesting for buyers - usually it does not make sense to pay for a company that is unable to generate profit for its owners. However, for example young and growing companies may be making losses at the beginning but still have the potential to succeed in the future. In addition, some companies may be valuable because of their capital.

The use of the P/E multiple must be ruled out when a company is unprofitable. Similarly, the EV/EBITDA multiple is not useful because a negative EBITDA would result in a negative value. Another consequence of the negative EBITDA is that the DCF method does not produce meaningful estimates because it is practically impossible that the company would generate positive cash flow.

As mentioned in the case of a negative net profit and positive EBITDA, the use of the ROE vs. P/BV method is not limited to valuing only profitable companies.

Therefore, there are only two methods that can be used in valuation. The book value of equity can be used because it is not dependent on the profit in any way. Especially in situations where the attractiveness of the company is based on its assets, the book value of equity may give a good estimation of the actual value of the company. This however, requires that the assets are valued right. On the other hand, the book value of equity does not take into account the actual business in any way; for example for startup companies this method should not be considered reliable.

One way of avoiding the challenges caused by negative net profit in company valuation is to use the EBIT-% vs. P/Sales method. Then it is important that the company can realistically be expected to reach the industry average profit margin. Automatic company valuation can take into account company-specific differences only on the basis of financial statements. Still, companies with similar figures can have very different prospects and therefore the estimates from this method must be taken with caution.

All in all, it is much harder to value an unprofitable company than it is to value a profitable one. The valuation of an unprofitable company is based on assumptions of the future growth and development. Therefore, the value might differ from reality. Many profitable companies are alike and easy to value whereas unprofitable companies might have very different reasons behind the difficulties. This complicates estimation and by studying the outcomes of valuations, one can notice that the estimation for profitable companies is easier and the outcomes are closer to reality.

In the case of negative net profit and negative EBITDA only two methods are used: The book value of equity and the EBIT-% vs. P/Sales method. These methods and the valuation path are marked in red in the picture.

Valuation Methods Appendix

Company valuation reminds very closely the pricing of securities. The buyer should pay the bigger price the better return he expects to receive. This can be explained with fixed-rate bonds as an example because setting their value is quite simple.

Example

The market interest rate at the beginning is 5 %. Market interest rate means the average interest rate of risk-free investments on the market. In this example, a government bond is issued with an interest rate of 5 % which corresponds to the market interest rate. In this case the bond value is equal to its nominal value because it generates as much profit as other similar investments on average.

If the bond was issued with an interest rate of 10 %, it would generate more profit than other similar investments on average. In this case the real value of the bond is greater than its nominal value because the investor receives better return for their money than from other similar investments.

If the bond interest rate was only 3 %, its real value remains below its nominal value. In this case the investor loses profit of the amount which is equivalent to the difference between the market interest rate and the bond interest rate.

This same logic can be applied to company valuation. The basic principle is that the buyer will pay not only for the capital of the company but also for its ability to generate profit. The capital which is in a profitable business is actually more valuable than its book value suggests - this can be compared to a bond whose profit is higher than the market interest rate. The business of a company which will only break even does not provide any added value, and therefore it is not worth paying anything more than the book value of the capital of such company. When a company is making losses it is not worth paying even the book value of the capital because the buyer will become responsible for covering the losses.

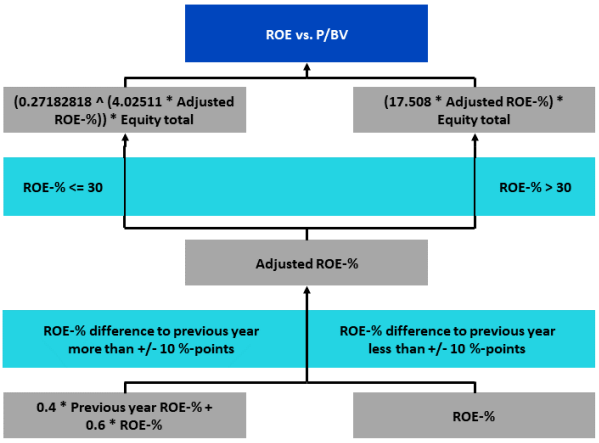
ROE vs. P/BV

The P/BV multiple (price to book value) describes these differences between the book value of equity and the actualized or estimated selling price. P/BV is simply the value of the company divided by the book value of its equity. A company's profit is directly connected to the P/BV ratio: the better profit the company makes the higher is the P/BV.

In order to use these figures in making reliable estimations, some previously actualized company acquisitions must be examined. Their information can be used to find a connection between P/BV and ROE-% (return on equity) and furthermore estimate a function to describe this relationship. Knowing the book value of equity and the rate of return, this function can be used to estimate the real value of a company fairly accurately.

Here, the ROE-% is calculated as an average over the previous two years (40-60 weighting) when these differ by more than +/- 10 percentage point. Otherwise an adjusted ROE of the year in question is used.

In order to achieve the most accurate and realistic valuation results it is necessary to accurately define the formulas used in different methods. When examining the relationship between return on equity and the book value of equity, the weighted average of ROE-% must be used in some cases.



Picture 14: The graph describes the calculations behind the ROE-% in this valuation.

Valuation Methods Appendix

Discounted Cash Flow

The basic idea in DCF is to calculate the present values of all cash flows of the company and sum them together, which results in an estimate of the value of the company. It is important to note that the income statement does not reflect the company's cash flows but is mostly an accounting tool. Therefore, a separate cash flow statement is needed.

The cash flow calculations start from operating profit (EBIT), which is the difference between turnover and the costs that were needed to create the turnover - it describes how much profit the company makes with its business operations.

Depreciations and amortizations must be added to the operating profit. These are accounting items which do not affect the actual cash flow: for example, the cost of a €2,000,000 investment may deducted as depreciation of €400,000 for the next five years, although the actual cash-binding investment has already been made in full before depreciation entries. Paid taxes are deducted, because they reduce the company's cash flow. Changes in working capital are also taken into account. Working capital can be increased, for example, by increasing stocks or decreasing accounts payable - these are of course binding the cash flow. Similarly, working capital decreases when accounts receivable decreases while customers pay off their credit accounts, or when the company's accounts payable increases and it gets more debt. This is why the change in working capital in the cash flow statement is a deduction. After all these adjustments we have an intermediate result which is called operating cash flow: it describes the cash flow which is left from the company's actual business.

Net Sales
-Production costs
Gross Margin
-Administrative Costs
-Depreciations
EBIT
-Paid taxes
Net Earnings
+Depreciations
-Change in working
Operative Cash Flow
-Change in long-term
-CAPEX
Operative Free Cash
+/- Net income/expenses
Free Cash Flow

A company can increase its cash by taking long-term loans. If the loan is interest-free, it does not create short-term obligations in the form of repayment or interest costs. Therefore, the change in non-interest bearing long-term liabilities is to be added in the calculated cash flow. Investments (capex) on the other hand are binding cash flow, so they must be deducted in the calculation. This is related to depreciations which were added previously: Depreciations are always connected to an investment so they must be eliminated in the cash flow statement already because otherwise the price of the investment would be reduced twice. Now we have got free operating cash flow, which means cash flow from the company's business which is not tied to other purposes.

If the company has such expenses or income that are not generated from its actual business, they must also be taken into account in the cash flow statement. By adding the net income or expenses from other activities we have calculated free cash flow, which is used as a basis for company valuation.

Calculation of the net present value (discounting)

When the free cash flows of the company have been calculated, the next thing to do is to calculate their present values, ie the value of the future cash flows at the present time. This is based on the time value of money, ie the fact that the cash flow now is more valuable than the same cash for example after five years.

The concept of money's time value can be illustrated with the return on capital. If you receive € 1,000 in cash now and invest it with 10 percent annual rate, you can expect an investment to be €1,000 * 1.1 ^ 5 = € 1,611 after five years - the difference is significant in comparison to receiving €1,000 in cash after five years. The time value of money is thus based on its earning potential: the earlier you get the money, the longer it can increase in value in a profitable investment. Therefore, the company's current cash flow can be considered more valuable than later ones.

As described with the example above, the cash flows of a company are discounted to present with the formula

$$DCF_n = \frac{FCF_n}{(1+WACC)^n},$$

DCF_n	*Discounted cash flow in year n*
FCF	*Free cash flow in year n*
$WACC$	*Weighted average cost of capital*

It should be noted here that the formula can only be used up to the last forecast year. Obviously, the company can not be expected to end its operations this year, but it is assumed that the operations will continue beyond the forecasts. Therefore, the cash flows calculated based on forecasts are supplemented with the Terminal Value i.e. the value of cash flows from the first post-forecast year to infinity. When the average cost of capital is higher than the growth in net sales (this is practically always true because the growth in net sales is expected to level to 3%), the sum of these cash flows mathematically converges to

$$DCF_t = FCF_t * \frac{1+G_{ns}}{WACC - G_{ns}},$$

DCF_t	*Discounted cash flow terminal value*
FCF_t	*Free cash flow of first post − estimates year*
G_{ns}	*Net sales growth rate in last estimate year*

Valuing the company

By summing up the discounted cash flows and the terminal value, the total present value of cash flows is obtained. This alone is not the value of a company. As the potential buyer also receives the cash reserves the company has, they must be added to the present value of cash flows. On the other hand, the potential buyer also receives all the debts and liabilities: the interest-bearing debt must be subtracted as it causes expenses to the buyer. Thus, the value of a company is obtained.

$$Value_{DCF} = DCF_t + \sum_{n=0}^{N} DCFn$$

Valuation Methods

Weighted Average Cost of Capital

In order to use DCF-valuation, it is important to decide the right discount factor. It has a great impact on the value of the company. The Weighted Average Cost of Capital (WACC) is the average return on equity and debt, weighted by their relative proportion in the balance sheet. The interest expenses from the debt can be subtracted from the income taxes. Thus, the tax rate is subtracted from the cost of debt. The formula for WACC is:

$$WACC = \frac{E}{E+D} * R_E + \frac{D}{D+E} * R_D * (1 - T_C)$$

D	*Debt*	R_D	*Cost of debt*
E	*Equity*	R_E	*Cost of equity*
T_C	*Tax rate*		

E/(E+D) illustrates the equity proportion of total capital whereas D/(D+E) describes the debt. The cost of debt is simply the average interest rate of the debt. The return on equity illustrates the required return of investors and is a bit more complicated to calculate. The following formula can be used in this:

$$R_E = r_f + \beta_E * r_m,$$

R_E	*Cost of equity*	β_E	*Beta*
r_f	*Risk free rate*		
r_m	*Market risk premium*		

The risk-free rate is the return, which an investor can receive from a risk-free investment e.g. government bond. The market risk premium is difference between the expected market return and the risk-free rate. Beta describes volatility i.e. the change of returns: the higher the beta, the larger the changes in the returns of an investment are in comparison to the changes in the markets. A higher beta implies an investment with a higher risk, therefore it correlates directly with the cost of equity.

valuation reality

Generally, in Finland, the trade price of companies operating conventional businesses falls usually around 4 and 5 times of the EBITDA of the company. This applies to companies in highly competitive sectors. Such companies are common e.g. in restaurant, HVAC, and hairdressing sectors.

The reason behind such trade prices is that neither banks nor specialized financing companies will grant loan higher than 4 to 5 times the EBITDA of a company, as larger loans cannot usually be paid back with the cash flows of the acquired company.

On the other hand, start-up companies with similar financial statements and cash flows can trade with significantly higher prices, as these kinds of acquisitions are high in demand compared to their supply due to added value from the acquisition (the acquirer can get higher return than the current owner due to e.g. sales channels). The added value of an acquired company is dependent on the owner, resulting in different valuations of the company by different prospective buyers.

As the demand of such companies is large relative to the supply, the trade price tends to be high relative to cash flow. The trade price is, however, determined only as the acquisition is realized. Therefore, the price is solely dependent on the willingness-to-pay of the acquiring company.

Estimate rules

Most of the valuation methods are based on only the actual financial information. However, in DCF-valuation estimates are used extensively. In this part some of the most important estimate rules are discussed.

Growth in net sales

The change in net sales has a great impact on all of the financial figures. E.g. investments are directly linked to sales: it is hard to expand without investing in production.

In stable industries the growth in net sales is highly regular. Therefore, the actual financial data is used to estimate growth in net sales. The assumption is that regardless of the recent changes, the growth in net sales will be the same as the long-term growth rate of the whole economy which is assumed to be 3%.

All of the special features of a company cannot be taken into account. In some cases the sales may vary a lot during a financial year. This may be the case with startups or after an acquisition. If the growth is exceptional or the value of the company changes drastically, the growth estimate is smoothened.

EBIT-%

EBIT-% has often clear differences between the industries and companies. Nonetheless, for a single company EBIT does not vary a lot in different times if the underlying business remains the same.

In reality, there might be large changes between the financial year, but the reasons causing them are impossible to forecast merely based on financial figures. The most credible estimate is that the EBIT-% will be around the same as it has been in the past.

The estimate is primary the weighted average of the past four actual financial years. The recent figures suit best for evaluating the state of the company and thus the future operations. The weights are as follows:

$$Y-1: 40\ \%, \quad Y-2: 30\ \%, \quad Y-3: 20\ \%, \quad Y-4: 10\ \%$$

For all the forecast years, the previously described EBIT-% estimate is used.

In some cases the weighted average of EBIT might be very low or even negative. Assuming that the company would not be able to be profitable in the future implies that it should quit its operations at some point. Only if it is assumed that the company will become profitable at some point and obtain a certain goal level of EBIT, it is reasonable to generate and use the estimates.

The formula for the goal level can be derived based on the capital turnover and the cost of capital. The goal level is the cost of capital divided by the capital turnover. Using the long-term cost of capital suggested by empirical analyses, 7%, the goal level can be calculated. In the estimates the EBIT-% follows the logarithmic function; the growth slows down and levels to the goal.

Investments

Investments are the amounts of money a company uses to increase the amount of intangible and tangible assets. The investments have a great impact on the free cash flow, therefore it is of paramount importance to pay attention to them while creating estimates. The basis for estimating investments is the change of the intangible and tangible assets. The correct estimation of the variables under these two figures is essential in the process of creating DCF valuation.

The assumption with tangible assets is that the proportion between them and sales stays constant. If the sales increase by 10%, the production must also increase by 10%. This again means that the company needs more tangible assets such as machines. It is assumed that the proportions between the subparts of the tangible stays constant - all of them increase with the same rate. For each subpart the estimate is the proportion between the last year's value of subpart and sales multiplied by the sales of the estimate year.

Intangible assets are different: it is not necessary to invest into intangible assets to increase sales. Therefore, their amount is estimated to remain at the level of the latest actualized financial statement.

creditreports.dk

Vocabulary Appendix

Accounting period	A period over which a financial statement is made. Usually 12 months starting from January and ending in December, but other options are possible.
Accounts payables turnover	Tells how many days it takes on average for a company to pay back its supply purchases.
Assets	The side of a company's balance sheet that tells what it owns. Divided into current and non-current assets.
Balance sheet	Balance sheet provides information about what a company owns and how it is financed at the end of its accounting period.
Beta	A measure of volatility or systematic risk. Beta ratio 1 implies that the return on asset varies similarly to total market return. Higher beta = higher risk.
Cash flow effect	An accounting event's impact on the company's cash flow. Not all events have a cash flow effect; see non-cash charge.
Cost of debt	The cost incurred by having debt. In practice, the interest rate of debt.
Cost of equity	Represents the level of return expected by equity investors.
Current assets	Assets which are meant to be owned by the firm for a maximum of one accounting period. E.g. inventories.
Current ratio	Measures a company's ability to cover its short-term debts with liquid assets. Calculated by dividing current assets by current liabilities.
Depreciation	A method of dividing an asset's purchase cost over its lifespan in the financial statement, instead of marking it as a one-off purchase.
Discount rate	An interest rate used to discount future cash flows to present value. Should correspond to the risk associated to the cash flow.
Discounted Cash Flow valuation	A valuation method in which a company's expected future cash flows are discounted to their present value, thus giving an estimate of the company's total value.
EBIT	Earnings before Interest and Tax. Net sales minus expenses excluding tax and interest.
EBITDA	Earnings before Interest, Taxes, Depreciation and Amortization. Net sales minus expenses excluding taxes, interest and depreciation & amortization.
Enterprise value (EV)	Value of equity + value of debt - cash and cash equivalents.
Equity	Equity is the amount of money invested into a company plus its retained earnings.
Equity & Liabilities	The side of the balance sheet which tells how assets are financed.
Equity ratio	The ratio between equity and balance sheet total.
EV/EBITDA	The ratio between enterprise value and EBITDA. Tells how many years it would take for a company to generate cumulative operating profit equal to its enterprise value.
Financial assets	Tangible assets in a liquid form that is used in the daily operations.
Financial costs	The costs associated with the company's financing. For example, interest payments and other costs related to loans.
Financial ratio	Measures used to assess a company's financial position.
Gearing	Measures a company's financial leverage. Interest-bearing net debt divided by equity.
Goodwill	An intangible asset which provides a competitive advantage, such as a strong brand or reputation. In an acquisition, goodwill appears on the balance sheet of the acquirer in the
Gross investment	The monetary value of investments made within an accounting period.

creditreports.dk

Vocabulary Appendix

Gross margin	A measure of profitability calculated by subtracting variable and fixed costs from net sales.
Income statement	A financial report which documents a company's revenues and expenses over an accounting period.
Industry	Companies that operate in a similar line of business form an industry. In practice, industry definitions and boundaries are vague.
Intangible assets	Assets which do not physically exist but are valuable nonetheless, e.g., brand value.
Interest expense	Interest payments incurred by debt financing.
Interest income	Interest payments received from lending to other entities.
Interest-bearing debt	A debt which requires interest payments. E.g. a bank loan.
Interest-bearing net debt	A company's total interest-bearing debt minus cash and cash equivalents.
Inventories	Goods ready to be sold or to be sold later; in other words finished and unfinished goods + raw materials used to produce them.
Liabilities	Financing obtained from outside the company and must be paid back.
Liquidity	Company's liquidity describes its ability to meet its financial obligations with liquid assets.
Long term	In business accounting measures long-term often refers to a time period longer than 12 months. In investment measures long-term refers to a time period longer than 7-10 years.
Long term receivables	Receivables which are due in more than 12 months.
Market price	The price which is determined in the market by supply and demand.
Market risk premium	The average premium over risk free rate which the market demands for a risky investment.
Market share	The proportion of a company's sales from the total sales of a specific market (e.g. euros or units sold).
Medium term	In investment measures medium-term often refers to a time period lasting up to ten years.
Multiples valuation	A valuation method which uses financial ratios to determine a relation between a company's ratio and the industry average, thus giving an assessment of the value of the company.
Net earnings	A company's total earnings. Revenues minus all the expenses. The amount left for shareholders.
Net investment	The amount of investments which increase the capacity. Gross investments minus depreciations.
Net sales	The monetary value of sales during an accounting period minus value-added tax.
Non-cash charge	Charges which do not have a cash flow effect but affect the income statement and/or balance sheet.
Non-current assets	Assets which are intended to be owned by the company for more than one accounting period.
Non-interest-bearing debt	Debt for which a firm does not have to pay interest. E.g. accounts payable.
Operating profit	Net sales minus variable and fixed costs and depreciation & amortization. See EBIT.
Operative cash flow	The cash flow generated by a company's operations.

creditreports.dk

Vocabulary Appendix

P/E	The ratio between share price and earnings per share. Tells how many years it would take for the company to pay back the purchase price with its current level of earnings.
Private company	A company whose shares are not traded on a public exchange.
Publicly traded company	A company whose shares are traded on a public exchange.
Quick ratio	Measures a company's ability to cover its short-term debts with liquid assets. Calculated by dividing liquid assets by current liabilities.
Receivables turnover	Tells how many days it takes on average for customers to deliver the cash payment for their purchases.
Relative indebtedness	Measures the extent to which a company's operations are financed with debt. Total debt divided by sales.
Retained earnings	Earnings that are not paid out to shareholders but kept within the company and used to finance its operations.
Return on assets	Measures how much returns are generated to capital providers (both equity and debt). Calculated by dividing net earnings by total assets.
Return on equity	Measures the rate of return for an equity investment. Calculated by dividing net earnings by equity.
Risk	The uncertainty involved in every business. In practice, risk can be observed from the unexpected fluctuation in a company's returns.
Risk free rate	The interest rate for an investment that involves virtually no risk. E.g. a government bond can be considered risk free.
ROA	See return on assets.
ROE	See return on equity.
ROI	Tells us how much returns an investment generates.
Shareholder's equity	The amount of equity on the balance sheet. Constitutes of invested money and retained earnings.
Short term	A period less than 12 months.
Short term receivables	Receivables which are due in less than 12 months.
Tangible assets	Assets that are physical in nature. E.g. machinery. Compare to intangible assets.
Tax rate	The tax rate used to calculate annual taxes.
Value of a company	Either the value of equity or enterprise value (EV). The value of a company is does not (usually) equal the price paid for it.
WACC	See weighted average cost of capital.
Weighted Average Cosf of Capital	Proportionally weighted cost of equity and cost of debt.
Working capital	The part of a company's capital that is needed to maintain day-to-day operations. Calculated as the difference between current assets and current liabilities.
Write-off	A write-off is a reduction of an asset's value. Has an effect on both income statement and balance sheet.