Linnæus University
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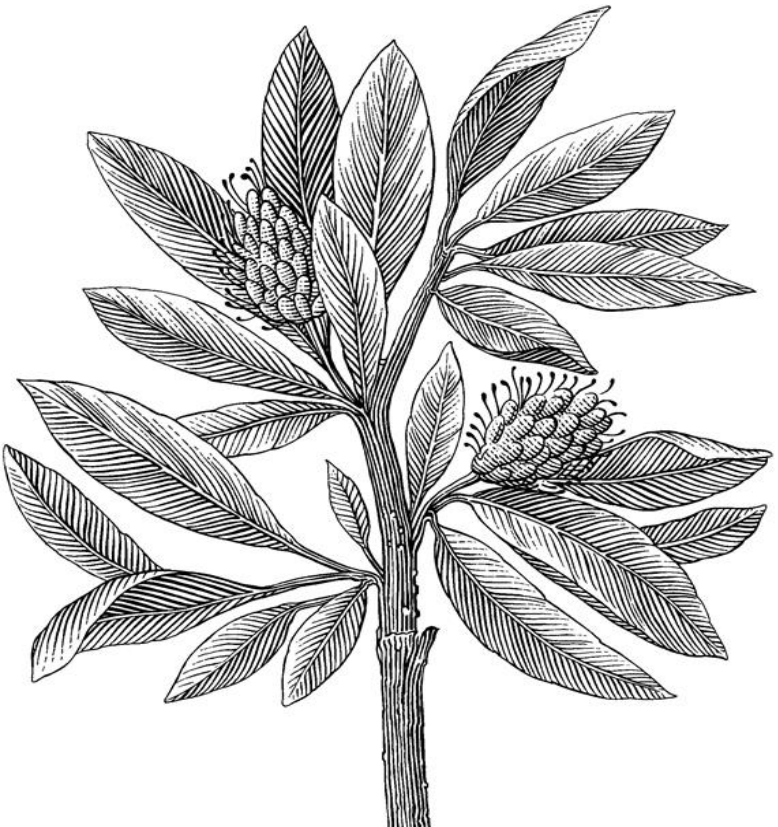
Bachelor Thesis in Finance

Relative and Discounted Cash Flow Valuation on Swedish Listed Companies

- How applicable are the methods to companies in different industries?



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Abstract

The purpose of this thesis is to look at how the two widely used valuation approaches Free Cash Flow to Firm and Relative valuation can contribute to the explanation of market prices of shares. The study also aims to investigate if it is possible to find any significant differences between industries, while using the two valuation methods.

There are a large number of models that are used to value assets and corporations, which have been used for a long time in the banking sector and similar contexts. It is widely known that a single valuation method or model which could predict a future stock price is hard to find or might even not exist. The study uses a quantitative method, in which we evaluated 36 Swedish companies, to be able to draw conclusions about the two valuation approaches.

Our results suggest that the calculated prices obtained from the two methods correlate with the market price of the share, and that the result differ between different industries.

Keywords: corporate finance, finance, valuation, discounted cash flow, multiples, relative valuation, free cash flow to firm.

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1 Introduction

In this chapter, the authors present a background of the research topic. This is followed by a presentation of the research purpose. A problem discussion is being included as well.

1.1 Background

"A cynic is a man who knows the price of everything, but the value of nothing".
-Oscar Wilde

All assets have some type of value. Being able to understand the difference between a share's price and estimated value can lead to a certain kind of knowledge of how the price may develop in the short and long run. Hägglund (2001) means that a proper analysis could give advantages to investors, since it results in better knowledge about companies and stocks, which makes it possible to locate stocks with higher returns. There are a large number of models that are used to value assets and corporations, which have been used for a long time in the banking sector and similar contexts. In the article *Brief Considerations on Business Valuation Methods* written by Hermoza and Molina, the authors discuss various models within corporate valuation. They mean that many new models have been developed in recent years. These models do not always produce unique results. The authors argue that for this reason, it is highly reasonable to review the most popular and currently used models.

Various investment philosophies and valuation methods have been discussed and tested as long as there have been financial markets. Sweden got its first limited company in 1848, and since then, the industry has developed more sophisticated methods for valuing assets and corporations. In an article from Financial Times, we are introduced to various concepts of picking stocks. Some investors use momentum strategies, while others use technical analysis. It is, however, most common to consider the valuation process of stocks. If you make a proper valuation of a share, you either might find a stock that you predict to trade higher than the current price. You might also want to confirm that the stock you just bought is correctly priced, to prevent unexpected events and thereby reduce the risk of your picked stock (Financial Times, 2014).

In Corporate valuation, there are two traditional concepts of valuation approaches, and each type has its subtypes. Intrinsic, or fundamental, valuation is one of them. The other one is called relative valuation, and the differences between these models originate from the diverse views of market efficiency. In intrinsic valuation, one assumption is that markets make mistakes. This means that the price of stocks in a sector, or even in a whole market, is not necessarily correct. The stock could be either over- or undervalued. Regarding the relative approach, Damodaran (2012) means that even though markets make mistakes in pricing certain individual stocks, markets are correct overall. It means that when you compare a specific stock to other comparable stocks, the price of the comparable stocks is correct on average.

In intrinsic valuation, you specifically look at cash flow models. Fernández (2008) says that the methods that are currently the most used are the discounted cash flow models. They are also the most accepted methods in both the academic and business community. Generally, these methods try to determine the firm value through the estimation of the cash flows that will be generated in the future, and then discounting them at an appropriate rate according to the risk of such flows (Fernández, 2008). This approach of valuing a company is not dependent on a variable from any other company, and is instead based on the fundamentals of the company itself.

If we instead consider the relative valuation approach for valuing a company, it is found that the determination of a company's value is based solely on comparable firms. A comparable firm is a firm with similar metrics as the company being valued. For instance, if company A is being evaluated and company B and C have similar cash flows, risk and growth potential as company A, and both have a P/E ratio of 10, the logic of relative valuation says that company A should also have a P/E ratio of 10 (CFI, 2019).

1.2 Purpose and Research Questions

The purpose of this study is to find out how significant the Free Cash flow to Firm approach and the Relative valuation approach are to explain the market value of stocks. We want to find out how the results that these models are generating differ from the market value of a share, and further understand how the valuation methods are better used on companies in different sectors. To fulfil the purpose of the study, we ask the following questions:

I. *Can any of the valuation methods contribute to an explanation of the market price?*
II. *Are the two valuation methods more applicable to companies in different sectors?*

1.3 Problem discussion

It is widely known that a single valuation method or model which could predict a future stock price is hard to find or might even not exist. One can say that the search for information and valuation models that determine the prices of shares in capital markets can be explained as the pursuit of the Holy Grail (Ramnath et al., 2008). Professor Sven-Erik Johansson refers to Hult (1998), who says that company valuation is complex;

> *"Let me start with a statement about which I think we can get general consensus: valuing companies is not easy. It is primarily because in order to know what a company is worth today, you need to know what will happen in the future"*

However, some valuation models are preferred among others in businesses and the academic world, which indicates that they are of practical use and thereby must have some advantages. It is not always preferable to apply all models to all types of companies, since the characteristics usually differ. Thus, there are companies with a particular type of character in which a model can be of greater relevance than other models. Therefore, it is relevant to investigate which model that works better on specific companies in different industries. We want to find out when a model works better than another, and under what conditions it works better. It is also relevant investigate to what extent our empirical study will be consistent according to what has already been written in theory.

A model might give a result that is far from the current price of the share. There are two possible explanations for that. It could imply that the model itself is not suitable to use of the valued company. It could also mean that the market has over- or undervalued a company, and

that the result of the model is precise. This is a paradox which many financial analysts and corporate managers are struggling with. The issue is whether to rely on the results of the model to make an investment action or not. Hermoza and Molina (2017) mean that even though multiple methods can be used to evaluate a firm, the calculated values obtained from the models result in a wide range of differences. The differences are reflected in the final value obtained through the valuation exercise, and also in the conceptual development throughout the stages of the valuation process. They also say that it is not possible to discount any of these methods as incorrect, considering that the use of them depends, in the majority of the cases, on the purpose for which the practice is conducted (Hermoza, Molina, 2017). In a report by Jensen Investment Management, written by Kurt Havnaer, he argues why they think that DCF is a more sophisticated way of valuing corporations rather than using multiples. On the contrary to relative valuation, DCF makes estimates of the total fundamental drivers of the company value. Havnaer also says that making reasonable forecasts based on these fundamentals is more important than evaluating the company based on multiples, where the drivers of the company value are simplified.

For the reason that there are several different ways of valuing shares, and that these differ considerably between each other regarding approaches and the whole concept, there is a reason to study these more closely. Further, we also want to see if the models are better applied to companies in a certain type of industry.

1.4 Delimitations

This study aims to evaluate 36 Swedish companies listed on the Stockholm Stock Exchange. The valuation will be done for five years, based on FCFF and Relative valuation. The reason for this is that we consider it a reasonable amount of data to fall within the framework of the thesis. The companies are divided into three sectors. In agreement with what is written in theory, it can be complicated to put a value on companies that operate in markets with uncertain growth and high volatility in revenues, and consequently, uncertainty regarding the future cash flows. Including smaller companies with higher risk and uncertainty, would complicate the valuation process, and the work over all. For that reason, companies with the mentioned characteristics will not be included in this study. We choose to include listed and mature companies, which according to the theory, should be better to apply our models on.

1.5 Previous research

As earlier mentioned, corporate and stock valuation are key areas in banking, finance and in the stock-market overall. Because of this, valuation and the methods used to make valuations have been dealt with in many works of literature, articles and essays, and what is discussed in this study is not new in itself. In the article *Is cash flow king of valuations?*, published in Financial Analyst Journal, the authors suggest that valuations derived from industry multiples are closer to traded prices than those based on reported operating cash flows. In the study, they compared the valuation performance multiples on a large sample of companies from ten different countries. Two measures of cash flow - operating cash flow and dividends, was compared with earnings multiples. The main finding is that valuations based on industry multiples using earnings forecasts are very accurate, and more precise than other multiples.

In the study *Valuation Using Multiples - Accuracy and Error Determinants*, written by Ek and Lillhage, the authors conclude that the multiple approach yields relatively good estimates compared to DCF. They found that eight out of ten multiples have a valuation error less than 15% on a long-term basis, and that four multiples outperform the DCF method. We are not familiar with previous studies where specifically FCFF and the relative valuation approaches were applied to multiple Swedish listed companies in the same study.

2 Theoretical framework

This chapter gives a presentation of the general theory about the concept of valuation. These terms and theories will frequently be used in this study. Therefore, the theories is of great importance for the reader.

2.1 Fundamental Analysis

Fundamental analysis in combination with a chosen valuation model is a process that will lead to a certain result. This result should be the basis for the company's value. Nilsson (2002) says that the result of the valuation process based on fundamental analysis leads to the final price for the company. A fundamental valuation of a public company aims to determine whether a company's shares are undervalued or overvalued against the listed market price for the share (Nilsson, 2002).

"An investment in knowledge pays the best interest."
– Benjamin Franklin

Valuation is in focus regarding the fundamental analysis. According to Nilsson (2002), fundamental analysis refers to the process of determining the fundamental value of a stock using publicly available information. Some analysts use discounted cash flow models to value companies, while others use relative valuation. The underlying character for fundamental analysis is that the right value of a company can be linked to its growth target, risk profile and cash flows. When there is a difference between the market value and the calculated value, it indicates that the share is under- or over-valued (Damodaran, 2012).

2.2 Financing costs

For a company to be able to develop and grow, they will need to invest in new assets. These investments will cost money, and the company is dependent on financing to cover the costs of the investments. Companies can receive money from two different sources of finance; lenders or investors. These two groups provide the company with money, hoping to make a positive return on their investment. There are two costs for the company. A cost arises when lenders want to get paid for the risk of lending money to the company. Also, investors who buy

shares in a company will expect a return on their invested capital, corresponding to the risk associated with investing in the company (Damodaran, 2012).

One common theory while discussing the cost of financing, is the Pecking Order theory. It was developed by Myers, Myers and Majluf in 1984. They argue that, because of asymmetric information, firms adopt a hierarchical order of financing preferences so that internal financing is preferred over external financing. If external financing is needed for a company, they first seek debt for funding. Equity is issued as a last resort. According to this theory, a company will always cover its external financing needs with debt, as long as their debt capacity allows for it (Jong, Verbeek, Verwijmeren, 2011).

2.2.1 Cost of equity

Capital Asset Pricing Model (CAPM) has served as a basis for comparing price and risk since the 1970s. The model is based on the idea of systematic risk (often referred to as non-diversifiable risk) and that investors must be compensated for it in the form of a risk premium. A risk premium is a return greater than the risk-free interest rate. When investing, investors want a higher risk premium when they take on more risky investments (CFI, 2019). Although the model has suffered some criticism, CAPM is still one of the most used models to calculate the cost of equity. It is used mainly for applying to larger companies, but also for smaller ones. It is also used on companies in the expansion phase and more mature ones (Grabowski, Pratt, 2014). The CAPM approach is useful to estimate the Cost of equity, but some scientists mean that it was first developed only for liquid assets (Michailetz, Artemenkov, & Artemenkov, 2007). According to this, non-listed companies should therefore be subject to further research, and should not be applied by the CAPM model (Steiger, 2008).

2.2.2 Cost of debt

The second financing cost which the company should consider is the cost of debt, and it is the return that a company provides to its debtholders and creditors (Damodaran, 2014). The cost of debt could be seen as the current cost of borrowing funds, which in practice is the average interest rate the firm has to pay the lending companies. Miller and Modigliani (1963) mean that a company's value increases with borrowing. This is because of the cost of debt, and the fact that the interest rate is deductible. As a result, higher debt can result in a larger tax debt, which increases the company's value. They later mean that economic theory and market

experience both suggest that the yield that is demanded by lenders will increase with the debt-equity ratio of the borrowing firm.

Miller and Modigliani (1963) later say that even though there is a tax advantage for debt financing, it does not necessarily mean that corporations should always seek to use the maximum possible amount of debt in their capital structure. This is because other forms of financing, notably retained earnings, may in some circumstances be cheaper.

According to Damodaran, the Cost of debt is affected by three factors.

- The riskless rate: As the riskless rate increases, the cost of debt for companies will also increase.
- The default risk of the firm: As the risk of not paying back the loan increases, the cost of borrowing money will also increase.
- Tax benefits associated with debt: The interest is tax deductible; therefore, the after-tax cost is dependent on the tax rate. This advantage arises from that the pre-tax cost of debt is larger than the after-tax cost of debt. The interest expenses will decrease as the tax rate increases (Damodaran, 2012).

2.2.3 Cost of capital

If you add the cost of equity to the cost of debt, you obtain the cost of capital. Rao and Stevens (2007) are saying that the Cost of capital is perhaps the most fundamental and widely used concept in financial economics. Pratt and Grabowski (2014) mean that the Cost of capital is forward-looking. What they mean is that it represents the investor's expectations. They were continuing by saying that the Cost of capital is market driven, since it represents the expected rate of return that the market requires. The actual Cost of capital for a specific firm depends on how much of the financing costs are derived from the two financing sources, lenders or investors. This is best shown by describing the Weighted Average Cost of capital (WACC). The WACC has an essential role in every DCF-valuation process. Since is it used as a discount rate, the WACC is very crucial for the predicted future cash flows.

WACC reflects the cost of own equity and borrowed capital (Cegłowski, Podgórski, 2012). The WACC of a company is dependent on a variety of factors. For example, the industry where the company operates, and the steadiness of its cash flows influence the cost of capital.

Companies that are characterized with stable cash flows in mature industries, with low growth rates, will typically have low capital costs (Morningstar, 2007)

According to Modigliani and Miller (1958), no mix of own and borrowed capital is better than another. Their theory suggests that it does not matter if a specific company is only financed by equity, or if the capital consists of a mix of different loans and equity. The company value will still be as large. This contradicted what economist previously believed in this area. According to their theory, the person who want to invest in a company does not have to consider whether the company is financed with own equity or debt capital.

2.3 Growth rate

Steiger (2008) means that small changes in the underlying assumptions of the valuation will result in large differences in the company's value. It is therefore of great importance to know which assumptions are used, and how they influence the outcome valuation. In the free cash flow to firm model, the growth rate used plays an important role, since the growth rate that is assumed can have a dramatic impact on the terminal value, and therefore the firm value.

"The investor of today does not profit from yesterday's growth."
- Warren Buffett

Valuations can be made both by using one single growth rate, or multiple growth rates. It depends on whether the company is already mature in the market or if they are still in an expansion phase. In discounted cash flow valuation, it is common to divide the growth into two stages. One represents the high growth phase, where a company entering a new market succeeds to attract customers. This will generally lead to relatively high revenues in which the company in question is said to be in the high growth phase. At some point, the company will pass over to a stable growth phase, and this period is assumed to last as long as the company operates on the market. According to JP Morgan Chase, the stable growth rate should be equal to the nominal growth in GDP.

2.4 Discounted Cash Flow valuation

The discounted cash flow models are based on the assumption that the value of a company is the present value of the expected future cash flows (Kumar, 2016). Damodaran argues that the discounted cash flow valuation is the foundation on which all other valuation approaches are built on and that when holding other things equal: higher cash flows, higher growth and lower risk should result in a higher value of the company (Damodaran, 2012).
Ceglowski and Podgorski (2012) mean that from a Value Based Management perspective, as well as the analysis related to fundamental analysis, the present value of cash flow that a given enterprise can obtain due to operational and strategic decisions is the most important value. Therefore, they mean that regarding company valuation, income-based methods are preferable, especially techniques of discounted cash flow (Cegłowski, Podgórski, 2012).

The three basic models of DCF valuation are the Free Cash Flow to Equity (FCFE), the Free Cash Flow to Firm (FCFF) and Dividend Discount Model (DDM). For FCFF, which this study will focus on, the future cash flow is discounted to the main stakeholders (shareholders and debtholders) with the Cost of capital (WACC) to arrive at the value of the company (Kumar, 2016). Theoretically, the models' approach can vary a little, even if they are based on discounting future cash flows. FCFE is based on evaluating the company's equity, while FCFF is about valuing the entire company. FCFF therefore includes, in addition to equity, bondholders and preferred stockholders. The DDM model is a special case of valuation, where the value of equity is the present value of future dividends. The differences between FCFF and FCFE is applies mostly regarding the cashflows associated with debt - interest payments, new debt issues and principal repayments (Damodaran, 2012).

Fernandez (2008) mean that the most appropriate method to value a company is to discount the expected future cash flows. Hermonza and Monina (2017) agree with Fernandez and say that these methods present many advantages. The methods are considered dynamic because the firm value depends on its capability to generate funds in the future, and it is not limited to performing a static analysis considering only the historical information of the organization. These methods are not based on subjective perceptions by their owners or market potential buyers (Pereyra, 2008).

Penman (2006) highlights some criticism of the DCF models. In his article, he refers to a fictitious example to demonstrate that the models do not always work considering valuation. Penman holds a company that has negative cash flows four of the last five years. Applying a growth rate to negative cash flows leads to model failure, which is why he thinks free cash flow is an unreliable indicator of value.

2.4.1 Free Cash Flow to Firm

In corporate practice, the FCFF technique is most commonly used. Mielcarz and Mlinaric (2014) say that according to the financial analyses and the popularization of particular techniques, in the literature, three techniques can be recognized as the most essential, where one of them is the free cash flow for firm.

As mentioned, FCFF is about valuing the entire company. FCFF therefore includes, in addition to equity, bondholders and preferred stockholders (Damodaran, 2012). It allows the analysis to be performed from the point of view of all parties financing. Damodaran (2012) means that a high FCFF indicates that the company has money left behind for its operations and performance, and at this point suggests good economic health for the company.

According to Damodaran, the applicability of DCF models, where the FCFF approach is included, depends on the informational requirements of expected future cashflows and discount rates. This approach is easiest to use for firms with currently positive cashflows and with some degree of reliability of estimating future cashflows. It also requires a proxy for risk that can be used as a discount rate for the company. If these information requirements are not fulfilled, the difficulties of making an objective valuation increase. The biggest problem occurs when evaluating non-listed private companies since their securities are not publicly traded and cannot be measured in terms of risk, and therefore affect the possibility to obtain a fair discount rate. Contrary, this approach is best applied when evaluating large, listed companies where a great amount of information is available.

2.5 Relative Valuation

In corporate valuation, the relative valuation approach is used to evaluate companies by comparing them to other businesses based on certain multiples (CFI, 2019). The most common use of this approach is to use an industry-average ratio to obtain a firm value. This assumes that the other firms in the industry are comparable to the firm being valued and that the market, on average, prices these firms correctly (Damodaran, 2012). Relative valuation is also known as comparable valuation.

There are two components to relative valuation. The process of relative valuation starts with the selection of a peer group. Peer group selection is based on defining industry attributes, matching companies on size, growth, margins, asset intensity, and risk. Multiples are classified as earnings multiples, book value multiples, revenue multiples, and sector-specific multiples (Rajesh, 2016). The second component is that to be able to value assets on a relative basis, prices must be standardized. You can convert prices into multiples of earnings, book values or sales. Unlike discounted cash flow valuation, which is described as a search for intrinsic value, we are much more reliant on the market efficiency when using relative valuation. In other words, we assume that the market is correct in the way it prices stocks on average, but that there may be individual shares that are incorrectly priced (Damodaran, 2012). To detect these specific stocks, the key ratios in the relative valuation are used, and the shares that are overvalued or undervalued could, therefore, be found. Damodaran says that relative valuation could sometimes be difficult, since it is hard to find similar companies. No two firms are identical, and firms in the same business can still differ on risk, growth potential and cash flows. He says this part of the relative valuation is “a key one”, and that ignoring these could be a potential pitfall for the valuation.

2.5.1 Multiples

The choice of multiples should be carefully selected before performing the valuation. In performing a relative valuation, it is advantageous to use multiples that are based on different fundamentals. In this case, the four multiples are based on earnings, book value and sales. This is because the valuation is to be carried out as accurately as possible. The three most widely used equity multiples are price-earnings ratios, price to book value ratios and price to sales ratios (Damodaran, 2012). A valuation based exclusively on multiples that are for example, earnings, should be considered inefficient. In an article written by Penman (1996),

he writes about combining multiples, and how to weigh these against each other. One thing that is mentioned is that a larger weight of the book value, in comparison to price weights, indicates that the book value is given importance in predicting long-term results.

2.5.1.1 Price / Earnings

The price-earnings multiple (PE) is the most widely used of all multiples. The PE ratio is consistent, with the value of equity per share in the numerator and earnings per share in the denominator. Both of which are a measure of equity earnings (Damodaran, 2012). Looking at the P/E ratio of a company tells you nothing if it is not compared to other company's P/E ratios or the historical P/E ratios of the firm. The benefit of this multiple is that it standardizes stocks of different prices and earnings levels.

2.5.1.2 EV / EBITDA

A firm value multiple that has won popularity in the last two decades, according to Damodaran, is the Enterprise value to EBITDA multiple. This multiple relates the total market value of the firm and the net of cash, to the earnings before interest, taxes and depreciation of the firm. There are a few advantages of this multiple; there are fewer companies with negative EBITDA than for example negative earnings per share, which allows including more companies in the analysis. Secondly, companies have different depreciation methods which will affect the earnings. By using earnings before depreciation is considered, we erase these differences and the metric holds for all of the companies being measured (CFI, 2019).

2.5.1.3 Price / Sales

The Price to Sales multiple compares a stock’s price to its revenues. This multiple, also known as *the market capitalization to revenue ratio*, is of central interest in many areas of capital market investment analysis and research (Armstrong, Davila, Foster, Hand, 2011). The ratio shows how high the market values a company's revenue. That a company has a high P/S number can mean two different things. Either that the company has a high share price in relation to sales per share, which may indicate that it is highly valued. It could also mean that the market has high expectations for the company, and believes that their sales will increase in the future (Avanza, 2019).

2.5.1.4 Price / Book-value

The Price to Book ratio is a multiple used to evaluate a company's current market value relative to its book value. It is used to compare a company's available net assets, in relation to the sales price of its stock. Damodaran (2012) means that the book value provides a relatively stable measure of value that can be compared to the market price, and says that price-book value ratios can be compared across similar firms for finding indications of under or overvaluation. Finally, firms that have negative earnings, which cannot be valued using P/E-ratios, can be evaluated using price-book-ratios.

3 Research Methodology

This chapter contains choice of approach and strategy to work on this paper. Methods that the thesis is based on, followed by the choice of data and source criticism.

3.1 Research Approach

There are two different approaches when dealing with research questions; deductive and inductive approach. The deductive approach is shortly summarized as testing an existing theory. This approach generally suits most quantitative researches where numerical data is analyzed. You primarily look at a specific theory, then formulating a hypothesis which can be tested empirically by collecting data to prove or disprove the relevance of the theory (Saunders, Lewis, Thornhill, 2009).

The deductive process can be described in four consecutive steps:

1. Deducing a hypothesis: Conduct a testable proposition of a relationship between variables or concepts from the theory.
2. Expressing the hypotheses in operational terms: This mean that the variables or concepts must be defined how they are to be measured.
3. Testing these operational hypotheses.
4. Analyzing the outcome of the test: are the results confirming the theory or rejecting it, which then will imply a modification of the theory?

Inductive approach, on the other hand, may be seen as the opposite way of conducting research; reversely, the first step is to collect data, then analyzing the results of the data which ultimately will conduct the theory of the chosen research area (Saunders, Lewis, Thornhill, 2009).

The two valuation approaches we are investigating in this thesis are well described in theory. The aim of the thesis is not to develop new theories about the subject, but rather to test and provide support for the already existing ones, which is in line with the deductive approach. Therefore, we will follow the deductive approach in our empirical section, since the aim of this thesis is to test whether the two chosen valuation approaches are of good use in corporate valuation.

3.2 Research Strategy

In order to answer the research question, an appropriate research strategy must be chosen. The researcher can use a variety of approaches, which can be divided into two major categories; qualitative or quantitative approach (Backman, 1998). Which method that should be applied is very dependent on the type of examination to be done, and what the research question is.

To test the research question in this thesis, a large amount of data needs to be collected, and later on will be statistically analyzed. Quantitative research is more fitting than qualitative in this case. Quantitative methods mean that the collection of information takes place in a structured manner, and that they are characterized by control from the researcher's side. Conducting surveys and directly contacting companies give different information than what the numbers of their financial statements do. However, this thesis does not examine anything depending on something else than the information from financial statements. A quantitative approach which allows the authors to analyze a large sample of companies is, therefore, more suitable than the qualitative approach. The information can then be converted into numerical values, which are then analyzed - for example in diagram form or via statistical software (Holme & Solvang, 1997).

3.3 Data

Bryman (2012) says that the process of data collection is of great importance for the methodological framework. Our theoretical frame of reference is based on secondary sources. Secondary data is collected, for example annual reports and financial key figures. The data will be obtained from the database Thomson Reuters Eikon. In general, it is much less expensive to use secondary data than to collect the data yourself. Consequently, you may be able to analyze more extensive data sets (Saunders, Lewis, Thornhill, 2009)

3.4 Sample

In order to fulfil the purpose of this study, we will apply valuation models from financial theory to 36 Swedish listed companies. These companies are taken from the Stockholm Stock Exchange's Mid- and Large-cap list. We have divided these companies into three different industries. These industries are Bank/Real Estate, Consumer-goods, and Manufacturing

companies. The companies will be divided into these industries, to be able to distinguish differences between them.

Bank/Real Estate	Consumer-goods	Manufacturing
COLLECTOR	LAMMHULTS DESIGN GROUP	AUTOLIV
AVANZA BANK	NEW WAVE GROUP	SANDVIK
FABEGE	AGROMINO	HALDEX
SEB	MQ HOLDING	ASSA ABLOY B
PLATZER FASTIGHETER	BILIA	FAGERHULT
VICTORIA PARK	CLOETTA	NEDERMAN HOLDING
KUNGSLEDEN	MEKONOMEN	LINDAB INTERNATIONAL
CATELLA	CLAS OHLSON	ASTRAZENECA
CASTELLUM	AXFOOD	NIBE INDUSTRIER
HUFVUDSTADEN	ELECTROLUX	ATLAS COPCO A
WIHLBORGS FASTIGHETER	ICA GRUPPEN	ABB LTD
SVENSKA HANDELSBANKEN	THULE GROUP	ALFA LAVAL

3.5 Method issues/bias

Regarding the relative valuation, some theory suggests that a comparative company does not need to be in the same industry at all. When performing a relative valuation, you should not necessarily look at companies that are in the same industry, but rather look for similar companies that have the same cash flow, growth rate and risk. Damodaran says, however, that most analyzes use companies that are in the same industry to perform a relative valuation. For this reason, this valuation will be executed based on industry. The companies are compared to the industry average and are divided into different segments.

In most valuations, it is necessary to make assumptions. If we were only evaluating one company, we could focus on achieving more precise underlying numbers. In the FCFF valuation, we are forced to assume one high growth phase and one stable phase for all companies. The reality is more complex than that, and the valuation could have been done more precisely if we were including fewer companies.

3.6 The valuation process

The choice of valuation approaches is based on their differences. To be able to produce useful results, and to be able to discuss the fundamental differences, we predict that two methods based on completely different grounds can provide useful material. We will look at data to be able to evaluate the companies five years ahead, starting with 2014. With this strategy, we will be able to compare each company over multiple years.

It is not always common to put a specific value on a share while using relative valuation. You compare with a benchmark of the industry and make decisions as to the extent whether the company in question is under- correctly- or overvalued. We have chosen to interpret what Penman suggests in his article and put greater weight on the P / BV-multiple. We will use this as the basis for our valuation model. The distribution becomes P / BV = 40%, P / S = 20%, P / E = 20% and EV / EBIDTA = 20%.

As earlier mentioned, the theory suggests that the best approach is to not rely exclusively on one multiple. You should instead combine several different ones to get a weighted result that is more accurate. All multiples have different advantages and combining them results in a more trustworthy valuation. We have chosen to combine the multiples mentioned in the theory section to be able to arrive at a company value for each of the companies involved in the study.

3.6.1 Free cash flow to firm

Free cash flow to firm (FCFF) is the cash flows available in the company after taking into account taxes, depreciation, changes in working capital and investments. It is essentially possible to see FCFF as a measure of a company's profit after all costs and reinvestments have been made. There are several formulas for calculating the FCFF at a specific time, depending on which information is available for the estimate. In this study, are the following formula will be used:

$$FCFF = EBIT(1 - Tax\ rate) + Depreciation - Capital\ expenditure - \Delta Working\ Capital$$

EBIT refers to the earnings before interests and taxes and it is deducted by the corporation tax. Depreciation is a non-cash expense, which is added back in the calculation and by

considering the investments and changes in working capital, we arrive at a final free cash flow to firm value.

To calculate the value of the firm, the future expected cash flows are summarized, and discounted with the Weighted Average Cost of Capital as following:

$$\sum \frac{FCFF^t}{(1+WACC)^t}$$

Damodaran suggest that two conditions that need to be met while using the stable growth model, which is used for calculating the terminal value. First, the growth rate has to be less than or equal to the growth rate in the economy. Second, the characteristics of the firm must be consistent with assumptions of stable growth. What he means by that is that the reinvestment rate used to estimate free cash flows to the firm needs to be consistent with the stable growth rate. To calculate the terminal value using FCFF, we assume a stable growth rate:

$$Terminal\ value = \frac{FCFF1}{(WACC - g_n)}$$ Where,

FCFF1 = The expected cash flow next year

g_n = Growth rate (forever)

WACC = Weighted Average Cost of Capital

The value of the firm can now be calculated through FCFF:

$$Firm\ value = \sum \frac{FCFF_t}{(1+WACC)^t} + \frac{Terminal\ value_t}{(1+WACC)^t}$$

3.6.1.1 Cost of Debt

The cost of debt refers to the effective rate a company pays on its current debt. It is obtained by dividing the total interest expense with the total debt as followed:

Cost of debt = Interest expense / Debt

3.6.1.2 Cost of Equity

In order to determine the Cost of equity for our chosen companies we have got to consider the Risk free rate(Rf), the Market Risk Premium(MRP) and the Beta values(β) for each company. This is necessary to decide the CAPM parameters, which will be used to define the Cost of equity.

The formula can be written according to the following $Ri = Rf + (Rm\text{-}Rf)\ bi$

Where

Ri = The expected return for shares in year i

Rf = A risk-free asset's expected return.

Rm = Expected return on the entire stock market.

bi = Beta value.

3.6.1.3 WACC

Weighted Average Cost of Capital is a calculation of a firm's cost of capital where each category of capital is proportionately weighted. A firm's WACC increases as the beta and rate of return on equity increases, since an increase in WACC mean a decrease in company value and an increase in risk. Furthermore, a decrease in tax rate will increase the cost of debt and thereby the cost of capital.

The formula for WACC is given by:

$$WACC = \frac{E}{V} * R_e + \frac{D}{V}\ R_d * (1 - T_c)$$

Where

E =Market value of equity

D =Market value of debt

V =E+D = Total market value of the firm

R_e = Cost of equity

Rd = Cost of debt

Tc = Corporate tax rate

3.7 Regression specification

In this study, it is relevant to study the relationship between the calculated share value and the actual market value of the share. As previously mentioned, we want to investigate to what extent the calculated value is in correlation with the market value. Regression analysis is a statistical method that attempts to explore and explain the relationship between two or several variables. The general formula for the single regression model is:

$$Y = a + bX + \varepsilon$$

where X is the independent variable, and Y is the dependent variable and εrepresent the error/residual term of the regression.

In the regression in this thesis, the preliminary formula used is *lnmprice = a + lnkprice + ε*. *Lnmprice* represents the dependent variable market price. The independent, or explanatory variable *lnkprice*, represents the calculated value of the stock. When performing our regression analysis, we used logarithmic variables since the observations tend to deviate from the regression line when having higher prices. This means that the variance of our regression line increases as we move from lower to higher values, and the assumption of homoscedasticity is violated.

3.7.1 Assumptions of Linear Regression

In linear regression, five assumptions is implied for relying the outcome of the regression model. In this thesis, two of them are relevant to describe, since they could have potential effects on the results.

-Linear relationship

The natural meaning of linearity is that the conditional expectation of Y is a linear function of X (Gujarati, Porter, 2009). In linear relationships, any change in the independent variable will produce a corresponding change in the dependent variable.

-Homoscedasticity

When the Y populations corresponding to X values have the same variance. If this assumption fails, the model suffers from the opposite, heteroscedasticity, which leads to biased standard errors and inefficient estimates.

3.7.2 Least squares estimation

One way of estimating β_1, the unknown coefficient of our regression, is to use the Ordinary Least Squares (OLS) estimation. The method minimizes the sum of the squared residuals in order to optimize the estimate of the regression (Gujarati, Porter, 2009).

3.7.3 Dummy variables

The most common way of comparing between different industries in a regression model, would be to use dummy variables. A dummy variable is a nominal scale variable that makes it possible to compare attributes or characteristics between for instance industries by setting values of 0 or 1. 0 indicates the absence of a certain attribute (or industry) while 1 indicates the presence of the attribute (Gujarati, Porter, 2009).

3.7.4 Hypothesis

In order to make conclusions about the relationship between our predicted values and the market values or measuring how significant the differences between industries in the regression models, hypothesis testing is the common approach. We present the hypotheses of our content, which will bring us closer to answering the research questions of this thesis.

Hypothesis 1: The FCFF approach give values that correlate with the market value of the shares

H_0 : *The values of FCFF has no impact on market values :* $\beta = 0$

H_a : *The values of FCFF has an impact on market values :* $\beta_0 \neq 0$

Hypothesis 2: The relative valuation approach give values that correlates with the market value of share

H_0 : *The values of relative valuation has no impact on market values:* $\beta_0 = 0$

H_a : *The values of relative valuation has an impact on market values:* $\beta_0 \neq 0$

3.7.5 Coefficient of determination, R^2

While estimating regression coefficients, we have to consider the goodness of fit of the regression line. That means that we need to find out how well the sample regression line fits the data (Gujarati, Porter, 2009). What we want is that the residuals around the regression line are as small as possible. This determinant tells us about the proportion of which the variance in the dependent variable is predictable from the independent variables. This measure can be

seen as an idea of how many data points would fall within the results of the line derived from the regression equation. Overall, you could say that the higher the value, the better the model fits the data.

3.7.6 Confidence interval and P-value

In hypothesis testing, the confidence interval is used to test the null hypothesis. When discussing hypothesis testing, the confidence interval could also be known as the acceptance region. Imagine a normal distribution curve, where the upper and lower limit is the critical values. Kenton (2019) means that confidence interval is a way to with certainty know that a variable is going to have its value in the acceptance region. In this thesis, a 95% confidence interval will be used. This gives the used variable a 95% certainty to have a value within the acceptance range.

The P-value, or probability value, could be defined as the lowest significance level at which the null hypothesis can be rejected (Gujarati, Porter, 2009). If the chosen significance level α is larger than the estimated p-value, then you could say that the null hypothesis should be rejected. When the confidence level of 95% is used, the P-value should be below 0,05 to be statistical significance.

3.8 Industry comparison

In this section, we will present differences and similarities between the three chosen industries we run in three separate regression models. We want to see how the individual industry affects the market price when only regressing the industry against the market price. The models are conducted by putting a dummy variable for each industry with its associated observations.

The progress can be summed up with the following formula:

$$\log mprice = \beta_0 + \beta_1 \log kprice \; if \; industry* = 1$$

where industry* refers to the specific industry being tested.

3.9 Reliability

One of the things that measure quality in a quantitative study is reliability. This could be explained as the accuracy of an instrument (Twycross, Heale, 2015). Ejvegård (2003) means that in order for the survey method, the test, or the measure to be usable, it is required that it is reliable and valid. If these two requirements are not met, the research result does not have any scientific value. Bell (2000) argues that the measurement that is made must produce the same result at different times, where there are similar conditions as in the first measurement. By clearly explaining our approach and methodology regarding the valuation and the regression analysis, we can increase reliability in the thesis. The weakness regarding the credibility of this paper is that there is always a subjective aspect of the valuation of companies. As earlier mentioned, it's necessary to make certain subjective judgments to be able to perform the valuation. If the authors have different views on different variables, the result and conclusion can be affected by this. The subjective approach makes it hard to reach completely unbiased calculated prices, and therefore an unbiased final result.

3.10 Source criticism

It may seem simple to understand the description of the theoretical models' substantiated assumptions and functionality, but it may prove to be more complicated when these are to be applied in practice. For this reason, we would like to have, to some extent, a skeptical approach to the simplified models described in the literature. We want to investigate to what extent the literature's approach is in line with the practical approach.

All of our values are based on secondary data obtained from the companies' annual reports. The companies that are included in the study, should be considered large and mature in comparison with other companies. It is necessary to believe that the companies comply with generally accepted accounting principles, and is following the norms and rules that apply to accounting standards. Therefore, it is necessary to assume that the financial numbers and figures presented are correct and give a true and fair view of the company's financial status.

We have also collected secondary data from doctoral dissertations, scientific literature and journals. We consider the literature we use to be reliable. This is because the authors of the literature are well known in the field, and have long been leaders in the subject. It is also a fact that the content in the chosen literature could be seen in other literature as well.

4 Empirical Method

In the thesis empirical chapter, the results from the valuations, and the calculations regarding these, could be found.

4.1 Adjustment of data

In the regression, some companies may be excluded. This is because the company in question has either negative cash flows, negative earnings or abnormal ratios. If the calculated value for Company A differs by more than 300% from the market value of the share, Company A will not participate in the regression. This is because we assume in such a case, that the model is not applicable at all to that specific company. Furthermore, a minor data loss occurs as a result of a few companies trading at negative P/E numbers. Since in most cases it is unnecessary to relate companies to losses, these companies have been excluded. An example of this is which has negative earnings, and therefore also a negative P/E-ratio. Due to the broad spread of companies, the key figures results in a large spread, and extreme values are created in some sectors.

4.2 Cost of equity

In most risk and return models, in which the CAPM is included, there is a need to define the risk-free rate. One common way to determine the risk-free rate is through looking at the yield of government securities. Accordingly, we obtained the risk-free rate by looking at how Swedish government bonds have yielded over the past five years. The average rate of government bonds is 0,98%, which was used in the CAPM model. The Market premium was established by looking at the development of the market risk premium from 2014 to 2018, which was presented in a report conducted by audit firm Pwc. The survey showed that the market premium had not changed significantly over the years. To fulfill the market premium of the CAPM calculations, we use the arithmetic average of the past market premiums reported, which would be 6,36%.

Finally, to estimate the Beta values we obtained the past five-year Beta values for each specific company, and made an arithmetic average of them to meet the criteria of making the CAPM model. Thereby, it is possible to determine the Cost of equity for each company.

An example of how we calculated the CAP model is shown below (Beta for Axfood, 0,496)

$$Cost\ of\ equity\ Axfood = 0{,}00977 + 0{,}0636 * 0{,}496 = 0{,}0413$$

To determine the cost of equity for future valuation, we fix the cost of equity to the five-year average cost of equity. For instance, the average cost of equity for Axfood is set to 0,0413.

4.3 Weighted Average Cost of Capital

As been previously explained, the weighted average cost of capital represents the total cost of financing a company, where the cost of equity and cost of debt are associated with the proportion of equity and debt. To determine the cost of debt for a company, we divide the total interest expense of debt with the total amount of debt for five consecutive years from 2014 to 2018. The results are then averaged arithmetically to determine the cost of debt for every specific company.

To determine the equity and debt for each company, we similarly averaged the previously proportion of the two financing sources as a basis for the valuation. Subsequently, the tax rate has to be determined in order to find out the tax advantage associated with debt. For the process of evaluating our companies we have determined the tax rate to be 24,9%. This is based on the fact that it is the average effective tax rate in the industries that are included in this thesis (Thomson Reuters, 2019).

After all parameters for the WACC-formula are settled, we can determine the total Cost of capital for each company. An example of how a calculation was conducted is shown below.

$$WACCSandvik = 0{,}977 * 0{,}0413166 + 0{,}022 * 0{,}024 * (1 - 0{,}249) = 4{,}08\%$$

As shown, the cost of capital for Axfood is fixed to 4,08% when discounting future cash flows in order to complete the firm valuation. Since Axfood has not made major changes in its capital structure during 2011-2018, this rate will be used for all years.

4.4 Growth rates

To make a correct and precise valuation, it is important to set an appropriate growth rate for each company. In this study, we have used historical growth rates estimated by arithmetic averages to find a suitable high growth rate for the FCFF model. The high growth rate is taken from the mean of the previous five-year revenue development. Even though there are several measures of growth rates, we find that revenue is a good estimator of growth since it is not affected by any accounting technique or other external effects. This will, however, result in companies having negative growth rates when predicting future cash flows during the high growth phase.

The high growth phase is assumed to last five years from the year of valuation. To determine the stable growth rate for all the evaluated companies, we have looked at the GDP growth of Sweden and set the mature growth to two percent. This is in line with the mean BNP historical growth rate of Sweden since 1970 (Ekonomifakta, 2019), and also in line with what J P Morgan suggests.

4.5 Valuation using FCFF

The final parameter that has to be decided in order to evaluate a firm according to the FCFF model is the cash flow itself the firm has left after accounting for different outflows of cash. As our theory section suggests, the formula we have used to determine the free cash flow to the firm is:

$$FCFF = EBIT\ (1 - Tax\ rate) + Depreciation - Capital\ expenditure - \Delta\ Working\ capital$$

To clarify how our calculations and implementation have been carried out, we explain the 2018 valuation process for Sandvik.

The figures below show values that are taken from Thomson Reuters database from 2015 to 2017. The tax rate (24,9%) is based on an average of the industry. FCFF is expected to grow at a rate of 4% during the high growth phase, then decrease to a stable growth rate of 2%. FCFF year 0 has been calculated by an arithmetic mean of Sandviks FCFF from 2015 to 2017, and has been determined to 9960 million SEK.

Year	EBIT x (1-0,259)	Depreciation	Capital expenditures	Change in Working capital	FCFF
2015	5398188	535000	−4214000	-776000	943188
2016	8288036	4715000	−3701000	338000	9640036
2017	13814645	4936000	−3590000	4136000	19296645
Avg					**99599563**

	FCFF	PV
$FCFF_0$	9959956	9320463
$FCFF_{2019}$	10305567	9024685
$FCFF_{2020}$	10663170	8738293
$FCFF_{2021}$	11033182	8460989
$FCFF_{2022}$	11416033	8192486
$FCFF_{2023}$	11812170	7932503
Sum		**51669421**

After summarizing the free cash flow to firm for Sandivk, we calculate the terminal value.

Terminal value: $\frac{9959956}{(0,0686-0,02)}$ = 204888 MSEK

PV terminal value: $\frac{204888237}{(1+0,0686)}$ = 191733 MSEK

If we add the sum of predicted future cash flow to firm to the terminal value, we obtain the firm value of Sandvik.

$Firm\ value\ Sandvik = 191733 + 51669 = 243402$ MSEK

This is the total value, which includes both Sandviks debt and equity. The debt belongs to Sandviks interest-bearing liabilities and is eliminated, by multiplying the total value with the proportion of equity for Sandvik as shown:
$243402 * 0{,}6714 =$ 163402 MSEK

We have now obtained the total equity value of Sandvik, and by dividing the total equity value with the shares outstanding for the year in question, we arrive at a calculated price of the share:

$$\frac{163'420'459'000}{1'254'386'000} = 130 \text{ SEK}$$

A comparison of Sandviks equity according to the cash flow valuation and market value, show that Sandvik is undervalued, since the closing price in 2018 was 125 SEK. When the interest-bearing debt (32,86%) is deducted from the company value and this sum is then divided with the number of shares outstanding, Sandvik receives a value per share according to the FCFF-approach of 130 SEK. This should be considered as the target price in the long run.

4.6 Valuation using Relative valuation

The relative valuation approach will be based on the four multiples presented in the theory section. The choice of multiples is based on the fact that Damodaran means that the most widely used equity multiples are price-earnings ratios, price to book value ratios and price to sales ratios.

	Sandvik	Industry mean
Market Cap MSEK	114	
Shares outstanding	1,254	
P	90,7	
E	4	
S	70,8	
B	29,12	
EV	126000000	
EBITDA	14244000	
P/E	22,675	26,9
P/S	1,28	2,1
P/B	3,11	2,8
EV/EBITDA	8,85	12,3

Calculated Price SEK	Market Cap MSEK	Explaination
149,68	188	P/S
107,77	135	P/E
113,16	142	EV/EBITDA
81,54	102	P/B
106,74	134	Weighted of P/S, P/E, EV/EBIT and P/B

The table above shows how the procedure for valuing Sandvik has been executed. The process is done in the same way for all companies. The valuation in this example is based on fundamentals from 2014, and the comparable companies are the one in the same industry as Sandvik. Means for the industry have been calculated, as this will form the basis for the valuation of Sandvik. For the valuation based on the P/E-ratio, Sandviks earnings per share are multiplied with the industry average P/E ratio. For the P/S, Sandviks sales per share are multiplied with the industry average P/S ratio. According to what has been written in theory, the P/B-multiple is given greater weight (40%) than the three other ratios (20% each). The final calculated value is suggesting that Sandvik is now undervalued, and that the target price should be 106,74 SEK. All multiples included in the valuation means, except for the Price / Book Value, that Sandvik was undervalued in January 2014.

5 Results

The results from the valuations are presented in the chapter, with additional outputs from the regression analysis. It is divided into two different sections, with the FCFF-approach first, and then the results and observations obtained from the Relative valuation.

5.1 Free cash flow to firm

To reconnect to the purpose of the study, we wanted to see how the calculated prices from all three industries correlate with all the associated market prices. The regression equation we primarily used to be able to see how much our calculated price could explain the market price was:

$$lnmprice = \beta_0 + \beta_1 lnkprice + \varepsilon$$

Source	SS	df	MS	Number of obs	=	99
				F(1, 97)	=	74.00
Model	22.9442116	1	22.9442116	Prob > F	=	0.0000
Residual	30.0741689	97	.310042978	R-squared	=	0.4328
				Adj R-squared	=	0.4269
Total	53.0183805	98	.541003882	Root MSE	=	.55682

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.574035	.0667287	8.60	0.000	.4415969	.706473
_cons	1.924846	.3034762	6.34	0.000	1.32253	2.527162

After logging our variables and then performing a heteroscedasticity test, we found that the regression model suffered from heteroscedasticity, which would damage the reliability of our variables. The next step, in order to find the driver of heteroscedasticity, was to put a dummy variable on each sector in three regression models. We could then conclude that the Manufacturing sector contained extreme values, which would force the heteroscedasticity in our model. To solve this problem, we regressed our calculated prices on the market prices again, where we added a new independent variable, representing the dummy variable of the manufacturing sector. This generates a new regression equation, which is described as:

$$lnmprice = \beta_0 + \beta_1 lnkprice + \beta_2 f1 + \varepsilon$$

Source	SS	df	MS	Number of obs	=	99
				F(2, 96)	=	43.01
Model	25.0556152	2	12.5278076	Prob > F	=	0.0000
Residual	27.9627652	96	.291278804	R-squared	=	0.4726
				Adj R-squared	=	0.4616
Total	53.0183805	98	.541003882	Root MSE	=	.5397

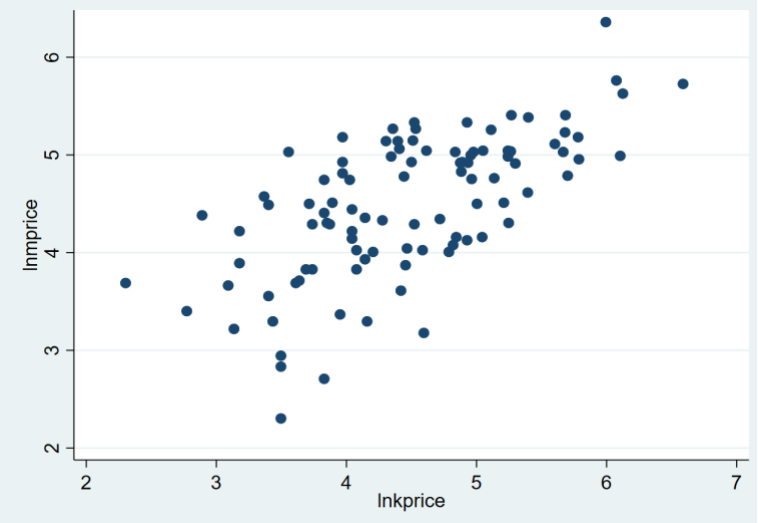
lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.6083327	.0659205	9.23	0.000	.4774815	.739184
fl	-.304621	.1131433	-2.69	0.008	-.5292086	-.0800334
_cons	1.89154	.2944095	6.42	0.000	1.307142	2.475938

After a new Breusch-Pagan heteroscedasticity test was made, we observed that the null hypothesis of the model having constant variance could no longer be rejected on a 95% confidence interval basis:

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of lnmprice

         chi2(1)      =     2.13
         Prob > chi2  =   0.1443
```

After running the new regression of market prices with the use of our calculated prices, there are several factors we can observe. First of all, the t-statistics of our two coefficients reveal that both of them are significant. The coefficient value of our calculated price (*kprice*) explains that a one percent change in our calculated price leads to a 0,6 percent change in the market price. The coefficient of determination (R^2) of 0,4726 means that approximately 47 percent of the variability of market prices is explained by the calculated prices. The null hypothesis states that the calculated prices have no impact on the market price. We find that, within a 95% confidence interval, the null hypothesis can be rejected according to our regression model. In the scatter plot below, we can visualize the relationship between the two variables. As can be noticed, there is a positive relationship between the calculated value and the market price of the selected shares.



5.1.1 Industry comparison

The following three regressions refer to the industries being examined in order to distinguish statistical differences between them.

Manufacturing

Source	SS	df	MS	Number of obs	=	42
				F(1, 40)	=	25.25
Model	4.64427028	1	4.64427028	Prob > F	=	0.0000
Residual	7.35713456	40	.183928364	R-squared	=	0.3870
				Adj R-squared	=	0.3717
Total	12.0014048	41	.292717191	Root MSE	=	.42887

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.4900029	.0975134	5.02	0.000	.292921	.6870849
_cons	2.601339	.4254586	6.11	0.000	1.741455	3.461223

Bank/Real Estate

Source	SS	df	MS	Number of obs	=	18
				F(1, 16)	=	6.16
Model	1.88872662	1	1.88872662	Prob > F	=	0.0245
Residual	4.90214464	16	.30638404	R-squared	=	0.2781
				Adj R-squared	=	0.2330
Total	6.79087126	17	.399463015	Root MSE	=	.55352

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.4082591	.1644313	2.48	0.025	.0596804	.7568378
_cons	2.307178	.7363907	3.13	0.006	.7460991	3.868256

Consumer goods

Source	SS	df	MS	Number of obs	=	39
				F(1, 37)	=	89.33
Model	20.7462551	1	20.7462551	Prob > F	=	0.0000
Residual	8.59295158	37	.232241935	R-squared	=	0.7071
				Adj R-squared	=	0.6992
Total	29.3392067	38	.772084388	Root MSE	=	.48191

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.7566674	.0800581	9.45	0.000	.5944542	.9188806
_cons	.8940575	.3818257	2.34	0.025	.1204052	1.66771

By looking at the models, we can first state that each and every industry coefficient are significant for the model, since all t-statistics reach a value outside the critical values of the t-distribution (-1,96 to 1,96). This can be confirmed by looking at the p-values where we find every p-value to be smaller than the alfa (α) level of 0.05 in our regression model. Moreover, we find that the coefficient for the consumer-goods industry of 0,7566 explains the market price better compared to the other industries, followed up by the manufacturing industry where one percent change in the predicted price indicates nearly a half percent change in the market price, holding all others equal. The bank/Real Estate industry has the lowest number of observations which to some extent, explains the relatively large standard error. Additionally, what is notable is that the coefficient of determination is larger for the consumer-goods industry, than for the other industries.

The next and final step is to examine if any of our independent variables has a coefficient value that is equal to 1, I.e the calculated prices can explain the market price to a full extent. To do that, we performed an additional one-sided t-test in STATA. The test is conducted by stating two hypotheses, one states that the coefficient value of our independent variable is equal to one (H0: $\beta = 1$). The other one represents the alternative hypothesis which states that the coefficient value is different from 1 (Ha: $\beta \neq 1$). The summary of the tests is shown below:

	F-statistic	Prob > F	Interpretation
All industries	35,3	0,0000	Reject H_0
Manufacturing	27,35	0,0000	Reject H_0
Bank/Real Estate	9,24	0,0043	Reject H_0
Consumer-goods	12,95	0,0024	Reject H_0

The four columns refer to the regression models previously performed, where the first one summarizes all the calculated prices, and the three following columns refer to the specific industry. Since all the coefficient values have P-values lower than the significance level (a=0,05), we reject the null hypothesis, for all separate tests, that the coefficient value of our independent variable is equal to 1.

5.2 Relative Valuation

As was conducted in the FCFF section, to look at the percentage change between our calculated price and market price, we use a log-log model for the relative valuation regression. The final output is shown below:

Source	SS	df	MS	Number of obs	=	169
				F(2, 166)	=	32.97
Model	26.8643911	2	13.4321955	Prob > F	=	0.0000
Residual	67.6388292	166	.407462826	R-squared	=	0.2843
				Adj R-squared	=	0.2756
Total	94.5032202	168	.562519168	Root MSE	=	.63833

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.5859886	.079464	7.37	0.000	.4290983	.7428789
tl	.2954068	.1056436	2.80	0.006	.0868286	.503985
_cons	1.53126	.3704206	4.13	0.000	.7999172	2.262603

We tested for heteroscedasticity and observed that our model contained it. After putting in a dummy variable for the manufacturing industry we were able to decrease the heteroscedasticity, but not eliminate it. Before further analysis, it is important to consider that when interpreting this regression model, the calculated price coefficient is less precise. This increases the likelihood that our coefficient estimate is further from the real population value.

If we review the output, we find a coefficient value of the calculated price of 0,586, which is significant in a 95% confidence interval, and the P-value of 0,000 confirms the significance. It tells us that for a one percent unit increase in the calculated price, the market price is expected to increase with 0,586 percent unit. The coefficient of determination reveals that approximately 28% of the variability in the market price is caused by our independent variable and the rest is explained by variables not included in our model. Since this regression suffers from heteroscedasticity which could lead to unreliable and misleading results, we

would argue that we will neither reject nor reject the null hypothesis that the relative valuation approach has no effect on the market price.

5.2.1 Industry comparison

Continuing, we will test if there are any differences between the industries the prices obtained from the relative valuation approach.

Manufacturing

Source	SS	df	MS	Number of obs	=	54
				F(1, 52)	=	0.09
Model	.021033981	1	.021033981	Prob > F	=	0.7661
Residual	12.2297806	52	.235188088	R-squared	=	0.0017
				Adj R-squared	=	-0.0175
Total	12.2508145	53	.231147444	Root MSE	=	.48496

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.0318095	.1063664	0.30	0.766	-.1816302	.2452493
_cons	4.43549	.5050549	8.78	0.000	3.422023	5.448957

Bank/Real Estate

Source	SS	df	MS	Number of obs	=	56
				F(1, 54)	=	31.41
Model	12.4118243	1	12.4118243	Prob > F	=	0.0000
Residual	21.3407234	54	.395198581	R-squared	=	0.3677
				Adj R-squared	=	0.3560
Total	33.7525477	55	.613682686	Root MSE	=	.62865

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	1.01273	.1807106	5.60	0.000	.6504271	1.375033
_cons	-.4451107	.8085177	-0.55	0.584	-2.066091	1.17587

Consumer goods

Source	SS	df	MS	Number of obs	=	59
				F(1, 57)	=	40.11
Model	16.8474761	1	16.8474761	Prob > F	=	0.0000
Residual	23.9408792	57	.420015424	R-squared	=	0.4130
				Adj R-squared	=	0.4027
Total	40.7883553	58	.703247505	Root MSE	=	.64809

lnmprice	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnkprice	.7602509	.1200389	6.33	0.000	.5198771	1.000625
_cons	.7779978	.5757121	1.35	0.182	-.3748459	1.930841

Starting with observing the manufacturing industry we can directly see that the t-value is insignificant which makes it clear that the relative valuation approach is not applicable in this sector. Moving on to the other two regression models we can observe that in the Bank/Real Estate industry we have a significant coefficient value of 1,01 which is interpreted as a one percentage increase in the calculated price should increase the market price by 1,01 percent. There is, in other words, a strong relationship between the calculated prices in the Bank/Real Estate sector and the market prices in that sector. However, it is this industry that drives the heteroscedasticity, which makes the estimate uncertain. The consumer goods industry has a significant coefficient value of 0,76 which indicates a quite strong relationship with the market prices. In order to compare between the industries, we can conclude that in the Bank/Real Estate sector the relative valuation approach is good a method for predicting market prices, even though you should be a bit careful in interpreting the coefficient value due to the heteroscedasticity. In the consumer-goods industry we find that the calculated values can explain the market prices of up to 76% whilst no interpretation can be done in the manufacturing sector.

We end the result section by testing if any of the coefficient values obtained from our regression model may fully explain the market prices, which would suggest that the coefficient value has a value of 1. The one-sided t-test is used, and the hypotheses are stated as follows:

H_0: $\beta = 1$

Ha: $\beta \neq 1$

	F-statistic	Prob > F	Interpretation
All industries	27,14	0,0000	Reject H_0
Manufacturing	82,85	0,0000	Reject H_0
Bank/Real Estate	0,00	0,9441	Can't reject H_0
Consumer-goods	3,99	0,0506	Can't reject H_0

To start with, when examining the relationship between all the calculated prices obtained from the relative valuation approach and the market prices, we found that this relationship cannot take a value of 1, as the table shows. We found no statistical significance in the small relationship between market prices and the manufacturing industry, so the interpretation of this test is of low importance. The bank/Real Estate industry showed a significant relationship of 1,01 with a standard error of 0,18 in the regression which makes it likely that the coefficient value may equal 1, as this t-test suggests. What was more interesting is that this t-test suggests that Consumer-goods industry with an F-statistic of 3,99, could completely explain the market prices of stocks, even though it is not likely that this relationship would stand in a 99% confidence interval.

6 Discussion

In this section of our thesis we are going to present suggestions of how our purpose and research questions may be responded. We divide this section into two parts where the first part discusses and analyze the use of our chosen methods and the second part discuss and analyze the results of our thesis.

The purpose of this study was to look at how the two classic and widely used valuation models of Free Cash Flow to Firm and Relative valuation can contribute to the explanation of market prices of shares. The second mission of our study was to investigate if we could find any significant differences between industries when using the two valuation approaches.

6.1 Method discussion

A part of great importance in our work was to interpret the theoretical formulas into reality, in order to get a final calculated value that we could use for the regressions. In FCFF, we had to make certain assumptions about the fundamentals of the model. According to what theory suggests, we assumed one high growth phase, and one stable growth phase for all companies involved. This is a complex matter, because in reality a stable growth period might appear at different times for different companies. Therefore, the rate could be considered stable at different levels. In order to be consistent, we fixed this rate to 2% for every company, to proceed with the valuation process. The high growth rate implies intuitively that the company in question has a growth of large level. In the valuation, we obtained the mean of the revenue growth for the last five years and interpreted it as the high growth for each company. This resulted in a few negative growth rates. To be consistent, we had to apply these rates into the valuations. This may be an example of the difficulties of converting the theoretical model into practice. When calculating the terminal value, it becomes clear that slight changes in cost of capital have large impacts on the outcome. This indicates how important it is to strive for the correct numbers in the different elements of the capital structure and financing costs. We would say that this exemplifies the very essence of the subjective assessment that corporate valuation implicates.

What is also important to analyze, is the assessment of how the upcoming years free cash flow might look like. Since this is a key parameter to predict the future cash flow to the firm, we based this number on how the previous three years FCFF have been and drew a mean

from them to predict the following years free cash flows. We think that this assumption is not necessarily incorrect, since there is no assurance in predicting future cash flows. It is, though, problematic since the cash flows fluctuate for many companies from year to year. The fact that we use a mean omits the possibility to look at trends, for instance.

Even though we reached statistical significance using the FCFF-values, it is inevitably to state that the model did not work for regression analysis without modifications. The regression model is based on the method of least squares (OLS), in which an underlying assumption is that the error term must be the same regardless of the value of X, in order to have homoscedasticity. This assumption could be fulfilled only when introducing a dummy variable to the regression model, which indicates that the FCFF method, exclusively, has weaknesses.

The choice of companies was primarily chosen to be optimal from a DCF-perspective, where we picked mature companies with good information about their assets. Assets that can generate cash flows that can easily be forecasted. This is in line what Damodaran suggest, that the models works best on companies with those characteristics. However, this does not mean that the chosen sample is optimal from a relative valuation perspective, considering that our two methods are so different from each other. By choosing companies from other preferences, such as growth and risk, could have resulted in a fairer and more reasonable outcome according to the relative valuation. This is an ambiguous matter since most comparative analyzes is done with companies in the same industry, which motivated our choice to conduct the method in such a way.

As mentioned before, there are no praxis on how to fold the multiples against each other, or which multiples you choose to include in a relative valuation. We choose four different multiples based on its differences, with regards to Penman's suggestions about how to weight them together. However, it is important to consider that the final price will have different values depending on the assessment of weighting these multiples; if some researchers and investors would claim that other multiples are better for obtaining the true value of a company, the stock price of our company would change substantially.

As in the case of FCFF, the Relative Valuation approach was not able to extract values that would fit in a regression model where the assumption of homoscedasticity is fulfilled. This implies that this method has difficulties to produce values that is statistically testable, which should be considered while using it.

Only because certain observations will be excluded in the regression does not mean that these values are ignored and forgotten in the study. Applying a particular model to a particular company, which results in extreme values, could be seen from different perspectives. Most likely, it is the company that has abnormal numbers, but it can also be seen as a criticism of the model in question. The creation of extreme values from a model could be a sign that the model is not always working and should be taken into consideration.

In the discussion of DCF-models in general, it is important to remember that these models assume that markets make mistakes in evaluating stocks and therefore has a restrictive view on market efficiency. It then occurs a methodological problem when finding out how close a DCF-based calculated value is in relation to the market value and base the result on how good of fit these two prices are. If the market is ineffective in pricing stocks and the discounted cash flow models are better in assessing the 'true' value of a stock, the differences between the market price and the price obtained from a DCF model are of low importance.

6.2 Result discussion

In terms of the FCFF valuation, we observe in the section where we regressed our calculated prices on the market prices, that there is a correlation between them. This suggests accepting our hypothesis that our predicted values would partly explain the market prices of the selected shares.

In this regression, where we find a coefficient value for our FCFF variable of 0,6. We interpret it as it is a medium-strong relationship and that was somewhat surprising for us, because when we visually compared the final stock prices with the market prices, we observed large differences on several stocks. Although this study cannot refer to earlier results specifically, we can at some extent confirm that the FCFF method has fundamentals that are important to derive the market price.

Previous research results about industry comparisons from a FCFF approach are rare. When applying the FCFF method to companies in different sectors to find differences, it makes it difficult to relate our research results to what already has been concluded, especially regarding the three industries we have chosen for this thesis. Apart from that, observing our results may indicate that the FCFF method applies better to the consumer-goods industry than for the other industries. This statement should be cautiously considered since the number of observations used in the three industries are somewhat small.

The relative valuation approach, where we used multiples to get a final stock price, we made a regression analysis based on 169 observations and looked at how they were related to the market prices. This regression did not meet the criterion of homoscedasticity, which could have serious consequences for the OLS estimator which the regression is based upon. Even though the estimator remains unbiased, the problem affects the standard error which by extension affects the confidence interval and hypothesis testing. This would affect the reliability of our results, because of the uncertainty of the relationship. This makes it hard to draw conclusions about whether the relative valuation approach is a good method for explaining the market prices. It is, anyhow, a common problem in many regression analyses, and for the sake of answering the research questions we have to assume that the coefficient of 0,586 is adequate. The regression expresses a relationship between the calculated prices and the market prices, but the variables do not correlate as much as in the case where the FCFF values were regressed against the market prices.

To compare between the two regressions, it is relevant to convey that the sample size differs between them considerably. In addition to this fact, it is remarkable that the multiple-based calculations, which in turn rely on the market efficiency to a higher extent, have a lower correlation with the market price, rather than otherwise. This would partly go against findings made in the article *Is cash flow king of valuations?* where they found that the use of multiples, and specifically earnings multiples, is the best measure of predicting market prices.

The industry comparison regression according to the use of multiples brought interesting results. By looking at the predicted prices in the Bank/real estate industry we discovered a strong relationship with the market prices. This relationship should not be interpreted as certain, as it was this industry that the heteroscedasticity was detected in. The consumer

goods industry did also indicate a strong relationship with market prices, while the manufacturing industry could not show any statistical evidence of explaining market prices.

7 Conclusion

In the last chapter we present the conclusions of the thesis.

In this thesis, two different valuation approaches were applied to several Swedish listed companies. The purpose was to see how well the valuation methods worked on companies in different industries.

In terms of the free cash flow to firm approach, we suggest that there is a positive relationship between the values obtained from this method, and the market prices associated with these values. Besides, we suggest that this positive relationship is found in the Consumer-goods industry, the Bank/Real Estate industry and the Manufacturing industry, where the method is best applied on the companies in the Consumer-goods industry. Furthermore, a limited number of observations were used in the regression analysis, which may have affected the study's results.

When using weighted industry multiples, we find that there is also a positive relationship between the calculated prices and the market prices, even though we could not precise the exact value of relationship due to the heteroscedasticity in our regression model. This method was surprisingly applicable to the Bank/Real Estate sector and the Consumer-goods industry, although the heteroscedasticity of this regression model needs to be taken into consideration.

When interpreting the results in this study, certain things must be taken into consideration. Our selected sample might not be optimal for both our valuation approaches. The companies' works well from a DCF perspective, since no surrounding effects affect the search for the intrinsic value of a company. However, if the relative valuation was conducted in a way where the comparable firms were based on similarities in cash flows, risk and growth, we might have expected a different result. The comparative companies that we selected might be too different from the company that is being evaluated, based on these fundamentals, and may have had an impact on the final result.

7.1 Suggestion for Further Research

In the future, it would be interesting to see a study that performs a relative valuation on a larger sample with Swedish companies. In such a study, it could be possible to choose comparable companies by looking at the growth rate, cash flows and risk, and not only choose companies based on the fact that they are operating in the same industry. In a study like that, it would be possible to look further into the multiples and see which of these a better indicator of company valuation than others.

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Appendix

1. Relative valuation 2014

3	AVANZA BANK HOLDING	50,2	34,0	21,5	2,4	5,7	8,8	7449427	346000	5,645	7,49	1,17	144369		30,24	15,99	40,57	9,262931818	21,1	50,2
4	FABEGE	47,4	12,5	14,1	7,7	7,2	6,6	16638392	2557000	41,668	0,93	6,3	330783		38,23	86,08	130,85	68,3734	78,4	47,4
5	SKANDINAVISKA ENSKILDA BANKEN C	87,5	12,2	20,5	21,0	41,6	2,1	217882690	46182000	61,472	1,31	6,3	2194172		220,65	86,08	356,28	100,8699636	172,9	87,5
6	PLATZER FASTIGHETER HOLDING B	28,5	9,6	18,4	5,2	5,1	5,6	3207539	539500	28,525	0,86	NA	103991		26,76		87,82	46,80693182	41,6	28,5
7	VICTORIA PARK A	7,4	2,3	12,5	7,9	1,5	4,8	1267851	407000	7,548	1,03	2,51	51381		8,13	34,30	134,08	12,38558182	40,3	7,4
8	KUNGSLEDEN	49,9	10,3	10,6	10,4	15,3	3,3	10283155	1943000	48,944	0,84	10,81	185967		80,83	147,70	176,86	80,31265455	113,2	49,9
9	CATELLA B	7,5	19,2	3,0	3,4	17,8	0,4	866005	279000	14,247	0,48	0	81699		94,49	0,00	57,81	23,37803182	39,8	7,5
10	CASTELLUM	101,9	13,1	21,2	9,6	17,6	5,8	20024399	1813000	72,211	1,19	11,45	189014		93,00	156,45	162,36	118,4916864	129,8	101,9
11	HUFVUDSTADEN A	98,8	10,9	9,8	12,9	8,1	12,2	20956619	2661200	80,938	1,07	10,78	206266		42,78	147,29	218,39	132,8119	134,8	98,8
12	WIHLBORGS FASTIGHETER	66,8	12,0	25,5		12,4	5,4	10971298	981000	45,325	1,27	8,26			65,62	112,86	0,00	74,37420455	65,4	66,8
13	SVENSKA HANDELSBANKEN A	108,6	14,2	29,0	19,1	33,4	3,3	23303871	42016000	66,504	1,58	7,92	2194172		176,71	108,22	324,14	109,1270182	165,5	108,6
14	AVERAGE	59,5	13,7	16,9	10,0	15,1	5,3				1,64									
15	LAMMHULTS DESIGN GROUP B	32,5	23,1	8,0	5,7	89,5	0,4	311735	48300	46,886	0,49	0,19	8448		67,50	5,26	63,57	96,96877273	66,1	32,5
16	NEW WAVE GROUP B	43,0	16,2	14,3	4,6	64,4	0,7	2509192	304600	36,522	0,96	2,99	66344		48,59	82,82	51,05	75,53413636	66,7	43,0
17	AGROMINO	182,0	-		5,2	348,9	0,5	86638	6693	305,65	0,66	0	1296		263,17	0,00	57,42	632,1397727	317,0	182,0
18	MQ HOLDING	19,7	10,9	7,9	3,4	31,7	0,6	1107430	163986	19,643	0,86	1,54	48643		23,93	42,65	37,48	40,62529545	37,1	19,7
19	BILIA A	55,0	17,1	6,6		193,5	0,3	5978833	848000	18,362	2,2	2,46			145,99	68,14	0,00	37,97595455	58,0	55,0
20	CLOETTA 'B'	22,8	30,3	14,3	2,4	18,5	1,2	6522796	679000	14,025	1,4	0,83	288619		13,97	22,99	26,16	29,00625	24,2	22,8
21	MEKONOMEN	153,1	21,4	16,4	12,7	134,1	1,1	7323903	547000	47,866	3,46	9,27	43162		101,17	256,76	140,91	98,99559091	139,4	153,1
22	CLAS OHLSON B	143,3	22,6	11,7	11,7	107,9	1,3	9060733	742000	31,119	3,96	5,53	63288		81,38	153,17	130,36	64,35975	98,7	143,3
23	AXFOOD	88,8	19,0	11,1	10,1	183,4	0,5	24476172	2125000	19,198	4,18	4,61	209871		138,32	127,69	112,58	39,70495455	91,6	88,8
24	ELECTROLUX B	175,2	67,6	9,6	25,2	391,7	0,4	65510113	7230000	57,397	2,94	5,99	287397		295,47	165,91	279,72	118,7074318	195,7	175,2
25	ICA GRUPPEN	217,8	42,1	11,3	29,1	433,7	0,5	61467372	5858000	122,912	1,64	52,53	201005		327,15	1454,96	324,05	254,2043636	522,9	217,8
26	THULE GROUP	79,8	34,4		5,8	54,6	1,5	8950000	577000	29,66	NA	NA	100000		41,21		64,16		21,1	79,8
27	AVERAGE	101,1	27,7	11,1	10,5	171,0	0,8				2,07									
28	AUTOLIV	75,0	20,2	9,2	10,3	100,0	0,8	9412844	1028900	38,637	2,32	3,94	94400		202,13	113,00	140,53	109,651806	135,0	75,0
29	SANDVIK	90,7	22,7	8,8	11,4	70,8	1,3	11400000	14244000	29,128	3,08	4	1254386		143,12	114,72	146,41	82,665264	113,9	90,7
30	HALDEX	84,0	68,8	12,2	8,1	99,1	0,8	4497784	356000	28,481	2,14	0,45	44204		200,27	12,91	103,84	80,829078	95,7	84,0
31	ASSA ABLOY B	114,8	27,0	16,9	9,2	51,2	2,2	153583345	10208000	32,496	3,48	4,88	1112576		103,43	139,96	118,30	92,223648	109,2	114,8
32	FAGERHULT	29,6	18,3	13,1	3,6	28,7	1,0	5211909	473700	10,209	2,13	1,3	130196		58,00	37,29	46,91	28,973142	40,0	29,6
33	NEDERMAN HOLDING	62,7	27,7	11,4	6,0	80,7	0,8	1962319	211400	20,864	3,08	2,59	35146		163,05	74,28	77,55	59,212032	86,7	62,7
34	LINDAB INTERNATIONAL	78,8	21,9	11,0	7,8	91,7	0,9	5007378	599000	43,809	1,46	1,78	76332		185,43	51,05	101,18	124,329942	117,3	78,8
35	ASTRAZENECA (OME)	512,5	47,8	19,9	2,4	12,6	1,0	57542495	3008687	9,976	NA		230,78		1263143	25,39	6618,96	30,71	28,311888	1346,3	512,5
36	NIBE INDUSTRIER B	47,3	25,5	15,6	3,8	23,9	2,0	22149957	1779000	14,185	2,43	1,73	462455		48,22	49,62	49,60	40,25703	45,6	47,3
37	ATLAS COPCO A	138,9	19,8	13,5	17,0	77,1	1,8	266011204	20697000	41,523	4,23	7,44	1218000		155,83	213,39	219,09	117,842274	164,8	138,9
38	ABB LTD N (OME)	155,4	19,6	10,0	2,1	16,1	9,6	47753138	4868933	7,159	NA		1,14		2300649	32,62	32,70	27,29	20,317242	26,6	155,4
39	ALFA LAVAL	171,5	24,9	13,1	14,1	83,6	2,1	62205372	5914000	40,712	4,03	7,32	419456		168,98	209,94	181,79	115,540656	158,4	171,5

2. Relative valuation 2015

1	#NAME?	P2015	2015PE	2015EPS	2015BVPS	2015EV/EI	2015EBITI	2015S	2015P/S	P/BV		Enl P/E	Enl P/S	Enl EV/EBITDA	Enl Price/BV		Viktat pris	Marknadspr
2	AVANZA BANK	51	31,1	1,63	7,674	0	3,25722	7,391	6,90028	6,64582		23,5165	39,4355	44,69791664	12,3935		26 kr	51 kr
3	FABEGE AB	50,9	18,6	2,74	49,818	26,357	1,44475	6,103	8,34016	1,02172		39,5307	32,5633	19,82592313	80,4561		51 kr	51 kr
4	SKANDINAVISKA ENSK	97,3	12	8,12	65,106	0	0,21789	36,82	2,64259	1,49449		117,149	196,457	2,990022131	105,146		105 kr	97 kr
5	PLATZER FASTIGHETER	30,38	10,7	2,83	34,119	24,184	4,59559	5,668	5,35992	0,89041		40,8292	30,2423	63,06390293	55,1022		49 kr	30 kr
6	VICTORIA PARK I	6,3	1,3	4,93	12,695		2,14712	2,81	2,24199	0,49626		71,1265	14,9931	29,46431271	20,5024		31 kr	6 kr
7	KUNGSLEDEN AB	56,27	1	0	50,186	18,977	2,56981	12,502	4,50088	1,12123		0	66,7058	35,26474229	81,0504		53 kr	56 kr
8	CATELLA AB	11	7,7	1,43	16,139	5,1	5,84737	22,832	0,48178	0,68158		20,631	121,823	80,24175421	26,0645		55 kr	11 kr
9	CASTELLUM AB	106,9	18,8	5,68	83,422	18,759	2,52838	17,454	6,12467	1,28144		81,9469	93,1278	34,69625705	134,727		96 kr	107 kr
10	HUFVUDSTADEN AB	101,2	11,6	8,71	94,862	23,741	2,31691	8,188	12,3596	1,06681		125,662	43,688	31,79427695	153,202		102 kr	101 kr
11	WIHLBORG FASTIGHETER	72	30,7	2,35	57,744	20,109	3,10904	12,698	5,67018	1,24688		33,9041	67,7516	42,66443521	93,2566		66 kr	72 kr
12	SV. HANDELSBANKEN AB	122,3	15,2	8,06	67,258	0	0,2506	30,051	4,06975	1,81837		116,284	160,341	3,438867405	108,622		99 kr	122 kr
13	AVERAGE		14,4273			13,7227			5,33561	1,615								
14	LAMMHULTS	36,6	15,5	2,36	47,348		5,98958	86,777	0,42177	0,773		46,0672	68,0948	52,83651042	393,428		191 kr	37 kr
15	NEW WAVE GROUP AB	38,8	14,8	2,63	37,556	10,461	0,76269	74,833	0,51849	1,03312		51,3376	58,7222	6,72800615	312,064		148 kr	39 kr
16	AGROMINO A/S	90		0	1,283	3,265	39,0432	231,487	0,38879	70,1481		0	181,65	344,4157716	10,6608		109 kr	90 kr
17	MQ HOLDING AB	24,79	11,9	2,07	21,439	7,108	1,04023	32,019	0,77423	1,1563		40,4064	25,1256	9,176301626	178,143		86 kr	25 kr
18	BILIA AB	60,12	15,3	3,94	20,382	7,544	0,50163	202,783	0,29647	2,94966		76,9088	159,126	4,425042033	169,36		116 kr	60 kr
19	CLOETTA AB	23	24,4	0,94	15,051	10,259	0,17532	19,833	1,15968	1,52814		18,3488	15,5631	1,54654697	125,063		57 kr	23 kr
20	MEKONOMEN AB	170,1	23	7,39	49,65	11,112	1,17233	130,3	1,30545	3,42598		144,253	102,248	10,3415699	412,556		216 kr	170 kr
21	CLAS OHLSON AB	135,5	19,6	6,9	33,923	9,952	0,80043	116,162	1,16647	3,99434		134,688	91,1535	7,060915591	281,876		159 kr	136 kr
22	AXFOOD AB	116,67	22,8	5,12	21,585	10,273	0,2411	196,535	0,59363	5,40514		99,9424	154,223	2,126843823	179,356		123 kr	117 kr
23	ELECTROLUX AB	227,4	20	15	52,106	7,175	0,17606	430,202	0,52859	4,36418		292,8	337,584	1,553122823	432,964		300 kr	227 kr
24	ICA GRUPPEN AB	308,8	27,9	11,08	139,406	11,065	0,25156	503,342	0,6135	2,21511		216,282	394,977	2,219087732	1158,36		586 kr	309 kr
25	THULE GROUP AB	87,75			32,28		0,506	53,2	1,64944	2,7184		0	41,7466	4,4636284	268,224		117 kr	88 kr
26	AVERAGE		19,52			8,8214			0,78471	8,30929								
27	AUTOLIV, INC	76,315	23,7	3,23	39,224	7,865	11,9773	103,729	0,73572	1,94562		79,0175	222,103	121,1623519	195,028		162 kr	76 kr
28	SANDVIK AB	76,1	21	3,62	27,088	8,127	0,84121	68,436	1,11199	2,80936		88,5584	146,534	8,509663851	134,686		103 kr	76 kr
29	HALDEX AB	103,5	47,2	2,19	31,4	7,457	23,8711	108,067	0,95774	3,29618		53,5754	231,391	241,4804814	156,126		168 kr	104 kr
30	ASSA ABLOY AB	137,3	28,6	4,8	37,429	14,947	0,94997	61,308	2,23951	3,66828		117,425	131,272	9,609861214	186,103		126 kr	137 kr
31	FAGERHULT AB	40,83	21,1	1,94	11,03	11,567	8,09892	30,011	1,3605	3,70172		47,4595	64,2591	81,92866013	54,8429		61 kr	41 kr
32	NEDERMAN HOLDING AB	54,5	24,3	2,24	23,818	9,398	30,0233	91,257	0,59721	2,28819		54,7985	195,398	303,7160189	118,427		158 kr	55 kr
33	LINDAB INTER	66	14,8	4,45	45,97	8,388	13,8238	99,421	0,66384	1,43572		108,863	212,879	139,8417859	228,57		184 kr	66 kr
34	NIBE INDUSTRIER AB	48,59	23,8	2,04	16,062	13,345	2,28174	28,636	1,69682	3,02515		49,9058	61,3149	23,08203652	79,8628		59 kr	49 kr
35	ATLAS COPCO	155,98	22,5	6,93	38,312	11,851	0,86769	83,917	1,85874	4,07131		169,533	179,682	8,777599137	190,493		148 kr	156 kr
36	ABB LTD	166	20,9	1,04	6,621	8,124	0,48147	15,407	10,7743	25,0717		25,4422	32,9892	4,870542725	32,9207		26 kr	166 kr
37	ALFA LAVAL AB	147,5	21,2	6,94	43,633	10,207	2,51564	94,756	1,55663	3,38047		169,778	202,89	25,4482072	216,95		166 kr	148 kr
38	AVERAGE		24,4636			10,116			2,14118	4,97216								

3. Relative valuation 2016

	#NAME?	P2016	2016PE	2016EPS	2016BVPS	2016EV/E	2016EBIT	2016S	2016P/S	P/BV		Enl P/E	Enl P/S	Enl EV/EBI	Enl Price/BV		Viktat pris	Marknadsp
2	AVANZA BANK	73,5	29,2	2,52	8,767		4,28969	7,748	9,48632	8,38371		25,9789	46,2168	100,155	15,4881		41 kr	74 kr
3	FABEGE AB	70,05	7,8	8,96	69,538	29,874	1,9348	7,848	8,92584	1,00736		92,3695	46,8133	45,1733	122,848		86 kr	70 kr
4	SKANDINAVISKA ENSK	88,85	11	8,06	64,996		0,29507	30,404	2,92231	1,36701		83,0913	181,36	6,88917	114,824		100 kr	89 kr
5	PLATZER FASTIGHETER	34,99	7,3	4,8	38,907	24,933	5,34741	6,837	5,11774	0,89932		49,4836	40,7827	124,85	68,7345		71 kr	35 kr
6	VICTORIA PARK I	14,9	3,2	4,64	18,037	32,05	2,66559	3,629	4,10581	0,82608		47,8342	21,647	62,2355	31,8648		39 kr	15 kr
7	KUNGSLEDEN AB	59,21	5,9	10,09	58,284	17,282	3,44147	13,234	4,47408	1,01589		104,019	78,9408	80,3506	102,967		94 kr	59 kr
8	CATELLA AB	21,5	8,1	2,64	19,096	8,465	7,81928	24,765	0,86816	1,12589		27,216	147,723	182,563	33,7357		85 kr	22 kr
9	CASTELLUM AB	104,73	9,6	10,89	107,013	26,281	2,3426	19,327	5,41884	0,97867		112,266	115,286	54,6944	189,053		132 kr	105 kr
10	HUFVUDSTADEN AB	119,9	8,6	13,9	111,736	27,132	3,10279	8,678	13,8165	1,07307		143,296	51,7643	72,4432	197,397		132 kr	120 kr
11	WIHLBORG FASTIGHETER	85,5	8,5	10,07	74,574	20,765	4,1636	13,199	6,47776	1,14651		103,813	78,732	97,2108	131,745		109 kr	86 kr
12	SV. HANDELSBANKEN AB	112,9	14,2	7,96	70,146		0,32919	28,214	4,00156	1,6095		82,0604	168,296	7,68591	123,923		101 kr	113 kr
13	AVERAGE		10,3091			23,3478			5,965	1,76664								
14	LAMMHULTS	40,4	14,8	2,73	50,875	7,287	75,7576	97,822	0,413	0,7941		58,2235	105,045	684,495	153,454		231 kr	40 kr
15	NEW WAVE GROUP AB	34,5	13,3	2,6	42,123	9,447	9,64669	78,939	0,43705	0,81903		55,4509	84,7677	87,1611	127,055		96 kr	35 kr
16	AGROMINO A/S	51		0	12,946	0,665	37,0285	17	3	3,93944		0	18,2553	334,565	39,0488		86 kr	51 kr
17	MQ HOLDING AB	35,7	14,1	2,53	22,159	9,099	13,1571	34,566	1,03281	1,61108		53,958	37,1183	118,879	66,8379		69 kr	36 kr
18	BILIA AB	96	17	5,66	24,426	9,57	6,22568	233,772	0,41066	3,93024		120,712	251,033	56,2511	73,6758		115 kr	96 kr
19	CLOETTA AB	28	20,7	1,35	14,549	10,277	2,21746	20,448	1,36933	1,92453		28,7918	21,9578	20,0355	43,8839		32 kr	28 kr
20	MEKONOMEN AB	143,9	35,1	4,1	53,519	9,393	14,8279	134,053	1,07346	2,68876		87,4418	143,951	133,975	161,429		138 kr	144 kr
21	CLAS OHLSON AB	153	21,2	7,23	33,748	11,05	10,0985	120,278	1,27205	4,5336		154,196	129,159	91,243	101,794		116 kr	153 kr
22	AXFOOD AB	146,8	23,8	6,17	19,617	11,506	3,04949	206,58	0,71062	7,48331		131,589	221,834	27,5532	59,1705		100 kr	147 kr
23	ELECTROLUX AB	205,2	20,1	10,21	61,615	5,996	2,22688	421,34	0,48702	3,33036		217,751	452,451	20,1206	185,848		212 kr	205 kr
24	ICA GRUPPEN AB	307,4	20,2	15,23	147,484	10,83	3,18175	515,32	0,59652	2,08429		324,814	553,37	28,7482	444,854		359 kr	307 kr
25	THULE GROUP AB	115,75	34,3	3,38	37,868	13,304	6,33438	55,554	2,08356	3,05667		72,0862	59,656	57,2332	114,221		83 kr	116 kr
26	AVERAGE		21,3273			9,03533			1,07384	3,01629								
27	AUTOLIV, INC	89,8794	26,5	3,4	41,692	8,697	7,25624	113,955	0,78873	2,15579		73,5945	247,68	76,3699	199,43		159 kr	90 kr
28	SANDVIK AB	74,05	23,8	3,11	31,248	7,72	0,51021	65,014	1,13899	2,36975		67,3174	141,307	5,36982	149,472		103 kr	74 kr
29	HALDEX AB	79,5	22,4	3,55	30,585	5,772	14,4783	98,95	0,80344	2,59931		76,8414	215,067	152,38	146,301		147 kr	80 kr
30	ASSA ABLOY AB	178	26,5	6,72	42,51	16,297	0,57617	64,183	2,77332	4,18725		145,457	139,501	6,06407	203,343		140 kr	178 kr
31	FAGERHULT AB	45,77	22	2,08	12,463	13,282	4,90226	34,415	1,32994	3,67247		45,0225	74,8006	51,595	59,6157		58 kr	46 kr
32	NEDERMAN HOLDING AB	85,17	21,6	3,95	28,002	9,351	18,2461	88,588	0,96142	3,04157		85,4995	192,545	192,035	133,945		148 kr	85 kr
33	LINDAB INTER	62,9	16,9	3,72	50,411	8,41	8,38443	102,827	0,61171	1,24774		80,5211	223,493	88,2438	241,137		175 kr	63 kr
34	NIBE INDUSTRIER AB	67,82	27	2,51	24,065	16,057	1,2698	32,698	2,07413	2,8182		54,3301	71,0688	13,3643	115,113		74 kr	68 kr
35	ATLAS COPCO	153,03	18,1	8,46	43,727	10,963	0,52698	83,345	1,8361	3,49967		183,121	181,149	5,54632	209,164		158 kr	153 kr
36	ABB LTD	152,8	16,2	1,06	6,42	8,564	0,29925	15,646	9,76607	23,8006		22,9442	34,0064	3,14948	30,7095		24 kr	153 kr
37	ALFA LAVAL AB	155	17,1	9,07	48,06	10,659	1,52579	84,953	1,82454	3,22514		196,324	184,644	16,0585	229,891		171 kr	155 kr
38	AVERAGE		21,6455			10,5247			2,17349	4,78341								

4. Relative valuation 2017

	#NAME?	P2017	2017PE	2017EPS	2017BVPS	2017EV/E	2017EBIT	2017S	2017P/S	P/BV		Enl P/E	Enl P/S	Enl EV/EB	Enl Price/BV		Viktat pris	Marknadspr
2	COLLECTOR AB	105	26,3	3,99	29,983		8,3649	18,824	5,57799	3,50198		51,1053	120,812	188,174	55,7948		94 kr	105 kr
3	AVANZA BANK	75,1	26,6	2,82	9,515		5,72739	8,317	9,0297	7,8928		36,1195	53,3781	128,841	17,7063		51 kr	75 kr
4	FABEGE AB	73,3	4,4	16,7	84,518	32,107	2,59687	6,892	10,6355	0,86727		213,899	44,2326	58,4182	157,278		126 kr	73 kr
5	SKANDINAVISKA ENSK	99,05	19,7	5,02	66,415		0,39639	31,137	3,1811	1,49138		64,2978	199,836	8,91709	123,59		104 kr	99 kr
6	PLATZER FASTIGHETER	46	10,9	4,21	49,355	27,181	7,17723	8,312	5,53417	0,93202		53,9231	53,346	161,456	91,8437		90 kr	46 kr
7	VICTORIA PARK I	22,2	5,3	4,17	25,445	27,924	3,53681	4,422	5,02035	0,87247		53,4108	28,3802	79,5628	47,3501		51 kr	22 kr
8	KUNGSLEDEN AB	54,9	22,2	2,47	64,981	16,059	3,9331	10,972	5,00365	0,84486		31,6366	70,4178	88,4775	120,922		86 kr	55 kr
9	CATELLA AB	23,1	5,3	4,38	21,124	6,656	10,4949	27,942	0,82671	1,09354		56,1005	179,331	236,09	39,3092		110 kr	23 kr
10	CASTELLUM AB	122,5	6,8	17,91	123,491	20,076	3,14421	18,968	6,45825	0,99198		229,397	121,736	70,7309	229,802		176 kr	123 kr
11	HUFVUDSTADEN AB	140,3	7	20,18	123,15	28,378	4,16453	8,923	15,7234	1,13926		258,472	57,2674	93,6836	229,167		174 kr	140 kr
12	WIHLBORG FASTIGHETER	82,75	4,9	16,93	88,424	21,584	5,58834	14,928	5,54327	0,93583		216,845	95,8072	125,713	164,546		153 kr	83 kr
13	SV. HANDELSBANKEN AB	128,7	14,3	9,02	72,829		0,44183	28,719	4,48135	1,76715		115,531	184,317	9,93931	135,526		116 kr	129 kr
14	AVERAGE		12,8083			22,4956			6,41796	1,86088							- kr	
15	LAMMHULTS	57	16,5	3,46	52	7,415	101,681	113,696	0,50134	1,09615		64,702	107,321	974,546	145,455		287 kr	57 kr
16	NEW WAVE GROUP AB	56	17,5	3,2	45,319	10,274	12,9477	84,368	0,66376	1,23568		59,84	79,6373	124,095	126,767		103 kr	56 kr
17	AGROMINO A/S	18,9		0	13,168		49,3083	13,522	1,39772	1,4353		0	12,7638	472,589	36,8337		112 kr	19 kr
18	MQ HOLDING AB	26,74	13,7	1,95	22,38	7,656	17,6593	37,438	0,71425	1,19482		36,465	35,3388	169,253	62,6016		73 kr	27 kr
19	BILIA AB	104,5	16,1	6,48	25,953	8,454	8,50908	268,784	0,38879	4,02651		121,176	253,713	81,5541	72,596		120 kr	105 kr
20	CLOETTA AB	28,6	21,2	1,35	13,228	9,638	2,97624	20,201	1,41577	2,16208		25,245	19,0683	28,5254	37,0015		29 kr	29 kr
21	MEKONOMEN AB	145,98	18,2	8,04	54,747	9,442	19,9018	135,536	1,07706	2,66645		150,348	127,936	190,746	153,139		155 kr	146 kr
22	CLAS OHLSON AB	138	25,5	5,4	35,678	9,295	13,617	126,626	1,08982	3,86793		100,98	119,526	130,51	99,7989		110 kr	138 kr
23	AXFOOD AB	141,7	19,7	7,18	20,346	10,407	4,09678	219,158	0,64657	6,96451		134,266	206,869	39,265	56,9121		99 kr	142 kr
24	ELECTROLUX AB	223,3	22,7	9,83	71,615	6,156	2,9889	424,704	0,52578	3,11806		183,821	400,89	28,6467	200,322		203 kr	223 kr
25	ICA GRUPPEN AB	277,5	13,7	20,18	157,696	12,853	4,27051	529,24	0,52434	1,75971		377,366	499,564	40,9301	441,109		360 kr	278 kr
26	THULE GROUP AB	137,2	20,9	6,58	33,966	13,838	8,41555	57,6	2,38194	4,03933		123,046	54,3702	80,6577	95,0101		90 kr	137 kr
27	AVERAGE		18,7			9,58436			0,94393	2,79721							- kr	
28	AUTOLIV, INC	82,049	16,6	4,93	46,38	7,901	9,87356	118,388	0,69305	1,76906		122,847	294,304	112,129	250,133		206 kr	82 kr
29	SANDVIK AB	114,9	41,1	2,8	38,858	9,773	0,6848	72,47	1,58548	2,95692		69,7709	180,155	7,77687	209,566		135 kr	115 kr
30	HALDEX AB	117,5	27	4,35	30,992	9,9	19,4326	100,941	1,16405	3,7913		108,394	250,932	220,686	167,144		183 kr	118 kr
31	ASSA ABLOY AB	171,3	24,1	7,12	45,597	14,92	0,77333	68,544	2,49912	3,75683		177,417	170,396	8,78232	245,91		170 kr	171 kr
32	FAGERHULT AB	67,86	23,1	2,94	14,396	14,398	6,54102	39,43	1,72102	4,71381		73,2595	98,0203	74,2828	77,6394		80 kr	68 kr
33	NEDERMAN HOLDING AB	64,17	13,1	4,91	30,659	9,226	24,4806	89,73	0,71515	2,09302		122,348	223,063	278,013	165,348		191 kr	64 kr
34	LINDAB INTER	73,5	19,3	3,8	54,093	8,656	11,2535	107,976	0,68071	1,35877		94,6891	268,421	127,8	291,73		215 kr	74 kr
35	NIBE INDUSTRIER AB	72,6	25,4	2,86	25,41	14,377	1,70431	37,715	1,92496	2,85714		71,266	93,7569	19,3549	137,039		92 kr	73 kr
36	ATLAS COPCO	207,15	32,6	6,35	49,961	12,895	0,70774	95,891	2,16027	4,14623		158,23	238,378	8,0374	269,446		189 kr	207 kr
37	ABB LTD	193,6	26,8	0,82	6,749	9,78	0,40166	15,669	12,3556	28,6857		20,4329	38,9521	4,56147	36,3982		27 kr	194 kr
38	ALFA LAVAL AB	155,4	25	6,22	48,63	13,095	2,04789	84,19	1,84582	3,19556		154,991	209,291	23,2568	262,268		182 kr	155 kr

5. Relative valuation 2018

	#NAME?	P2018	2018PE	2018EPS	2018BVPS	2018EV/EBITDA	2018EBIT	2018S	2018P/S	P/BV		Enl P/E	Enl P/S	Enl EV/EBITDA	Enl Price/BV		Viktat pris	Marknadsp
2	COLLECTOR AB	82	16,3	5,03	33,84		9,44581	22,602	3,628	2,42317		49,3359	138,9	206,009643	54,489505		101 kr	82 kr
3	AVANZA BANK	70,4	27,5	2,56	10,894		6,40835	9,001	7,82135	6,46227		25,1093	55,3155	139,7637251	17,541627		51 kr	70 kr
4	FABEGE AB	87,45	4,2	21,05	105,546	30,67	2,93244	8,071	10,8351	0,82855		206,465	49,6002	63,95533099	169,95122		132 kr	87 kr
5	SKANDINAVISKA ENSK	96,8	12,1	7,98	68,76		0,44827	32,184	3,00771	1,4078		78,2705	197,786	9,776507756	110,71804		101 kr	97 kr
6	PLATZER FASTIGHETER	52,6	6	8,75	60,343	21,118	8,09575	8,716	6,03488	0,87168		85,8229	53,564	176,5652021	97,1649		102 kr	53 kr
7	VICTORIA PARK I	29,2	3,7	7,8	29,994	29,642	3,99384	4,9	5,95918	0,97353		76,505	30,1128	87,10416203	48,296638		58 kr	29 kr
8	KUNGSLEDEN AB	59,55	5,6	10,58	72,192	20,024	4,44133	10,92	5,4533	0,82488		103,772	67,1086	96,86376217	116,24428		100 kr	60 kr
9	CATELLA AB	19,72	10	1,98	17,143	4,373	11,5318	26,345	0,74853	1,15032		19,4205	161,903	251,5049189	27,603829		98 kr	20 kr
10	CASTELLUM AB	137,4	5,9	23,11	145,501	21,534	3,5505	20,414	6,73068	0,94432		226,671	125,454	77,43506155	234,28716		180 kr	137 kr
11	HUFVUDSTADEN AB	131,6	7,3	17,92	140,593	26,197	4,70267	9,129	14,4156	0,93604		175,765	56,1021	102,5633708	226,38425		157 kr	132 kr
12	WIHLBORG FASTIGHETER	98,75	5,4	18,2	101,032	20,919	6,31046	17,463	5,65481	0,97741		178,512	107,318	137,6288034	162,68273		150 kr	99 kr
13	SV. HANDELSBANKEN AB	111,4	13,7	8,12	73,167		0,49893	32,228	3,45662	1,52254		79,6437	198,056	10,88139506	117,81423		105 kr	111 kr
14	AVERAGE		9,80833			21,809625			6,14548	1,61021							- kr	
15	LAMMHULTS	48,1	12	4,02	53,977	6,535	114,82	114,169	0,42131	0,89112		58,0707	107,291	1150,747676	143,82975		321 kr	48 kr
16	NEW WAVE GROUP AB	55,5	11	5,04	51,474	9,195	14,6208	94,819	0,58533	1,07821		72,8051	89,1069	146,5319601	137,16013		117 kr	56 kr
17	AGROMINO A/S	19,35	7,5	2,6	13,072		55,6799	10,936	1,76939	1,48026		37,5582	10,2772	558,0343473	34,832289		135 kr	19 kr
18	MQ HOLDING AB	20,49	10,6	1,93	22,523	6,824	19,9412	35,67	0,57443	0,90974		27,8797	33,5212	199,854375	60,015884		76 kr	20 kr
19	BILIA AB	80,7	12,2	6,62	28,875	6,494	9,60862	281,146	0,28704	2,79481		95,6289	264,209	96,29935675	76,941733		122 kr	81 kr
20	CLOETTA AB	30,04		0	13,748	11,924	3,36083	21,704	1,38408	2,18505		0	20,3965	33,68287037	36,633591		25 kr	30 kr
21	MEKONOMEN AB	125,77	15,4	8,16	67,928	12,485	17,2129	195,853	0,64217	1,85152		117,875	184,054	172,5110706	181,00426		167 kr	126 kr
22	CLAS OHLSON AB	112,1	14,2	7,88	35,817	8,492	15,3462	129,915	0,86287	3,1298		113,83	122,089	153,8019928	95,439725		116 kr	112 kr
23	AXFOOD AB	157,5	22,6	6,97	20,545	11,58	4,63018	229,454	0,68641	7,6661		100,685	215,631	46,4045269	54,745209		94 kr	158 kr
24	ELECTROLUX AB	257,5	14,5	17,7	75,637	6,487	3,37512	431,903	0,5962	3,40442		255,685	405,884	33,82608852	201,54604		220 kr	258 kr
25	ICA GRUPPEN AB	296	14,8	20	163,98	13,447	4,82234	573,482	0,51615	1,8051		288,909	538,934	48,33040693	436,94911		350 kr	296 kr
26	THULE GROUP AB	185,8	24,1	7,71	38,873	16,781	9,39841	62,946	2,95174	4,77967		111,374	59,154	94,19252549	103,58289		94 kr	186 kr
27	AVERAGE		14,4455			10,02218182			0,93976	2,66465							- kr	
28	AUTOLIV, INC	92,9265	22,2	4,19	21,627	9,009	11,1366	99,407	0,93481	4,29678		101,131	305,604	128,3819956	138,89973		163 kr	93 kr
29	SANDVIK AB	147,05	21,1	6,96	46,617	9,61	0,77329	79,778	1,84324	3,15443		167,989	245,259	8,914378683	299,39837		204 kr	147 kr
30	HALDEX AB	88,1	27	0,12	35,811	7,258	21,9437	115,804	0,76077	2,46014		2,89636	356,012	252,9651574	229,99668		214 kr	88 kr
31	ASSA ABLOY AB	170,5	26,6	6,4	46,715	14,736	0,87326	75,666	2,25332	3,64979		154,473	232,617	10,06690081	300,02778		199 kr	171 kr
32	FAGERHULT AB	91,02	27,4	3,32	16,212	15,087	7,38575	42,8	2,12664	5,61436		80,1327	131,579	85,14224662	104,12181		101 kr	91 kr
33	NEDERMAN HOLDING AB	84	16,9	4,97	35,632	10,754	27,644	101,283	0,82936	2,35743		119,958	311,371	318,6774151	228,84705		242 kr	84 kr
34	LINDAB INTER	70,5	15,7	4,48	58,481	8,012	12,7076	122,177	0,57703	1,20552		108,131	375,605	146,4925826	375,59509		276 kr	71 kr
35	NIBE INDUSTRIER AB	79,48	24,7	3,22	30,566	14,224	1,92454	44,673	1,77915	2,60027		77,7191	137,337	22,1859021	196,31059		126 kr	79 kr
36	ATLAS COPCO	262,29	26	10,09	34,984	13,659	0,79986	78,585	3,33766	7,49743		243,536	241,591	9,220699867	224,68526		189 kr	262 kr
37	ABB LTD	220,6	25,6	1,03	6,426	11,308	0,45498	12,704	17,3646	34,3293		24,8605	39,0555	5,244967696	41,27108		30 kr	221 kr
38	ALFA LAVAL AB	194,9	32,3	6,03	55,97	13,15	2,31252	96,949	2,01034	3,48222		145,542	298,047	26,65850964	359,46815		238 kr	195 kr

6. FCFF 14

	Namn	FCFF 12	FCFF 13	Average (FCFF0)		High g	Stable g	WACC
2	ABB	−590494	1252272	330889		10%	2%	5,48%
3	Agromino	42106	−35961	3073		6%	2%	5,81%
4	Alva Laval	1986001	2743167	2364584		7%	2%	5,56%
5	Assa Abloy	3574721	2649711	3112216		10%	2%	5,72%
6	Autoliv	354977	489660	422319		7%	2%	8,70%
7	Avanza	−480977	1406774	462899		2%	2%	7,84%
8	Axfood	880449	575786	728118		3%	2%	4,08%
9	Claes Ohlson B	707417	239608	473513		5%	2%	4,66%
10	Fagerhult	158397	101199	129798		8%	2%	3,36%
11	Haldex	63124	50144	56634		2%	2%	10,22%
12	Hufvudstaden A	1030900	1968918	1499909		6%	2%	4,62%
13	ICA-gruppen	309059	6835087	3572073		6%	2%	4,05%
14	Lammhults	30855	26788	28822		−8%	2%	5,29%
15	Lindab	−43660	403456	179898		0%	2%	6,83%
16	Mekonomen	324275	431231	377753		19%	2%	3,92%
17	MQ holding	59445	31800	45623		1%	2%	5,10%
18	Nederman Holdi	190327	87276	138802		16%	2%	5,11%
19	New Wave group	50977	187370	119174		2%	2%	7,77%
20	Nibe	502304	475540	488922		15%	2%	4,86%
21	Platzer Fastighet	−26337	116466	45065		19%	2%	2,95%
22	Sandvik	13216981	12333768	12775375		2%	2%	6,86%
23	SEB	15290589	−11619901	1835344		9%	2%	2,34%
24	Thule	360098	636359	498229		4%	2%	4,34%
25	Victoria Park A	40914	335456	188185		−10%	2%	2,85%

PV 14	PV 15	PV 16	PV 17	PV 18	PV 19	Term value	PV term value		Enterprise value	Debt	Value of Equity	Shares outstanding	Calculated price	Market price
313698	327349	341594	356458	371970	388156	9508305	9014320	ABB	11113545	0,2946	7839495	2300649	3 kr	166 kr
2904	2896	2888	2881	2873	2866	80643	76215	Agromino	93523	0,4164	54580	1296	42 kr	90 kr
2240038	2263593	2287395	2311448	2335754	2360315	66420899	62922413	Alva Laval	76720955	0,2046	61023847	419456	145 kr	148 kr
2943961	3054928	3170078	3289568	3413562	3542230	83768488	79239733	Assa Abloy	98654061	0,3872	60455209	1112576	54 kr	138 kr
388505	383239	378045	372920	367866	362879	6300044	5795626	Autoliv	8049081	0,1341	6969699	94400	74 kr	76 kr
429246	405483	383035	361831	341800	322878	7926344	7350097	Avanza	9594368	0,02	9402481	144369	65 kr	51 kr
699575	692786	686063	679406	672813	666284	35005649	33633406	Axfood	37730332	0,0406	36198481	209871	172 kr	117 kr
452429	455931	459459	463015	466599	470210	17801222	17008620	Claes Ohlson B	19776264	0,35	12854571	63288	203 kr	136 kr
125579	130815	136270	141952	147871	154038	9543971	9233718	Fagerhult	10070242	0,51	4934419	130196	38 kr	41 kr
51383	47537	43979	40687	37641	34824	688978	625094	Haldex	881143	0,263	649403	44204	15 kr	104 kr
1433673	1447514	1461488	1475597	1489843	1504226	57248435	54720355	Hufvudstaden A	63532696	0,2737	46143797	206266	224 kr	101 kr
3433035	3496384	3560901	3626609	3693530	3761686	174247463	167465126	ICA-gruppen	189037271	0,2794	136220258	201005	678 kr	309 kr
27373	23874	20822	18160	15839	13814	876033	832020	Lammhults	951902	0,25	713927	8448	85 kr	37 kr
168397	157741	147759	138409	129651	121447	3724596	3486470	Lindab	4349874	0,379	2701272	76332	35 kr	66 kr
363504	415448	474815	542665	620211	708838	19674635	18932482	Mekonomen	22057961	0,4633	11838508	43162	274 kr	170 kr
43409	41604	39874	38216	36627	35104	1471694	1400279	MQ holding	1635113	0,2891	1162402	48643	24 kr	25 kr
132054	146024	161472	178555	197445	218334	4463071	4246095	Nederman Holdi	5279980	0,5454	2400279	35146	68 kr	55 kr
110581	104733	99193	93947	88978	84272	2065399	1916488	New Wave group	2498192	0,408	1478929	66344	22 kr	39 kr
466262	511216	560504	614545	673796	738760	17095175	16302856	Nibe	19867939	0,4425	11076376	462455	24 kr	49 kr
43773	50470	58191	67094	77358	89193	4743632	4607704	Platzer Fastighet	4993783	0,6696	1649946	103991	16 kr	30 kr
11955245	11452914	10971690	10510686	10069052	9645975	262867788	245992690	Sandvik	310598252	0,4745	163219382	1254386	130 kr	76 kr
1793379	1903078	2019486	2143015	2274101	2413205	539807059	527464392	SEB	540010655	0,8827	63343250	2194172	29 kr	97 kr
477505	474256	471028	467823	464640	461478	21291816	20406188	Thule	23222917	0,7197	6509384	100000	65 kr	88 kr
182970	160591	140948	123708	108577	95296	22139412	21525923	Victoria Park A	22338013	0,675	7259854	51381	141 kr	6 kr

7. FCFF 15

	Namn	FCFF 13	FCFF 14	Average (FCFF0)	High g	Stable g	WACC
2	ABB	1252272	5969564	3610918	2%	2%	5,48%
3	Alva Laval	2743167	3274195	3008681	7%	2%	5,56%
4	Assa Abloy	2649711	3209795	2929753	11%	2%	5,72%
5	AstraZeneca	10699057	9713996	10206527	−7%	2%	3,32%
6	Atlas Copco	21773345	21709988	21741667	5%	2%	6,87%
7	Autoliv	2649711	3209795	2929753	4%	2%	8,70%
8	Avanza	1406774	1414589	1410682	0%	2%	7,84%
9	Axfood	575786	3194436	1885111	3%	2%	4,08%
10	Catella	110257	489260	299759	18%	2%	2,57%
11	Claes Ohlson B	239608	363908	301758	5%	2%	4,66%
12	Electrolux B	−2528950	2996809	233930	3%	2%	5,80%
13	Fagerhult	101199	167028	134114	8%	2%	3,36%
14	Haldex	50144	78469	64307	3%	2%	10,22%
15	Hufvudstaden A	1968918	2010054	1989486	5%	2%	4,62%
16	ICA-gruppen	6835087	610385	3722736	19%	2%	4,05%
17	Lammhults	26788	32458	29623	6%	2%	5,29%
18	Lindab	403456	−79785	161836	1%	2%	6,83%
19	Mekonomen	431231	37545	234388	8%	2%	3,92%
20	MQ holding	31800	117414	74607	1%	2%	5,10%
21	Nederman Holdir	87276	137514	112395	12%	2%	5,11%
22	New Wave group	187370	778450	482910	4%	2%	7,77%
23	Nibe	475540	733127	604334	11%	2%	4,86%
24	Platzer Fastighet	116466	70714	93590	17%	2%	2,95%
25	Sandvik	12333768	9118449	10726109	−4%	2%	6,86%
26	Thule	636359	540998	588679	3%	2%	4,34%
27	Victoria Park A	335456	182906	259181	50%	2%	2,85%

PV 15	PV 16	PV 17	PV 18	PV 19	PV 20	Term value	PV term value		Enterprise value	Debt	Equity	Shares outstanding	Calculated price	Market price
3423320	3300641	3182359	3068315	2958359	2852342	103762011,5	98371266,11	ABB	117156603	0,3138	80392861,03	2258900	36 kr	153 kr
2850209	2896381	2943300	2990980	3039431	3088668	84513511,24	80062060,66	Alva Laval	97871030	0,558	43258995,43	419456	103 kr	155 kr
2771238	2907808	3051108	3201470	3359242	3524789	78756801,08	74495649,9	Assa Abloy	93311305	0,3565	60045824,76	1110776	54 kr	178 kr
9878558	8875596	7974464	7164822	6437383	5783801	773221704,5	748375633,5	AstraZeneca	794490258	0,3556	511969522,3	1263143	405 kr	578 kr
20344032	20045163	19750684	19460532	19174642	18892952	446440790,6	417741920,6	Atlas Copco	535409925	0,3253	361241076,5	1218000	297 kr	153 kr
2695265	2577982	2465803	2358506	2255877	2157714	43727656,72	40227835,07	Autoliv	54738984	0,1341	47398485,84	1529000	31 kr	89 kr
1308125	1210961	1121015	1037750	960669	889314	24155505,14	22399392,75	Avanza	28927227	0,0232	28256114,96	144369	196 kr	74 kr
1811213	1799380	1787624	1775945	1764342	1752814	90630336,54	87077571,62	Axfood	97768890	0,0245	95373551,76	209871	454 kr	147 kr
292248	335157	384367	440803	505524	579749	52589210,53	51271532,15	Catella	53809381	0,663	18133761,35	81699	222 kr	22 kr
288322	290085	291859	293644	295440	297246	11344285,71	10839179,93	Claes Ohlson B	12595776	0,356	8111679,865	63141	128 kr	153 kr
221105	216090	211188	206397	201715	197140	6156039,474	5818562,83	Electrolux B	7072198	0,4513	3880515,022	286320	14 kr	205 kr
129754	135202	140879	146794	152958	159381	9861286,765	9540718,619	Fagerhult	10405687	0,4997	5205965,166	130196	40 kr	46 kr
58344	54522	50950	47613	44494	41579	782317,5182	709778,1875	Haldex	1007261	0,1823	823653,4651	44204	19 kr	80 kr
1901631	1909810	1918025	1926275	1934560	1942881	75934580,15	72581323,03	Hufvudstaden A	84114505	0,2529	62841946,41	206266	305 kr	120 kr
3577834	4102216	4703454	5392811	6183204	7089440	181596878	174528474,8	ICA-gruppen	205577434	0,2815	147707386,4	201005	735 kr	307 kr
28135	28332	28532	28732	28934	29137	900395,1368	855157,3148	Lammhults	1026959	0,2014	820129,7413	84483	10 kr	40 kr
151489	142839	134683	126992	119741	112904	3350631,47	3136414,369	Lindab	3925062	0,3589	2516357,12	76332	33 kr	63 kr
225547	235205	245277	255780	266733	278154	12207708,33	11747217,41	Mekonomen	13253912	0,4761	6943724,478	43162	161 kr	144 kr
70987	68103	65336	62681	60135	57692	2406677,419	2289892,882	MQ holding	2674825	0,1927	2159386,616	48643	44 kr	36 kr
106931	114245	122060	130410	139330	148861	3613987,138	3438290,494	Nederman Holdi	4200128	0,5125	2047562,581	35146	58 kr	85 kr
448093	432418	417291	402694	388607	375012	8369324,09	7765912,675	New Wave group	10230028	0,4595	5529329,894	65344	85 kr	35 kr
576324	608422	642307	678079	715843	755711	21130541,96	20151193,93	Nibe	24127879	0,5344	11233940,42	462455	24 kr	68 kr
90908	103165	117074	132858	150770	171097	9851578,947	9569285,039	Platzer Fastighet	10335157	0,6967	3134653,072	103991	30 kr	35 kr
10037534	9010861	8089200	7261809	6519047	5852257	220701821	206533615	Sandvik	253304323	0,5032	125841587,6	1254383	100 kr	74 kr
564193	559272	554394	549559	544766	540015	25157200,85	24110792,46	Thule	27422991	0,4704	14523216,27	100000	145 kr	116 kr
251999	367524	536010	781735	1140110	1662776	30491882,35	29646944,44	Victoria Park A	34387098	0,725	9456452,072	204492	46 kr	15 kr
													145 kr	122 kr

8. FCFF 16

	Namn	FCFF 14	FCFF 15	Average (FCFF0)	High g	Stable g	WACC
2	ABB	5969564	10414601	8192083	−3%	2%	5,48%
3	Alfa Laval	3274195	4033033	3653614	10%	2%	5,56%
4	Assa Abloy	3209795	4542349	3876072	14%	2%	6%
5	Atlas Copco	21709988	−616718	10546635	3%	2%	6,87%
6	Autoliv	290049	380011	335030	4%	2%	8,70%
7	Avanza	1414589	3758022	2586306	16%	2%	7,84%
8	Axfood	3194436	1400752	2297594	4%	2%	4,08%
9	Castellum	−739449	1316690	288621	2%	2%	3,29%
10	Catella	489260	453818	471539	25%	2%	2,57%
11	Claes Ohlson B	363908	282348	323128	5%	2%	5%
12	Cloetta	165476	625363	395420	5%	2%	3,64%
13	Electrolux B	2996809	3916460	3456635	4%	2%	5,80%
14	Fagerhult	167028	208798	187913	9%	2%	3,36%
15	Haldex	78469	−63463	7503	7%	2%	10,22%
16	Hufvudstaden A	2010054	3475373	2742714	3%	2%	4,62%
17	ICA-gruppen	610385	2803624	1707005	22%	2%	4%
18	Lammhults	32458	20211	26335	6%	2%	5,29%
19	Lindab	−79785	227480	73848	5%	2%	6,83%
20	Mekonomen	37545	192877	115211	2%	2%	3,92%
21	MQ holding	117414	82744	100079	1%	2%	5%
22	Nederman Holdi	137514	336128	236821	12%	2%	5%
23	New Wave group	778450	324048	551249	9%	2%	8%
24	Nibe	733127	1146973	940050	13%	2%	4,86%
25	Platzer Fastighet	70714	265301	168008	15%	2%	2,95%
26	Sandvik	9118449	943188	5030819	−4%	2%	6,86%
27	Thule	540998	433567	487283	7%	2%	4,34%
28	Victoria Park A	182906	948708	565807	50%	2%	2,85%

PV 16	PV 17	PV 18	PV 19	PV 20	PV 21	Term value	PV term value		Enterprise value	Debt	Equity	Shares outstanding	Calculated price	Market price
7766479	7134735	6554378	6021229	5531448	5081506	235404669,5	223174696,2	ABB	261264473	0,3317	174603047	2191625	80 kr	194 kr
3461173	3617575	3781044	3951900	4130477	4317123	97223954,85	92103026,57	Alfa Laval	115362319	0,4457	63945333,62	419456	152 kr	155 kr
3666356	3942061	4238499	4557228	4899926	5268394	98557968,1	93225471,15	Assa Abloy	119797936	0,3263	80707869,36	1110776	73 kr	171 kr
9868658	9541765	9225700	8920105	8624632	8338947	202641851,8	189615281,9	Atlas Copco	244135090	0,3296	163668164,3	1216096	135 kr	207 kr
308215	293669	279810	266604	254022	242034	4600227,931	4232040,415	Autoliv	5876396	0,3296	3939535,64	88200	45 kr	82 kr
2398280	2579085	2773521	2982616	3207473	3449283	41066443,88	38080901,23	Avanza	55471160	0,0233	54178682,12	146720	369 kr	75 kr
2207527	2213678	2219846	2226031	2232233	2238453	106131101,1	101970696,7	Axfood	115308465	0,0165	113405875	209871	540 kr	142 kr
279427	277020	274633	272266	269920	267595	21661034,15	20971085,44	Castellum	22611946	0,564	9858808,617	189014	52 kr	123 kr
459724	558329	678084	823525	1000160	1214683	80653349,27	78632494,17	Catella	83366999	0,6631	28086342,03	81729	344 kr	23 kr
308741	310924	313122	315336	317566	319811	11606792,64	11089998,7	Claes Ohlson B	12975497	0,3663	8222572,744	63216	130 kr	138 kr
381532	388011	394600	401301	408116	415046	23264130,76	22447057,86	Cloetta	24835664	0,4049	14779703,57	288619	51 kr	29 kr
3267140	3211556	3156917	3103207	3050412	2998514	85977377,87	81264062,26	Electrolux B	100051809	0,4544	54588266,95	287397	190 kr	223 kr
181804	190898	200447	210473	221001	232055	13367968,61	12933406,16	Fagerhult	14170084	0,4829	7327350,368	130196	56 kr	68 kr
6807	6598	6395	6198	6008	5823	82813,80173	75135,00429	Haldex	112964	0,1625	94607,41832	44204	2 kr	118 kr
2621596	2583507	2545972	2508982	2472530	2436607	100060907,4	95642236,14	Hufvudstaden A	110811430	0,2271	85646154,27	206266	415 kr	140 kr
1640562	1917747	2241764	2620526	3063283	3580846	80027402,4	76912448,24	ICA-gruppen	91977175	0,3069	63749380,04	201005	317 kr	178 kr
25011	25235	25460	25687	25917	26148	760224,8357	722029,4764	Lammhults	875487	0,1815	716586,453	8448	85 kr	57 kr
69126	67683	66270	64887	63533	62206	1431183,888	1339683,505	Lindab	1733389	0,3377	1148023,708	76332	15 kr	74 kr
110865	109212	107583	105978	104397	102840	5774223,361	5556412,01	Mekonomen	6197287	0,4721	3271547,548	43162	76 kr	146 kr
95223	91118	87191	83433	79837	76396	3071698,229	2922643,415	MQ holding	3435841	0,1108	3055149,708	48643	63 kr	27 kr
225308	240355	256408	273533	291801	311290	7244622,92	6892420,245	Nederman Holdi	8491116	0,4853	4370377,281	35146	124 kr	64 kr
511505	517675	523920	530240	536636	543109	8864905,668	8225763,82	New Wave group	11388848	0,4545	6212616,83	65344	95 kr	56 kr
896481	966671	1042356	1123967	1211968	1306859	31345490,29	29892704,84	Nibe	36441008	0,4831	18836356,97	462455	41 kr	73 kr
163193	182881	204944	229669	257376	288426	17178241,86	16686004,73	Platzer Fastighet	18012495	0,6671	5996359,476	103991	58 kr	46 kr
4707859	4216191	3775870	3381534	3028381	2712110	96869533,92	90650883,33	Sandvik	112472829	0,5004	56191425,27	1254386	45 kr	115 kr
467014	479368	492048	505063	518423	532137	19957867,03	19127723,82	Thule	22121777	0,4218	12790811,22	100000	128 kr	137 kr
550128	802701	1171233	1708963	2493575	3638413	64720981,44	62927546,37	Victoria Park A	73292559	0,6138	28305586,2	76000	372 kr	22 kr

9. FCFF 17

	Namn	FCFF 15	FCFF 16	Average (FCFF0)	WACC	HIGH g	STABLE g
2	ABB	10414601	8807771	9611186	5,48%	−15%	2%
3	Agromino	30205	23631	26918	5,81%	−20%	2%
4	Alva Laval	4033033	4035066	4034050	5,56%	7%	2%
5	Assa Abloy	4542349	3400170	3971260	5,72%	14%	2%
6	Atlas Copco	−616718	13661809	6522546	6,87%	7%	2%
7	Avanza	3758022	1177062	2467542	7,84%	17%	2%
8	Axfood	1400752	1265402	1333077	4,08%	5%	2%
9	Catella	453818	−121492	166163	2,57%	26%	2%
10	Claes Ohlson B	282348	172833	227591	4,66%	5%	2%
11	Cloetta	625363	671318	648341	3,64%	2%	2%
12	Electrolux B	3916460	4591145	4253803	5,80%	4%	2%
13	Fabege	262346	3224754	1743550	5,31%	1%	2%
14	Fagerhult	208798	163087	185943	3,36%	13%	2%
15	Hufvudstaden A	3475373	4067347	3771360	4,62%	3%	2%
16	ICA-gruppen	2803624	1706785	2255205	4,05%	17%	2%
17	Kungsleden	462606	2128824	1295715	4,66%	14%	2%
18	Lammhults	20211	−11430	4391	5,29%	12%	2%
19	Lindab	227480	265488	246484	6,83%	6%	2%
20	Mekonomen	192877	319974	256426	3,92%	1%	2%
21	MQ holding	82744	15154	48949	5,10%	5%	2%
22	Nederman Holdi	336128	182476	259302	5,11%	6%	2%
23	New Wave grou	324048	278002	301025	7,77%	9%	2%
24	Nibe	1146973	801482	974228	4,86%	16%	2%
25	Platzer Fastighet	265301	−16970	124166	2,95%	14%	2%
26	Sandvik	943188	9640036	5291612	6,86%	−2%	2%
27	SEB	46896554	64104879	55500717	2,34%	−10%	2%
28	Thule	433567	540715	487141	4,34%	7%	2%
29	Victoria Park A	948708	599347	774028	2,85%	77%	2%

PV17	PV 18	PV 19	PV 20	PV 21	PV 22	Term value	PV term value		Enterprise value	Debt	Value of Equity	Shares outstanding	Calculated price	Market price
9111856,276	7331467,976	5898954,182	4746342,828	3818943,077	3241136,99	276183506	261834950,5	ABB	295983652	0,3286	198723424	2138707	93 kr	194 kr
26918	20453,71137	15541,80507	11809,48046	8480,733417	6444,107048	706509	667714,9479	Agromino	757363	0,2489	568855	17284	33 kr	19 kr
4034050	4085258,541	4137117,639	4189635,048	4242819,123	4296678,327	113315997	107347477,4	Alva Laval	132333036	0,3995	79465988	419456	189 kr	155 kr
3971260	4278532,511	4609580,524	4966243,111	5350502,179	5764492,983	106754288	100978327,3	Assa Abloy	129918938	0,3061	90150751	1110777	81 kr	171 kr
6522546	6504235,744	6485977,386	6467770,282	6449614,288	6431509,26	133933172	125323451,4	Atlas Copco	164185104	0,3174	112072752	1214467	92 kr	207 kr
2467542	2684687,527	2920942,02	3177987,085	3457652,306	3761928,274	42252432	39180667,2	Avanza	57651406	0,0223	56365780	149195	378 kr	75 kr
1333077	1344476,294	1355973,065	1367568,146	1379262,378	1391056,608	64090240	61577863,55	Axfood	69749277	0,0191	68417066	209871	326 kr	142 kr
166163	203633,5098	249553,7894	305829,3003	374795,194	459313,2094	29151404	28420984,21	Catella	30180272	0,6393	10886024	81849	133 kr	23 kr
227591	228916,9877	230251,2067	231593,2021	232943,0192	234300,7035	8556034	8175075,324	Claes Ohlson B	9560671	0,4048	5690511	63376	90 kr	138 kr
648341	636830,0164	625523,8872	614418,4843	603510,2442	592795,6663	39532957	38144497,6	Cloetta	41865916	0,3883	25609381	288619	89 kr	29 kr
4253803	4165349,14	4078735,075	3993922,058	3910872,639	3829550,146	111942171	105805454,7	Electrolux B	130037686	0,3494	84602519	287397	294 kr	223 kr
1743550	1669377,519	1598360,414	1530364,453	1465261,113	1402927,339	52675227	50019206,71	Fabege	59429048	0,4886	30392015	330783	92 kr	73 kr
185943	204004,2521	223820,4546	245561,5282	269414,4476	295584,3494	13672243	13227788,94	Fagerhult	14652116	0,5368	6786860	130552	52 kr	68 kr
3771360	3711880,512	3653339,097	3595720,96	3539011,539	3483196,504	143945038	137588451,7	Hufvudstaden A	159342960	0,2239	123666071	206266	600 kr	140 kr
2255205	2545205,809	2872498,973	3241879,427	3658759,262	4129246,517	110009976	105727991,9	ICA-gruppen	124430786	0,2606	92004123	201147	457 kr	278 kr
1295715	1410974,953	1536487,821	1673165,65	1822001,616	1984077,243	48711090	46542222,65	Kungsleden	56264645	0,6037	22297679	185967	120 kr	55 kr
4391	4670,301073	4967,933519	5284,533708	5621,310431	5979,549514	133450	126745,0356	Lammhults	157659	0,3201	107192	8448	13 kr	57 kr
246484	245491,8806	244503,7545	243519,6057	242539,4182	241563,176	5103188	4776924,465	Lindab	6241026	0,4279	3570491	76332	47 kr	74 kr
256426	247986,5546	239825,3342	231932,6991	224299,81	216918,1188	13355495	12851707,84	Mekonomen	14269096	0,4279	8163350	43162	189 kr	146 kr
48949	48795,30666	48642,0959	48489,3662	48337,11604	48185,34394	1579000	1502378,687	MQ holding	1793777	0,1582	1510001	48643	31 kr	27 kr
259302	260338,1225	261378,3852	262422,8046	263471,3973	264524,18	8337685	7932342,201	Nederman Holdi	9503779	0,4271	5444715	35076	155 kr	64 kr
301025	304739,9787	308500,8042	312308,0425	316162,2663	320064,0554	5217071	4840930,739	New Wave grou	6703731	0,4112	3947157	66344	59 kr	56 kr
974228	1078005,119	1192837,44	1319902,043	1460501,946	1616078,97	34063899	32485121,69	Nibe	40126675	0,4003	24063967	504017	48 kr	73 kr
124166	137456,4549	152170,1036	168458,7344	186490,937	206453,3472	13070053	12695534,37	Platzer Fastighet	13670729	0,6289	5073208	119684	42 kr	46 kr
5291612	4844454,445	4435083,084	4060304,867	3717196,567	3403081,978	108880905	101891171	Sandvik	127642904	0,4448	70867340	1254386	56 kr	115 kr
55500717	48575329,07	42514092,48	37209177,87	32566211,28	28502594,73	16323740147	15950498483	SEB	16195366604	0,85	2429304991	2168994	1 120 kr	99 kr
487141	500633,7879	514500,2978	528750,8811	543396,1758	558447,1146	20817991	19952071,55	Thule	23084941	0,3905	14070271	101036	139 kr	137 kr
774028	1332064,827	2292420,753	3945148,015	6789413,695	11684260,81	91062059	88538705,71	Victoria Park A	115356041	0,6293	42762485	76743	557 kr	22 kr

10. FCFF 18

	A	B	C	D	E	F	G	H	I
1	Namn	FCFF 15	FCFF 16	FCFF 17	Average (FCFF0)		WACC	HIGH g	STABLE g
2	ABB	10414601	8807771	8772783	9331718		5,48%	-13,17%	2%
3	Agromino	30205	23631	29660	27832		5,81%	-15,57%	2%
4	Alfa Laval	4033033	4035066	2539841	3535980		5,56%	0,70%	2%
5	Assa Abloy	4542349	3400170	4427368	4123296		5,72%	10,43%	2%
6	Atlas Copco	-616718	13661809	19691788	10912293		6,87%	-2,50%	2%
7	Avanza	3758022	1177062	1651801	2195628		7,84%	15,20%	2%
8	Axfood	1400752	1265402	1302133	1322762		4,08%	6,10%	2%
9	Castellum	1316690	2164307	2207951	1896316		3,29%	17,03%	2%
10	Catella	453818	-121492	48412	126913		2,57%	12,00%	2%
11	Claes Ohlson B	282348	172833	301486	252222		4,66%	5,50%	2%
12	Cloetta	625363	671318	927219	741300		3,64%	3,37%	2%
13	Electrolux B	3916460	4591145	3418826	3975477		5,80%	2,60%	2%
14	Fabege	262346	3224754	1119651	1535584		5,31%	3%	2%
15	Fagerhult	208798	163087	398338	256741		3,36%	11,53%	2%
16	Handelsbanken	293415000	17169000	-18352000	97410667		1,41%	-5,73%	2%
17	Hufvudstaden A	3475373	4067347	2999791	3514170		4,62%	3,40%	2%
18	ICA-gruppen	2803624	1706785	1595192	2035200		4,05%	8,03%	2%
19	Kungsleden	462606	2128824	1914728	1502053		4,66%	2,03%	2%
20	Lammhults	20211	-11430	29897	12893		5,29%	7,40%	2%
21	Lindab	227480	265488	203753	232240		6,83%	5,60%	2%
22	Mekonomen	192877	319974	213504	242118		3,92%	3,63%	2%
23	MQ holding	82744	15154	54072	50657		5,10%	6,23%	2%
24	Nederman Holdi	336128	182476	243632	254079		5,11%	3,87%	2%
25	New Wave grou	324048	278002	636798	412949		7,77%	9,53%	2%
26	Nibe	1146973	801482	979561	976005		4,86%	19,93%	2%
27	Platzer Fastighet	265301	-16970	699621	315984		2,95%	24,53%	2%
28	Sandvik	943188	9640036	19296645	9959956		6,86%	3,47%	2%
29	SEB	46896554	64104879	73522546	61507993		2,34%	-8,50%	2%
30	Thule	433567	540715	570815	515032		4,34%	9,07%	2%
31	Victoria Park A	948708	599347	1150030	899362		2,85%	53,47%	2%

R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
PV18	PV 19	PV 20	PV 21	PV 22	PV 23		Term value	PV term value	Enterprise value	Debt	Value of Equity	Shares outstanding	Calculated price	Market price
8846519,423	7282040	5994234	4934172	4061579	3343301	ABB	267796488	253872518	288334363	0,3267	194135527	2138606	91 kr	172 kr
26303,75201	20989	16748	13364	10663	8509	Agromino	730499	690387	786964	0,2804	566299	17421	33 kr	17 kr
3349851,957	3195736	3048710	2908449	2774641	2646988	Alfa Laval	99428437	94194691	112119068	0,3827	69211101	419456	165 kr	192 kr
3900378,923	4074330	4256039	4445852	4644130	4851251	Assa Abloy	110982735	104982702	131154684	0,3124	90181960	1110777	81 kr	158 kr
10211151,6	9316184	8499656	7754694	7075026	6454927	Atlas Copco	224236185	209828464	259140102	0,2929	183237966	839394	218 kr	218 kr
2035925,472	2174790	2323127	2481581	2650843	2831650	Avanza	37569105	34836451	49334367	0,0235	48175009	151365	318 kr	88 kr
1270897,895	1295552	1320685	1346305	1372422	1399045	Axfood	63565957	61073587	69078493	0,4195	40100065	209270	192 kr	154 kr
1835826,99	2079936	2366504	2669848	3024856	3427070	Castellum	146442844	141771585	157165626	0,5312	73679246	273201	270 kr	166 kr
123738,414	135121	147550	161123	175944	192129	Catella	22450782	21889258	22824863	0,6363	8301403	83751	99 kr	24 kr
240982,5911	242907	244847	246802	248773	250760	Claes Ohlson B	9467342	9045450	10520523	0,3646	6684740	59870	112 kr	77 kr
715267,167	713407	711551	709700	707854	706012		45212366	43624606	47888397	0,4155	27990768	288619	97 kr	25 kr
3757695,861	3644193	3534119	3427369	3323844	3223446		104739006	99001285	119911950	0,3059	83230885	287397	290 kr	187 kr
1458119,125	1427899	1398306	1369325	1340946	1313154		46355359	44016902	52324651	0,47	27732065	330783	84 kr	119 kr
248394,7748	268029	289215	312075	336743	363360		18877116	18263453	20081269	0,5872	8289548	131325	63 kr	78 kr
96052905,21	89286953	82997593	77151255	71716732	66665016		-16610390852	-16378866429	-15894995975	0,9129	-1384454149	1944174		-
3358842,462	3319533	3280684	3242289	3204344	3166842		133901391	127982891	147555426	0,1962	118605051	206266	575 kr	136 kr
1956063,908	2030969	2108742	2189494	2273338	2360393		99486873	95618440	108537441	0,1977	87079589	201147	433 kr	318 kr
1435217,494	1399195	1364076	1329839	1296461	1263921		56536212	54020583	62109292	0,5164	30036054	218403	138 kr	62 kr
12244,43459	12489	12739	12994	13254	13519		391387	371709	448948	0,3008	313904	8448	37 kr	40 kr
217391,5099	214888	212413	209966	207548	205157		4807838	4500438	5767801	0,262	4256637	76332	56 kr	63 kr
232975,0822	232315	231656	231000	230345	229692		12580439	12105357	13493340	0,4171	7865268	43162	182 kr	91 kr
48197,14345	48714	49236	49764	50298	50837		1632481	1553220	1850266	0,1397	1591784	48643	33 kr	10 kr
241731,1364	238884	236070	233290	230542	227827		8175094	7777807	9186152	0,4334	5204874	35089	148 kr	90 kr
383162,751	389406	395751	402200	408754	415414		7152035	6636149	9030837	0,3778	5618987	66344	85 kr	48 kr
930808,551	1064624	1217678	1392735	1592958	1821967		34178074	32595359	40616129	0,4003	24357492	504017	48 kr	91 kr
306941,0392	371295	449141	543309	657219	795013		33396619	32440861	35563778	0,584	14794532	119684	124 kr	59 kr
9320463,878	9024685	8738293	8460989	8192486	7932503		204888237	191733110	243402531	0,3286	163420459	1254386	130 kr	125 kr
60104199,69	53740187	48050015	42962336	38413355	34346034		18327803118	17909508743	18187124872	0,8374	2957226504	2167046		-
493594,6003	515955	539328	563760	589298	615994		21979999	21065103	24383032	0,3965	14715160	102073	144 kr	153 kr
874421,6649	1304761	1946888	2905033	4334720	6468016		105537691	102611048	120444887	0,5811	50454363	76742	657 kr	36 kr

11. Companies (Thompson Reuters commands)

	A
1	W:COLL
2	W:AZA
3	W:FABG
4	W:SENC
5	W:PLFA
6	W:VICP
7	W:KLED
8	W:CATB
9	W:CAST
10	W:HUA
11	W:WIHS
12	W:SVK
13	W:LAMM
14	W:NEWB
15	W:TAGR
16	W:MQ
17	W:BILI
18	W:CLAB
19	W:MEKO
20	W:CLAS
21	W:AXFO
22	W:SE@G
23	W:ICA
24	W:THULE
25	U:ALV
26	W:SAND
27	W:HAL
28	W:ASSB
29	W:FAG
30	W:NMAN
31	W:LIAB
32	W:AZNS
33	W:NIBE
34	W:SR@G
35	W:ABB
36	W:ALF

12. MRP calculation

	A	B
1	Ri=Rf+(MRP)*B	
2		
3	MRP	
4	14	5,60%
5	15	6,80%
6	16	6,50%
7	17	6,50%
8	18	6,40%
9	Average	6,36%

13. Risk free rate

	A	B	C
1	Datum	Instrument	Snittränta
2	2019-03-13	Statsobligationer	0,4281
3	2019-02-13	Statsobligationer	0,3489
4	2019-01-16	Statsobligationer	0,6118
5	2018-12-03	Statsobligationer	0,6925
6	2018-11-30	Statsobligationer	0,6773
7	2018-11-29	Statsobligationer	0,6922
8	2018-11-28	Statsobligationer	0,7087
9	2018-10-31	Statsobligationer	0,8112
10	2018-10-17	Statsobligationer	0,8832
11	2018-10-03	Statsobligationer	0,8375
12	2018-09-19	Statsobligationer	0,6430
13	2018-08-22	Statsobligationer	0,4689
14	2018-06-13	Statsobligationer	0,4226
15	2018-06-04	Statsobligationer	0,7187
16	2018-06-01	Statsobligationer	0,6785
17	2018-05-31	Statsobligationer	0,6817
18	2018-05-30	Statsobligationer	0,6193
19	2018-05-16	Statsobligationer	0,7488
20	2018-04-19	Statsobligationer	0,7084
21	2018-04-04	Statsobligationer	0,6776
22	2018-03-07	Statsobligationer	0,8080
23	2018-02-07	Statsobligationer	0,9046
24	2018-01-24	Statsobligationer	0,8437
25	2017-12-13	Statsobligationer	0,7161
26	2017-11-15	Statsobligationer	0,7373
27	2017-05-22	Statsobligationer	0,7412
28	2017-05-19	Statsobligationer	0,7472
29	2017-05-18	Statsobligationer	0,7511
30	2017-04-05	Statsobligationer	0,8090
31	2017-01-31	Statsobligationer	1,0358
32	2017-01-30	Statsobligationer	1,0358
33	2017-01-27	Statsobligationer	1,0058
34	2017-01-26	Statsobligationer	1,0212
35	2017-01-25	Statsobligationer	0,9444
36	2016-10-05	Statsobligationer	0,2378
37	2016-09-07	Statsobligationer	0,1378
38	2016-06-22	Statsobligationer	−0,5848
39	2016-01-20	Statsobligationer	0,9784
40	2015-11-30	Statsobligationer	1,0327
41	2015-11-27	Statsobligationer	0,9873
42	2015-11-26	Statsobligationer	1,0014
43	2015-11-25	Statsobligationer	1,0596
44	2015-10-14	Statsobligationer	0,6583
45	2015-05-26	Statsobligationer	0,9392
46	2015-05-25	Statsobligationer	0,9778
47	2015-05-22	Statsobligationer	0,9670
48	2015-05-21	Statsobligationer	0,9978
49	2015-05-20	Statsobligationer	0,9501
50	2015-04-22	Statsobligationer	0,3045
51	2015-02-11	Statsobligationer	−0,0503
52	2014-11-26	Statsobligationer	1,0354
53	2014-11-14	Statsobligationer	0,5668
54	2014-11-13	Statsobligationer	0,5779
55	2014-11-12	Statsobligationer	0,0236
56	2014-10-29	Statsobligationer	0,5642
57	2014-09-17	Statsobligationer	0,9314
58	2014-08-06	Statsobligationer	1,1046
59	2014-06-04	Statsobligationer	1,4190
60	2014-05-12	Statsobligationer	2,0482
61	2014-05-09	Statsobligationer	2,0308
62	2014-05-08	Statsobligationer	2,0667
63	2014-05-07	Statsobligationer	1,5214
64	2014-04-23	Statsobligationer	1,2892
65	2014-04-09	Statsobligationer	2,2460
66	2014-02-26	Statsobligationer	2,2071
67	2014-02-12	Statsobligationer	1,5530
68	2014-02-04	Statsobligationer	2,3085
69	2014-02-03	Statsobligationer	2,3170
70	2014-01-31	Statsobligationer	2,3221
71	2014-01-30	Statsobligationer	2,3387
72	2014-01-29	Statsobligationer	2,4180
73	2014-01-15	Statsobligationer	1,7080
74		RF Average	RF average	0.9771%

14. WACC calculations

7		E/V	Re	D/V	Rd	1-tc	WACC
8	ABB LTD - TOTAL DEBT % TOTAL CAPITAL/STD	0,658	0,068	0,343	0,039	0,751	5,48%
9	ALFA LAVAL AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,627	0,080	0,373	0,019	0,751	5,56%
10	ASTRAZENECA PLC - TOTAL DEBT % TOTAL CAPITAL/STD	0,468	0,041	0,532	0,035	0,751	3,32%
11	ATLAS COPCO - TOTAL DEBT % TOTAL CAPITAL/STD	0,689	0,089	0,311	0,032	0,751	6,87%
12	AVANZA BANK - TOTAL DEBT % TOTAL CAPITAL/STD	0,936	0,083	0,064	0,015	0,751	7,84%
13	AXFOOD AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,978	0,041	0,022	0,025	0,751	4,08%
14	CASTELLUM AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,466	0,049	0,534	0,025	0,751	3,29%
15	CATELLA AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,362	0,065	0,638	0,004	0,751	2,57%
16	CLOETTA AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,601	0,047	0,399	0,027	0,751	3,64%
17	COLLECTOR AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,162	0,102	0,838	0,009	0,751	2,21%
18	ELECTROLUX AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,677	0,074	0,323	0,033	0,751	5,80%
19	FAGERHULT AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,436	0,063	0,564	0,015	0,751	3,36%
20	FASTIGHETS AB BALDER - TOTAL DEBT % TOTAL CAPITAL/STD	0,403	0,081	0,597	0,017	0,751	4,02%
21	HUFVUDSTADEN AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,793	0,055	0,207	0,015	0,751	4,62%
22	ICA GRUPPEN AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,797	0,043	0,203	0,038	0,751	4,05%
23	KNOWIT AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,950	0,068	0,050	0,041	0,751	6,60%
24	KUNGSLEDEN AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,454	0,079	0,546	0,038	0,751	5,13%
25	LAGERCRANTZ GROUP AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,596	0,078	0,404	0,019	0,751	5,20%
26	LAMMHULTS - TOTAL DEBT % TOTAL CAPITAL/STD	0,711	0,068	0,289	0,022	0,751	5,29%
27	LINDAB INTER - TOTAL DEBT % TOTAL CAPITAL/STD	0,744	0,084	0,256	0,029	0,751	6,83%
28	MEKONOMEN AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,542	0,062	0,458	0,016	0,751	3,92%
29	NIBE INDUSTRIER AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,608	0,073	0,392	0,015	0,751	4,86%
30	PLATZER FASTIGHETER - TOTAL DEBT % TOTAL CAPITAL/STD	0,404	0,050	0,596	0,021	0,751	2,95%
31	SKANDINAVISKA ENSK - TOTAL DEBT % TOTAL CAPITAL/STD	0,152	0,078	0,848	0,018	0,751	2,34%
32	STOCKWIK FORVALT - TOTAL DEBT % TOTAL CAPITAL/STD	0,519	0,000	0,481	0,048	0,751	1,71%
33	SPORTAMORE AB (PUBL) - TOTAL DEBT % TOTAL CAPITAL/STD	0,840	0,020	0,160	0,008	0,751	1,79%
34	SV. HANDELSBANKEN AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,084	0,071	0,916	0,013	0,751	1,50%
35	SWEDBANK AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,126	0,095	0,874	0,015	0,751	2,20%
36	THULE GROUP AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,621	0,054	0,379	0,035	0,751	4,34%
37	WALLENSTAM AB - TOTAL DEBT % TOTAL CAPITAL/STD	0,511	0,062	0,489	0,016	0,751	3,76%
38	VICTORIA PARK I - TOTAL DEBT % TOTAL CAPITAL/STD	0,408	0,050	0,592	0,018	0,751	2,85%