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Decision Process of Financial Analysts

A case study of ABB

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Abstract

Price targets have for a long time been subjects of discussions. Private investors as well as professional investors around the world base their investment decision on financial analysts' reports. Recent reports indicate that analysts are not pricing assets very well and differences between recommendations are significant. Three themes are addressed here, namely the impact of risk, psychological biases and information asymmetries on the estimations made.

The empirical findings are mainly based on primary information from a case study on the international engineering company Asea Brown Boveri (ABB). Five deep-going interviews were made with financial analysts in order to examine estimations made by analysts. Our results indicate that analysts' use the same models but assess variables subjectively. Both aspects regarding information asymmetries and psychological biases appear to impact the decision process of analyst when setting their recommendations.

Key words: Financial analyst, Risk, Information asymmetry, Psychological biases

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1. Introduction

Price targets and recommendations proposed by professional analysts, are tools used by investors investing for their own sake and for the sake of others. Financial journals reveal that disagreements between analysts' about which price is proper for companies securities are commonplace.

1.1 Miss Pricing is a Fact

Studies show that predictions made by analysts are important and valuable to the market since the operators of the financial markets tend to use these recommendations as guidelines¹. Financial analysts can be regarded as intermediaries on the financial market whose work is to evaluate the performance of companies and to express their estimations of the companies "real" value to the market.² Naturally, investors, lenders and shareholders are interested in the value of a company³.

However, that the recommendations of professional analyst differ has been known for long. As early as in 1933, a study was made in order to evaluate the competency of analysts⁴. The study showed that analysts were not more accurate than regular people in predicting the future prices of stocks. Since the opinions of analysts seem to have an impact on investment decisions and thus the allocation of money, studies have examined how analysts are performing and why⁵. For example, as late as in 2006, an article was published in which a well-known analyst stated he was happy if he was correct in 60 per cent of his predictions.⁶

As a result of differing performance across analysts the debate in financial and business media about the performance of analysts and its effects remains unsolved. Indeed, the importance of widening the studies from a statistical framework to a more descriptive framework is relevant if the analysts' decision processes are to be better understood⁷.

In this context, it is also intriguing to see that professional analyst do not agree about the price of the same security. We do all the time see that analysts are publishing different recommendations concerning the same company, even on the same day.

¹ Healy, P., Palepu, K. (2001)

² ibid

³ Kothari (2001)

⁴ Cowles, A 3rd. (1933)

⁵ Schipper, K (1991), Brown, P. (1993). Ramnath et al. (2008). etc

⁶ <http://www.e24.se/> (2006)

⁷ Brown, P. (1993)

1.2 Pre Study

To establish a first understanding of why analysts generate different valuations of one single company, an explorative pre-study was made. The pre-study was initiated by contacting three Swedish actors on the financial market, independent of each other and with different functions. The intent was to receive input from both the sell-side analysts and from other actors within the industry. Two of the respondents are well-experienced analysts employed at two of the largest financial institutions in Sweden of which one is a buy-side analyst and one is a sell-side analyst. The third interview was held with an independent savings economist employed at a bank focusing on guiding individuals through financial decisions. After we had explained our problem of research to the three people chosen for the pre-study we had informal talks with two (the sell-side analyst and the saving economist) of them over the telephone addressing price targets as well as the relevance and design of our study. The buy-side analyst did chose to provide information through e-mails due to time constraints.

Why several analysts publish reports with different results regarding a specific company at a given date is intriguing according to the sell-side analyst. It might be that it reflects that analysts set their price targets subjectively, in a way that reflects their view of reality. The buy-side analyst similarly stressed that analyses are the result of different and most individual subjective assessments that are made in association with a specific analysis. Valuation models exist but carry limitations, and the final valuation is often based on the assessments made throughout the process. These assessments can, for example, concern future growth forecasts or conditions for the coming quarter. This response, of subjectivity being reflected in the assessments made, was an eye-opening response to us. Our initial thoughts were that different price targets reflect market imperfections that confuse investors and mislead them by different pieces of information on what direction a company is going; something that the analysts did not agree with.

The buy-side analyst stated that the major issue for analysts is to discover undervalued firms by screening, firm-visits and external analyses. The most prominent methods in this process, if looking at key figures and models are cash flow valuation, the net asset value and peers valuation (relative valuation). He finds that in his firm, they do not use different models for different industries except for the shipping and offshore industry in which they focus on the net asset value. For the remaining industries they look primarily on the value drivers. One of

the sell-side analysts stated that he is using the discounted cash flow model when he analyses companies and that it is industry practise.

The three interviewees mention that analysts often overrate risks when analysing small firms and underrate risk when analysing large firms. Methods like the beta-value are used to solve for risk but one analyst underlines that risk is the subject for most subjective assessments. From the buy-side perspective it is mentioned that when measuring risks focus is on the aspects that might affect the subject firm in a value destructive way. However, no quantification of these risks is made.

The key take-away from the pre-study is that analyst pricing is a complex matter. The models used for valuating stocks do not seem to differ between analysts. Nor do the three interviewees find that there is “secret” information that some analysts have whereas others do not. Rather, differences in recommendations and price targets appear to be linked to how variables of the models are subjectively assessed. One of the most important variables being assessed seems to be that of risk.

To investors, correct information about the value of a prospect company is crucial. To date, it is known that deviations in price targets exist but it is still unknown what drives this difference: the problem addressed here. Based on the pre-study it is likely that differences occur as a result of what data the analysts is putting into his/ her valuation model. The data can differ due to the three following reasons: 1) risk assessments, 2) psychological biases and 3) information asymmetries.

1.3 Research Questions

To shed light on the problem of research, three questions of research have been stipulated. One question addresses the impact of psychological bias, one considers information asymmetries, and one question is focused on risk assessment.

Contemporary conditions and trends as well as the development of the financial markets have been shown to affect the decision process of analysts⁸. Also, articles concerning the functions and work of financial analysts describe that analysts are not pricing stocks well in relation to the actual outcome⁹. Indeed, it has been identified that analysts are mostly wrong in times of high uncertainty that analysts tend to be unanimous and recommending “hold” in uncertain

⁸ Schipper, K (1991), Brown, P. (1993)

⁹ <http://www.affarsvarlden.se/> (2009)

times¹⁰. An article from early 2011 describes how analysts historically have been very optimistic in their view of the direction of market return¹¹. The consensus of these articles is that financial analysts are likely to do whatever other analysts are doing (the psychological bias of herd behaviour). We arrive at the first question of research:

1. How do financial analysts assess risk and make estimations?

The first question of research is an approach to a very important factor in the valuation of a company – the assessment of the riskiness of the investment or speculation. It is important to investigate what kind of risk measures the analysts' uses since if analysts give firms different risk premiums or are discounting with different discount rates it naturally gives different values of the companies even if every other value in the same type of model are just the same. The pre-study indicates a rather subjective perspective when measuring risk.

Sveriges Finansanalytikers Förening (SFF) annually publishes recommendations for how an analyst's work process should be performed and for the way that companies should disclose information. In the 2010 edition it can be concluded that the valuation models used by analysts are quite similar whereas the assumption made by the analysts about the future conditions differ¹². These are assumptions about conditions like growth, profitability and cost of equity e.g. the risk assessments vary. This underlines a very important question. Are the risk assessments, both concerning financial risks and operational risks, the subject of objective or subjective views of the analysts? If objective, the differences in price targets should vary only depending on the access to information of each analyst given that analysts are using similar models. If subjective, a whole range of aspects such as how the individual analyst is reacting towards certain information and act in relation to the rest of the market. We arrive at the second question of research:

2. Are psychological biases relevant in explaining differences in the analysts' recommendations?

Studies about how psychological factors are affecting the financial markets have been pursued since the 1970s¹³. Several specific psychological factors have been identified in explaining how investment decisions are made. Herd behaviour was one main issue that was specifically

¹⁰ <http://www.ft.com/> (2010)

¹¹ <http://www.affarsvarlden.se/> (2011)

¹² Finansanalytikernas Rekommendationer (2009)

¹³ Bruner (2004)

stressed¹⁴. Alongside with examining the models used in equity valuation we would also like to examine whether financial analysts by any chance are more or less exposed to market psychology, or perhaps other psychological factors that bias the opinions. Herd behaviour might perhaps be very significant among analysts if nobody would like to make significant defaults in relation to other analysts. This question is of course related to both what sort of information analysts receive. We arrive at the third question of research:

3. Are information asymmetries relevant in explaining differences in the analysts' recommendations?

Information asymmetry and how it affects the actors of the market has also proven relevant when considering the price assessments made by financial analysts. Indeed, biased information has impact on decisions taken by the parties involved in a decision or deal giving the well informed an advantage¹⁵. A prominent issue related to the performance and decision process of analysts is how transparency and information flows affect the judgement of analysts. For example Stockholmsbörsen's (Swedish Stock Exchange) surveillance unit during the fall of 2010 addressed letters to the presidents of the listed companies on the stock exchange that contained severe criticism on the way of presenting information¹⁶. As the regulative framework is designed, all background information on events that may affect the value of the company should be presented to the market¹⁷. This is however not the current situation. In an analysis of the current market conditions, as a response to the surveillance unit critics, the fact that companies bias information is emphasized¹⁸. Biased information in this case occurs when companies disclose favourable information and are selective to whom to provide information to.

1.4 Purpose

The purpose of this thesis is to create an understanding for the decision process of financial analysts, as well as to gain knowledge of factors leading to different recommendations. So to say gain access to what in literature is referred to as the "black box" in financial analysts' decision-making processes – something that is not yet fully discovered. The research questions will be presented after the disclosure of the framework of this study, so that they can be assessed in their context.

¹⁴ Wärneryd, 2001

¹⁵ Akerlof, G.A. (1970)

¹⁶ <http://www.svd.se/> (2010)

¹⁷ Lag (2007:528) om värdepappersmarknaden

¹⁸ <http://www.svd.se/> (2010)

2. The Framework of the Study

The theories of assessing the value of companies are extensive, as is the previous research on the function of financial analysts. Derived from the background and pre-study the focus lies on the valuation process, psychological aspects and access to information.

2.1 The Valuation Process

The analytical fundamental valuation process is by many¹⁹ described as a three-step process where first the analyst is making assumptions about the future (cash flow etc.). The second step is to put this information/forecast into a valuation model to make accurate price targets. Lastly the price target is compared with the current market price in order to be used as information for investors. Little simplified, if the price target is below the market price, the analyst recommends a buy and vice versa²⁰.

Since we are looking at decision process of the analysts we are primarily looking at the assumptions and models made and used by analysts and how they assess the world around them. The price target is simply the result of the first two steps and thus not the relevant topic, we have already observed that it is something that differs.

2.2 Valuing Stocks

Since the total value of a company can be defined as the stock price times outstanding shares, do we really need further value of a listed company? The answer is yes. By comparing the stock price with the corporate valuation an investor seeks indications if the firm is under- or overvalued, which the investor further will base his or her decision to buy or sell the stock²¹.

The techniques for valuing stocks are in most models the same as for evaluating the value of the company, naturally. All types of valuation methods are based on some assessment or prognosis of the future, referred to as estimates. According to the pre-study, the two most used methods to solve for the value of a company is the discounted cash flow model and relative valuation.

¹⁹ Copeland, Koller & Murrin (2000), Penman (2009)

²⁰ Healy & Palepy (2001)

²¹ Lundén B & Ohlsson, G (2007)

2.2.1 Discounted Cash Flow Model

The most widely used model when valuing companies is the discounted cash flow model or the DCF-model²². In brief, the model is estimating the value of a company based on the future cash flows of the company. The cash flows are discounted by a rate, which is determined by the opportunity cost of capital, the weighted average cost of capital (WACC). The WACC is determined by the risk of the operations from the investors' as well as the debt-holders' view and in relation to the current conditions on the market.

$$WACC = k_d \left(\frac{D}{E + D} \right) (1 - tc) + k_e \left(\frac{E}{E + D} \right)$$

Where:

k_d = cost of debt,

D = Debt,

tc = corporate tax rate,

k_e = cost of equity,

E = equity

Figure 1: Weighted Average Cost of Capital

The technique is based on a constant rate of return over time and the risk is normally distributed around the expected future cash flow. When future cash flows are not possible to estimate reasonably, other more or less sophisticated techniques have to be considered for valuation purposes²³.

It is possible to make different assumptions of the WACC and thus come up with a different solution for the firm value, for example by using different data and timelines for the beta measures. It is of course also possible to come up with different future cash flows when assessing the market conditions differently.

²² Koller et al (2005), Öhrlings PWC (2007) etc.

²³ Öhrlings PWC (2007), Damodaran (2010) etc.

Because of the difficulties with making long-term estimations a terminal value is calculated, the latter part of the function in figure 2. This value is a perpetuity value estimated by the cash flow the last year estimated discounted by the opportunity cost of capital. Below the DCF-model is clearly illustrated in figure 2.

$$DCF_0 = \sum_{t=1}^T \frac{FCF_t}{(1+WACC)^t} + \frac{FCF_{T+1}/(WACC-g)}{(1+WACC)^T}$$

Figure 2: Discounted Cash Flow Model

2.2.2 Relative Valuation

Except for the firm specific values, analysts consequently use various multiple analyses when they are setting recommendations. This is done in order to be able to compare one company with another, or to relatively value an asset depending on how similar assets are priced²⁴. If two companies are operating within the same business and both are successful – is this really necessary? Of course, if one company is much more efficient one should invest in that. Considering everything else remains stable, if one is bought way below the other in terms of price/value, that stock should be bought. Thus analysts have measures to compare different stocks.

The multiples can be divided in three groups: earnings multiples, book value multiples and revenue and sector specific multiples, all by different characteristics. The most commonly used multiples are simple earnings multiples²⁵ which are of importance since it gives a view of the relative value of the firm.²⁶

Using multiples is of course not the same as making perfect comparisons. In the modern economy companies are most often carrying different parts of value chains and are many times in different niches in the same industry. This is something that really makes it hard to compare one company with another, even though they seem at first glance to be operating in the same industry and within the same activities²⁷.

²⁴ Damodaran, A (2002)

²⁵ Demirakos et al. (2004)

²⁶ Damodaran, A. (2002)

²⁷ Ibid

2.2.3 Other Methods

The aforementioned methods are the most commonly used. However, company's values can be really misleading if using these methods. Depending on the nature of the subject company other methods and instruments may therefore be used²⁸. In the case of ABB, this should however not be the case due to the nature of its operations and the products' positions in their life cycles. Theory suggest different methods when for example valuing companies that are young and in a start up phase, operating in financial services, that have negative earnings or are in the real estate business.²⁹

2.3 Risk/Forecasting

Risk includes the possibility of losing some or all of the original investment. A fundamental idea in finance is the relationship between risk and return. The greater the amount of risk an investor is willing to take on, the greater the potential return. The reason for this is that investors need to be compensated for taking on additional risk with a so-called risk premium³⁰.

In the most commonly used valuation models, risk as a term is seldom used. It is more likely that literature is about estimate growth rates. This is basically done in two ways: by historical growth rates or by doing a fundamental growth analysis. Professional analysts of course make fundamental research since it is their job to do so. Mainly there are two ways to make risk assessments³¹. The first one is to make an analysis of all existing threats and opportunities the firm is facing and make a forecast of these altogether³². This type of analysis is often referred to as fundamental forecasting or fundamental analysis, and is closely related to the operational risks a firm faces. Operational risk can be defined as risk that is directly related to the companies' operations, as with internal processes as well as external events³³. Naturally the operational risk assessments will affect the estimated future cash flows of the firm.

Then to evaluate the value of the firm, the analysts consider the volatility of the firm's stock in relation to the overall market (index) and by this receive a beta value. This method is called the CAPM-method. The beta value affects the firms WACC – the discount rate which is used to discount future cash flows. Thus, the higher the systematic risk, the higher the cost of equity.

²⁸ Damodaran (2010)

²⁹ Damodaran (2010)

³⁰ Damodaran (2002)

³¹ Finansanalytikernas Rekommendationer (2009)

³² Damodaran. (2002)

³³ Basel Committee of Banking Supervision (2001)

2.3.1 Fundamental Forecasting

When creating a forecast an analyst often uses some kind of risk model. Various aspects are in this covered by weighting various aspects as well as determine the risk connected to each aspect³⁴. By analysts it is stated that these models are created depending of the drivers behind the earnings of the company³⁵. Thus, these risk models vary depending on the firms' business models and earnings drivers as well as on the structure of the industries in which the firms are operating in.

Sum of the parts valuation is when dividing the assets of a firm in various segments. For example, a company can have several operating units. These units can be operating rather independently and even in different businesses and/or markets and are responding differently to different factors. Thus, an analyst separating the business units and making estimates for each one of them can come up with a total growth estimate³⁶.

2.3.2 Capital Asset Pricing Model

The Capital Asset Pricing Model (CAPM) is one way to calculate a company's stock's systematic risk. It is a simple mathematic method based on regression analysis and can be a tool to analyse the volatility of a firm stock and its correlation to other stocks.

The risk is measured as the beta value of the firm stock and captures a range of aspects that are related to different types of risks. Thus, the risk can be divided into business risk and the financial risk of the company. The financial risk depends on the firms leverage and the business risk measures variation of the firms operating profit³⁷. One important aspect to consider about CAPM is that its results are strictly depending on historical data, relations and performance.

Since the beta value affects the discount rate³⁸, it affects the valuation since that if the unlevered beta value is high, it will be multiplied with the cost of equity and thus affects the discount rate. A more distinct map of these relations can be found in appendix 3. So if an analysis is made by the DCF-method, CAPM and beta will have significant importance.

³⁴ Ibid

³⁵ Pre Study

³⁶ Trout, R (2000)

³⁷ Öhrlings PWC

³⁸ Copeland, Weston & Shastri (2007)

2.4 Psychology

Financial psychology is the study of how actors on the financial markets perceive the market conditions and the psychological effect of the behaviour on the market; some important identified psychological biases are listed below³⁹.

When setting price targets, psychological factors might affect the outcome if analysts are exposed to financial as well as regular psychological factors. Again, the analysts' profession is not only to evaluate the value of the company but to estimate what will be the price of the company's stock⁴⁰.

Several studies⁴¹ about financial analysts have underlined the importance of psychological factors. For instance the individual analyst might have incentives to set a price target that is in line with his/hers interests⁴². These interests, among others, might be to keep his/her position on the market (keep on getting information from the company which the analyst is following) or not being too aggressive in its evaluation because of the risk of higher default grade⁴³.

Another very prominent factor in the work of analysts with relation to psychology is the existence of consensus estimates. Since it is easy to compare one self's expectations with the competitors' expectations, comparisons may influence ones willingness to differ too much from the average⁴⁴.

2.4.1 Herd Behaviour

Herd behaviour is the simple definition of the pattern in human behaviour that humans tend to do what other humans do. This can of course be negative if instead of being rational people go with the mainstream. For example studies have been done on human behaviour looking at how we behave at red lights. Instead of making own conclusions based on how we perceive our current surroundings, exemplified here by a red or green light that signals if traffic is likely to pass by, we often assess the situation by following the herd and walk if others do so. This no matter what the signal shows. Subsequently the result of the study was that it is common to do as others even if it might carry risks that are not in proportion to the gain.⁴⁵ The point is that individuals often miss to evaluate and adapt to important information in order to not differ from the herd. To diverge from the average may lead to analysts being more

³⁹ Wärneryd (2001)

⁴⁰ Healy & Palepu. (2001)

⁴¹ Stickel (1992), Clarke, J. & A. Subramanian (2005) etc.

⁴² Clarke, J. & A. Subramanian (2005)

⁴³ ibid

⁴⁴ Amir & Ganzach (1998)

⁴⁵ Wärneryd (2001)

conservative in their decision process. Hence, they tend to report forecasts closer to consensus than analyst with better record of accuracy.

Herd behaviour is also applicable on the financial market as the operators are humans. It is also stated to be more influencing in times of uncertainty, when analysts to a higher grade do not know how to assess information and which information to adapt to.

2.4.2 Other Psychological Aspects

There are, besides of herding, many other psychological aspects impacting the decision process of financial analysts. Various incentives might affect the decisions of analysts and therefore also much characterize the outcome of the analysis. Such incentives can be career concerns⁴⁶, or other reputational aspects.⁴⁷

Confidence and experience are also factors that are proved to affect analysts work. Analysts with high confidence tend to diverge more from consensus and vice versa⁴⁸. Career concerns and pressure from employer may also affect the willingness to set certain recommendations⁴⁹.

Financial analysts are often under pressure by many factors. The buyers of their services rely on them when making investments, employers are expecting good results in order to be profitable and their performance is often evaluated and public. Several rankings are published annually listing the analysts that are most accurate in their forecasting. Such evaluations might affect the decision-making process as it carries reputational risk. During the past century several studies presented results saying that events as rankings and decision-making that is related to reputational risks are connected with herd behaviour.⁵⁰

2.5 Access to Information

Problems with asymmetric information are a well-known and long-term problem in the financial market⁵¹. A well-known study discussed information asymmetry, which sometimes occurs when the seller has more information than the buyer, which could lead to a disappearance of the market.⁵²

A wide definition of the problem can be illustrated by a simple example; people are always looking for the best goods, lowest costs and best offers. But in reality, some people have a lot

⁴⁶ Clarke, J. & A. Subramanian (2005)

⁴⁷ Stickel (1992)

⁴⁸ Trueman, B. (1994)

⁴⁹ Clarke, J. & A. Subramanian (2005), Hong H., J. Kubik, and D. Solomon. (2000)

⁵⁰ Diamond (1989) Stole (1996) and Graham (1999) etc.

⁵¹ Stiglitz & Weiss (1981)

⁵² Akerlof, G.A. (1970)

of information while others do not. Some may have more or better information about prices, production cost and the situation of competition and some may not. This “information gap” is the problem of asymmetric information. An efficient market is one where security prices are perfectly reflected by the available information on the market⁵³

Previous research states that the information in analyst’s research reports only contains one half of what’s included in the annual report from the analyzed company. The rest of the analysis is based on external factors.⁵⁴ Moreover, analysts seem to rely on information from a range of sources and that those sources differ along the process⁵⁵. In economics, information asymmetry often refers to, or deals with, when one party holds more or better information that makes him or her more powerful than others⁵⁶.

2.5.1 Efficient Market Hypothesis

The efficient market hypothesis (EMH) implies that financial markets are *informationally* efficient, which means that prices are reflected by the available information⁵⁷. This is closely related to the research problem since if the analysts are making assumptions based on same rather than different information it affects the approach on how to attack the research problem.⁵⁸ The EMH has lately been subject for many questions and the statement of the market as rational is much questioned⁵⁹.

2.5.2 Signalling

Another issue concerning the performance of financial analysts are the companies way of informing the market, or in another term, signalling. The theory of signalling was introduced by Michael Spencer in his work *Market Signalling* where he discussed the employee’s way of signal their respective skills to employers with a certain degree of education etc.⁶⁰ In finance, signalling refers to how companies signal their expected future performance by increase or decrease in dividend or debt.⁶¹ This is related to the research because companies tend to signal information that not always reflects the actual performance.

⁵³ Fama, E., (1991)

⁵⁴ Rogers & Grant (1997)

⁵⁵ Bouwman et al. (1995)

⁵⁶ Wärneryd, 2001

⁵⁷ Fama, Eugene (1970),

⁵⁸ Burton G. Malkiel (1987)

⁵⁹ Daniel, Hirshleifer, and Subramanyam, (1998), Barberis, Shleifer, and Vishny, (1998) and Hong and Stein, (1999).

⁶⁰ Spencer, A.M (1974)

⁶¹ Copeland, Weston, Shastri

2.5.3 Analysts' Access to Information

Since analyzing stocks and companies is the profession of analysts it is also their work to engage in collecting information. Therefore one must separate “market information” from the information that analysts are using, despite the transparency of the information disclosed by public firms.

Public information is most often the one that is given to corporate annual reports and the market changes reflected in public medias. However analysts are making extensive research and thus have access to more extensive information. The following sources of information are examples of what kind of information an analyst uses⁶².

- Firm-Specific information made public since the last earnings report
- Macroeconomic information
- Information from competitors on future prospects
- Private information about the firm
- Public information other than earnings

Naturally, laymen do not have the time to make this research and the nature thus has evolved towards somewhat a biased situation when it comes to the access to information.

⁶² Damodaran, 2002.

3 Methodology

3.1 Approach

Using a correct method is important to get reliable answers to fill the purpose of any study. Furthermore, the approach plays an important part in the collection of information. Partly because the empirical information has to be consistent with the study's purpose, and partly because the information has to be treated correct.⁶³

Because our study is disposed as an investigation of the circumstances regarding differences in price targeting, the pre-study is exploratory. Exploratory research, in research methods, can often be seen as elastic. The direction of the thesis changes while both secondary and primary information is being gathered⁶⁴. Why different recommendations and prices do occurs is not easy to define and understand as well as the decision process of financial analysts. Since the main goal for this paper is to shed light on that issue, the direction may not be one-way, and it's likely that different theories will emerge during the process. As we discuss below, the thesis is based on a qualitative method with interviews, which is characteristic for an exploratory research approach⁶⁵.

As a result of the information being accumulated gradually from a very early stage, a picture of the problem area concerning price targeting has been clarified along the way. Our narrow knowledge about price targets in the beginning, and due to the subject being hard to define, could be reasons for this.

3.1.1 Qualitative Method / Assault Approach

A thesis can be approached with either a qualitative study or a quantitative study, or both⁶⁶. The section above presented the exploratory research approach as the main build up for this thesis. In this part, we will further discuss and present why we have chosen a qualitative nature of this study.

Based up on the pilot study, and the desire to explain the decision process of financial analyst and different in recommendations, we have decided to undertake a qualitative approach. We have identified that to solve our problem we need complex information, often based on

⁶³ Bryman, A., Bell, E. (2007)

⁶⁴ Eriksson L-T. & Wiederheim-Paul, F (2001)

⁶⁵ Ibid

⁶⁶ Patel, R. & Davidsson, B. (2003)

subjective values from analyst to analyst. To be able to gather this kind of information its considered best to do a qualitative study where each analyst can describe -with deep going answers- why he or she prefers different methods when evaluate a company, as well as how they asses risk.

A quantitative study, encompassing the financial analysts of an entire industry, could have resulted in better possibility to generalize our findings. However, the possibilities to undertake deep going dialog with the respondents are deemed important and of more value than being able to generalize our findings.

3.2 Case Study

A case study should only involve one or few objects⁶⁷. This thesis will only contain one company and of course, there are both pros and cons relevant to emphasize when doing a case study. Studying only one company makes the study difficult to generalize. If we generalize our result, the trustworthiness of the thesis may be questioned⁶⁸. Every company is in many aspects unlike others, which make our interviews and conclusions only valuable to understand why price targets diverge in our chosen company. Though, we will discuss the potential of this research being relevant for other firms, as well for other companies operating in a contrasting business area.

The decision of making a case study with one company is based on the power of concentration, which enables a more deep-going analysis of the problem area. Moreover, to be able to answer the thesis purpose we find it most relevant to apply the problem on a specific target. Looking into more than one company would force us to do a more general research that probably would eliminate our possibilities to formulate straightforward conclusions.

3.2.1 Case chosen for study – A presentation of ABB.ltd

The procedure of choosing subject firm required some relevant research and eventually the Swedish firm ABB was concerned to fulfil the requirements set up. Firstly, and of great importance, ABB is a firm which by economical measures can be regarded as “stable”. In this context stable means that it is mature, so that unexpected growth will not be an issue. It is not very volatile, but follows a cyclic risk, based on the contemporary conditions in the business

⁶⁷ Eriksson L-T. & Wiederheim-Paul, F. (2001)

⁶⁸ Merriam, S.B.(1994)

cycle. This means that analysts should not differ much in their predictions, based on the hypothesis that all have access to same information.

Secondly, ABB is a global leader in power and automation technologies, and has more than 115 000 employees around the world. The company is currently listed on NASDAQ OMX stock exchange market and also on some other stock markets around the world⁶⁹. As for most of the corporations traded on OMX, ABB is well known target for financial experts, newsletter writers, analysts and advisors. It's also a frequently traded stock for private investors who base their decision on analyses made by financial experts etc. We consider ABB as an imposing stock to analyse and the study can probably be applied on most other stocks as will be discussed later in this paper.

3.3 Collecting Data

3.3.1 Primary Data

In order to be able to evaluate the differences in valuation methods a deep going interview was held with five analysts, whom all have followed ABB. Ltd for at least three years. These deep going interview sessions are primary information and could be seen as the most reliable data⁷⁰.

Interviews

This study is mainly based on primary data collected through interviews. To get reliable and trustworthy information we wanted to discuss with people who are well grounded in financial business and who all now are following/analyzing ABB.

The answers will be presented in the empirical findings under each headline. Quotes will be mixed along with summarizes of the different or/and common view of the question. Each analyst has expressed his or her wish to act as a confidential source, which of course will be granted. The interviews have been made under period of three weeks, from late November until the middle of December. Due to the busy period in the industry it was of most importunateness that we could be as flexible as possible match our respondent's wish of certain time and date for the interview to be held. With his or her permission, each analyst was contacted by phone in order to decide a specific date and time for the interview session. The questionnaire was sent out at least three days before the interview. They have all been

⁶⁹ ABB – Offical homepage

⁷⁰ Eriksson L-T. & Wiederheim-Paul, F. (2001)

granted a copy of the final version of this thesis. From now on, we describe the respondents as *Analyst 1, Analyst 2, Analyst 3, Analyst 4 & Analyst 5*.

Population

Since the case study for this thesis is ABB, it was fundamental that all our respondents are, or have been, following the company. We received information regarding who is analyzing the company at all the major financial institutions in both Sweden and Europe. Because they were all experienced and long-term followers of ABB, the selection of analysts based on the list was not a real problem. To get a comparable and measurable result five analysts were chosen. The decision was also based on the time line and the size of the population and therefore we found five high-quality interviews enough and a good foundation for the analysis. The interviewees were picked due to a process where we first contacted all of the Swedish analysts following ABB, and secondly we sent the same proposal to all analysts globally. According to ABB's homepage the analyst coverage is 39 globally of which 10 in Sweden. Each of them was first contacted by a short e-mail with an explanation of the thesis and our purpose. We were also describing their part and contribution in the research.

Of the five respondents chosen, four of the respondents are employed at financial institutions in Sweden, which makes the interviewed analyst in Sweden to almost 40 % of the total population. The last respondent is employed in another country in Europe. In the early beginning we stated the criteria that our participating analysts should all be analyzing ABB right now, and for at least one year. Thus, we minimize the risk that the respondents have forgotten important information if they do not longer work with ABB as one of their main objects.

Structure of interview & the questionnaire

The main subject for this thesis is to identify why different price targets occurs among analyst. We have chosen semi-structural interviews. Semi-structural interviews are composed by a list of relatively identified questions that provide the respondent with great flexibility in how they chose to answer them⁷¹. Thus, a semi-structural interview is widely open and provides the interviewer with freedom to issue attendant questions, which may not have been included in the questionnaire. The interviews were characterized by a relatively low grade of standardization. This meant that our questionnaire was designed to provide the respondents

⁷¹ Bryman, A., Bell, E. (2007)

with liberty to answer with their own words and room to develop their reasoning and arguments.

Since the subject is relatively difficult to limit, we found it most appropriate to interview our respondents with open question regarding all the four problem areas, defined in the pre-study. The questionnaire has been designed in way that is corresponds to our theoretical framework. Based on the pre-study where four problem areas were defined. The questionnaire is disclosed in Appendix. It was designed to fit the theoretical framework and include the input from the pre-study. Therefore, the headlines of the interview were: Valuation Process, Risk/Forecasting, Psychology and Access to Information.

Interview situation

Since none of the respondents were situated in Gothenburg, the interviews were held by a telephone conference with permission to record the conversation. The techniques used for this part was Skype. The length of the interviews varied between 25-40 minutes, including the time for attendant questions during and after the main topics. Before and after the interview each of the analysts were informed of their complete rights to act as a confidential source with neither his name, nor his company, in any way would be mentioned in the thesis. One respondent off-set our wish to record and quote his answers, but still we were allowed to use his comments to our conclusions.

We would have favoured to visit every analyst at their respective job site to make the interview session comfortable for both parties. Another negative aspect to consider with a telephone conference is that noise and technical disturbance could lead to potential misunderstandings. Professional recording equipment were used to avoid this problem to that extent it was possible. Due to our recordings, we have been able to go through the material multiple times to ensure that all answers are correctly transcribed.

3.3.2 Secondary data

To be able to describe the phenomena with price targets this study contains significant amount of secondary data. Scientific journals and literature have been used, but the study also contains published articles from news writers as well as precedent composed studies. To find former studies and scientific articles we have used databases like Business source Premier and Jstor. Examples of search words are *Price targets, analysts, financial analyst, information asymmetry, psychology and finance, risk, risk modelling and corporate valuation*. We have used

Google to search for newspaper articles and information concerning ABB has been found on the firm’s official home page.

3.4 Process of Research

The process of this research has been evaluated from vague thoughts regarding price targets and the decision process of financial analyst, to an all-embracing pre study and a brief review of previous studies. Based on the pre-study and previous research the problem was defined and transformed into three questions. The picture below, gives a brief overview of our process;

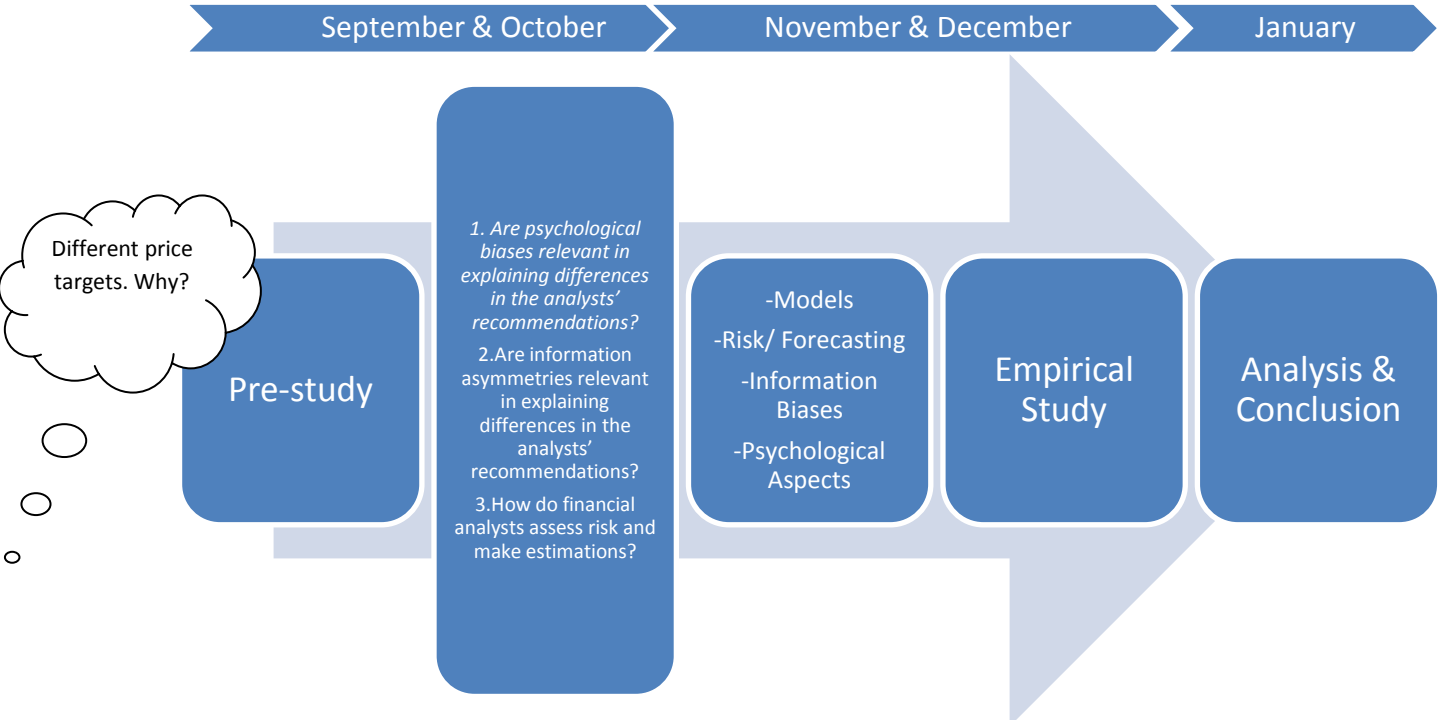


Figure 3 : Process of Research

3.5 The validity of the thesis

3.5.1 Reliability

To be able to meet criteria for good reliability it’s vital that the subject can be repeated in the future without the significant changes in results and conclusions. A common mistake that reduces reliability is hearing mistakes or poor structured interviews⁷². Failures such as hearing mistakes or sloppy written notes have been avoided through our recordings.

⁷² Esaiasson et al, (2004)

However, the reliability can be fairly had to measure due to our semi-structural interview sessions. The interviews gave the respondents opportunities to develop their answers according to their own subjective preferences at the specific time. Hence, it's unlikely that we would receive the exactly same answer at another date, as people constantly changes in experiences and fundamental perceptions⁷³. As mentioned above, interventions to protect reductions in reliability has been made through recordings and quick transcription of the interviews. No analysts have seen the transcription and therefore have not been able further discuss the interview. Since every analyst has been treated as a complete confidential source, our strong belief is that they all answered in an honest and trustworthy way.

Because the relatively high percentage of all Swedish analysts that are following ABB have participated (four out of ten), we believe that the reliability if this thesis is sufficient. We assume that an identical interview with the remaining analyst who follows ABB would end up with approximately the same result. This is due to the thesis being designed as a case study. If we would have interviewed various analysts, focused on other companies than ABB, about their valuation method without taking into consideration their analyzed objects, the result would probably change as individuals with other preferences and abilities would have been picked.

Efforts to minimize mistakes and desire to achieve reliable and trustworthy information, along with the design of the thesis make the reliability sufficient. Another thing to be emphasized is that perfect reliability when making a case study is rather difficult to reach, which is due to individuals making different interpretations when speaking to them⁷⁴. 3.5.2 Validity

Validity can be expressed as the study's ability to measure what's supposed to be measured⁷⁵. To answer the thesis problem formulation and purpose the study contains various sources regarding the subject field. Deep-going interviews have been made with relevant persons to strengthen the thesis internal validity⁷⁶. As we already mentioned, the interview-session and structure of the questionnaire were designed so that we could clarify obscurities. On the other hand can the respondents, dependent on subjective opinions about ABB or their employees,

⁷³ Ibid

⁷⁴ Esaiasson et al, (2004)

⁷⁵ Ibid

⁷⁶ Merriam, S.B. (1994)

have angled certain answers. Therefore, it's important to be critical to answers and reply with attendant questions when needed.

Because of this thesis is designed as a case-study, we won't be able to generalize the results as mentioned above. Hence, this study's external validity would have increased⁷⁷. However, there are possibilities that the study could be applied on similar companies within the same business area. If the interviews are corresponding in a very high grade in for example the valuation methods, we could probably presume those being exercised within similar firms.

3.6 Criticism of the sources

This thesis contains a relatively large spectrum of literature, scientific articles that authors have been written with different purposes. It's for that reason vital that we continuously review the material with critical thoughts. Some parts of the secondary information contain some news paper and journal articles where the author himself chose what information and quotes he puts in the article. The author can have reformulated quotes and statements and that makes the information imponderable. Conversely, we have used solid and well known data bases in our research and tried to ensure that quotes in news paper occurs in more than one article.

Primary data in the shape of interviews has been reviewed critical by adding questions during the conversation if we experienced any vagueness's and by the promises that everybody would act as a confidential source. Unfortunately, primary data may of different reasons not guaranty a complete veracious and disinterested picture. Even though interventions have been made to prevent the most prominent mistakes, we are fully aware of that there still might be some unidentified misunderstandings. We have tried our best to be express the question as clear and explicit as possible.

3.7 Delimitations

There are, in essence, two main paths to choose when making a stock and thus company valuation. The first path is the technical analysis where the analyst considers the stocks historical pattern to be able to make a forecast of the future direction of the value. The second path is fundamental analysis where the analyst tries to determine the future value of the company by using various models that are taking the future cash flows or earnings of the company into account. Technical analysis does not consider risk measurements that reduce

⁷⁷ Ibid

their importance for this study. In this thesis fundamental valuation methods are examined only. Further this thesis will not include analysis of the market risk since the focus will lie on the firm-specific risk and analysts' subjective valuation.

We choose to investigate one single industry since analysts are likely to use different methods to evaluate a company within a specific sector. When we choose industry we are looking for an industry that contains both several large public Swedish companies and that also contains a certain amount of risk. This thesis excludes volatile industries such as the more volatile biotech-industry.

Since the study is designed as a case study, the problem questions will be formulated so that they directly refer to our chosen company. However, since deep going interview session will be held, some questions may also lead to a more widen discussion concerning the problem questions.

4. Empirical study

The study was developed from evaluating the background, pre-study and the framework for this study. Subsequently the empirical study was structured in the same manner as the framework of the study with focus on the valuation process, access to information and psychological aspects. To strengthen the value of the study an “other” section was created to fill a gap where important aspects, not matched under the previous headlines, could be discussed. Due to the extensive material from the interviews made, only fragments of the full interviews are published. Each of the problem questions will be presented after one other. The questionnaire from the interviews is found in Appendix I.

4.1 Valuation Process

Can you in detail describe your process when you analyse ABB?

All analysts gave detailed information about their specific process. Some had been following ABB for a longer time than others and thus the processes differed somewhat due to that some have more experience with the industry and ABB’s operations. However, except for some small variations almost all of the analysts are using the same methods. In essence, the process is focused on understanding the business model and the key drivers for the firm’s success. *Analyst 1* separates distinctively between numerical and qualitative measurements:

“The process can be divided between numerical or qualitative measurements. If the starting point is the earnings and measures of these there are a specific process to assess the value of the company...Our job is so to say to first estimate a firm’s future earnings. Thereafter by existing valuation models to value the firm based on our expectations of the future and also to assess where we believe the stock is going to be during a specific timeline”

The process can mainly be divided into three steps. Precisely as the theory suggest; 1) fundamental research of the company. This involves looking into reports and documents, competitors, speaking with management and investor relation etc. 2) Putting data into a model, which according to every analyst ends up in the DCF-model. 3) Derive and estimate a future price target and recommendation for ABB. *Analyst 2* stated that he in the process to find out the qualitative information about the data tries to communicate as much as he can with the management of the target firm. *Analyst 3* also ranks the management as a great source of information and continues:

“It’s not very complicated, on one hand we take information from the market and we use information from peers, clients and suppliers. That is one part of the input data. The second one is to double check what the management and information/investor relations are saying. If you get a perfect fit then its fine, otherwise is most about your own judgements whether you think that management is very conservative and you chose to stick with your own view. In the last part you take this input data and put it into models and creates estimates of the future and later derive price targets etcetera for ABB.”

Analyst 1 describes a similar scenario in his process and states that he consequently uses DCF and multiples valuation:

“You cannot say that some pieces are not important. Somewhere one must say that in all kinds of analysis it is about the market.”

So the most important things are as aforementioned the business model of the subject company and its competitors. Analyst 4 further stresses the importance of understanding the surroundings of the analysed company:

“Next step is the situation with competitors. You can have a great product on a poor market. Ideally I would like to call all the thousands of customers and ask them what they feel about ABB and Siemens but that is not possible...Then one look at the internal components of the company. That will say how the cost structure looks like. Is it variable or fixed? How much working capital...Of course one has to have a critical view, but all the companies I look at have very transparent information...Generally the company is the best source of information about itself.”

Analyst 4 emphasize the fact that analysts are starting off by looking at the current balance sheet and then make estimations for how each line in the sheet will develop by using sum of the parts. This will give the analyst an estimate of the cash flows and by discounting these subsequently the value of the company:

“The starting point is the balance sheet and then you simulate different parameters so that the lines in the balance sheet adjusts to what you believe will happen the coming years and so on...Simple business measures...Based on

these you get a cash flow, a free cash flow, which is discounted by your WACC. I work with this partly since it is business customs. I also use a somewhat different framework. This is based on a closer horizon than a DCF model and a formula in which I add the volatility I see the market has for the stock...Then the main model is driven by estimates on the parts that are cooked down to EBIT. But it will be a result for the different business units.”

Thus the DCF model and its components are setting the foundation for the multiple analyses as well.

What does your fundamental analysis look like and is it specific for ABB?

The interviewees agree on almost the same methods of evaluating ABB. Everyone is doing multiple analyses and is comparing ABB with other companies within the same industry as stated by the answers in the question above. Each analyst however has something that he specifically emphasizes. As *Analyst 5* says:

“It is depending somewhat from time to time – where in the cycle you are and so on. Currently, about ABB, it is EV against EBIT and that one tries to go for a debt-adjustment measure since they are having a very strong balance sheet that pulls down, or is not generating any returns. Margins and so on are also on very average levels so you can use an earnings measurement that as when large turning points occurs, one usually uses an earnings neutral measurement as EV/Sales to compare different industries.”

The others agree that various EV multiples are used and also the most common P/E. *Analyst 1* agrees with *Analyst 5* and states that for ABB, which have different divisions, sum of the parts analysis is very important:

“First you have the DCF. Then you use “sum of the parts” and then also some kind of multiples. Either the most commonly used P/E or some else as the different EV values...Sum of the parts gives a flexibility concerning the close profits. DCF-model is a sort of base for a valuation of a firm’s value. On top one uses other valuation methods as “sum of the parts”, where you can set different multiples for different divisions as you believe the market will value them. Over time the model does not default very much. If looking back at the past period of 07-08 as an example where the profit goes down very much, it is

an extremely small part of the total value of the cash flow. On mid-term time line it affects the cash flow very little. The valuation is very strict and is by principle the sum of the firm's future cash flows. This does not need to be reflected in the markets valuation of the firm, since it often looks at other aspects”

Analyst 2 states that ABB is rather special for him due to weak Swedish competition. He thus compares ABB a lot with foreign competitors that are somewhat specific for ABB compared with the rest of the companies that he is analysing. For other subject firms he is “probably” looking more on the local market.

Do methods vary a lot depending on the industry?

On this question the analysts were having different opinions. *Analyst 2* uses same methods and models no matter the type of industry and some adjusts depending on what kind of industry the target company is operating in. One has only been following the same type of industry but assumed that he would need to adjust his valuation method when looking to other business. *Analyst 3* makes it very clear that valuation-methods differ depending on the nature of the business and that it is a natural and common practice.

“Definitely yes. When we analyse biotech we use much less complicated DCF-models or relative valuation. You can say that's it's a probability DCF-model. For real estate's we use net asset value. For financial companies such as banks you use book-value method or sum of the parts.”

Analyst 1 states that he is rather unfamiliar with other industries and that he therefore is not able to give a certain answer on this question but that he is sure that he would have to adjust his process to the nature of the industry if that would have been the case:

“I have really just analysed engineering companies and here the profits are quite stable. They have an existing business on a market that is rather structured. Then there are many firms operating on other markets that are in a state of development and then it is much harder to assess future profits”

4.2 Risk/Forecasting

To what extent do you believe that your individual subjective assessment of the firm's opportunities and threats are reflected in your analysis?

All of the interviewees share the opinion that it is their fully subjective opinion that makes the actual analysis. *Analyst 5* illustrates the common view:

"The whole thing is about to find the deviation you self have from the market's. Most often you share 95 per cent of your opinion with the market but it is the other five per cent that is the unique, important and interesting"

Analyst 1 agrees and is saying that historical references and aspects could be useful, but only to a certain point:

"By principle the whole estimation is about what me as an analyst believes, even though I of course always can look at historical references and see that the conditions are quite similar at present...Historical references, sure, but in the end it is about what I predict"

Analyst 3 states that he uses "soft factors" to estimate the future, but points out that those are mainly based by assumptions and subjective preferences as well.

"You have a value which can be a premium or a discount to the fair value and that's called "soft factors" like credibility, track-record of the management, liquidity of the stock, which is mainly based on different assumptions and varies from analyst to analyst"

What are the most prominent aspects when you are making your forecast and do you measure risk in other ways than the firm's beta?

As stated in the previous section, most analysts are looking at the key drivers of the firm's earnings and long-term growth of the company. There are however different opinions about what are the key drivers but the common view is that this depends on the type of business. All of the respondents focus on the risks with an operational perspective *Analyst 1* states that when it comes to ABB he believes that sales, prices and currencies are very important. *Analyst 3* agrees and continues:

“The most important is the long-term growth and currency risk. The second most is profitability”

All analysts but one says that they are including other risk measures than the beta to calculate and estimate the risk of the firm. However, the design of the risk model seems to differ and various variables occur as instruments. *Analyst 3* uses “soft factors”, such as the judgment of future credibility and track record of the management. *Analyst 1* prefers to use future expectations of volume and sales prices:

“Volume, prices, currency and acquisitions. Those are the factors that are affecting the orders and sales, and these aspects construct the prognoses. Then one looks at the EBIT-level and from two models making estimates. Either you count for a cost of sold goods and OPEX and find an EBIT. But other firm’s are not designed in the same way, and then you cannot assess EBIT on the same foundations. Instead you see how the currency affects EBIT, how the acquisitions affect EBIT and the operational leverage.”

Analyst 5 adds that they are not including specific risk measures in the forecasting. The risk is reflected in the way of estimate future earnings. Perhaps if there is big uncertainty they use scenario analysis. Beta is only included when using DCF:

“Yes I guess we do, perhaps in a more non-scientific way. Beta is so to say a historical measure and we are more subjectively trying to assess the future views...I experience that beta is not as big factor in reality as in theory – in my profession”

All thus agree on that there is a distinction between theory and practice - that the forecast is the result of their subjective assessment of the subject company’s possibilities. *Analyst 4* is the only one that does not uses beta for the calculation of the discount rate:

“The volatility is by me the function of $\sigma^2/2$. This standard deviation is based on the same research I do when I am making my estimates...This value is free from the noise of the market...WACC is somewhat wrong to since you use a measure that is affected by the expectations of the market. It removes the individual analyst’s risk measures in the equation.”

How is the companies risk reflected in your analysis?

As in the answer to the previous question, the risk is reflected in various ways from analyst to analyst. *Analyst 1* and *Analyst 4* provide the most detailed answers. *Analyst 1* puts it into context when he divides the risk into operational and financial risk:

“The financial risk represents a very small part, since it is not relevant what the mathematical beta value is. You have got a beta value in your model but it is not changed if nothing significance occurs. However, when the firm had severe financial problems that were a reason to set a high risk-premium...Now the risk is more about competition from the Chinese power market that has begun to buy more domestically. The market risk is the one that affect, which for me is within the operational risk. How I assess the operational or market risk affects for example my assessment of the firm’s margin. This subsequently is reflected in the DCF-model. If I then set a financial risk premium on ABB, I have double counted the risk. That is my point of view, and then perhaps it says in a book that this is not the way to do it but that is my way of doing it”

Analyst 4 continues:

”In a DCF you can say exactly what the risk is because of the beta. We are really translating the value to multiples so that a DCF is not needed. Or, it (DCF) is the best way to measure a valuation but it is not the most pedagogic way to convey your valuation. It is very hard for a third party to understand what you have included in your assessments.”

In sum, most analysts stated they are not paying very much attention to the beta-value, but instead are looking to the operational risks.

4.3 Psychology

Does consensus estimates limit an analysts’ will to set a price target in which he/she actually believes in?

Consensus estimates may, according to the interviews, have a small effect on the analysts will to set the price target that he or she believes in. Four out of five analyst state they do not really consider, or even look at, the consensus before publishing the price target or/and recommendation. Although, they admit it is interesting to see whether they are substantially above or below consensus. *Analyst 5* explains:

“I never believe it affect the overall judgment since people (analysts) actively are looking for different views than the one given by consensus”

Analyst 1 discuss’ the situation likewise:

“No I do not think that consensus is affecting the price target itself. First I set prognoses and after that I look at consensus estimates to see if I deviate anything. If I deviate and believes consensus is wrong I write that in the report. But I do think that consensus may have an unconscious affect on the analyst.”

Both Analyst 2 and Analyst 4 say they do not themselves take consensus into consideration in their own analyses though they believe that others might are afraid to set recommendations/prices far from consensus. Analyst 1 also says that consensus might affect analyst will to set a price target, even though he is not affected by it.

Do you find consensus estimates limiting or helpful in the valuation process?

Those analysts (Analyst 1, Analyst 4 and Analyst 2) who in the previous question stated that consensus estimates may affect the price target, finds consensus as limiting. Analyst 4 explains why:

“Yes I believe so. I do not want to include noise from consensus. I start from what I see and what I know and believes that it is on that ground the market sets prices as well...It is not my primarily task to look at what consensus is...However it is impossible to not look at consensus since those I work for always want that information. Many want to see a relation between what I set and the consensus sets...By its existence I would say it is limiting”

Analyst 1 agrees with Analyst 4 and feels consensus more as limiting in the process rather than helpful.

“I would say it’s limiting and rather than a supportive tool in the process, because I believe that it unconscious affects analysts. Even though I always stand behind my own point of view, set my own forecasts and afterwards look at consensus, it will always be somewhere subconscious when you know what consensus is: What is the difference? What is it really? Have I missed anything or have the others missed anything?”

The other two, *Analysts 1* and *Analyst 3*, who do not find consensus interesting to look at any point during the analyzing process, finds consensus estimate neither limiting nor helpful. *Analyst 3* sums:

“I don’t really care about the consensus. I have my view, and then I check with consensus and might take a closer look if I’m substantially above or below. It’s always interesting to know what the competitor’s arguments are. Analysts may have a different view of for example the long-term infrastructure and competitive environment”

Is there any competition among analysts to set accurate price targets?

All respondents agree that there is competition among analyst to set accurate price targets. The main reason is that “clients” prefer “suppliers” that perform best. *Analyst 5* states that the rankings make their work very transparent. Another opinion is that the evaluation of analysts among independent organizations acts as an incitement to perform well. *Analyst 1* explains:

“Yes, that is so far our customers, which are investors; they would like the counterparties and suppliers that perform best. Since you always want to be best and successful there is always a sort of willingness to get closer to the “real price” than the others. This is good since people then put more effort to really assess the true value”

Moreover, *Analyst 3* is most satisfied when he sets accurate price target and is ranked highly. *Analyst 3* summarizes the significant arguments among the interviewed analysts:

“Yes, because there is a certain competition because every analyst’s ranked globally twice a year. Everybody wants to see themselves high on that ranking list, since it’s also often bonus relative. And besides that, you always want to be good at what you do.”

Analyst 4 elaborates the previous statement further:

“There are large organizations whose primary task is to evaluate and measure all analysts globally and that is published...I believe that analysts are affected somewhat by that but other measures, more qualitative, as when they evaluate your abilities as conversational party etc. are heavier measures. But overall I would say yes.”

Thus all of the interviewees in this study perceive moments of competition, but none is actually saying this is affecting their work more than that they therefore would like to be greater analysts and set more accurate price targets.

Do you feel that you have to set a specific price to favour your employer?

Four out of five analysts says that they do not feel any pressure from their employer to set a price target of ABB that “suits” the firm. *Analyst 5* summarizes their thoughts well:

”No, yet again, not more than that they would like an opinion which is clear and unique. It is clear that if an analyst has an opinion that is always one per cent away from the current firm stock price that is perhaps not so very interesting”

Analyst 3 states that this certainly might be the case within larger houses:

”I know brokers where price targets are set by the house or the boss, and you have to come up with a model that reflects this price target. This is something that really happens”

Analyst 4 agreed and was also pointing towards the larger institutions.

”I can say like this. Here you have the opportunity to set a hypothesis. You have access to the difficult years from 2007 until today...If you start by using the WACC from Bloomberg’s where they are doing an exercise similar to mine and sets it relatively to the WACC based on the estimates you will find out that the average estimate WACC was around 17-18 per cent – it is usually 8 per cent. It is quite obvious that analysts “trimmed” their estimates to fit in with the existing conditions in the overall economy and never the less the stock market itself. Especially if looking at large American banks that had completely crashed it was probably hard to be an analysts yelling about a positive outlook. It would probably be suicidal”.

Analyst 5 gives the previous statement some support by saying that some might feel pressure to set price targets that are acceptable to all stakeholders who are either the friends on the target firm, or the employer.

Does the market psychology differ between industry and size of firms?

The analysts are not very familiar with these types of differences but are signalling that it might perhaps exist differences depending on industry and size of the firms. *Analyst 2* states that differences are present depending on sector. Some sectors are very volatile and follow business cycle while some has other drivers. Such differences affect all aspects of the work of analysts while *Analyst 5* means that smaller firms are not as covered as large ones and that it makes sense that the psychological importance should decline by the number of analysts following a company.

“Yes that could be said since smaller firms are not that much in the spot-light”

Analyst 4 states that since larger firms are attracting more analysts, such analysis also carries the risk of being influenced by the overall concerns. He exemplifies this by what is going on today in ABB and its exposure to the risk of Chinese competition. Every large broker carries the same message since no one would like to end up as the “one that was wrong”:

“Generally it is good that many analysts follow the target company...and of course the coverage of larger firms is more extensive. I can though personally feel that the risk is more prominent that there are on-going battues when it comes to larger firms. ABB is a very interesting example of that at the moment. The focus is extremely directed towards Chinese competition...This focus generates extremely high discount rates. For example when looking at the energy division, the value of ABB is half. And on all the large houses in America and London everyone carry the same story...so the conclusion is, of course my subjective, that larger firms tend to carry more risk of battues than small ones”

In brief, the analysts in this study do not have much experience of differences of psychological effects due to industry characteristics. This depends on that they all are, and historically have been, concentrated within this specific or similar industries.

4.4 Access to information

Du you experience differences in access to information compared with fellow analysts regarding ABB?

The respondents perceive that in some way the problem with asymmetric information can occur due to various aspects such as the geographical distance between the “house” and the subject company. This can affect the ability to arrange meetings with the management etc. It

can also depend on how well the analyst knows the management. *Analyst 3* points that larger financial institutions might have an advantage over smaller firms regarding the attention from ABB:

“Yes, it’s a global company and the ABB management knows that larger houses have more impact on the share price and therefore relay for information to those houses and generally receives more access than smaller brokers”

Analyst 5 explains why he thinks that the location can impact the access to information:

“ABB is a sort of special company since it has its headquarters in Zürich and thus one can perhaps believe that one has the opportunity to meet the corporate management more if one self is based down there than if one is located in Stockholm...And of course, that is working to ones advance when it comes to companies that are located in Stockholm.”

Analyst 4 agrees that in a company which is managed the way it is supposed to, very little asymmetric information would exist since the information is directed directly towards the market. *Analyst 1* concludes:

“No. Firms that are operating the way firms are supposed to do have a single company information which is directed towards the market and that is something that they are very strict with”

The respondents however implicitly state that asymmetric information can be a problem with small as well as large companies.

Do you believe that ABB communicate information which well reflects its actual performance?

All analysts declare that ABB is very restrictive with what they say and publish, as well as they provide good and true information to the extent it is possible. *Analyst 3* explains:

“Yes, they do it very transparently and always adjusted for ethical purposes. I think you really receive true information about ABBs performance”

Analyst 1 declares that he has not yet experienced any problem with ABB, but states that every analyst has a responsibility to assess the information given by the company. The company may not be better than anyone else to estimate their future.

“I believe that the only contemporary as the firm most often communicates is its outlooks. Then it is up to each one of us to judge from our knowledge about the market, industry and firm how this action is performed in different situations. I would like to state that the firm’s own communication is a part of our assessment. If the firm states that next year will be a bad one, then one is not without evidence states that it is going to say it will be the best ever. One has to be quite open with the fact that not even the firm has a crystal ball as it seeks answers from. A good analyst, which has a lot of knowledge of a certain industry, also has a good ability to apprehend what will happen next year. We can hopefully also assess what we believe about the future through some knowledge about the industry.”

ABB operates globally. Do you experience more asymmetric information with smaller firms?

None of *Analyst 1*, *Analyst 4* or *Analyst 2* has experienced any problem with asymmetric information when analysing smaller firms. According to them, they have been just as professional as larger corporations. However, *Analyst 3*, and *Analyst 5* say it could be a problem according to their experience from smaller firms. *Analyst 5*:

“Generally this is probably a problem that is more common if looking at smaller firms. I really never experience access to information as a problem.”

Analyst 3 is more direct when he speaks generally about asymmetric information.

“You want to make sure, in big companies, that everybody receives the same information. In smaller firms it really depends of your access to management, how much they like you, what is your rating of the stock and so on. The problem with asymmetric information between companies and institutions certainly exists.”

To summarize, two analysts have not experienced any problem with asymmetric information within smaller firms. Two think it might be a general problem in smaller business areas and one states that it certainly is a problem.

4.5 Other

What makes your way of analysing ABB unique?

All analysts were more or less pointing at the subjective parts and stated it is their individual view that makes their process unique. Otherwise the procedures are not that different. *Analyst 3* concludes:

“Not anything, it’s a very standard procedure I think. But maybe all the soft factors we consider when either giving a premium or a discount”

Besides the subjective view, experience, access to management, the closeness to the market, and market position were mentioned as factors that can separate one analyst from another. *Analyst 5* emphasized that his experience is what makes his position unique:

”Experience concerning what affect the firm which might not is obvious from the start. Otherwise the main reason is only how much effort one puts into the research.”

Analyst 1:

“Good question! I really try to stay close to the market. I try to stay close to the reality and assess it by discussing a lot with their competitors and customers, by the hope about it will end up in estimates or a view of trends.”

Analyst 2 states that good contacts are of much importance. Besides that he declares good knowledge and experience as the two factors that are most important if he looks at what he does compared with the colleagues.

Analyst 4:

“I believe I can act more independent. The differences are probably not so much in the subjective measures but in the ability to be able to set the price target one really believe in”

What do you experience as the biggest reasons for analysts making different recommendations about ABB and overall?

Analyst 2 emphasized the personality of the analyst - if he perceives signs with an optimistic or pessimistic view. Other reasons could be a different views and assumptions of the macroeconomic environment, as well as the development of the infrastructure. *Analyst 3:*

“Some say ABB will remain as market-leaders and some say they will lose markets share to China, but also outside. So it’s mainly about different assumptions and views about the competitive environment in the business“

Analyst 1 yet again emphasizes the subjective opinion of the individual analysts and express what he thinks would be the outcome without this view:

“If you had asked all analysts to use a DCF model with almost the same risk premium you would end up with a difference in price targets for approximately ten per cent”

Analyst 4 talks about pressure from stakeholders affecting the outcome of analysts’ reports:

“I am sorry to say this but I partly believe that it is sometimes due to the analysts’ ability to relate the analysis with the surrounding world objective and independent. And the other most prominent factor I believe is important for the differences in price targets is that behind the individual analysts there are different business-like incentives to set different price targets”

4.6 Summary

The interviews widened the perspective of the elements of fundamental analysis and the decision process of analysts. The results of the first section indicate that all analyst mainly use the same models, which are the multiples and DCF-model when analysing ABB. The fundamental analysis of ABB is therefore basically the same among all our interviewed analysts. They also almost agree that the methods and tools used will alter depending on which industry they analyse.

Regarding the risk factor the results imply that various aspects and instruments are used to forecast the risk of ABB. The importunateness of the beta-value or its equivalent differs among the analysts, since more weight is put on the other operational aspects.

The result from the section about psychological aspects varies more than the two formers. All respondents are feeling competition within the business to set accurate price target. However, the opinions whether consensus is a problem or not differ between them, as well the pressure from the stakeholders varied.

All analysts state that the information given by ABB is very transparent and well reflects the company’s actual performance. However, three out of five point out reasons for why they

think some have more access to information than others. There were also different opinions regarding the general view of the problem with asymmetric information.

The main reason for analysts setting different prices is, based on the interviews, different views regarding assessments of the macroeconomic changes and competitive environment and other subjective aspects.

5. Analysis

This chapter holds a discussion about our empirical findings analysed in relation to the framework of the study and the qualitative study presented in chapter four.

5.1 Valuation Process

Theory suggests a three step process (earnings estimations, modelling, relative valuation) of company analysis which all the analysts say they more or less follow⁷⁸. Moreover, theoretically it's the DCF model that dominates the valuation of companies, along with additional analyses serving as comparison measures.⁷⁹ The use of these methods, in practice, is not addressed much in literature. Based on our results it seems reasonable to assume that it is accepted business practice to use them. All of the interviewees were, for example, using DCF as main tool in the valuation process. However, the parameters used within the model did differ somehow. *Analyst 4* did not use the common beta value in his calculation of the WACC, which means that he can be making different assumptions of the cost of capital than he would if he used beta. This shows that it is possible to choose and trim the DCF-model to fit the incentives of the analyst, something that will be discussed more closely in the propositions for further research (section 7).

The results show that differences, in regards to the context in which a firm operates, force analysts to change valuation methods to fit the reality of companies. The components of the simple DCF model are not, *per se*, changed rather the way that information is assessed, is revisited. This finding is in line with corporate valuation literature⁸⁰. In the ABB case, the results reveal that the main part of the fundamental valuation process of ABB does not fluctuate much between the analysts: all analysts are using the DCF-model as their main method to calculate the present value of the firm. Hence, it seems unlikely that *the method* used for valuing stocks is a main reason for analysts setting different price targets. Asking the analysts about the *assumptions* they make in regards to the data used in the models the results clearly show that they value different variables differently which subsequently impacts the company's earnings. For example, weighting the same variables differently can lead to diverse outcomes and, in the long run, different values of the same company.

⁷⁸ Copeland et al (2000) & Pennman (2009) etc.

⁷⁹ Koller et al (2005)

⁸⁰ Damodaran (2002), Penman Copleand, Weston & Shastri

5.2 Risk/Forecasting

Analysts estimate, according to theory, the future by weighting various aspects into their model depending on what business area the company operates in⁸¹. Furthermore, when measuring the volatility of company's stock in relation to the overall market, the beta-value is, in theory, calculated by using the CAPM-model. The beta-value affects the discount rate, thus it influences the value of a firm⁸². Our results are in line with theory and show that the beta-value of a firm should be important when estimating its value.

When it comes to how our respondents measure risk, we can distinguish both dissimilarities regarding the design of the risk model, as well as the variables used to forecast the risk of ABB. All of the analysts, except for one, use beta to measure ABB's financial risk in the WACC. The beta is calculated by using historical data in the CAPM-model⁸³. Therefore, the systematic risk will more or less give the same result since all analysts have access to the same historical information.

The overall opinion of the respondents in this study implies that companies' beta-value does not play such a big part in the total analysis of ABB. Therefore, the price target and recommendation may not be significantly influenced by the calculated beta value. Instead, the analysts look more at the operational risk. This "risk" is reflected in the estimated future cash flows which are based on various assumptions of the performance of the subject company. Risk can be defined as the risk of indirect or direct losses resulting from external events, people and systems⁸⁴. *Analyst 1* tends to "value" currency risk high whereas *Analyst 3* uses the track record of the management. This illustrates very well how analysts are weighting different factors differently. All of the interviewed analysts say that assessing the risk of a company is mostly down to subjective preferences rather than looking into historical data as in the beta value. As emerged from the interview with *Analyst 1*, he finds historical data useful for some purposes though it is what he predicts that eventually matters. In sum, analysts put different variables in the same model that will ultimately lead to an altered view of the value of the company.

⁸¹ Damadoran (2002)

⁸² Copeland et al (2000) & Penman (2009)

⁸³ Finansanalytikernas Rekommendationer (2009)

⁸⁴ Basel Committee on Banking Supervision (2001)

5.3 Psychology

According to studies on behavioural finance consensus can limit analysts' willingness to set a price target because they are afraid of standing out. Individuals are afraid to diverge too much from what can be seen as average.⁸⁵ Herd behaviour is a well known behaviour that shows that humans tend to do what other humans do instead of being rational in decision making despite obvious signs. Individuals follow what is considered as the mainstream. In finance, herd behaviour can lead to exclusion of important information⁸⁶. Since analysts are being compared both against each other by independent organizations and their employers with consensus, it might have a significant effect on the decision making process of financial analysts.

The questionnaire includes a handful of questions about psychological biases. Three out of five analysts in our study stated that consensus did not affect them in their work, but after some thoughts, they all agreed on that the consensus estimates actually had some presence and that it often is a limitation to their work.

There is an underlying aspect that all of them seem to consider the aspect of career concerns when you as employee diverge from what can be seen as average⁸⁷. The fact that one analyst states that others might be afraid of diverging from the mainstream and another one explains about the circumstances between consensus estimates and the will to set price targets makes this aspect relevant. One analyst told us that his employer always wants to compare his analyses with consensus: which might act as a discouragement to set the price target he actually believes in.

The empirical result, regarding consensus, is rather ambiguous since the respondents both expressed that consensus is not considered in the decision process but at the same time they did all state that it has significance presence within the industry of financial analysts.

Analysts are often under pressure, both from their own employers but also because they are constantly being ranked and therefore facing a risk in a reputational downgrade⁸⁸. According to *Analyst 3* an analyst is being ranked at least twice a year, both globally and domestic by large organisations. *Analyst 5*, *Analyst 3* and *Analyst 4* state that this might affect others

⁸⁵ Wärneryd (2001)

⁸⁶ *ibid*

⁸⁷ Clarke and Subramanian (2005)

⁸⁸ Diamond (1989)

within the industry to not make independent decisions. They might be afraid of losing ranking points by stick out and try to find the “perfect match”. Eventually the analyst’s employer or the employer’s clients, the investors, would not fancy this.

The flip side of the coin is that some of the respondents in the study believe that the competitive environment can encourage “standing out” since it would probably lead to better ranking if one is accurate than conform. We find that competitiveness between analysts is not a main reason for different price targets nor is the opposite (our respondents implied it is an incentive to make better market-research). There may also be incentives for analyst to set a specific target and recommendations that is in line with his or hers employers interest. Employers are expecting good results in order to be profitable⁸⁹. All analysts that were interviewed said they felt no pressure from their employment to set a specific price target. However, *Analyst 3* told us that it certainly can be the case in some institutions according to his colleagues and experience, while *Analyst 4* also stated that it might be a “problem” in larger institutions. It might not be the case for our respondents, but the statements indicate that employers sometimes have power the outcome of the financial analysts’ recommendations and thus also entrench the independency of analysts’ decision processes. Hence, we do not rule out employers pointing in a certain direction as an explanation to why different price targets do occur.

5.4 Access to information

Theory implies information asymmetry exist whenever one party has more information available than the counterparty, and benefits from this⁹⁰. If a financial analyst receives more or/and better information, his/her knowledge about variables will probably result in a more accurate price target. He/she would end up making different decisions that subsequently should result in different price targets, compared with those who cannot access the same information⁹¹.

Analyst 3 points out that the location of the analysing institution can play an important role in the process – the closer your employer is to the analysed company the more likely it is that an analyst can profit from its location. The other respondents also mentioned this. Moreover, *Analyst 2* addresses the aspect of how well an analyst knows the management.

⁸⁹ Graham (1999), Stole (1996)

⁹⁰ Akerlof, G.A. (1970)

⁹¹ Krishnaswami, S. and V. Subramaniam (1999)

With the case of ABB the situation should then be that financial analysts, working on large institutions in, for example Switzerland having advantage over institutions in other parts of the world (it's where the headquarters of ABB is located). This is a discussion that lies beyond this thesis framework and requires a more deep-going research. *Analyst 5* said that he experiences more “closeness” to the companies’ located in Stockholm where he is working. Both *Analyst 3* and *Analyst 4* describe the asymmetric information problem as more common within smaller institutions. They argue that large companies today care more about larger houses because their recommendations and price targets have superior impact of the stock.

Another part in the area of asymmetric information is how companies signal and publish their performance. In theory a company sometimes signals and publishes false or misleading information that does not reflect their actual performance. This could eventually lead to contradicting information, if developments in macroeconomic environment point to a totally different direction than the firm⁹². Analyst may translate and handle this contradiction differently, and therefore make different estimations and decisions.

Regarding the phenomenon of signalling and the question whether our respondents felt that ABB communicates information that reflects their actual performance well, the collective answer was yes. Every analyst interviewed said that ABB publish information very transparently and correct, at least to that extent it is possible. *Analyst 3* pointed out that not even the management can foresee the future flawless and therefore every single analyst has to be critical to the published information, and take it into consideration in a wider context. Companies like ABB that are large and international, are according to the respondents, trying to always reflect and communicate true and relevant information.

The empirical findings exposed a dilemma with asymmetric information in terms of where the analysed company is located in relation to the analysing firm, as well as the size of the analysing firm. Of course, analysts that access different information compared to their colleagues, will to some extent value the company altered. Since both large and small financial institutions all over the world follow ABB, we do not exclude this part of information asymmetry as a factor for diverge recommendations and price targets.

⁹² Copeland, Weston, Shastri (2005)

5.5 Other

The analysts are very clear on the fact that the procedure when analysing ABB is not different from that of analysing other companies. However, what they underline and pay attention to differ. The most interesting thing that came up in this section was that *Analyst 4* believed the ability to act independently is the major reason to why his process is not identical to the process of others. Independency can be related to most of the aspects considered in this study. As agents act independently he/she is probably not bothered by consensus estimates and is not affected by either employer or stakeholders to set specific price targets. Such decision process would exclude the “noise” from the surrounding environment.

On the question about what was the major reason to why the price targets and recommendations are different the respondents had very different answers. *Analyst 4* again stressed the independency perspective and that the analysts’ ability to go with what they actually believe in can be intruded by other incentives. Besides this, the other respondents claimed it is a result of their subjective opinions.

5.6 Summary

In brief, the study shows that the works of financial analysts depend on their perceptions and abilities to make assessments. This is illustrated by them perceiving the surroundings differently, by them emphasizing different factors as well as by them being incentivized by different things.

The models used in the valuation process were shown to be pretty much the same. DCF-modelling and multiples valuation seem to be industry practise, used by all analysts. To calculate the discount rate, all but one analyst used beta, and the one that did not used a very similar value.

It was made clear during the empirical study that risk and forecasting are two concepts that can be both separated and merged. Most of the analysts are using beta when solving for WACC but are to a much higher extent looking at risks when making forecasts. These risks are more of operational characteristics and of much importance are to see how the subject company will react and perform in relation to changing market conditions. Several aspects can then affect the decision processes and the individual analyst can assess these aspects differently, which might lead to different estimated earnings of the subject company.

Psychological aspects as well as different incentives are also affecting the decision processes as career concerns and reputation might depend on the performance of analysts. Therefore the

question of herding is highly relevant. The access to information should according to the study also be relevant since companies in its strategy to affect the value of the company are selective to whom it pay most attention and discloses most information. The geographical distance between the analyst and the transmitter of information might also affect these kinds of relationships.

6. Conclusion

The purpose of this thesis was to create an understanding of the decision process of financial analysts, as well as to gain knowledge of factors leading to different recommendations. So to say gain access to what in literature is referred to as the “black box” in financial analysts’ decision-making processes – something that is not yet fully discovered. By finding answers to the three research questions set up, based on the pre-study and background, we aimed to contribute to this research. The questions and answers as following:

1. How do financial analysts assess risk and make estimations?

Based on our research and interviews, the different risk and forecast estimations play a large part in why the recommendations are different. Not so much about the historical risks as in beta but in how the analysts are assessing the future. The differences are a reflection of the subjective and individual view by the analyst. One of the purposes with this thesis was to create an understanding for the phenomena of price targets and its relation to the analysts’ decision processes, as well as to gain knowledge of the circumstances regarding disparity in recommendations from analyst to analyst. The conclusion is that no matter how close to the theory the analyst works, there will always be differences since the subjective view of the analyst is reflected in recommendations regarding ABB.

Risks are partly estimated by historical values as in the beta value, but most importantly the analysis is built around estimations on how well companies will perform in the future. To make these estimations research is made on several aspects as the business model of ABB, the competitors and the overall environment it operates within. Thereafter the analysts are quantifying this research by estimating the future cash flows. In these estimations the operational risks are included.

2. Are psychological biases relevant in explaining differences in the analysts’ recommendations?

This study revealed that the respondents felt presence of consensus in their work even though most of them said they were unaffected by it. However, almost all of them think that consensus might affect other to set price targets that not diverge too much from what’s

average. However, due to the answers in this study, we cannot argue it is affecting the decision process for analyst.

There is also competition among analyst, because of ranking points and pressure from investors. From this we can establish two scenarios; 1) It prevents analysts from setting different price targets because they are afraid of losing ranking points and be downgraded. 2) It can promote analyst to set different price targets due to the fact that they want to be the best of what they do and therefore finding different ways to be successful. Hence, the conclusion is that competitiveness can both prevent and promote different price targets.

3. Are information asymmetries relevant in explaining differences in the analysts' recommendations?

ABB seems to communicate information that well reflects their actual performance. Moreover, it seems to present the same information to everyone while doing it in a very transparently and adequate way. Some arguments were raised by analysts whether the location of analysing firm matter in respect of more access to information. In that sentence, information asymmetry could play a part. We conclude that information asymmetry cannot be rejected as a reason for setting different price targets and recommendations.

7. Proposition for Further Research

During the process of this research we have faced some questions that with answers would continue to contribute to the research about financial analysts. One interesting aspect to further look into is how historical values of estimates and the discount rate of it and see how it is “trimmed” or adjusted to the existing surroundings. Analyst 4 specifically raised this question. His thoughts about this illustrate clearly the problem and also that “financial analysis” still is far from scientific:

“You have access to the difficult years from 2007 until today...If you start by using the WACC from Bloomberg’s where they are doing an exercise similar to mine and sets it relatively to the WACC based on the estimates you will find out that the average estimate WACC was around 17-18 per cent – it is usually 8 per cent. It is quite obvious that analysts “trimmed” their estimates to fit in with the existing conditions in the overall economy and never the less the stock market itself. Especially if looking at large American banks that had completely crashed it was probably hard to be an analysts yelling about a positive outlook. It would probably be “suicidal””

Evidence from a study as the one proposed by *Analyst 4* would seriously indicate that the role of analysts would have to be reconsidered yet again. It would also give the market further understanding of the work of analysts.

Another issue to further investigate is the implications, both stated in our study and in theory, of setting buy rating to be able to make reliable forecasts in future. Does this relationship ever end? If it is commonly accepted to adjust the recommendation to the management of the subject company’s approval to be able to access trustworthy and much information in the future, this should only be “accepted” to a certain extent. The question that needs to be studied is whether the trustworthy and extended future information is ever used. Otherwise such relationship between the management and the analyst makes no sense, at least from the market’s point of view.

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Pre-study

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Anonymous Buy-Side Analyst – Email Correspondence 2010-11-22

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Empirical Study

Analyst 5 – Telephone 2010-12-07

Analyst 2 – Telephone 2010-12-14

Analyst 4 – Telephone 2010-12-09

Analyst 1 – Telephone 2010-12-08

Analyst 3 – Telephone 2010-12-18

Appendix 1 - Questionnaire for master thesis - study of analysts following ABB

Below follows a brief presentation of the background for the study which we are making due to the framework of our master thesis in finance study at the School of Economics, Business & Law at University of Gothenburg. To get clarity about the phenomena of price targets and its relation to risk we are addressing questions under the headlines: Valuation methods, Risk/Forecasting, Psychology, Access to information and other questions.

As a respondent, You are encouraged to point us in the right direction where You believe that Your experiences and point of view are more relevant to our study. We will of course treat your answers confidential and neither yours, nor your employer's name will be published, unless you would like to.

If anything appears vague or if you have any questions or suggestions we would like You to contact us as soon as possible.

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Background

The background to this questionnaire is the phenomenon of price targets and that different price targets are proposed by different analysts at the same time. Thus there must exist differences in the analyst's assessments. We have chosen to specifically examine ABB and thus also analysts that actively follows ABB. Focus lies on how analysts treats the firm-specific risks and how this later on is reflected in the overall assessment/price target.

We have made interviews with various actors on the financial market which all have agreed on that the subject is relevant and topical. All respondents in the pre-study found the subject interesting. They all stressed the fact that the phenomenon is not a problem, rather a reflection of the instability of the market.

Purpose

The purpose of the thesis is to create an understanding for the phenomena of price targets and its relation to risk, as well as to gain knowledge of the circumstances regarding disparity in recommendations from analyst to analyst.

We thank You in advance for Your patience, help and cooperation

Questions

Valuation methods

1. Can You in detail describe your process when you analyse ABB.
2. When You are making your fundamental analysis of ABB, what methods do you use?
3. Depending on the answer in Q2, why are you using these specific methods?
4. Do these methods differ a lot depending on which Industry You are looking into?

Risk/Forecasting

1. To what extent do you believe that your individual subjective assessment of the firms opportunities and threats are reflected in Your analyse?
2. What are the most prominent aspects when you are creating prognoses?
3. Do you measure risk in other ways than the firm's beta?
4. How is the firm's risk reflected in Your analyse?
5. How much, of you total analyse of ABB is based on the risk-factor? (Approximately expressed in %)

Psychology

1. Does consensus estimates limit an analysts' will to set a price target in which he/she actually believes in?
2. Do You find this supportive or limiting?
3. Is there any competition among analysts to set accurate price targets?
4. Do You feel that you have to set a specific price to favour your employer?
5. If yes, how does this affect you overall work process?
6. Does the market psychology differ between industry and size of firms?

Access to information

1. Du You experience differences in access to information compared with fellow analysts regarding ABB?
2. Do You believe that ABB publish information which well reflects its actual performance?
3. If no, how does this affect your way of analyzing ABB?
4. ABB operates globally. Do You experience more asymmetric information with smaller firms?
5. How is the general environment of the market look like? Is asymmetric information sometimes an actual problem?

Other questions

1. What makes Your way of analyzing ABB unique?
2. What do You experience as the biggest reasons for analysts making different recommendations?
3. How long have You been an analyst?
4. How long have You been following ABB?
5. Are You the only one at Your company following ABB?

If You have any opinions or other thoughts regarding this questionnaire you are more than welcome to share them with us!

Appendix 2 – The Capital Asset Pricing Model

How CAPM affect the discount rate through beta.

Comparison of M-M and CAPM Cost of Capital Equations

Type of Capital	CAPM Definition	M-M Definition
Debt	$k_b = R_f + [E(R_m) - R_f]\beta_b$	$k_b = R_f, \beta_b = 0$
Unlevered equity	$\rho = R_f + [E(R_m) - R_f]\beta_U$	$\rho = \rho$
Levered equity	$k_e = R_f + [E(R_m) - R_f]\beta_L$	$k_e = \rho + (\rho - k_b)(1 - \tau_c)\frac{B}{S}$
WACC for the firm	$WACC = k_b(1 - \tau_c)\frac{B}{B+S} + k_e\frac{S}{B+S}$ $\beta_L = \left[1 + (1 - \tau_c)\frac{B}{S}\right]\beta_U$	$WACC = \rho\left(1 - \tau_c\frac{B}{B+S}\right)$

Figure 4: CAPM Relations: Copeland, Weston & Shastri (2005)