LUND UNIVERSITY
School of Economics and Management

Department of Business Administration

The Basel II Framework

- The Practical Application in Two Swedish Banks

Authors:

Karin Johansson
Erica Ulfgrim

Advisor:

Gunnar Wahlström

Abstract

Title:	The Basel II Framework – The Practical Application in Two Swedish Banks
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Authors:	Karin Johansson and Erica Ulfgrim
Advisor:	Ek. Dr. Gunnar Wahlström
Five key words:	Basel II, calculative cultures, compliance, practical application, risk management
Purpose:	The purpose of this thesis is to study the practical application of the Basel II Framework in two Swedish banks of different organisational structure and briefly investigate the opinions of the framework now that it has been in use for some time.
Methodology:	Qualitative approach, inductive study, grounded theory, phenomenology, telephone and face-to-face interviews
Theoretical perspectives:	The theoretical perspectives begin with the concept of risk metaphors and criticism towards a number of earlier risk measures is presented. This leads down to the issue of why risk measurements do not work. Thereafter earlier studies on why there is a reliance on numbers and why people come to believe in statements are taken up. Furthermore there is a presentation of why Basel II is argued to promote centralised management. Finally we present a study on enterprise risk management which has shown that variations exist in practical application.
Empirical foundation:	The empirical foundation consists of data from a number of interviews with respondents working at two Swedish banks of different organisational structure. One bank is decentralised and one is centralised. Furthermore one interview was conducted with the Swedish Financial Supervisory Authority.
Conclusion:	Regarding the practical application of Basel II we have found that the decentralised Bank A has gone from a more holistic approach to risk management to show more numeric tendencies. The centralised Bank B probably had numeric tendencies already before the transfer to Basel II and this has remained so. We have also seen that the banks achieve compliance and uniformity in similar ways but emphasise different things. Bank A emphasised an understanding of the framework while Bank B put more emphasis on the use of calculations. Finally we found that the general opinions about Basel II now that it has been implemented for some time were positive.

A Word of Thanks

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Karin Johansson Erica Ulfgrim

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A Note to the Reader

Before you begin reading this thesis we would like to clarify that when we throughout this thesis refer to either; *Basel II*, *the Basel II Framework*, *the framework* and *the new framework*, we are at all times referring to the Basel II Framework issued by the Basel Committee on Banking Supervision that was available for implementation at the year-end 2007.

1. Introduction

This chapter will describe the context of this thesis, starting with a background illustrating the financial crisis and the problems with risk measures. This is followed by an introductory discussion and an account of earlier research leading down to our focus questions and the intent of this study.

1.1 Background

The world is currently enduring the worst financial crisis since the crash on Wall Street in 1929. From the starting point in the United States in July 2007, the crisis has now spread to large parts of the world, having effects on for example mortgages, pensions and financing, causing great increases in unemployment. Initiatives in the form of liquidity injections, guarantees for financial activities and various packages for economic stimulation, taken by governments and central banks have so far only had limited success.[1]

The causes to the financial crisis have been widely discussed in media worldwide. The core of the current crises is to be found in the abundance of liquidity and low interest rates that have been offered to lenders. The effects of this were amplified by financial innovation, and the idea that the high growth levels of the past decade were likely to remain permanently.[2]

The abundance of liquidity and low returns made investors seek higher yields and the result was the mis-pricing of risk. With time came financial instruments that were designed to increase yields, in combination with increased leverage.[3]

The high degree of competition and low interest rates, made the participants of financial markets look for possibilities of even higher yields which was achieved through increased leverage or investing in assets with a higher degree of risks. Participants of the financial markets were taking greater risks, but the risks were mis-priced and with increased leverage financial institutions became more vulnerable to changes in asset values.[4]

The ongoing financial crisis has also shed a light on the failures in assessment of risks and the regulation and supervision of financial institutions. The core of the issue is that prior to the financial crisis there was a belief that financial institutions could better manage their risks that what was in fact true. This in turn resulted in misjudgements of the necessary capital base.[5]

[1] De Larosière Report (2009), p. 6
[2] Ibid., p. 7
[3] Ibid., pp. 7-8
[4] Ibid., p. 8
[5] Ibid., p. 8

Furthermore risk was not easy to assess, partly due to complex structures of financial products. In addition to this models for risk assessment underestimated risk exposure and the lack of transparency in financial markets caused grey areas concerning the banking system.[6]

1.2 Introductory Discussion

Daily news is published about the ongoing financial crisis and last year the Swedish newspaper *Dagens Nyheter* published an article stating that this crisis was the worst since the financial crisis of the 1930s[7]. Nevertheless, the world has experienced a number of financial crises during past decades and in response to these crises there has been an enormous growth in financial risk modelling, resulting in market risk regulations being model based[8].

Risk has often been measured by historical probabilities[9]. Though, many of these risk models have faced harsh criticism. McGoun claims that interpretations of the portfolio model CAPM (Capital Asset Pricing Model) are flawed, and believes that there is no rational reason for its success. He further states that CAPM's normative value has not, and cannot, be demonstrated.[10] His approach confirms a statement by Roll in 1977, who claimed that CAPM is no science, since the theory is not testable[11].

Daníelsson broadens the discussion when reflecting over limits in risk modelling. He states that;

> "Most existing risk models break down in times of crisis because the stochastic process of market prices is endogenous to the actions of market participants."[12]

Further he argues that in times of crisis people's actions become more homogenous and there is a general shift towards safer assets[13]. Furthermore, Daníelsson claims that if risk modelling is not done with great skill and care, the risk forecast will be unreliable to the point of being useless[14].

However, in 2007 a new framework for risk management was introduced called the Basel II Framework and it was issued by The Basel Committee on Banking Supervision[15]. Compared to previous regulations, Basel II provides a more flexible and adaptable framework that can evolve with the market[16]. The framework gives financial institutions more freedom in

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[6] De Larosière Report (2009), p. 8
[7] www.dn.se/ekonomi/finanskrisen-ar-over-ar-2012-1.569455
[8] Danìelsson, J., *The emperor has no clothes: Limits to risk modelling*, (2002), p. 1273
[9] McGoun, E. G., *The History Of Risk "Mesurement"*, (1995), p. 511
[10] McGoun, E. G., *The CAPM: A Nobel Failue*, (1992), p.170
[11] Roll, R., *A Critique of the Asset Pricing Theory's Test,* Journal of Finance Economists, (1977), p. 130
[12] Danìelsson, J., *The emperor has no clothes: Limits to risk modelling,* (2002), p. 1293
[13] Ibid., p. 1275
[14] Ibid., p. 1293
[15] www.bis.org/publ/bcbsca.htm
[16] Ibid.

choosing methods for calculating the necessary capital base. In light of the ongoing financial crisis, and considering the importance of banks having a sufficient capital base, Basel II becomes of interest to study.

Earlier research regarding this framework was conducted before its implementation or has mainly focused on the opinions towards the framework, why its practical application has not yet been examined. With the harsh criticism against many other risk measures in mind, we are curious about the Basel II Framework and the opinions of users now that it has been in use for a while.

Historically, the performance of decentralised banks has been very good and Wallander states that Handelsbanken, which was once radically decentralised, has had profitability higher than the mean of the other Swedish banks[17]. However, it has been argued that the Basel II Framework will be disadvantageous for decentralised banks, since the framework concentrates power to the headquarters. This implies that the framework is more in line with centralised management.[18] This discussion made the authors question whether the framework was disadvantageous for decentralised banks.

Moreover, Mikes has argued that systematic variations in risk management exist in practice[19]. This made the authors curious as to whether or not there are any variations in the practical application of the Basel II Framework between centralised and decentralised banks.

As can be read from the discussion above, there is a knowledge gap regarding the practical application of the Basel II Framework. Even though Mikes has studied the practical differences risk management, her study did not consider the Basel II Framework. Furthermore, earlier studies have focused on Basel II before it was actually in use.

1.3 Purpose

The purpose of this thesis is to study the practical application of the Basel II Framework in two Swedish banks of different organisational structure and briefly investigate the opinions of the framework now that it has been in use for some time.

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[17] Wallander, J., *Budgeting * an unnecessary evil*, (1999), p. 406
[18] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), pp. 60-61
[19] Mikes, A., *Risk management and calculative cultures*, (2009), p. 18

1.4 Focus Questions

- How do these two Swedish banks practically apply the Basel II framework?
- Are their any variations in their practical application?
- How do they secure uniform application and compliance with the Basel II Framework?
- And further, what are their opinions on the Basel II Framework now when it has been in use for some time?

1.5 Chapter summary

Based on the discussion above it appears that risk is not easy to asses and in the current financial crisis the models underestimated the risk exposure, causing concerns among banks. A number of the risk measures have faced criticism and they have been accused of falling apart in times of crisis. A new framework for risk managing was available for implementation in 2007 and this offers a more flexible approach than its predecessors. Since earlier research was conducted before the frameworks implementation this thesis will focus on examining the practical application of the framework. Further, since Mikes' study suggested that systematic variations in risk management exist in practice[20], the authors aim to examine if there are any variations in the practical application between banks of different organisational structure. This will be achieved by examining two banks of different organisational structure.

[20] Mikes, A., *Risk management and calculative cultures*, (2009), p. 18

2. Literature

The following chapter will give a deeper portrayal of risk and why the risk measures tend not to work. It will give light to the fact that there are variations among organisations regarding the practical application of risk measures and why people, despite the downsides, tend to rely on numbers when determining risk. This is followed by a section on statements and misstatements explaining why people tend to believe in certain information. The chapter will further describe the advantages of decentralised organisations in the banking industry, and the fact that the Basel II Framework tends to promote a centralised structure. The chapter will conclude with a section on criticism of the implementation of the framework.

2. 1 Risk metaphors – Is Risk All Bad?

Risk is a concept that is often viewed negatively. As argued by Young, risk is often set in contrast to rewards, implying that risk is something bad, a view that is amplified when risk is set together with terms such as the risk of loss. Young describes three metaphorical constructions of risk that all create an image of risk as something negative, that may be assessed and which can and should be controlled. These metaphors are the orientational, the attribute and the ontological.[21]

Within the orientational metaphors references to the upside or downside result in negative views of risk. As Young describes it, risk is often contrasted to the "upside potential" causing people to associate risk with a downside potential.[22]

Attribute metaphors refer to risk as a quality or attribute of entities, assets, liabilities and commitments. Risk becomes a phenomenon which can be reflected upon in importance or size. When risk is seen as a quality of an item it also becomes a matter for consideration when performing accounting calculations. Furthermore Young argues that risk as a quality enables us to compare the relative riskiness of items and furthermore to compare similar or different degrees of risk in items.[23]

Young describes ontological risk metaphors as those where risk is seen as a thing apart or outside of an entity. Within the ontological metaphors risk can be seen in a number of ways, one of which is risk as a substance. Risk is then seen as something which may be pooled, has a number of levels which differ between companies and over time and may be concentrated to certain areas or activities. Thus risk can change and does not always remain at the same level and it can also be seen as a phenomenon which is sensitive to changes in market prices.

[21] Young J., *Risk(ing) Metaphors* (2001), p. 612
[22] Ibid., pp. 612-613
[23] Ibid., pp. 613-614

Young has also used the ontological metaphors to categorise risk as a burden, it is perceived as a burden for someone to bear. A person can as such choose to retain risk rather than reduce it but can also choose to transfer it to another party. Risk can also be seen as exposure where companies can be at risk, or place their capital at risk. Risk thus becomes an external threat to financial wellbeing. Young has also described risk as a threat similar to that of a disease as economic entities are exposed to the possibility of negative events in the future. An increased exposure to risk increases the likelihood of these negative events, as does exposure to a disease. However, it may also be possible to create immunity to risk as is possible in the case of disease. The last of the classifications within the ontological risk metaphors presented by Young is that of risk as adversary. Risk is then seen as a phenomenon which we face and can protect ourselves against, as well as something that can be neutralised. This introduces an element of control to risk, suggesting that this is something which we must do. The conclusions which can be drawn from the ontological risk metaphors are that risk is external to us, and also a phenomenon which may be controlled.[24]

Young proposes that one of the reasons to the great increase in "risk management devices" that has been seen in recent years, could be that risk as a result of the usage of risk metaphors, has come to be seen as a manageable phenomenon. The use of metaphors has also caused people to believe that risk may be controlled or dominated. To fulfil this purpose efforts have been focused on finding improved methods of managing risk, to defeat, control or even dominate it. Risk management has grown to become a part of well-managed businesses that is taken for granted. However, not all metaphors contribute to the view that risk is manageable, theories on risk as chaos; can lead to questioning of whether or not it is possible to manage risk.[25]

2.2 Why Risk Measures do not Work

2.2.1 Portfolio Theory

Portfolio theory was developed by Harry Markowitz in 1952 and it is concerned with finding the most efficient portfolio for an investor, giving the highest return for the degree of risk that the investor will accept. The concept underlying the theory is that by spreading investments across a number of assets in a portfolio, an investor can reduce his or her overall risk. This is achieved as bad news and lowered stock prices for one company in the portfolio can be levelled out by good news and raised stock prices for another.[26]

Markowitz's modern portfolio theory has with time been further developed into what has become known as the Capital Asset Pricing Model, CAPM[27]. The first steps to the development towards CAPM were taken by James Tobin in 1958[28]. Tobin sought to explain

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[24] Young J., *Risk(ing) Metaphors* (2001), pp. 614-618
[25] Ibid., pp. 618-621
[26] Arnold, G., *Corporate Financial Management,* (2005), p. 276
[27] McGoun, E. G., *The CAPM: A Nobel Failure,* (1992), p. 163
[28] Ibid., p. 163

investors' demand for cash as preferred to interest-bearing monetary assets. He put forth the idea that the efficient portfolios of investors would include both cash and interest-bearing monetary assets. The degree of which cash would be preferred would change in relation to the interest rate. The higher the interest rate, increasing chances of capital gain, the lesser is the preference of cash and vice versa.[29]

The ideas of Tobin and Markowitz were to be further developed by William Sharpe. Due to the changing arena for investments, with risk coming to affect financial transactions, Sharpe believed that earlier models for price behaviour were not grounded in more than assertions[30]. Furthermore he believed that no existing theory could describe the links between price of risk and such things as investor's preferences and physical attributes of the capital assets. Therefore, he believed that the theories could not explain the relationships between prices and risks of assets.[31] Sharpe's interpretation of CAPM has been considered a useful interpretation, however with time a more positive interpretation became dominant[32].

The CAPM model was later surveyed by Stephen Ross, the creator of CAPM's successor, the arbitrage pricing theory[33]. Ross found that the CAPM formula in fact had the same intuitive implications for investment as the practices for portfolio selection. These had already been used since before the development of portfolio theory by Markowitz.[34]

However, the CAPM has also received its share of critique. As a positive model, the CAPM must be falsifiable by empirical evidence[35]. The survey conducted by Ross concluded that the CAPM could be both observed and tested statistically[36]. However by the time of Ross' survey, no such test had yet been performed[37]. Critique against the possibilities of testing the CAPM were presented by Roll in 1978. He found that realistically there was no possibility of testing CAPM without detailed knowledge of the composition of the market portfolio and inclusion of all these assets in the sample. If a proxy for the market portfolio is chosen there is a risk that, as long as it is mean variance efficient, the result will support CAPM even if the chosen portfolio is inappropriate.[38] However, also Roll's comments received criticism, not least from Ross in his survey of the CAPM, that argued that if one was to reason as Roll, it would in fact not be possible to test any theory.[39]

McGoun concludes his analysis of CAPM by stating that *"Since all interpretations of the CAPM are flawed, there is no rational reason for the success of the model."*[40] McGoun criticises the model's ability to provide value for investors and how useful the model is in reality. CAPM was built on ideas that existed before its development, thus not contributing to

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[29] Tobin J., *Liquidity Preference as Behavior Towards Risk* (1958), pp. 65, 85-86
[30] Sharpe W.F., *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk* (1964), p. 425
[31] Sharpe W.F., *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk* (1964), p. 426
[32] McGoun, E. G., *The CAPM: A Nobel Failure*, (1992), p. 165
[33] Ibid., p.165
[34] Ibid., pp. 165-166; Ross S.A., *The Current Status of the Capital Asset Pricing Model (CAPM)* (1978)
[35] McGoun, E. G., *The CAPM: A Nobel Failure*, (1992), p. 166
[36] Ross S.A., *The Current Status of the Capital Asset Pricing Model (CAPM)* (1978), p. 885
[37] Ibid., p. 898
[38] Roll R., *A Critique of the Asset Pricing Theory's Tests* (1977), pp. 130-131
[39] Ross S.A., *The Current Status of the Capital Asset Pricing Model (CAPM)* (1978), p. 893
[40] McGoun, E. G., *The CAPM: A Nobel Failure*, (1992), p. 170

any new knowledge. In addition McGoun criticises the CAPM's risk measurement, stating that it may not be the best method for estimating risk.[41]

McGoun presents two reasons, the sociological and the psychological, as to why the CAPM, despite winning a Nobel Prize gained its reputation. The sociological explanation centres around the practitioner community. The CAPM gained popularity as it added to the prestige of finance specialists. Further the CAPM was introduced in a time when risk and return were becoming more important issues and the CAPM enabled a way to measure performance. [42]

The psychological reason presented by McGoun centres around the academic community. Several reasons for the popularity of the CAPM are presented. Firstly the Duhem-Quine thesis implies that it can be argued that any falsification of a model may not be a failure of the theory itself but rather a failure of the assumptions used to test the theory empirically. However, the amount of evidence against the CAPM makes it difficult to believe that this should be an argument in the case of CAPM. Secondly, the CAPM is the source of many reputations within finance, and CAPM also plays a large role in accounting theorisation. Thereby those who have gained their reputations with the help of CAPM will be unlikely to dispute the beliefs that gained them their reputations. McGoun also proposes that there may be no alternative to the CAPM and that this is the reason for its continued existence.[43]

2.2.2 Value-at-Risk and Risk Modelling in General

Not only have the CAPM and portfolio theory been criticised for not functioning, but this is also true for Value-at-risk (VaR) and risk modelling in general[44]. Value-at-risk was first created as a system of quantifying market risk and has since evolved to become a measure of integrated market and credit risk as well[45]. As explained by Ahn et al., *"VaR is an estimate of the probability and size of the potential loss to be expected over a given period."*[46] The definition of VaR presented by Philippe Jorian is "*VAR summarises the worst loss over a target horizon with a given level of confidence*."[47]

As argued by Daníelsson, all the models of his study were imperfect with various breeches in their robustness or having high risk volatility, in fact implying that risk forecasting was not much different from a roulette wheel.[48] Also Bao *et al* have criticised the ability to forecast risk during crises, stating that it is both more difficult than during stable times, but also that the models give poorer results.[49]

Daníelsson argues that most risk models today are built on the assumption that market data is random and dependent on past observations. This in turn, relies upon the hypothesis that there

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[41] McGoun, E. G., *The CAPM: A Nobel Failure*, (1992), p. 170
[42] Ibid., pp. 170-172
[43] Ibid., p. 172-174
[44] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), pp. 1273, 1275
[45] Jorian, P., *Value at Risk: The New Benchmark for Managing Financial Risk*, (2006), p. 21
[46] Ahn, D-H., et.al., *Optimal Risk Management Using Options*, (1999), p. 360
[47] Jorian, P., *Value at Risk: The New Benchmark for Managing Financial Risk*, (2006), p. 22
[48] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), pp. 1273, 1275
[49] Bao *et al,.Evaluating Predictive Performance of Value-at-Risk Models in Emerging Markets: A Reality Check* (2006) p. 125

is a great number of market participants whose combined actions are in fact random and do not influence the market. This approach to modelling has been criticised for being incorrect. Market prices cannot be seen as following an independent random process as risk measurements influence people’s behaviour. The difficulties with such models arise in times of crisis. This due to the fact that the market data, the foundation of these models, is taken from times when there is no crisis. Thus, the model will give only little guidance in times of crisis.[50]

Furthermore Daníelsson argues that risk models are to a certain degree based on assumptions, making it impossible to create the perfect risk model[51]. Also, when a model itself is created the quality of the model becomes closely linked with the talents of the creator of the risk model and the ability to make correct assumptions[52].

When developing risk models one of the basic assumptions is that financial data will remain the same in periods of calm as well of crisis. However Daníelsson argues against this belief, stating that during crisis people abandon risky investments in assets and revert to safer investments such as properties. Thus risk models based on data from stable periods will not offer correct guidance during a financial crisis.[53] As Morris and Shin argue, modern risk-management techniques have a basis in the belief that the actions of other risk managers will not affect the uncertainty of price movements. Thus it is believed that a model based on past data will be sufficient to estimate the probabilities of favourable outcomes.[54] However as stated by Daníelsson, when risk-managers speculate in risk, the nature of the risk changes[55].

The problem can be illustrated by looking at the financial crisis in 1997-1998 and the value-at-risk model which had at that point almost become the universal method for controlling market risks. When the crisis broke out, actors on the financial markets all acted in a similar manner, that is withdrawing from risky assets to invest in more stable ones. As the opportunists who usually took advantage of short-term price differences in assets no longer acted in this manner and with investors acting alike and investing in more stable assets, price movements were amplified and liquidity decreased. The vast amount of risk managers using the value-at-risk method for controlling market risks, amplified the effects of the crisis by acting in similar ways.[56]

Similar actions from a large number of investors did not only amplify the financial crisis 1997-1998, but this was also true for the 1987 financial crisis. At this time portfolio theory was the most frequently used method for managing risk. As Daníelsson explains, these strategies worked well in stable periods. However when crisis struck and financial institutions strived after identical trading strategies, the futures markets on which the portfolio theory relied, could not function. This resulted in an amplification of the effects of the crisis.[57]

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[50] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), p. 1274
[51] Ibid., p. 1274
[52] Ibid., p. 1278
[53] Ibid., p. 1275
[54] Morris S. and Shin Y.S., *Risk Management with Interdependent Choice* (1999), p. 53
[55] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), pp. 1275-1276
[56] Ibid., p. 1276, Dunbar N., *Inventing Money* (2001)
[57] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), p. 1276

Daníelsson argues that as long as financial institutions do not follow the same trading strategies, no single strategy can cause a liquidity crisis. However, as risk is not an exogenous random variable the actions of each institution will affect the market. Thus, risk models will inevitably lead to effects on the distribution of risk. Risk models are based on past actions of market participants, if many of the participants, as during crises, follow the same strategies, the properties of risk will be affected. Daníelsson thus concludes that as risk properties are not the same in stable periods as during crises, risk models will prove to be ineffective and may in the end actually amplify the crisis by increasing price swings and causing liquidity problems.[58]

In his study Daníelsson argued that a reliable risk model should give accurate forecasts over a wide range of areas; time horizons, assets and different risk levels within one class of assets. However he found that none of the models he studied did well in this area, but noted that risk managers can identify more accurate models to suit their needs.[59] When risk models are created the length of historical data series, on which the models are based, tend to centre on the regulatory suggestion of at least 250 days. This is partly because data may not be available for a longer period of time but also due to the fact that a longer series of data may be difficult to analyse and create a model from. Studies have shown that the longer the horizon for data collection that is used to create the model, the lower the risk volatility and collecting data over a shorter period time does not necessarily result in more accurate risk forecasts.[60]

Another issue causing problems with risk models is that of changing correlations between assets in a portfolio. When the value of some assets increases and the value of others decrease in a market, the estimated correlation between the assets is higher compared to when the markets are both increasing in value. This is further amplified in times of crisis when markets collapse and the value of all assets decreases, causing a large rise in the correlation between the assets. Unfortunately risk models are often created without considering the changes in correlation between assets in different situations in the market that arise in times of crisis. Thus the models will give too low estimations of portfolio risk.[61]

Evidence of this behaviour of the correlation between assets has been presented by Erb et al. who used semicorrelation analysis to study correlation between markets in different market conditions. When two markets were both increasing in value, they found that the correlation was lower than if both were decreasing in value or if one market was increasing or one was decreasing. Based on their results they found that their correlation forecasts would lead to different combinations of assets in portfolios.[62]

Another problematic issue for risk models is the difficulty of defining the concept of risk. No universal definition of risk exists. Daníelsson has attempted to classify the concept in three parts; volatility, value-at-risk and coherent risk measures. Volatility is the most basic concept

[58] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), p. 1276-1277
[59] Ibid., pp. 1279-1281
[60] Ibid., p. 1284
[61] Ibid., pp. 1286-1287
[62] Erb et al., *Forecasting International Equity Correlations* (1994), pp. 32-34, 44-45

of risk, but this measure is according to Daníelsson somewhat misleading in that volatility relies on the idea that returns are normally distributed over time. However such is not the case, and by only relying on volatility in making investment choices investors may incorrectly select an investment which is in fact more risky, despite having lower volatility.[63]

In addition to volatility risk may be measured using value-at risk, which has many positive risk measurement attributes. It is fairly easy to implement and is not too difficult to explain to users. However, the measure can easily be manipulated and it is possible that the value-at-risk of a portfolio may be higher than the measure for each of the assets added together, it is not subadditive. Thus diversifying risk through more investments can be interpreted as being more risky. Investors should therefore consider to which degree they depend on measures of value-at-risk for their investments.[64]

Another issue with value-at-risk is that it only shows risk in one quantile of the profit and loss distribution and the information from this one quantile may not be sufficient or relevant at all times. This in combination with the fact that value-at-risk is not subadditive[65] has resulted in a number of alternative measures of risk. However, limitations have been found for such risk measures as well.[66]

Due to the fact that value-at-risk gives information only on one quantile of the profit and loss distribution it furthermore gives users the option of manipulating it.[67] Ahn et al. have shown how banks can make use of their options to affect the value-at-risk measure, potentially causing a decrease in the expected profit and an increase in risk.[68]

One opinion on risk modelling today is that there is not enough technology to supply reliable risk models, in part due to difficulties of defining risk and preventing manipulation of risk measurements, making it difficult to use risk models in regulating risk. Authorities are demanding minimum levels of capital to be held by banks in order to safeguard against lack of capital. However, this capital may not be sensitive to risk, as this will increase the risk that financial institutions will have to raise capital in times of crisis, thus amplifying the crisis.[69]

As can be seen from the discussion above, risk modelling has proved to be ineffective to varying degrees. The problems encountered by risk models have also increased in times of financial crisis. Now that the Basel II Framework has been in use for a number of years it is important to see how it copes as a risk model. This is especially interesting in light of the ongoing financial crisis. As Daníelsson argues, Basel II only focuses on the risks that are present in times of non-crisis, and thus it may not give much direction in times of financial crisis[70].

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[63] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), pp. 1287-1288
[64] Ibid., pp. 1288-1289
[65] Artzner et al., *Coherent Measures of Risk,* (1999), pp. 215-218
[66] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), pp.1289-1290; Artzner et al., *Coherent Measures of Risk,* (1999), pp. 203-228; Yamai, Y., Yoshiba, T., *Comarative Analysis of Expected Shortfall and VaR: their estimation error, decomposition, and optimization,* (2001), p. 18
[67] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), p. 1290
[68] Ahn, D-H., et.al., *Optimal Risk Management Using Options,* (1999), p. 370
[69] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), pp. 1292-1293
[70] Ibid., p. 1293

2.3 Reliance on Numbers

Today there is a commonly held view among business' that numbers are important when evaluating a performance[71] however in current literature many authors are critical to an over-reliance on numbers[72]. Porter argues that there has been a growing role of quantitative expertise[73] and the cons of using numbers are plenty. Numbers can easily be used in different places in world since they speak the same language[74] and a decision based on numbers is by far considered fair and impersonal[75]. The calculative approach may be appealing to researchers, as it enables processing of large amounts of data. Also a quantitative statistical survey may easily be translated and used in other nations. Databanks, which may be rather costly to set up, contain data that can easily be transmitted; it is mobile and can be sold.[76] In addition to this, quantitative arguments are less easily dismissed than those which are non-quantitative, as they are seen to be more objective and less opinion-based. Mathematical approaches have also gained popularity due to their ability to be used by people of various cultures, without the difficulties of language barriers that exist in less mathematical subjects.[77]

There has been a development towards academic papers focusing on mathematical arguments where research questions are formed to leave out issues that seem unsolvable or too value-laden. Authors of academic papers present standardised evidence and analytical methods to enable tests of the hypothesis. Papers also conform to each other through similar sample-size, as few case-studies or small sample-sized papers are published.[78]

Porter explains the reliance on numbers by arguing that it minimises the need for intimate knowledge and personal trust[79]. Many take comfort in knowing that they have used standardised procedures giving evidence of a certain reliance on numbers.[80] The tradition of believing in numbers can further be explained by people being convinced of the superiority of numbers, it is explained by social relationships.[81]

Chua presents several explanations to the calculative tradition, categorising them into rational, social psychological and sociological reasons. A rational reason would be that there are no

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[71] Chua, W.F., *Teaching and Learning only the Language of Numbers,* (1996), pp. 129-156; Halkos, G.E., et al., *Efficiency measurement of Greek commercial banks with the use of financial ratios,* (2004), p. 201; Hirst, M.K., *Accounting information and the evaluation of subordinate performance,* (1981), p. 771
[72] Briloff, A.J., *Unaccountable accounting revisited,* (1993), pp. 301-335; Lee, T.A., *The war of sidewardly mobile corporate financial report,* (2006), p. 445
[73] Porter, T., *Trust in Numbers—The Pursuit of Objectivity in Science and Public Life,* (1995), p. 6
[74] Ibid., p. ix
[75] Ibid., p. 8
[76] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), p. 138
[77] Ibid., pp. 140-141
[78] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), p. 131
[79] Porter, T., *Trust in Numbers—The Pursuit of Objectivity in Science and Public Life,* (1995), p. ix
[80] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), p. 141
[81] Ibid., p. 144

viable options.[82] Other options have received criticism for being to broad or multifaceted to be approached by a mathematical model[83].

The social psychological answer as to why the natural sciences and the empirical/calculative tradition have dominated accounting research discusses whether this tradition has reached a degree of familiarity among researchers, making it difficult to abandon.[84]

Chua implies that the sociological answer to the question will centre around the fact that research tradition is institutionalised in research networks such as universities, doctoral programs and journals[85]. Chua further argues along the lines of the sociological answer;

> "*Thus, the empirical/calculative research tradition persists in part because it is constituted by a global, actor-network that supplies it with key resources – graduate students, research funds and cultural capital.*"[86]

Porter argues that the language of quantity is attempting since it is structured and rule-bound[87]. However, despite the fact that a calculative culture is dominant in accounting research, it is still important to consider its risks and limitations. The calculative traditions of quantification and proceduralisation risk dehumanising the data and leaving out moral debates. The problems with numbers tend to surface, when numbers are taken out of their context and used as absolute neutral truths, when the belief in numbers becomes too great.[88]

According to Chua, numbers are not enslaving. Though, it becomes dangerous when numbers are taken to be neutral absolute and *"their persuasive power is decontextualised (both culturally and historically), their limitations as modes of representing social life are downplayed and their dominance rules out all debates about the political ideals and values which quantification itself expresses confront"*.[89] It gets worrying when researchers, who try to build general models with the intent to predict behaviour, do not tackle the issue of numbers being imperfect[90]. Furthermore, if people use numbers without knowledge of how they were calculated, they become bound to these numbers since they cannot interpret and see the information behind them[91].

2.4 Statements and Misstatements

[82] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), p. 133
[83] Verrecchia, R., *The Use of Mathematical Models in Financial Accounting,* (1982), pp. 17-18
[84] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), p. 134
[85] Ibid., pp. 136-137
[86] Ibid., pp. 136-137
[87] Porter, T., *Trust in Numbers—The Pursuit of Objectivity in Science and Public Life,* (1995), p. ix
[88] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), pp. 154-155
[89] Ibid., p. 154
[90] Ibid., p. 154
[91] ter Bogt, H.J., *Performance evaluation styles in governmental organizations,* (2003), pp. 311-332; Young, J.J., *Institutional thinking: the case of financial instruments,* (1996), pp. 487-513

In addition to studies focusing on people's beliefs in numbers and calculations, there are other studies that have focused on people's beliefs in statements. When papers are written, authors make use of literary inscription in attempt to persuade the readers. However as long as there is evidence that the author has tried to persuade the reader, the reader will not be convinced. At the same time, in some cases readers may regard facts in themselves to be correct. There is a link between literary inscription and facts. Readers perceive a text as containing facts or being about facts only when they no longer perceive a debate or the use of literary inscription. However the facts of a statement may just as easily be undercut by pointing out the literary inscription used to create the fact.[92]

Different types of statements exist today and they have been found to vary in how fact-like they are. As such studies have been undertaken to further investigate the existence of statements.[93]

One of the extreme sides of statements includes those where readers have been persuaded of a fact to the degree that no reference to them is needed. Statements consisting of such facts are labelled type five statements. Facts in such statements are taken for granted and they are mainly used when trying to argue for other facts. The facts that are taken for granted are difficult to spot as they are merged with routine enquiry, skills and tacit knowledge. Often such facts have been through earlier discussions, emerging as noncontentious facts.[94]

The type four statements make more explicit statements and do so in the form of sentences that describe the relationship between two units. The type four statements are mainly used to spread already accepted knowledge through for example text books.[95]

Type three statements are similar to the type four statements in the way that they also take the form of sentences that describe the relationship between two units. However in type three statements, the description contains a statement about another statement, a modality. If this modality were removed the type three statement would become a type four statement. The difference between these types of statements can be identified by looking at the wording of the statement. A statement that states that something *is* (type four) is different from a statement stating that something *is reported to be* (type three).[96]

Type two statements have been found to resemble claims rather than accepted or established facts. The type two statements draw the reader's attention to what is generally known or to what could reasonably be expected. These statements may also take the form of suggestions as to what could be further studied.[97]

Compared to the type two to five statements above, type one statements consist of speculations about the relationship between two units.[98]

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[92] Latour and Woolgar, *Laboratory Life – The Construction of Scientific Facts,* (1986), p.76
[93] Ibid., p.76
[94] Ibid., p. 76-77
[95] Ibid., p. 77
[96] Ibid., p. 77-78
[97] Ibid., p. 78-79
[98] Ibid., p. 79

It is also possible to alter statements causing them to become another type of statement. As such a type three statement can become for example a type four statement. This can be achieved in one of two ways. Firstly the modality of a statement can be altered, causing the statement to become more or less fact-like. Secondly is using a statement already in existence and thereby enhancing or lessening how fact-like the new statement appears.[99]

In addition to the matter of types of statements and how these are transformed, there is the matter of acceptance of statements. Latour and Woolgar write "*…an important factor in the acceptance of a statement was the recognition by others of another statement which was similar."*[100] The existence of more than one statement has been seen as evidence of an external object or an objective condition. As the object was considered external the subjectivity of the statement would disappear and the statement would be considered more fact-like. In addition to this the weight of statements can be modified by making use of reference to other documents and also my using words such as "maybe" or "unlikely". For example if a someone were to comment on a statement, saying that there are no other documents reaching the same conclusion, the weight of the statement would be decreased.[101]

2.5 Decentralisation – a more successful organisation structure

In the 1970 Handelsbanken faced a major crisis with low profitability and conflicts with the authorities. In order to meet this crisis the bank made changes to the organisation and became radically decentralised.[102]

Compared to the other banks in Sweden, the decentralised Handelsbanken has performed well. In 1999 Wallander stated that the new policy of the bank had a higher profitability than the mean of the other Swedish banks.[103] During the last thirty six years, Handelsbanken has had a higher profitability than their competitors. Further, according to their studies, they have had the most satisfied customers, this since 1989 when the measuring started.[104]

In his article from 1999, Wallander talks about the consequences of strong centralised budgeting. A budget is a forecast for the company's following year and is built on the general development of demand, prices, exchange rates, wages, costs and so on.[105] Wallander states that if you make this kind of forecast, what you are really saying to employees is that they should continue to work as they are doing. But, in reality, you do not need a budget system to tell them that.[106]

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[99] Latour and Woolgar, *Laboratory Life – The Construction of Scientific Facts,* (1986), p. 83
[100] Ibid.
[101] Ibid., p. 84
[102] Wallander, J., *Budgeting - an unnecessary evil,* (1999), p. 405
[103] Ibid., p. 406
[104] www.handelsbanken.se
[105] Wallander, J., *Budgeting - an unnecessary evil,* (1999), p. 410
[106] Ibid., pp. 410-411

Furthermore, Wallander argues about the difficulty to foresee the changes in the economic situation with help from the budget. Instead, the budget will rather make it more difficult to adjust to these changes. According to Wallander, there is no point in having a budget if you do not believe in it. But, if you do believe in it, you will have a strong tendency to look at deviations as accidental happenings. Thus, there is a strong risk that the budget will not be helpful and it will therefore be harder to adjust to the new circumstances.[107]

In addition to this Wallander's opinion is that a complicated system will not solve the problems[108]. According to him, it is important that the organisation has a general goal and follows the same course; though at the same time it is important for the organisation to be ready for changes. When determining the general goal, it is important that it is in line with the company's philosophy. A future distant target is not as important since this may be hard to reach, this because of the high probability of changes along the way. Most often there will be changes in factors that will influence your business. With this in mind, it will be necessary to be able to adjust the course of the company.[109]

Wallander argues that it is important to get the employees involved in their work and that this is more easily achieved with smaller units with a degree of independence, he believes in decentralisation[110]. The strength of a decentralised organisation is confirmed with the result of Swedish Handelsbanken which has been one of the most cost-efficient universal banks in Europe. Further during a long time the bank had lower credit loss than its competitors[111].

2.6 Basel II – advantageous for centralised management

In a study conducted by Wahlström in 2009, positive opinions of the Basel II Framework were expressed. However, these opinions were most frequently expressed by employees from centralised banks. As an example, they thought it created a more efficient internal systems and control of risk.[112] On the other hand, there have also been negative opinions. Among these, there was a common fear that the Basel II Framework promotes increased centralisation.[113]

Centralised organisations are characterised by high power distance[114]. According to Wahlström's study, the support for the Basel II Framework was more frequently expressed by respondents in centralised banks. The Basel II Framework has an emphasis on measuring risk using numbers, which leads to uniformity in the banks.[115] This uniformity was viewed in a positive way by people who believed it improved control of risk. Both uniformity and

[107] Wallander, J., *Budgeting - an unnecessary evil,* (1999), p. 411
[108] Ibid., pp. 412-413
[109] Ibid., p. 418
[110] Wallander, J., *Budgeting - an unnecessary evil,* (1999), pp. 412-413
[111] www.handelsbanken.se
[112] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 59
[113] Ibid., p. 54
[114] Anthony, R. N., Govindarajan, V., *Management Control Systems,* (2007), p. 679
[115] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context,* (2009), p. 60

improved systems of control where viewed as pleasing effects by those in favour of the framework's advantages for centralised organisations.[116] Further, the Basel Committee on Banking Supervision constantly engages the banking industry to discuss risk management and in particular to produce quantified measures of risk[117].

The fact that the Basel II framework leads to control and uniformity results in a concentration of power at headquarters, thus the Basel II Framework enhanced the value of centralised management.[118]

Wahlström found that some of the common fears expressed by people working at decentralised banks were a potential lack of applicability of the models in practise, that the framework was overly resource intensive and that the framework would lead to disadvantages for decentralised banks[119]. This difference in opinions regarding centralised and decentralised banks can be explained by different studies. According to these studies, people are more open to change when it matches their pre-existing beliefs.[120] And in this case, the Basel II Framework was less in line with the organisation of a decentralised management structure[121]. Wahlström found that employees at decentralised banks felt that the Basel II Framework was more in line with centralised management[122].

Different organisations work in separate ways and do not always have the same opinion. This phenomenon was illustrated in Wahlström's research. The centralised banks were of the opinion that the competence of the bank was shown by the ability to develop models, collect data and gain approval of Swedish Financial Supervisory Authority. People in this kind of organisation felt comfortable with risk measures. There was tendency among the employees towards feeling safe based on the idea that the information from risk measurements would reduce the risk of "bad" clients. However, people in decentralised banks put greater emphasis on establishing personal relationship with customers. They were convinced of the advantage of knowing the customer personally.[123] When explaining his results Wahlström argued that the opinions of the decentralised bank was not surprising as *"These bank officers were more unreceptive to a regulation that could threaten their current frame of reference as far as management structure."*[124] Wahlström, in his own words *"unsurprisingly"*, also came across opinions from the decentralised bank in his study that said that Basel II would increase centralisation in the banks at the expense of a more decentralised structure, with more delegation to branches[125].

With this new framework, the creation models and collection data was concentrated to the headquarters. When new measurements are introduced, this move of responsibilities is not

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[116] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 60
[117] www.bis.org/publ/bcbs107.htm
[118] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 61
[119] Ibid., p. 61
[120] Hedberg, B. et al., *Designing semi-confusing information systems for organizations in changing environments*, (1978), pp. 47-64; Young, J.J., *Constructing, persuading and silencing*, (2003), pp. 621-638
[121] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 61
[122] Ibid., p. 64
[123] Ibid., p. 63
[124] Ibid., p. 61
[125] Ibid., p. 64

uncommon.[126] Since the new framework demands that employees report to headquarters, a decentralised system becomes undesirable[127].

Among Swedish banks, there is a tradition of decentralised management[128]. According to Wahlström's study, if the Basel II Framework is fully implemented, Swedish banks will have to make adjustments to their overall management structure. However he argues, the demand for using the information on risk measurement on a daily basis are likely to be *"…troublesome for banks accustomed to operating under decentralised management"*.[129]

2.7 Variations in Risk Measures in Practice

According to Power, there has been an explosion of risk management practises[130]. One philosophy adopted by many banks is that of enterprise risk management (ERM). However, Mikes argues that there is little notion of how ERM works in practice[131] and according to other studies in management control, systematic variations of ERM might exist in practise[132].

When analysing ERM in practice there are two powerful corporate governance approaches; the shareholder value drive and the risk-based internal control mechanism. The shareholder value drive supports control practises which are designed to focus on the creation of value. The risk-base internal control mechanism includes non-financial aspects and focuses on maintaining appropriate business behaviour.[133]

The study done by Mikes in 2009 involves two large banking organisations. She called these Gotebank and Fraser Bank. Gotebank's top management was more sceptical towards risk quantification and put less effort on risk techniques. On the other hand, Fraser Bank had a strong enthusiasm for risk quantification and there was a common understanding that risk numbers gave a fair view of risk profiles.[134]

Mikes' study found variations in ERM in practice[135]. The study identifies two variations of ERM models. The first one is driven by strong shareholder value imperative, called ERM by numbers. When using ERM by numbers, the practices are formed to encourage value creation. ERM by numbers "*has a vision of uniting and controlling risk*" in a common framework, hence there is a quantitative enthusiasm. Management primarily works with and prefers risk measures that can be quantified.[136] The second model is holistic ERM, which is driven by

[126] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context,* (2009), p. 64
[127] Ibid., p. 61
[128] Ibid., p. 64
[129] Ibid.
[130] Power, M., *Counting, control and calculation: reflections on measuring and management,* (2004), p. 770
[131] Mikes, A,. *Risk management and calculative cultures,* (2009), p. 19
[132] Hopwood, A.G., *The archaeology of accounting systems,* (1987), pp. 207-234; Simons, R., *Strategic orientation and top management attention to control systems,* (1991), p. 51
[133] Mikes, A,. *Risk management and calculative cultures,* (2009), p 22
[134] Ibid., p. 20
[135] Ibid., p. 18
[136] Ibid., p. 36

demands of the risk-based internal control imperative[137]. In this approach, the management is more sceptical towards quantification. Further, they exercise risk in a more flexible manner and it requires risk officers to have considerable knowledge of the businesses whose risk they are monitoring.[138] Hence, what needs to be considered within corporate governance is that these two variations might give rise to different calculative cultures[139].

Different behaviour was recognised in the two approaches. In Gotebank, 'red signals' were viewed as learning opportunities, whereas, in Fraser Bank, they reacted to these by correcting the risk profile. Though, in the Fraser Bank, reports on red signals were not frequently viewed by top management.[140] Instead the role of the red alarm was diagnostic[141].

According to the study, Gotebank had a more holistic approach to ERM. Their approach included different risk measures that were not quantifiable, and the definition of risk was broad in order to enable the inclusion of the treatment of different events.[142] On the contrary, Fraser Bank's risk-based management was strongly dependent on its risk measurement and integrated risk management, they had a more numeric approach to ERM[143].

New control systems pose a challenge to organisations as they need to *"establish their own voice and language in order to provide organizational debates"*[144]. The tools for risk management are often highly analytical, data-driven techniques. However, these tools tend be different in different cultures.[145] The alignment between the cultural foundation of the new system and the attitude of the intended users will affect the success of management information.[146] For example in Mikes' study there was a big difference in the views of merits and limitations of risk management tools between Gotebank and Fraser Bank[147]. As an explanation to the differences in the attitude of the users, Mikes introduces the phenomenon of calculative cultures[148]. Distinguishing between calculative cultures, separating calculative idealism and calculative pragmatism, increases the understanding of different attitudes towards analytical tools, such as ERM[149]. Within organisations with tendencies towards risk pragmatism, there is less trust in numbers and information from risk measures are considered trend indicators[150]. On the other hand calculative idealistic tendencies contribute to a greater trust in numbers and users believe that the risk measures are capable of reflecting reality. In addition to this, users put a lot of effort into maintaining and improving risk measurement.[151] Mikes argues that senior officers will base their approach to managing risk on earlier

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137 Mikes, A,. *Risk management and calculative cultures,* (2009), p. 18
138 Ibid., p. 36
139 Ibid., p. 37
140 Ibid., p. 34
141 Simons, R,. *Strategic orientation and top management attention to control systems*, (1991), p. 61
142 *Enterprise Risk Management – Integrated Framework,* (September 2004)
143 Mikes, A,. *Risk management and calculative cultures,* (2009), p. 37
144 Ibid., p. 20
145 Ibid., p. 21
146 Bhimani, A., *A study of the emergence of management accounting system ethos and its influence on perceived system success,* (2003), p. 525
147 Mikes, A,. *Risk management and calculative cultures,* (2009), p. 21
148 Ibid.
149 Ibid.
150 Porter, T., *Trust in Numbers—The Pursuit of Objectivity in Science and Public Life,* (1995)
151 Mikes, A,. *Risk management and calculative cultures,* (2009), p. 22

experiences and for example their first encounter with ERM practises. She argues that the calculative cultures "*both influence and is influenced by*" the choice of analytical model.[152]

2.8 Chapter Summary

To sum up the chapter on literature, Young has argued that even though risk is seen as something negative, it can be measured and hence may be controlled. However, many models for risk measurement have been roughly criticised. According to McGoun, all interpretations of CAPM are flawed and Daníelsson argues that most risk models today are built on the assumption that market data is random. But according to him, this is an incorrect approach to use since risk measurements influence people's behaviour. Furthermore, according to Porter there has been a growing role of quantitative expertise and Chua explains this by people being convinced of the superiority of numbers. Latour and Woolgar argue that some statements are taken for granted and explain that the existence of more than one statement has been seen as evidence of an external object or an objective condition. Historically the decentralised Swedish Bank Handelsbanken has had higher profitability than their competitors. Though, the Basel II framework leads to control and uniformity results in a concentration of power at headquarters and is hence more in line with a centralised management. In addition to this Mikes has studied two banks and is arguing that there are variations in risk measures in practise. She identified two variations of ERM; first ERM by numbers which has a vision of uniting and controlling risk in a common framework. The second model is holistic ERM where the management is more sceptical against quantification.

[152] Mikes, A,. *Risk management and calculative cultures,* (2009), p. 22

3. Method

This chapter will describe the research approach used in this study and the reasons for choosing this approach. Further, a description is made over how this study was conducted, as well as a presentation of the primary and secondary data. The chapter continues with the chosen respondents and the reasoning behind the sampling. This is followed by a section on source criticism to strengthen the reliability and validity of the study. Finally, the chapter ends with a description of how the authors aim to analyse their data and a report over alternative ways of performing the study.

3.1 Qualitative Approach

This study has been conducted using a qualitative approach. This approach involves the notion of studying a person's opinions and experiences as opposed to a quantitative approach, which mainly produces numeric results.[153] The qualitative approach is useful when studying people's thoughts and when the study involves analysis of documents[154]. This approach was the most appropriate to illustrate the focus question since the intent was to examine how the Basel II framework was practically applied in banks of different organisational structure and the banks' opinions in the matter. The intent was not to collect any yes or no answers. The use of a qualitative approach enabled the authors to study the opinions of Basel II in greater depth than if a qualitative approach had been used[155]. Another reason for performing a qualitative study is that the authors aimed to gather data that would allow us to deeply pursue our subject and show the nuances that exist therein[156].

The collected data enables conclusions as to the practical application of the Basel II Framework to be drawn. However, due to the small sample size of this qualitative study and the fact that the respondents have been chosen for a specific purpose, it is not possible to draw any general conclusions as would be possible if a quantitative approach had been used.[157] The conclusions reached will be closely linked to the respondents[158]. The study focuses on finding information about the nuances of the subject rather than looking at a larger sample of the population. It is common for the qualitative approach to study a smaller sample but reaching individuals with the right position or the right information[159].

In contrast to the qualitative approach, a quantitative approach studies a larger sample of the population. The aim is that the sample will enable the researcher to draw general conclusions

[153] Jacobsen, D. I., *Vad, hur och varför?*, (2002), p. 137
[154] Patton, M. Q., *Qualitative Research and Evaluation Methods, (2002),* p. 145
[155] Jacobsen, D. I., *Vad, hur och varför?*, (2002), p. 266
[156] Ibid., p. 56
[157] Silverman, D., *Doing Qualitative Research,* (2005), pp. 126-127
[158] Jacobsen, D. I., *Vad, hur och varför?*, (2002), p. 268
[159] Patton, M. Q., *Qualitative Research and Evaluation Methods, (2002),* p. 7

for a larger part of the population with a certain degree of certainty and. A study with a quantitative approach is normally conducted by making use of statistical procedures and results of the study can be reproduced. Hence, it allows the researcher to draw broader conclusions.[160]

The practical use of the qualitative approach emerges from openness towards the respondents[161]. The approach is perceived as an open method where the researcher does not try to control the information when collecting it. The information is categorised first after it has been collected.[162] The chosen approach is suitable when few entities are interviewed, when the individual person's opinions are of interest and when the researchers are interested in how the interviewed respondent interprets the issue[163]. This makes the qualitative approach an appropriate choice for how the authors wish to study the focus question.

There are many favourable sides to the chosen approach. It sets few limits to the answers of the respondent and allows the researcher to examine details and unique angles with every interview respondent.[164] This provided an opportunity of collecting more detailed answers used to clarify any nuances when comparing the different structural banks. The downside is that there is seldom a possibility to draw general conclusions based on the collected material, since the respondents are not chosen from a random basis.[165]

3.1.1 Inductive Approach

An inductive approach, implicating a move from empirical data towards theory, has been used in conducting this study. The researcher performs empirical studies of reality and then uses this information to draw theoretical conclusions. In the ideal situation the researcher commences the study completely without expectations, with the intent of letting respondents describe their perceptions of their worlds in their own terms.[166] It is an open approach with the vision that nothing shall limit the collected information[167]. As mentioned above, the authors have used a qualitative approach in this study. Qualitative approaches are to a large extent inductive since qualitative approaches are more opened toward new information. This in difference to a quantitative approach, which is deductive to a larger extent since the researcher categorises the information before it is collected.[168]

The authors aimed to draw theoretical conclusions of their own based on the empirical data gathered from interviews. The study aims to contribute to a greater insight in how banks of different organisational structure practically apply the Basel II Framework and their opinions regarding this. Thus, the study is in line with the inductive approach. The idea of presenting a study without any prior expectations on part of the authors is of course not possible, since it is

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[160] Silverman, D., *Doing Qualitative Research,* (2005), p. 126
[161] Patton, M. Q., *Qualitative Research and Evaluation Methods, (2002),* p. 203
[162] Jacobsen, D. I., *Vad, hur och varför?,* (2002), p. 140
[163] Ibid., pp. 160-161
[164] Ibid., p. 142
[165] Silverman, D., *Doing Qualitative Research,* (2005), p. 127
[166] Ibid., pp. 78-79
[167] Jacobsen, D. I., *Vad, hur och varför?,* (2002), p. 35
[168] Ibid., p. 43

not possible to recognise a field of study without orientation[169]. Hence, the main problem is that nobody can have a completely open mind unaffected by information and expectations, why the result will not be completely objective[170]. In order to tackle this problem the authors wrote down the main interview questions at an early stage, before the phenomenon of Basel II had been studied in depth, thereby minimising the risk of prior expectations influencing the result of the study and the creation of interview questions. Further, the intent was to compare the application of Basel II in banks of different organisational structure. Information as to the practical application was not something the authors could learn in advance.

To apply the results as a general theory, a deductive approach is needed where the theory is tested in reality on a larger number of banks. In contrast to the inductive approach, the deductive approach implies a move from theory to empirical observations.[171]

3.1.2 Phenomenology

Phenomenology is concerned with examining how people experience a certain phenomenon, experiences of it, memories, or how people make sense of it. The authors have therefore conducted in-depth interviews with people who have come in direct contact with the phenomenon, Basel II and its practical application. The fundamental idea of phenomenology centres on the examination of how people describe and experience through their senses. Furthermore focus is put on how people interpret and make sense of their experiences. As such, when studying the phenomenon it was of great importance that the authors made use of either observations or in-depth interviews. Furthermore, phenomenologists have a belief in the essence of a shared experience. Therefore the authors have compared the experiences of different people, in order to determine the essence of the phenomenon.[172]

When gathering data for our thesis, the aim was to create an understanding of the phenomenon which was studied. This is in line with the phenomenological approach that can be divided into seven steps. These are: the experience, the ideation, the generalisation, the nuances, the constitution, the reduction and the interpretation of the phenomenon. The experience of the phenomenon encompasses the observation of as well as the analysis and reporting of it. The process begins with observing the phenomenon. Thereafter it is analysed and the process is completed by describing it. The goal is to find the essence of the phenomenon through one's own interpretation. As researchers however, the authors must rely on other people's experiences of the phenomenon that is being studied. In the process of the ideation of the phenomenon, there is a move from a concrete description of the phenomenon to one which is more abstract, trying to identify the nature of the phenomenon. In the process of generalising the phenomenon the authors attempt to identify fundamental prerequisites for the nature of it, the aim is to generalise from one phenomenon to several others, as to draw conclusions of the original phenomenon. When studying the nuances of the phenomenon the aim is to identify the existence of the phenomenon in different situations, looking at it from different angles, backgrounds and settings. The constitution of the phenomenon can be

[169] Silverman, D., *Doing Qualitative Research,* (2005), p. 79
[170] Jacobsen, D. I., *Vad, hur och varför?,* (2002), pp. 43-44
[171] Ibid., p. 34
[172] Patton M.Q., *Qualitative Research & Evaluation Methods* (2002), pp. 104-107

described as an ongoing perceptive and cognitive process by which the idea of the phenomenon is completed. The reduction process of the phenomenon implies that the authors shall reconsider our perceptions of the phenomenon. The final step in studying the phenomenon is the interpretation of it; however, a phenomenologist does not consider explanations or concealed ideas of the phenomenon.[173]

3.1.3 Grounded theory

In addition to what has been said above, the aim is to create theory through the methods proposed by grounded theory. Grounded theory aims at creating theory, something which is achieved through comparing and connecting induction and deduction. Furthermore grounded theory aims to give the researcher the possibility of seeing alternate meanings of a phenomenon. In generating theories there is a need for methods which enable the researcher to gather empirical data from the real world. In order to achieve this, the authors have conducted interviews with a number of respondents. Furthermore grounded theory emphasises the objectivity of the researcher in order to ensure reasonable findings and representation of a phenomenon without bias. As Patton summarises grounded theory, it is a realist and objectivist approach that focuses on discipline and structured procedures as methods for reducing any potential bias of the researcher while at the same time allowing the researcher to be somewhat creative when analysing results.[174]

In grounded theory the design, methods of data collection, analysis and the theory generated thereof, all show traces of a systematic approach[175]. This is to ensure that the reader knows exactly how the resulting theory has been generated. Furthermore, researchers following grounded theory leave nothing to chance; the approach provides instructions for every step of the way. The study has been structured in line with this, both in terms of the gathering of data but also the analysis of the results. Grounded theory is concerned with creating theories that exemplify phenomena in the real world. Grounded theorists have been described as portraying a number of characteristics. These are the ability to critically analyse situations, to recognise whether or not there is a case of bias, possessing the ability to think abstractly, having a flexible approach to criticism, the ability to be sensitive to respondents and how the phrase and act when responding to questions and finally they have a devotion to the work process.[176]

A grounded theorist will have a certain process when collecting and analysing data to create a theory of the real world phenomenon. The process is initiated by basic descriptions of the phenomenon. The data gathered from these descriptions is later organised into categories as variables based on such things as properties and dimensions. Descriptions are further used in order to get a clearer picture of the data and any present patterns. The grounded theorist will thereafter attempt to create theories based on this data, trying to logically explain the phenomenon.[177] The study consists of gathering information from the real world, concerning Basel II in order to create theory as to the practical application of this.

[173] Bjurwill C., *Fenomenologi* (1995), pp. 81-118
[174] Patton M.Q., *Qualitative Research & Evaluation Methods* (2002), pp. 124-129
[175] Ibid., pp. 487-489
[176] Ibid., pp. 489-490
[177] Ibid., pp. 490-492

3.2 Data Collection

Data collection for this thesis will be a combination of primary and secondary data sources. One of the reasons behind this is that by using several different types of sources to better judge the reliability of the sources. Several sources that support each other can strengthen the reliability of our results.[178]

3.2.1 Primary Data

The primary data sources for this thesis are a number of interviews conducted with two Swedish banks and the Swedish Financial Supervisory Authority, Finansinspektionen. Primary data is collected directly by the researcher for the study in question[179].

In order to gather data for this thesis a number of individual and open interviews with representatives from two Swedish banks and The Swedish Financial Supervisory Authority have been conducted. This method of data collection is appropriate for the purpose of the study as the authors wish to study only a few samples. Conducting face-to-face interviews is time-consuming and can also result in a large amount of data that is difficult to overlook, adding to the reasons for only studying a few samples. Conducting individual and open interviews is also appropriate for the study as it seeks to collect the views of the individual; however the result of this is that no conclusions that are valid for a larger group of people can be drawn. Furthermore the individual and open interview gives the opportunity of understanding how the individual interprets a specific phenomenon.[180]

The aim was to conduct all of the interviews face-to-face but in cases where this was not possible the respondents were interviewed over the phone. One of the downsides of conducting interviews over the phone is that the respondent may be less keen on discussing sensitive matters. By interviewing over the phone it is more difficult to establish a connection of trust with the interviewee. Furthermore, studies have shown that the respondent may be more inclined not to tell the truth in an interview conducted over the phone than one conducted face-to-face. In addition to this, there is an opinion that if an interview contains mainly open-ended questions, a face-to-face interview is more appropriate as it, compared to a telephone interview, is easier to establish an open discussion in such a setting.[181] Moreover the face-to-face interview enables the interviewer to pose more complicated questions than what would have been possible over the phone[182]. In cases where telephone interviews have been necessary it has not been possible to directly observe the person that is being interviewed. There is a risk of encountering difficulties, as it is not possible to observe the respondent’s reactions to the questions, making it difficult to assess how comfortable the respondent is with the question. This may affect how the respondent chooses to answer the

[178] Jacobsen, D. I., *Vad, hur och varför*?, (2002), p. 153
[179] Lundahl U., Skärvad, P-H., *Utredningsmetodik för samhällsvetare och ekonomer*, (1992), pp. 77-78
[180] Jacobsen, D. I., *Vad, hur och varför*?, (2002), pp. 160-161
[181] Jacobsen, D. I., *Vad, hur och varför*?, (2002), pp. 161-162
[182] Eriksson, L.T., Wiedersheim-Paul, F., *Att utreda forska och rapportera,* (2001), pp. 85-86

question, not wanting to give away more than necessary if they are uncomfortable. However, despite this the authors chose rather to conduct an interview over the phone instead of having no interview at all. As the authors wanted to reach specific people, it was not an option to choose another respondent. There are also some positive aspects to the times telephone interviews have been necessary. Due to the anonymity of telephone interviews, the researcher may decrease the effect of the interviewer on the respondent. The presence of the interviewer can contribute to a change in behaviour of the interviewee, as the interviewee notices the body language of the interviewer and reacts to this.[183]

The individual and open interviews have consisted of a combination of standardised and open-ended questions yet giving room to pursue areas of interest that may arise during the interview. During the interviews an interview guide with questions, focusing on certain issues, has been used. This was done in order to ensure that the interview covered all areas of that needed for the study. Furthermore the form of the interviews made sure that time was used efficiently and it also allows for easier analysis and comparison of the results.[184] The questions have also been adapted based on the respondents. This was done in order to enable the authors to pose questions based on how knowledgeable the respondents were in different areas. Some questions may be difficult for an employee at a smaller office to answer wherefore the authors chose to pose some questions only to the central organisations.

Concerning the setting of the face-to-face interviews the authors have chosen to conduct the interviews in environments common to the interviewees, visiting them at their offices. The interviews took place in meeting rooms where the conversation was not overheard by others. Conducting interviews in environments both familiar and non-familiar to the respondent may have both positive and negative effects on the interview. However, the authors believe that an environment common to the interviewee may make them feel more relaxed.[185] Regarding the telephone interviews the authors were not able to affect the environment that the respondent was in. Furthermore in order to make all of the respondents comfortable the authors chose to conduct the interviews in the interviewees' mother tongue, Swedish. The authors believe that as this is the respondents' mother tongue they may more easily be able to express themselves. Hence the interviews have been translated into English.

Despite the risk of affecting the answers of the respondents, the authors have chosen to be open with the objective of the interviews that have been conducted. The reason behind this is the difficulties of obtaining interviews without being open with the objective of the study and the interview. Being open with the interview may also decrease any discomfort on the part of the respondent for not being sure of the objective of the interview. Such discomfort could perhaps cause the respondent to become more cautious and thus disclose less information[186]

Throughout the interviews the answers of our respondents have been recorded. The reason behind this is that the interview becomes more natural if it can be conducted as a conversation, keeping eye contact with the respondent and the conversation moving forward.

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[183] Jacobsen, D. I., *Vad, hur och varför*?, (2002), pp. 161-162
[184] Patton, M.Q., *Qualitative Research & Evaluation Methods*, (2002), pp. 344-348
[185] Lundahl U., Skärvad, P-H., *Utredningsmetodik för samhällsvetare och ekonomer*, (1992), p. 97
[186] Ibid., p. 95

Some notes have been taken during the interview, but not to the degree of which the conversation became continuously interrupted.[187] Unfortunately the authors were not given permission to record all of the interviews. In two cases the authors instead had to rely on taking notes by hand during the interview. In order to keep the conversation as natural as possible the authors in such cases chose to appoint one of themselves as interviewer and the other as note taker. The person who interviewed the respondent still took notes but too a lesser degree.

3.2.2 Secondary Data

In order to complete this thesis secondary data sources have been used. Secondary data does not originate from studies undertaken by the researcher. Secondary data is collected by looking at information gathered by others.[188]

Secondary data has been included in order to gather further information as to how other people have interpreted similar situations or related phenomena. These sources are less spontaneous than interviews and the information may have been altered for a specific purpose. However, the secondary sources of data can also have been more thoroughly overlooked and we have had to be more critical to our choice of sources.[189] The secondary sources have been used to compare other studies that may not directly have been conducted about Basel II but still have relevance in relation to our study of its practical application.

In using secondary data the authors have been aware of the fact that such data has been assembled for other purposes than that of this study. In addition to this the authors have had to consider which information that is useful for us, as well as the fact that the original data of the secondary source may have been altered in order to fit the purpose of the study. The authors did not have access to the original data and thus they do not know what the researcher chose to include and what not to include when presenting the data.[190]

3.2.3 Sampling

When choosing respondents to the interviews, the aim has not been to interview a large number of people. Instead a decision has been made to go along with the more typically qualitative approach and in greater depth study fewer samples. The authors have also chosen to interview those who are well-informed in this area of research. This has been done in order to learn about central issues concerning Basel II that are important to the study.[191]

The first selection regarding the respondents was the type of bank at which they worked. The aim was to interview respondents from two Swedish banks. In order to fulfil the intent of this study the authors wanted to look at one centralised and one decentralised bank. Furthermore to maintain a certain degree of comparability between the banks, banks of similar size were

[187] Jacobsen, D. I., *Vad, hur och varför*?, (2002), p. 166
[188] Lundahl U., Skärvad, P-H., *Utredningsmetodik för samhällsvetare och ekonomer*, (1992), p. 78
[189] Jacobsen, D. I., *Vad, hur och varför*?, (2002), pp. 153, 185-186
[190] Ibid., pp. 186.189
[191] Patton, M.Q., *Qualitative Research & Evaluation Methods*, (2002), p. 230

chosen. The choice fell upon larger Swedish banks because the authors believed that the organisational structure of these banks would be more apparent as compared to smaller banks.

The respondents were divided into two categories, based on the type of bank in which they work. The authors have focused on respondents from one centralised and one decentralised Swedish bank. This was done in order to analyse any differences as a result of centralisation or decentralisation of the bank. Furthermore the respondents were divided into categories based on their position and location in the bank. The aim was to achieve a spread between respondents from the banks' central organisations and local offices in order to analyse any differences in practical application of Basel II throughout the entire banks. The authors did not only want a central opinion on what people higher up in the organisational hierarchy thought that other parts of the organisation were doing. For a more detailed description of the respondents, the reader may see appendix 1.

When finding the respondents the authors have made use of what is known as snowball sampling. This was found to be suitable for the study as it enabled the authors to contact those who were well-informed about Basel II. In order to find suitable respondents the authors described the errand and asked the switchboard operators to refer them to someone within the banks. When the authors reached the person in question they once again described the errand and asked if the respondent felt they could help or otherwise if the authors could be referred to someone more appropriate. Often a number of independent sources referred the authors to the same person, convincing the authors that this was a well-informed respondent. The authors also made use of the interviewees and after completing the interview the respondent was asked if they knew of someone else the authors should interview.[192]

When choosing the secondary sources, the authors have aimed at finding sources of high quality. As such the authors have looked for authors with a great deal of knowledge of and competence in the area they are studying. In order to maintain a high degree of quality in the secondary sources the authors have primarily used scientific articles that have been published in renowned journals.[193]

3.3 Source Criticism

3.3.1 Reliability

To generate a trustworthy result the authors needed a methodological approach that gave stable and reliable results, in other words the study needed to be reliable. A study with high reliability means that the same or similar results can be reached irrespective of who performs the study and of entities are reviewed.[194] In addition, reliability also entails the notion of whether the results of a study are repeatable[195].

[192] Patton, M.Q., *Qualitative Research & Evaluation Methods*, (2002), pp. 237-238
[193] Jacobsen D.I., *Vad, hur och varför?* (2002), pg. 210
[194] Eriksson, L. T., *Att utreda, forska och rapportera,* (2001), p. 40
[195] Bryman, A., Bell, E., *Business research methods,*(2003), p. 33

This study focuses on the practical application of the Basel II Framework in two Swedish banks today, the same results may not be reached if the study is replicated in five or ten years. With time regulation will change in order to adapt to evolving markets and banks may as such face new expectations. Hence, it might not be possible to replicate the study.

Furthermore, since the authors have chosen to perform the study by looking at two specific Swedish banks the conclusions cannot be generalised. The results depend on the reviewed entities. Also, the results of the study are to a great deal dependent on the respondents. As such, other respondents may produce different results. However as stated above, it was never the intent to draw general conclusions; instead the intent is to examine these two banks and their opinions at this point in time.

One main threat to the reliability is the notion of how the researcher has registered the data. The reliability can be weakened if you fail in the transcription[196]. It is important to be cautious when registering data as no one can remember a large amount of detailed information.[197] With this in mind, a recorder has been used for a majority of the interviews and as such the interviews could be reproduced at any point. For the remaining two interviews where the authors could not record, one person focused entirely on note taking in order to record as much as possible.

Another threat to the reliability is the effect of the authors as interviewers. The authors were well aware that their behaviour could have an impact on the answers of the respondents.[198] To manage this, the authors tried not to act either uninvolved or be to bold in their behaviour and the questions they asked. Instead the authors tried to have a neutral profile towards the interviewee.

3.3.2 Validity

It is of great importance that the study is conducted with a high degree of validity, as to assure that the correctness of the results and conclusions drawn thereof[199].

There are two important aspects of validity that the authors must be aware of, internal and external validity. Internal validity is concerned with whether or not the method of data collection, in our case interviews, actually measure what they intend to[200]. The internal validity can be measured without any need of empirical data, in fact it concerns the degree of which a variable and how it is measured correspond with each other[201]. It also concerns the degree of correspondence between observations and the ideas that result from these[202].

An important aspect when analysing the internal validity is asking if the researcher has been able to interview the correct sources. This is of importance as the sources provide the study

[196] Silverman, D., *Doing Qualitative Research,* (2005), p. 222
[197] Jacobsen, D. I., *Vad, hur och varför*?, (2002), p. 273
[198] Ibid., p. 270
[199] Bryman, A., Bell, E., *Business research methods,*(2003), p. 33
[200] Lundahl, U., Skärvad, P-H., *Utredningsmetodik för samhällsvetare och ekonomer,* (1992), p. 88
[201] Eriksson, L. T., Weidersheim-Paul, F., *Att utreda, forska och rapportera,* (2001), pp. 38-39
[202] Bryman, A., Bell, E., *Business research methods,*(2003), p. 288

with the information on which the conclusions are based.[203] When choosing interviewees the authors have interviewed those with specialist knowledge about Basel II. In the local offices of the banks it has not always been possible to find a Basel II-specialist but the interviewee has then been a person who works with areas connected to Basel II and who also felt that they had enough knowledge to answer the questions. In order to ensure that the person felt competent enough to answer our questions, the respondent was supplied with further information regarding the proposed questions.

Another aspect of internal validity concerns whether or not the respondents give correct information. When choosing respondents the authors have therefore looked at a number of issues. The first is whether or not the respondent is well-informed about the phenomenon that is being studied. Furthermore the aim was to interview those who worked with Basel II, as opposed to someone who did not have any first-hand experience of working with the framework. However, to complement the empirical material the authors have made use of secondary sources such information gathered by other researchers on the subject. The risk with using secondary sources is that they may have been subject to bias by the researcher presenting his or her results. However, the authors believe that there is a need for these sources, but a critical approach when looking at which of these sources to include in the study has been used. Another issue that the authors looked at when choosing respondents was how knowledgeable the respondent was about the subject of study. Hence, respondents who have worked with Basel II, and in their own view were updated on the subject, were chosen. The authors have also looked for interviewees who have worked with Basel II for a number of years as they also wanted to ask questions about the implementation of Basel II, a process that has required a number of years.[204]

Another important issue concerning the respondents was their willingness to give truthful information[205]. Basel II may not be considered a sensitive subject, yet banks may not be willing to give information proving that application of the framework is not being handled in accordance with the regulations. Local offices may not be willing do disclose that they do not actually work in accordance with directions given from the bank's headquarters. In order to tackle this problem the authors have chosen not to disclose the names of the interviewees nor which banks they work for. The respondents have been informed of this, in hope that this will encourage them to speak more freely. Furthermore attempts have been made to formulate questions in a way that will encourage the respondents to disclose as much information as possible. A method of handling the problem of respondents not being willing to tell the truth is by using several sources to corroborate what a source has said[206]. A number of people have therefore been interviewed within each bank. However, it has been difficult to find several people within one office to interview. The authors were often referred back to the original interviewee and with the difficulties of finding several interviewees at smaller offices the authors decided to be satisfied with only one respondent from each office.

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[203] Jacobsen, D. I., *Vad, hur och varför?*, (2002), pp. 259-260
[204] Ibid., p. 260
[205] Ibid., pp. 260-261
[206] Ibid., p. 261

The concept of validity also includes external validity that concerns whether or not general conclusions based on the research results can be drawn[207]. There is a tendency for qualitative studies to be weak in this area due to the fact that these studies often focus on smaller samples[208]. Due to the small size of this sample, there is a greater risk that the sample is not representative for the larger population[209]. Instead of including a representative sample of respondents in this study the authors have chosen to interview those with insight in the chosen subject. This is because the authors believe that this will enable them to venture deeper into the subject. The purpose of the study is not to draw conclusions for a larger population, but instead to focus on a smaller group, and thus the external validity will not be as high.[210]

3.4 Method for Data Analysis

After performing the interviews and collecting the empirical information, the authors began the project of analysing the data. With the qualitative analysis the data is transformed into findings[211]. The main challenge in the analysis lies in making sense of the massive amounts of information[212]. Since the qualitative approach is unique for every study, the analytical approach will also be unique[213].

When analysing, the data is categorised in attempt to find patterns of convergence and divergence. According to Patton, categories should be judged by to criteria, these are; *internal homogeneity* and *external heterogeneity*. Internal homogeneity regards to which extent the data merge, while external heterogeneity concerns the differences between the data.[214]

The study intends to analyse the collected data from different aspects. The authors wished to compare the answers between the banks based on their differing organisational structure. The intent was to categorise the answers of the respondents and structure patterns of convergence and divergence. After breaking down the results down into categories, the categories were analysed based on the organisational structure of the banks. Further, an attempt is made to validate the results of this study by making use of the academic articles from the second chapter. It is important to make comparisons, why the empiric data was compared with studies closely linked to this subject. The aim was to explain the results by making use of earlier studies and literature.[215]

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[207] Bryman, A., Bell, E., *Business research methods,*(2003), p. 34
[208] Ibid., p. 288
[209] Jacobsen, D. I., *Vad, hur och varför*?, (2002), p. 267
[210] Ibid.,
[211] Patton, M. Q., *Qualitattive Research & Evaluation Methods,* (2002), p. 432
[212] Ibid.
[213] Ibid., p. 433
[214] Ibid., p. 465
[215] Jacobsen. D. I., *Vad, hur och varför?,* (2002), p. 460

3.5 Alternative Research Approach

The study was conducted by gathering information through interviews. However, there are always alternative methods of conducting a study. One alternative is direct observation of the respondent's behaviour. The observation can be made in different ways. Either, the observer can sit behind a one way mirror and not be seen, or the observer can participate and follow the respondent during a work day. This approach is suitable for answering questions such as "what does a chef executive officer do?" or in this case "how do the bank practically apply the Basel II Framework?" [216] However, since the intent was to compare the practical application of Basel II in two banks of different organisational structure. The approach of observation would be too time consuming. Also, observations would not enable the authors to gather information on the respondents' opinions on varying aspects of the framework wherefore interviews were deemed to be more suitable. Considering the types of questions used in this study and the limited time horizon, observation was never an option. Further, an observation is more fitting when studying the respondent's performance and actions[217].

In addition to observations questionnaires could have been used. These are standardised forms where every respondent answers the same questions. [218] Most of the time options to answer are set in advance, why you do not get any in-deep answers from your respondents. This approach presupposes that the researcher has enough knowledge in advance.[219] When using questionnaires a larger group of respondents can be reached in a smaller amount of time, than if interviews are used. Further, this larger independent selection makes it possible to draw general conclusions. However, the intent was not to reach a large group of respondents. Instead the authors wanted to focus on a smaller group of respondents where more open-ended questions could be asked. The authors wanted the possibility to reach deeper in the replies and not just get more limited answers. Further, the authors were only interested in respondent from two specific banks, why a questionnaire or survey with a large selection of respondents was not optimal for the study. The intent was never to draw any general conclusions and as such interviews were deemed to be more appropriate.

A third option would be to make a case-study. In a case study focus is put on researching a single unit. This unit can either regard specific persons or a specific organisation, as in this case, one single bank.[220] This was neither an alternative as the intent was to study if there are any variations in the application between banks of different organisational structure.

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[216] Lundahl, U., Skärvad, P-H., *Utredningsmetodik för samhällsvetare och ekonomer,* (1992), p. 99
[217] Jacobsen, D. I., *Vad, hur och varför?,* (2002), p.180
[218] Lundahl, U., Skärvad, P-H., *Utredningsmetodik för samhällsvetare och ekonomer,* (1992), p. 136
[219] Jacobsen, D. I., *Vad, hur och varför?,* (2002), pp. 38-39
[220] Ibid., pp. 95-96

3.6 Chapter Summary

To collect the information required for this study a qualitative approach was used. This approach was the most appropriate to illustrate the focus question since the intent was to examine how the Basel II framework was practically applied in banks of different organisational structure, and also to give light as to their opinions of the framework. Furthermore an inductive approach has been used, supporting the empiric results with existing literature. In line with the phenomenological approach the study has examined a certain phenomenon. The authors have conducted in-depth interviews with people who have come in direct contact with the phenomenon, Basel II. Furthermore the aim has been to create new theory through the methods proposed by grounded theory. This method aims to give the researcher the possibility of seeing alternate meanings of a phenomenon why the authors have gathered empirical data from the real world. The primary data sources for this study are a number of interviews conducted with two Swedish banks and the Swedish Financial Supervisory Authority. The aim was to conduct all of the interviews face-to-face but in cases where this was not possible the respondents were interviewed over the phone. The secondary data is gathered form other authors who have interpreted similar or related situations or events. Moreover, regarding the sample the authors have chosen to interview those who are well-informed in our area of research. This has been done in order to learn about central issues concerning Basel II that are important to the study. Further, the study needs to be reliable. With this in mind, and in order to sustain an open approach the authors had the same basic questions for all interviews, but were open to further deepen the discussion depending on the respondents' answers. Regarding the validity of the study it is important that it measures what it is intended to measure. Hence, when choosing respondents the authors have interviewed those with specialist knowledge about Basel II. When all data was collected it was analysed by trying to find patterns of convergence and divergence. Even though this study was conducted by making use of interviews an there were options, but they were not deemed to be suitable in this case.

4. Current Discussion

The following chapter will take up the more current discussion about Basel II in order to further deepen the reader's understanding. The chapter will start with a brief history of the Basel II Framework and its intent. Thereafter, it will take up the discussion of the framework's developments and enhancements. Finally, the chapter will reveal opinions of the framework, from both before and after the financial crisis.

4.1 Brief History of the Basel Committee and its Framework

The Basel Committee on Banking Supervision was established in 1974 by central bank Governors. The members of the Committee come from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, United Kingdom and the United States.[221]

The Committee is no international authority; instead its goal is to develop broad standards which are recommended to legal authorities. These, in turn, may choose if they want to implement the standards or not. The Committee works towards harmonisation of banking approaches, without setting details in member countries' supervisory techniques.[222]

The Committee introduced a capital measurement system in 1988. This is referred to as the *Basel Capital Accord*. The aim of this system was to create a framework regarding a minimum capital requirement; this minimum level was set to eight percentages.[223]

Since 1988, the framework has reach out to the Committee's member nations as well as other countries with international active banks. It was in 1999 as the Committee laid out a proposal for a revised *Capital Adequacy Framework*, which consisted of three pillars, where the first one aimed to improve to rules set out in the 1988's *Basel Capital Accord*, and regarded a sufficient capital base.[224]

The proposal was followed by a consultative process with all the member countries and supervisory authorities. The Committee released further proposals for consultation in 2001 and 2003. All these efforts led to important improvements to the original proposal and the present version is agreed by all member states.[225]

221 www.bis.org/bcbs/history.htm
222 Ibid.
223 Ibid.
224 Ibid.
225 www.bis.org/publ/bcbs107.htm

4.2 Basel II – the revised framework

It was in June 2004 as the Basel Committee on Banking Supervision published the *International Convergence of Capital Measurement and Capital Standards, a Revised Framework*, more known as Basel II.[226] It became available for implementation in the year-end of 2007[227].

The Basel II Framework is a result of the Basel Committee on Banking Supervisions' work on securing "*international convergence on revisions to supervisory regulations governing the capital adequacy of internationally active banks*".[228] An essential part of the new and improved framework is the use of banks' internal risk measurements as inputs when calculating the capital base[229].

In May 2006 it was agreed that national financial supervisory authorities shall monitor the capital requirements during the implementation of Basel II and the Committee will monitor national progress[230]. Each supervisor should control and ensure that the banks' systems give rise to a sufficient capital base. The supervisors are expected to ensure compliance with the minimum capital requirements.[231]

Basel II aims to increase financial stability.[232] The intent of the framework is to strengthen the international banking system with focus on keeping an adequate capital base. Further, banks and other parties have welcomed the concept of the three pillars; regarding minimum capital requirements, supervisory review, and market discipline. It is on these three pillars as the improved framework is based, and it is developed to reach more risk-sensitive capital requirements. The Committee has held on to the elements of 1988 capital requirements, regarding a minimum capital requirement of eight percentages of their risk-weighted assets.[233]

The new framework provides flexibility for banks when choosing the appropriate approach for calculating the capital base. The Committee intends to monitor the application of the Basel II Framework to achieve consistency in the application.[234]

It is important to note that the new framework is designed to set the minimum required capital for internationally active banks, why national authorities are allowed to raise the level of sufficient capital. Furthermore, the national authorities are free to complement the measures for calculating the capital base.[235]

[226] www.bis.org/publ/bcbs109.htm
[227] www.bis.org/publ/bcbsca.htm
[228] www.bis.org/publ/bcbs107.htm
[229] Ibid.
[230] www.bis.org/publ/bcbsca.htm
[231] www.bis.org/publ/bcbs107.htm
[232] www.bis.org/publ/bcbs109.htm
[233] www.bis.org/publ/bcbs107.htm
[234] Ibid.
[235] Ibid.

As mentioned, the framework is based on three pillars, where the first one concerns the minimum capital base. This must be complemented by the second pillar, concerning supervisory review, and the third pillar, regarding market discipline. Every pillar is needed to ensure the efficiency of the other two.[236]

According to the Committee it is important to repeat the objectives on a regulatory basis and overlook the minimum level of capital required. The objectives are set up to broadly maintain the aggregate level of requirements, why it provides incentives to implement a more advanced approach regarding the calculation of the capital base.[237]

4.3 Cooperation and Continuous Development

The new framework is designed to be more forward-looking with regard to the supervision of the required capital and it has the possibility to evolve over time. In addition to this, the framework keeps up with the development of the market. The Basel Committee on Banking Supervision takes concerns towards changes by rework the framework when it is needed.[238]

Further, the Committee on European Banking Supervisors (CEBS) has been analysing a number of questions regarding the implementation of Basel II[239]. The CEBS gives advice to the European Commission on banking policy issues and has encouraged cooperation and convergence of supervisory practices, as well as a common implementation and consistent application.[240]

To be able to reach a larger group of countries, the Basel Committee on Banking Supervision has encouraged cooperation between its members and other supervisory authorities. The secretariat of the Committee is supplied by the Bank for International Settlements in Basel.[241]

The Committee intends to continuously keep a dialogue with the banking industry. Many of these banking organisations have put a lot of effort into developing models that concerns the credit risk. These models are used by banks in "*quantifying, aggregating and managing credit risk across geographic and product lines*" and the Committee considers it important to keep a dialogue concerning the performance and comparability of these measures.[242]

236 www.bis.org/publ/bcbs107.htm
237 Ibid.
238 Ibid.
239 CEBS Report
240 www.c-ebs.org/
241 www.bis.org/bcbs/history.htm
242 www.bis.org/publ/bcbs107.htm

4.4 Enhancements to the Basel II Capital Framework

A publication from January 2009 regards the fact that the Basel Committee on Banking Supervision has taken actions towards strengthening the Basel II framework. The objective of these enhancements regards "*the regulation and supervision of internationally active banks in light of weaknesses revealed by the financial markets crisis*". Nout Wellink, Chairman of the Basel Committee and President of the Netherlands Bank said;[243]

> *"the proposed enhancements will help ensure that the risks inherent in banks' portfolios related to trading activities, securitisations and exposures to off-balance sheet vehicles are better reflected in minimum capital requirements, risk management practices and accompanying disclosures to the public."*[244]

In addition, the Committee is proposing standards to encourage a more accurate supervision and risk management of risk concentrations, off-balance sheet exposures, securitisations and related reputation risks.[245] These changes are part of a broader work programme that the Committee published in its 20 November 2008 press release. This programme aims to strengthen capital adequacy, risk management and supervision.[246] According to Wellink, the Committee indents to implement the program in a way that increases the financial confidence and that avoids worsening current market conditions.[247]

4.5 Basel II – prior to application

One of the reasons for the developments towards Basel II has been the need of synchronising bank regulations with the operations of banks abiding by those regulations. This synchronisation is needed due to the costs for banks of having double systems which is needed if the regulations are too standardised and not applicable to the banks' practical work.[248]

In accordance with Basel II it is the role of the Board of a bank to supervise and ensure that the bank follows the risk- and capital strategies that are set out by the board. Furthermore the Board must decide on methods of risk management and risk control and ensure that these are used throughout the bank. The Chief Executive Officer of the bank, as well as other senior officers must thereafter ensure that the systems set out by the Board are used in the daily activities of the group. The roles of the Board and other senior officers are important in order to ensure certain knowledge about the degree of risk that the bank is subject to, and in order to

[243] www.bis.org/press/p090116.htm
[244] Ibid.
[245] Ibid.
[246] Ibid.
[247] Ibid.
[248] Lind, G., *Basel II – nytt regelverk för bankkapital* (2005), p. 7

avoid situations where executive officers have too large opportunities to act independently of an ignorant board, subjecting to bank to risk.[249]

The method for supervision of banks in accordance with the Basel II Framework is based on three parts. First, the banks have been given greater responsibility for their own internal controls. Secondly the supervisory authorities have greater powers to ensure that banks follow not only the letter of the law but also the spirit of the law when building strong systems of leadership and operating in accordance with the framework. Furthermore, the banks are subject to supervision by external parties that have been given larger opportunities to analyse the banks. The aim of the supervision that has been set out is to ensure that each bank is frequently analysed by a number of parties.[250]

Prior to its application the Basel II Framework has been discussed for a number of reasons. One of these is the pro-cyclical nature that results when Basel II is applied in real life. This results from rising capital requirements in times of recession, causing banks not to lend money when it is needed. On the other hand, excessive lending may be seen in times of an upswing and as a result, changes in economic situations are amplified.[251]

Another issue that was raised prior to the application of the Basel II Framework was the risk that banks would start behaving in a too similar manner when choosing how to adapt to and work with Basel II. The concerns centred on the issue that if the risk management systems of banks become all too similar, changes in economic situations would be amplified and there would also be a greater risk for disturbances in the system. If banks were to have similar approaches to risk management there is a risk that these would all produce incorrect and misleading risk measurements, posing a threat to the banks.[252]

4.6 De Larosière Report

The De Larosière Report has looked at the causes to the ongoing financial crisis in order to determine how best to prevent such crises in the future.[253] One of the core causes to the ongoing financial crisis was the abundance of liquidity and low interest rates to be found in financial markets. This caused the participants of the financial markets to take greater risks, resulting in today's crisis.[254]

The question is now, what authorities can do in order to decrease the risks of bubbles as compared to the current approach of intervening after the bubbles have burst. In order to achieve such behaviour it is important that authorities communicate any concerns about market sustainability in terms of increases in asset prices and also that they strive for more objective risk evaluations. Furthermore, authorities should develop and implement monetary

[249] Lind, G., *Basel II – nytt regelverk för bankkapital* (2005), p. 12
[250] Ibid., p. 13
[251] Ibid., pp. 15-16
[252] Ibid., pp. 18-19
[253] De Larosière Report (2009), p. 13
[254] Ibid., p. 14

policies with the aim of overlooking monetary and credit developments, not only consumer prices. The De Larosière Report suggests that authorities should aim at using a number of regulatory tools for counter-cyclical objectives.[255] The suggested regulatory tools are;

> "*introducing dynamic provisioning or counter-cyclical reserves on banks in 'good times' to limit credit expansion and so to alleviate pro-cyclicality effects in the 'bad times'; making rules on loans to value more restrictive; modifying tax rules that excessively stimulate the demand for assets.*"[256]

The Report states that these tools were not sufficiently used by authorities prior to the ongoing crisis. Furthermore there is a need for greater communication and cooperation between monetary and regulatory authorities in order to determine how best to achieve a stable macro-economic framework, to increase the oversight of financial institutions.[257]

The De Larosière Report argues that Basel II is not to be seen as a major cause of the financial crisis. The reason is that Basel II only came into force on 1 January 2008 and will not be enforced in the U.S. until 1 April 2010. The Basel II Framework contains a number of improvements that to a certain extent could have helped prevent the crisis. However, it was enforced too late for this to be possible.[258]

The De Larosière Report is also critical to Basel II stating that it is in need of review. A reason for this is that Basel II put too much faith in the ability of financial institutions to handle important risks, and also underestimated these risks. Furthermore the belief of Basel II that the use of securitisation could spread risks could transfer risk away from the financial institutions has been proven incorrect. In addition to this, the Report claims that in preparing Basel II too much emphasis has been put on recent economic data from periods of good liquidity.[259]

The De Larosière Report states that liquidity is an issue that has not received enough attention from supervisors, as it is an important matter both for individual firms but also for the regulatory system. Furthermore, the Report disapproves of the Basel II Framework's reliance upon the grades of credit rating agencies. The ratings become an issue if they cause the user to rely too heavily on the rating agencies, thus not seeing the need for using their own judgement in making investment decisions. The ratings should only be relied on in financial markets if they are performed by competent firms who work with integrity.[260]

Another issue that has come to light is that banks have used internal risk models created by the use of too short statistical horizons and therefore they have not functioned properly in the crisis period that the financial markets are currently enduring. Furthermore, there is a lack of

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[255] De Larosière Report (2009), pp. 14-15
[256] Ibid., p. 15
[257] Ibid.
[258] Ibid., pp. 15-16
[259] Ibid., p. 16
[260] Ibid.

understanding of risk and risk models in financial institutions. The De Larosière report argues that there is a need for greater understanding of the natures and extents of risks taken.[261]

The De Larosière Report presents a number of areas of improvement for the Basel II Framework. The first is that there should be increased minimum requirements of high quality capital in banks. The second area of improvement concerns the pro-cyclical impacts of Basel II. This nature has emerged from the risk-sensitive capital requirements and the mark-to-market principle used in market conditions as those of today. These rules have augmented the movements in market trends.[262]

Moreover, there is a need for greater focus on the management of liquidity risk as to ensure that any increases in risks are consistent with the assets; their nature and holding horizons by the bank. Also the rules on off-balance sheet vehicles should be stricter and there is also a need to guarantee greater transparency.[263]

4.7 Chapter Summary

The chapter starts of with a brief history of the Basel Committee and its framework, Basel II, stating that the intent with the framework is to strengthen the international banking system with focus on keeping an adequate capital base. Further it explained that Basel II is a revised framework and that it was in June 2004 that the Basel Committee on Banking Supervision published the *International Convergence of Capital Measurement and Capital Standards, a Revised Framework,* more commonly known as Basel II. The framework is designed to set the minimum required capital for internationally active banks. The chapter further stated that the Committee considers the changing economic environment and as such develops the framework when it is needed. This is exemplified in a publication from January 2009 regarding the fact that the Basel Committee on Banking Supervision has taken actions towards strengthening the Basel II framework. In prior to the application of the framework, it is the roles of the Board and other senior officers which are important in order to ensure certain knowledge about the degree of risk that the bank is subject to. The Basel II Framework has been discussed for a number of reasons. One of these is the pro-cyclical nature that results from the framework. This results from rising capital requirements in times of recession, and banks not lending money when it is needed. The De Larosière Report has looked at the causes to the ongoing financial crisis in order to determine how best to prevent such crises in the future. According to the report, it is important that authorities communicate any concerns about market sustainability in terms of increases in asset prices and also that they strive for more objective risk evaluations. However, the De Larosière Report argues that Basel II is not to be seen as a major cause of the financial crisis. The reason is that Basel II only came into force on 1 January 2008 and will not be enforced in the U.S. until 1 April 2010. Further, the report presents a number of areas of improvement for the Basel II Framework. The first is that

[261] De Larosière Report (2009), p. 16
[262] Ibid., pp. 16-17
[263] Ibid., p. 18

there should be increased minimum requirements of high quality capital in banks. The second area of improvement concerns the pro-cyclical impacts of Basel II.

5. Interviews

This chapter will reveal the empiric results based on the answers of three respondents from each studied bank as well as the replies from the Swedish Financial Supervisory Authority. In order to achieve a complete analysis, the chapter will also present certain aspects of both banks' reports on capital adequacy and risk management from 2008. The conclusions are based on the respondents' answers to questions regarding the Basel II framework, its implementation, pros and cons and compliance with the framework and the reports on capital adequacy and risk management. We further aim to compare the empiric results and our secondary data. Finally, the chapter ends with a summarising chart.

5.1 Bank A – Introduction and Risk Management

The first bank to be chosen to be examined for this study has been called Bank A. This is a decentralised organisation where every office carries the responsibility for possible credit losses. However, credit limits are agreed upon in different levels in the organisation depending on the size of the credit limit. Hence, the offices deal with the problems of clients failing to pay back yet are supported by headquarters.[264]

Bank A has a clear responsibility distribution where every business unit carries the responsibility for their business and risks. According to the bank, the person who knows the customer best has the most accurate information to evaluate the risk taken. Since every office is a profit centre there are strong incentives for cautious risk taking. Each person is responsible for the risk that they submit the organisation to, but there is also a local control of risk within different business areas. This is controlled to ensure that the risk taken is not too high.[265]

In Bank A, a central credit department prepares decisions taken by the board or its credit committee. The central credit department makes sure that the credit decisions of the organisation are made in uniformity and in line with the decisions made by the board. Further, the central credit department supports the credit organisation as a whole.[266]

The capital level required in order to ensure the bank's survival is determined with consideration to what is required by law as well as stress tests and economic capital. Further, Bank A's Central Finance Department has the responsibility that the organisation holds a satisfying liquidity. The liquidity situation is reported daily to the CFO and on a regular basis to executive director and the board.[267]

[264] Report on Capital Adequacy and Risk Management Bank A, 2008
[265] Ibid.
[266] Ibid.
[267] Ibid.

Bank A aims to be a relation-bank and the offices keep regular contact with the customer. This provides a deeper understanding of and more updated information about the customer. The bank is strongly focused on building long-term relations with good customers with high credibility.[268]

Through the internal risk measuring system the bank's credit risk is measured in a, for the bank, reliable and uniform way. The classification of risk is built on the bank's internal rating, which in turn is based on the customer's possibility to pay back. Hence, when the bank evaluates a customer's credit risk they look at the possibility to pay back. According to Bank A, a weak possibility to pay back can never be compensated with good security. However, a safety can reduce the loss of the bank if the customer does not fulfil his or her obligations.[269]

To quantify the bank's credit risk a probability of the risk of customers defaulting is used. This is called *probability of default* (PD). Furthermore, other measures are used such as the size of the banks exposure in case of malfunction called *exposure at default* (EAD) and the share of the exposure that the bank losses in case of malfunction called *loss given default* (LGD).[270]

Bank A annually oversees their risk classification system. This system is partly focused on the internal rating, which aims for the systems to be used in a consistent, high-quality and purposive way, and partly on statistical models which quantifies satisfactory risk. In order to handle situations where the internal rating does not work, Bank A makes use of model adjustments, changed instructions for rating etc. The reports of validations are sent to the board of Bank A and are reviewed by the Swedish Financial Supervisory Authority.[271]

Historically Bank A has had a well functioning risk management. This is, among other factors, shown in the fact that Bank A has had lower credit losses than its competitors. The increased sensitivity concerning the capital requirement in regard to the Basel II Framework has strengthened the focus of the bank's risk management.[272]

5.2 Bank B – Introduction and Risk Management

The second bank in the study has been called Bank B. Bank B has a centralised organisational structure.

In their 2008 report on capital adequacy and risk management Bank B states that a key to profitability lies in the bank's own abilities in the evaluation, management and pricing of risks. At the same time the bank must take care to sustain a certain level of capitalisation for

[268] Report on Capital Adequacy and Risk Management Bank A, 2008
[269] Ibid.
[270] Ibid.
[271] Ibid.
[272] Ibid.

any potential unforeseen occurrences in the bank. In order to maintain a certain degree of financial stability the bank early on makes sure to identify, monitor and manage any issues related to risk and capital.[273]

The 2008 report of Bank B further states that the Board of Directors is responsible for ensuring internal controls and the bank's risk. Thus it lies upon the board to monitor risk exposure and also to establish policies on capital and risk for the bank. In addition to the policies set out by the Board of Directors, the bank has a risk control function that issues further instructions. Furthermore Bank B has a committee that is assigned the task of identifying, defining, measuring, and monitoring risks as set out by both external and internal regulation. [274]

The overall responsibility for ensuring that risk management is complete, in accordance with both the policies and intentions of the Board, lies upon the President and Chief Executive Officer (CEO) of the bank. The President and CEO also has the task of informing the Board of any essential risk information.[275]

Ensuring the practical application of the Board's intentions of risk management and control within Bank B is the task of two committees working with credit and assets and liabilities. The task entails the acceptance of policies for implementation of risk management and control and how this is to be managed, controlled and evaluated. The committee working with assets and liabilities handles the overall risk level of Bank B including its divisions. Furthermore the committee has decisive powers in areas such as methods for measuring risk, limitations to risk and capital management. The committee working with control of risk is the body assigned the task of monitoring credit, market, operational and liquidity risk. Risk management on a daily basis within the bank is the responsibility of its divisions, treasury and support functions. The daily risk management is assisted by risk organisations and risk managers.[276]

The issue of capital is a centrally regulated issue within Bank B. In order to guard the bank against sharp declines in the macro-economic environment, stress-tests are used in order to asses an extra safety margin in addition to the requirements from capital models. The bank uses an economic capital framework largely based on Basel II rules on capital adequacy and it is enhanced to create a higher sensitivity to risk in capital assessment processes, to asses the need of capital. The essence of the framework is that the greater the risk, a larger risk buffer is needed.[277]

When credit decisions within Bank B are made consideration is given to the creditworthiness of the potential client and also to the type of credit arrangement that is in question. The client's current and future financial situation is considered as well as any form of covenants or collateral that may be in question.[278]

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[273] Report on Capital Adequacy and Risk Management Bank B, 2008
[274] Ibid.
[275] Ibid.
[276] Ibid.
[277] Ibid.
[278] Ibid.

When considering the credit portfolio of Bank B emphasis is put on determining any concentrations of risk in geographical areas, industry sectors and any large names. Such large names encompass both risk exposures but also include large names that issue collateral or guaranties and credit derivatives. Collateral values that are non-retail are based on an estimation of their market values, estimations which are reviewed annually. [279]

When granting credit for mortgages and other retail exposures Bank B uses a method for scoring that depends on the business that is pursued and the criteria for scoring differ between portfolios and countries. To classify credit exposures that are non-retail Bank B uses internal risk classes based on the risk of default on payment obligations. These risk classifications are used when determining limits on credit as well as issues related to the monitoring, managing and reporting of the credit portfolio.[280]

The risk rating system and its performance is reviewed on a regular basis as to assure that the system for credit risk class assignment is functioning satisfactorily and that it is used as set out in internal rules and instructions. The review of the performance of the credit risk system is completed by staff independent of those who assign risk class to clients.[281]

When looking at the credit details Bank B uses the same risk classes, PD scale and approach to rating for all clients. However some adjustments may be made in relation to the industry in which the client is active. The system of risk class assignment used in Bank B encompasses both business risk and financial risk and the circumstances of the client are considered. The client is further assessed in relation to financial ratios and peer group comparison. Clients in risk classes are reviewed at least annually and those in higher risk classes, high-risk exposures, are reviewed more frequently in attempt to identify problems early and thereby identify solutions. Retail exposures are assigned to pools of probability of default on the basis of the score they receive when being judged on, among other things, payment behaviour. Any new risk exposures that have no earlier history in the bank receive a score from an external vendor. Bank B uses probability of default estimates reflecting the average default frequency for a risk class over a business cycle. The values of probability of default are based on historical statistics of defaults within the bank of over a period of at least one business cycle. In cases when internal data has not been sufficient the bank has chosen to complement with external data.[282]

5.3 The Implementation of Basel II

5.3.1 Organisational Structure of Bank A and Bank B

The regulation for banks, the Basel II Framework, has been implemented in Sweden since 2007. Banks in Sweden, a country which by tradition has had a decentralised banking

[279] Report on Capital Adequacy and Risk Management Bank B, 2008
[280] Ibid.
[281] Ibid.
[282] Ibid.

culture[283], have therefore had to adopt to a framework which has been argued to be more suited for centralised management[284].

The banks studied in line with this thesis were chosen on the basis of their organisational structure. Bank A was chosen for its decentralised structure and Bank B was chosen for being centralised. However, the respondents often described the banks as showing traces of both centralisation and decentralisation. Respondents from Bank A all stated that the bank was decentralised. However, when presenting how the bank worked with risk management and credit policies it became clear that the handling of these issues was a more centralised matter. For example the choice credit policy was a centralised decision however; decisions on granting credit were taken locally in different offices.[285] However, larger credits may be decided upon higher up in the organisation[286]. Also, decisions concerning Basel II were taken centrally[287]. On the other hand, the respondents of Bank B did not want to describe themselves as fully centralised. Instead they described how certain areas of the bank were centralised while other areas were more decentralised. For example risk management was a centralised issue[288]. Also, concerning credit grants in Bank B, decisions were taken at several levels, for example if the matter concerned a very large credit of several million Swedish crowns, then the credit decision would be taken centrally.[289]

5.3.2 Risk Quantification and the Transition to Basel II

Mikes found two differing attitudes to risk quantification in the banks that she studied, where one of the banks was more positive to this than the other[290]. Concerning the process of implementing Basel II in Bank A and Bank B differing attitudes towards risk quantification could also be seen.

The respondents of the decentralised Bank A describe how they initially found it difficult to accept the need of quantitative material and studies that needed to be included in the applications to the Swedish Financial Supervisory Authority. One respondent stated:

> *"We describe ourselves as a relation bank and we have not been impressed by quantitative analysis."*[291]

The deputy credit manager from Bank A says that prior to the adoption of Basel II the procedures for handling of information in Bank A were less formalised. There was a lot of paperwork but the bank had no routines in place to gather the information into databases as is done according to Basel II. An employee within credit risk management at Bank A focused on

[283] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 64
[284] Ibid., p. 59
[285] Interviews with Bank A; private market manager, deputy credit manager, employee within credit risk management
[286] Report on Capital Adequacy and Risk Management Bank A, 2008
[287] Interviews with Bank A; private market manager, deputy credit manager, employee within credit risk management
[288] Interview Bank B: risk coordinator within risk management
[289] Interview Bank B: credit manager
[290] Mikes, A., *Risk management and calculative cultures*, (2009), p. 20
[291] Interview Bank A: deputy credit manager

describing the importance of implementing Basel II in accordance with the organisational culture of the bank. He said that Bank A felt that employees at local offices could better determine the risk of their client, and as such they wanted to enable them to do this as well as possible while still abiding by the regulations of Basel II.

Compared to Bank A, respondents at Bank B were more positive to the implementation of Basel II. A credit manager at Bank B felt that the implementation process had gone smoothly. However, a risk coordinator within risk management said that to start with, in 2002-2003, it was not easy to understand the final intent of the framework. The same respondent also believed that the centralised organisational structure of the bank was well suited for the implementation of Basel II. Bank B does not mention any difficulties with the quantitative analysis implied by Basel II. They also do not offer any negative opinions as to the use of such quantitative analysis.

The evidence presented above points towards that Bank A has been less positive to the quantitative dynamics that come with the implementation of Basel II. This may be explained by their decentralised structure and the fact that they describe themselves as a bank emphasising client relationships. In such an organisational culture where client relations are important and the head office wants to delegate a lot of the decision making power to local offices, there is bound to be a more negative attitude to the quantitative nature of the Basel II Framework and the requirements on implementation of the framework. On the other hand Bank B with its more centralised structure gives a more positive view of the transfer to Basel II and the quantitative analysis that came with this. A probable reason for this could be that centralised organisational structures have higher power distance than decentralised organisations[292]. The Basel II framework, by greater emphasis on numbers and quantitative analysis, contributes to greater uniformity within the organisation[293]. This in turn leads to more concentration of power to the organisation's headquarters[294]. As such the quantitative nature of Basel II is more in line with the centralised structure of Bank B and thus there may be fewer objections to this quantitative nature within the organisation.

5.3.3 Application of Basel II in Bank A and Bank B Today

Bank A has an organisational structure comprising a small central organisation, a regional organisation and local offices. The central organisation is in charge of the formal work with Basel II and as such it has the task of interpreting the regulation and developing the models required by Basel II and also the internal models for how the organisation is to work with Basel II. Furthermore the central organisation prepares the ground work and discusses the outlines of instructions for the rest of the organisation.[295]

The regional organisations are important to the implementation of Basel II and comprise six regional offices. They are responsible for having a certain level of expertise within the area and they are responsible for the education of all involved personnel within the region.

[292] Anthony, R.N., Govindarajan, V., *Management Control Systems,* (2007), p. 679
[293] www.bis.org/publ/bcbs107.htm
[294] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context,* (2009), p. 61
[295] Interviews Bank A; private market manager, deputy credit manager

Concerning the daily implementation, this task is performed by the local offices and the regional organisation.[296] However, it lies within the responsibilities of the regional organisation to ensure that Basel II is in fact implemented in the local offices.[297]

Bank A believes that the local offices are best suited to judge the risk of a client. This belief has been a central issue when deciding on the implementation of Basel II. As such, Bank A has focused on creating support functions to aid the credit staff of local offices in their judgment of a client's risk.[298] These functions take the form of central or regional support as well as education and the possibility to contact specialists in case of need.[299] In the transfer to Basel II The bank provided educational programs for all (credit) managers and the office managers have made sure that the information has been passed on to employees at local offices.[300]

In Bank B, work on Basel II and its implementation began in 2002-2003[301], before the final decision on Basel II was made[302]. Work on Basel II and its implementation in the bank is directed and controlled centrally.[303] The organisation in itself comprises a central office and three regional offices and local offices.[304] It is the responsibility of the central organisation to develop the models for risk management that are used within the organisation as required by the Basel II Framework.[305]

Concerning issues of credit there are different decision levels within the bank. These levels are based on the size of the credit. Smaller credits are granted by local offices and the larger the credit the higher up in the organisation the decision is taken, first regionally and thereafter centrally.[306] In smaller offices, up to 95% of all credit decisions can be of such a size that they can be decided upon within the local office. Smaller offices also seldom handle such large credits that need to be taken to the central organisation for approval.[307]

5.3.4 Approaches to Risk Management and Calculative Cultures

When studying ERM in practise Mikes found two variations in the practical application of the risk model based on either shareholder value (the numeric approach) or risk-based internal control mechanisms (the holistic approach).[308] Parallels can be drawn between these approaches to ERM and the practical application of Basel II in Bank A and Bank B.

[296] Interview Bank A: deputy credit manager
[297] Interview Bank A: private market manager
[298] Interview Bank A: employee within credit risk management
[299] Ibid.
[300] Interview Bank A: private market manager
[301] Interview Bank B: risk coordinator within risk management
[302] www.bis.org/publ/bcbs107.htm
[303] Interview Bank B: risk coordinator within risk management
[304] Interview Bank B: credit manager
[305] Interview Bank B: office manager
[306] Interview Bank B: credit manager
[307] Interview Bank B: office manager
[308] Mikes, A., *Risk management and calculative cultures,* (2009), p. 18-37

A deputy credit manager at Bank A said that traditionally Bank A has been a bank based upon client relationships and they have not been impressed by the use of quantitative analysis. The respondent continues by explaining that in the initial phases of the adoption of Basel II, the bank had a difficult time coming to terms with the amount of quantitative material and studies that were a necessary part of the adoption and application process. He also explained that prior to Basel II the work in local offices was less formalised, there was a lot of paperwork, yet this information did not have to be transferred into large databases such as those now required due to Basel II. The unwillingness to use quantitative analysis and the historical lack of more formalised databases leads the authors to believe that initially and prior to the implementation of Basel II Bank A had a holistic approach to risk management.

An employee within credit risk management explained that with the adoption of Basel II Bank A has developed templates which all offices must use when evaluating the risk of any client. Further no office may depart from the model that has been set out as the whole organisation must follow the same credit policy and capital adequacy regulations. As such all offices rate clients according to the same templates. A private market manager said that Basel II resulted in the use of a greater number of parameters which are to be considered when evaluating existing and potential clients. Further the risk classifications into which clients can be categorised have increased in number, from four to one hundred. Bank A has also increased its supervision of the risk evaluations that local offices complete. Any deviations from projected risk evaluations of clients are analysed and added to statistical databases. One respondent said:

> *"We collect lists of all the loans that offices have which are not fulfilled properly by the client… These are collected and summed up and are in turn checked up upon by Finansinspektionen [Swedish Financial Supervisory Authority] or another authority."*[309]

The deputy credit manager that was interviewed presented the view that one of the results of Basel II was that there would be an increase in documentation and that this documentation would be followed up to a greater extent than before.

So far the evidence above points towards the conclusion that Basel II has resulted in an increased numerical approach to risk management within Bank A. However, Bank A still shows traces of the initially more holistic approach to risk management.

One of the respondents holds to the idea that the bank still mainly uses quantitative analysis as a complementary method of evaluating risk in clients. The level of detail required as a result of the implementation of Basel II was viewed negatively. A respondent said that as a result of Basel II the local offices must analyse a lot of variables for every credit risk evaluation, no matter what the size of the credit. The bank has different parameters for evaluating for example companies and individual persons, however, within these classifications there is no difference in parameters which are reviewed.

[309] Interview Bank A: private market manager

More evidence that the holistic approach still exists in Bank A is the general attitude to the understanding of the regulation within the bank. When discussing how well the regulation is observed within all areas of the bank the respondents have described the use of random testing. However they point out that in their opinion education and an understanding of the regulation is more important. Bank A puts a lot of emphasis into the continuous updating of the employees on Basel II and how it affects their work. They argue that it is of great importance that all employees understand the importance of not having bad clients and that this is best achieved through continuous education and updates. We believe that a possible explanation for this behaviour is that Bank A believes that the employees in local offices best judge the risk in their clients and that they therefore need this information.

The conclusion that can be reached is that initially Bank A had a very holistic approach to risk management. However, with the move towards Basel II the bank has had to accept a greater amount of risk quantification, in the form of increased follow-ups of compliance with the models as well as random tests and a greater of number of parameters when evaluating clients. However, despite this increase in quantitative material we still see the holistic culture of the organisation shining through. This takes the form of the attitude towards education and the dislike of the amount of quantitative parameters.

A risk coordinator within risk management at Bank B said that when Basel II was first introduced this required a new way of thinking about pricing and risk. However, Bank B seems to have adopted Basel II with less unwillingness than in Bank A. The risk coordinator from Bank B describes how they already in 2006 implemented a tool for better registering issues related to risk within the bank. A credit manager from Bank B said that in order to study how well risk evaluations of clients correspond with reality Bank B has a department focusing on studying all the credit granting documents of local offices to see if the evaluations turned out to be and still are correct. In addition to this, the risk coordinator within Bank B described how Bank B follow up compliance with the risk calculation templates to ensure that they are used and they also do random tests of risk evaluations and how these are done. Furthermore Bank B has a system that identifies where risk evaluations have been faulty. The system has been put in place in order to enable improvements in risk evaluation for the future. An office manager from a smaller office commented that the bank’s procedures of following up and examining the use of the models created as a result of Basel II were numerous. The respondent also commented that it was her job to monitor this within the office. Her job was monitored by another who was monitored by another and so on. She further commented that within the organisation there was a lot of supervision to ensure compliance with the internal models and that deviation from the models was not easily accepted. The risk coordinator and the credit manager of Bank B have said that in order to evaluate the performance of the system Bank B focuses on the use of calculations.

The evidence above points towards that Bank B has a more numeric approach to risk management. The early implementation of a tool for registering issues related to risk suggests that the numeric approach to risk management to some degree existed within the organisation already prior to the formal implementation of Basel II. This system shows that the bank early on had the intent of further improving its risk managing techniques. Since the implementation of Basel II we can see that Bank B has not abandoned this numeric approach. In the current application of the framework Bank B makes use of many techniques to follow up and improve the systems used in the bank. These techniques identify if the systems are functioning adequately or if and how they can be improved. This evidence further suggests that Bank B has a more numeric approach to risk management but the study has also found more traces of the numeric approach.

Education about Basel II in Bank B is not a continuous matter. When Basel II was first implemented in the organisation the employees were educated in the new programs for calculating risk and similar issues. The education required that each employee take part in one education opportunity. For education purposes Bank B made use of *e-learning* which meant that the employees took part in education through their computers. A number of months after the education opportunity all employees who had taken part in the education had to take a test to see how well they remembered what they had been taught. The purpose of the test was also to evaluate the education scheme. Once employees had completed there education no further education was organised.[310] Once again we can see how Bank B has a tendency towards the numeric approach to risk management. The tests of the education program were used in order to ascertain their effectiveness, hence if they created any value for the organisation.

The conclusion that can be drawn about risk management in Bank B is that prior to the implementation of Basel II the bank already showed traces of a numeric approach to risk management. With the introduction of Basel II the bank has implemented the requirements in line with this numeric approach, submitting all levels of the bank to studies of compliance in order to see if the system is functioning and if or how it can be improved. Further evidence of the bank's numeric approach can be seen in the way they have chosen to educate and evaluate knowledge of the framework within the bank, making use of tests in order to evaluate this.

The introduction of new control systems can prove to have a more or less difficult time gaining acceptance from the intended users. Mikes made use of the concept of calculative cultures in order to classify different attitudes of the intended users; calculative idealism and calculative pragmatism.[311] Such a classification is in order in our study of Basel II as well.

Bank A has historically been a bank based on relationships with clients, where quantitative analysis has not been in wide use. However, with the introduction of Basel II, the need to introduce such analysis has increased. The respondents have said that since the implementation of Basel II the bank has increased documentation of risk evaluation practices. The follow-up of such evaluations has also increased. Basel II has also resulted in a greater number of parameters on which to base credit evaluations. The employees of the bank are of the opinion that these parameters give a better and more fair evaluation than what was done before. However the bank still includes client relationships in its evaluations of clients. This leads us to the conclusion that Bank A probable had a more calculative pragmatic approach to risk management prior to Basel II. However, with the implementation of Basel II, the bank may be moving in a direction towards a more calculative idealistic approach.

[310] Interviews Bank B; credit manager, risk coordinator within risk management
[311] Mikes, A., *Risk management and calculative cultures,* (2009), p. 21

Based partly on the way in which Bank B continuously throughout different areas of the bank make use of quantifiable evaluations the conclusion can be drawn that the bank has a calculative idealistic approach. Further evidence of the calculative idealistic approach is given as the bank has installed systems for evaluation of risk evaluations in order to improve these for the future. Furthermore, throughout the interviews conducted for this study no one has mentioned any negative aspects of the use the bank's risk management techniques. The lack of critique of what can be considered an extended use of quantitative evaluations suggests that the general attitude towards this within Bank B is positive. Furthermore the risk coordinator and credit manager within Bank B have said that the bank mainly seeks to judge compliance by making use of calculations adding to the reasons suggesting that Bank B has a more calculative idealistic approach to risk management.

When comparing the approaches to risk management that exist in Bank A and Bank B, Bank B appears to have a more apparent numerical approach to this. The bank has a greater quantitative enthusiasm than Bank A, and as it appears they frequently make use of this as a method for evaluating compliance with the internal system for risk management and for evaluating the need of improvements or new methods for risk management. Bank A on the other hand has a more holistic approach to risk management and the implementation of Basel II, something which is noted especially in a general dislike for quantitative parameters among our respondents. However, Bank A has become more numeric since the implementation of Basel II, as they have had to accept greater risk quantification and more quantitative methods for evaluating compliance. The banks differ in calculative cultures. Once again the more frequent reliance upon quantifiable evaluations and calculations suggests that Bank B shows traces of the calculative idealistic approach. On the other hand Bank A is more calculative pragmatic, relying more on client relationships and displaying a stronger dislike for quantitative analysis. However with the transition to Basel II it appears that Bank A may be on the way to becoming more calculative idealistic.

A possible reason to this difference in attitude to risk management between the banks is the differing organisational structures within the banks. The more centralised Bank B is controlled from the top of the organisation. As a result of the higher power distance within Bank B, those in higher organisational levels may want to evaluate compliance on lower levels. Earlier studies have shown that uniformity and improved systems of control are liked by members from centralised banks.[312] Other sources have also stated that uniformity can be a result of an emphasis on using numbers.[313] Thus the centralised structure within Bank B may cause the bank to strive for uniformity. In order to obtain this uniformity they put a lot of emphasis on evaluation of risk management, through among other things focus on methods for risk calculation, within the organisation. This is in essence a very numeric attitude to risk management.

Bank A on the other hand is a more decentralised organisation that believes in delegating responsibilities to local and regional offices. In the decentralised organisation the power distance is smaller and information travels more easily between these levels[314]. Other

[312] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context,* (2009), p. 61
[313] www.bis.org/publ/bcbs107.htm
[314] Interview Bank A: private market manager

researchers have argued that decentralisation and an organisation with a number of small units with a certain degree of independence is preferable. Wallander does not believe in success of complicated systems, instead he believed that it is important for the organisation to work towards the same goal, while still maintaining a readiness to change.[315] Such tendencies may exist in Bank A and this may be an explanation as to why Bank A is less fond of quantitative analysis. Bank A has instead chosen to focus more on the education of members within the organisation, perhaps in order to ensure that the organisation is moving in the same direction.

5.3.5 Basel II and the Promotion of Centralised Management

When conducting his study Wahlström found a fear in decentralised banks that Basel II would promote increased centralisation at the expense of a more decentralised structure[316]. Further the Basel II Framework has been said to lead to uniformity, resulting in concentration of power to headquarters thus enhancing the value of centralised management[317]. The question is if these concerns have become realised now that the framework has been implemented in Sweden.

As can be seen from the discussion above Basel II is causing the two banks to become more alike with regard to their approaches to risk management. However, whether or not the decentralised Bank A is becoming more centralised is difficult to say without looking further into the bank's history of risk management. Nonetheless, this study has shown that the bank is making more use of what is traditionally considered more centralised methods of risk management[318], making more use of numeric approaches.

5.3.6 Reflection over Answers

Bank A and Bank B were both chosen for this study on the basis of their organisational structure. This has enabled us to analyse any differences in the practical application of Basel II between the two banks.

The study found that Bank A has had a more difficult time accepting the more quantitative nature of the Basel II Framework. Initially Bank A has been a bank emphasising relationships with clients, and has not been fond of quantitative analysis. However with the transition to Basel II the bank has had to accept more methods involving this type of analysis. Bank B on the other hand have not voiced any negative criticism to the quantitative nature of Basel II, on the contrary they have stated that the bank focuses on the use of calculations in judging the compliance to Basel II within the organisation.

The difference in attitudes between the two banks has led us to classify them differently in terms of their approaches to and attitudes towards risk management. Bank A seems traditionally to have been more holistic in their approaches to risk management however

[315] Wallander, J., *Budgeting - an unnecessary evil*, (1999), p. 412-418
[316] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 64
[317] Ibid., p. 61
[318] Ibid., p. 60

Basel II has brought more numeric methods into their way of working. The transformation of Bank A also shows in when looking at their calculative culture. Prior to Basel II Bank A seems to have been more calculative pragmatic but since the implementation of the new framework they seem to be becoming more calculative idealistic. Bank B on the other hand appears to have had a more numeric approach to risk management already prior to the transition to Basel II and now since the implementation we can still see that they focus on calculations and numbers, typical of the numeric approach. Also, the bank has had a more calculative idealistic culture within the organisation and this has remained through the transition to Basel II.

5.4 Compliance in the Application

After examining if there are any variations in the practical application of the Basel II Framework, the authors question how the different banks assure compliance with the framework. The CEBS, who gives advice to the European Commission on banking policy issues, has encouraged a consistent application of the framework.[319] Hence, the authors further questioned if the framework was administered in uniformity both within the banks and between banks.

5.4.1 Uniform Application?

All respondents from both Bank A and Bank B were convinced that the Basel II Framework was applied uniformly among their different bank offices. An employee within credit risk management stated that all offices within Bank A are affected in the same way by the Basel II Framework through the internal models. The respondent further said that the application of the framework is observed and evaluated in the same way and therefore it must be applied in the same way. Further, a deputy credit manager at Bank A argued about the importance of education and keeping knowledge of the framework alive. According to him, it is important to understand the intent of the framework and the consequences of not applying it correctly.

Even the respondents at Bank B confirmed that all their offices applied the framework in uniformity. According to them, they all used the framework and hence, the application must be the same. An office manager at Bank B explains that there is a tough control within the application of the framework and that they have no choice in the matter. However, a risk coordinator within risk management at Bank B points to the fact that the framework is not fully implemented yet, why the question of uniformity is hard to answer at this time.

Hence, in their own view, both banks have uniform application within their organisations. This might be explained by the fact that, as stated by an employee within credit risk management at bank A, the banks uses internal models which contribute to a uniform application of the framework. This exemplifies how centralised the framework is. Even though evidence suggests that there is a uniform application within both banks, the two banks have different emphasis on

[319] www.c-ebs.org/

what is important to assure a uniform application. In Bank A, they put strong emphasis on the employees' understanding of the intent of the framework when applying it, whilst the office manager from Bank B stated that all employees know how to practically apply the framework in day-to-day activities but not everybody knows the intent behind it.

Comparing the application of Basel II between different Swedish banks, the deputy risk manager in Bank A believes that it is applied in uniformity between the banks. However, over time, as the banks implement more advanced methods of calculation, the respondent believes that the differences will increase. According to him, the foundation of the framework will always be the same, but when the banks implement more advanced methods of the framework, where each banks' individual models are more advanced, the differences will increases.

A credit manager at Bank B states that there are central organisations ensuring and supervising the different banks' applications of framework and an employee at the Swedish Financial Supervisory Authority states that;

> *"We believe that the framework is applied uniformly in different Swedish banks and we have no reason to believe anything else. There are common criteria which they all need to fulfil. Sure, the banks may have different ways of solving things, but the framework is intended to be flexible. In general, it is applied uniformly."*

The authors can see that the banks' methods for applying the framework are similar between the two banks of different organisational structure. This could depend on the centralised structure of the framework and that it contributes to a certain way of application. As has been written earlier, with the implementation of Basel II in the Swedish banking system, the banking system will have to cope with more centralised ways of managing risk, with an increase in quantified measures of risk and a general focus on using numbers[320]. Hence, even in the decentralised organisation, the application becomes centralised and is applied in uniformity within the different offices. Wahlström argues that in line with Basel II, a decentralised organisation becomes less desirable. Evidence from the study suggests that even in the decentralised bank, the risk-management decisions are centralised. For the decentralised bank the utmost decision rests with the local branches but all decisions and check-ups are taken centrally.

The main difference in the application between the banks is that Bank A puts emphasis on getting the employees to understand the intent of the framework whilst this is not considered as important in Bank B.

5.4.2 Compliance with the Framework

The respondents mentioned that because of the tough control of the framework, both within the banks and from the Swedish Financial Supervisory Authority, it is applied in uniformity.

[320] www.bis.org/publ/bcbs107.htm

But how do the banks achieve this control and how do they assure compliance with the framework?

According to an employee at the Swedish Financial Supervisory Authority, there are different criteria which state that the framework shall be used in uniformity and the banks shall also have internal routines to assure the performance. Further, the banks' internal auditing department shall make sure that the Internal Ratings-Based systems (IRB-systems) are used is uniformity thorough the organisation. The Swedish Financial Supervisory Authority has an annual supervision of the banks which use the IRB-systems and assure that these are performing in a correct manner.

Hence, the Swedish Financial Supervisory Authority oversees that the banks use the framework in a correct way. They have certain rules for the banks' internal auditing departments concerning how to manage the compliance with the framework. However, the authors were curious to see if and how the banks assure compliance with the framework.

A deputy credit manager at Bank A states that to assure that the organisation follows the framework they have used education. He further states that the compliance is assured by the employees having enough support from the bank's internal systems. Bank A has a regional unit which provides education and which takes random samples to ensure compliance. They also have a central unit which makes sure that the regional unit is performing correctly. However, he states, compliance is mainly a question of education.

An employee within credit risk management at Bank A describes the bank's supporting systems. According to him, these systems help with issues like how to rate a client, how to report defaults if these arise, or how much you need to pay for the risk of a client. Hence, the treatment of a client has a certain structure and support as how to treat the client in every office. With these methods the uniform application is ensured in all the offices of Bank A.

A private market manager at Bank A explains that they are using an IRB-system. According to the private market manager they have statistics on the credit decisions that have been taken and of loans that have not been paid and they also write failure-reports when risk evaluations of clients have turned out to be faulty. Further, they are supervised by the Swedish Financial Supervisory Authority. He continues by stating that all the offices get information about the Basel II Framework on a regular basis. Further when an employee at a local office wishes to approve a loan to a client they have to put a loan application into the bank's internal system. If they do not do this, they cannot get the credit contract for the client to sign. This procedure is necessary when rating a customer. Consequently, compliance with the Basel II Framework is assured through the bank's internal systems.

The evidence above suggests that Bank A's structure of assuring compliance is centralised with a central department supervising the application of Basel II throughout organisation and further, the employees follow a certain structure in the daily application of Basel II. However, as written earlier, Bank A has a system where every office carries the responsibility for possible credit losses and in addition to each person being responsible for the risk they submit the organisation to there is a local control of risk within different business areas[321]. Hence, even if the internal systems are supervised by central units, local offices carry a lot of the responsibility for assuring compliance and supervision of this, why a decentralised structure can still be distinguished in their organisation.

Bank B also uses education to achieve compliance, but the respondents have not emphasised education when describing how the bank ensures compliance with the framework. Instead, a risk coordinator within risk management at Bank B states that when assuring the application they concentrate at the use of calculations. A credit manager at Bank B continues by stating that the assurance of the application is managed by central units. He explains that every credit decision taken has a number and these numbers are collected and stored in a central data bank. The central unit is supervises and controls that all decisions are correct.

Hence, in Bank B, the assurance is more centralised managed than in Bank A, with more emphasis on calculations and greater responsibility on the central department's supervision.

As has been written, many authors are critical to an over-reliance on numbers[322] and according to Porter there has been a growing role of quantitative expertise[323]. The increased reliance on numbers is confirmed by an office manager at Bank B when stating that;

> *"… everybody knows the practical application of the framework, but not everybody knows the intent behind it."*

In her view, they did not have to know the intent. Just as argued in the De Larosière report, there seems to be a lack of understanding of risk and risk models in some financial institutions[324]. The authors find the lack of understanding and too big a trust in numbers are disturbing and as Chua argues that the problems with numbers tend to surface when numbers are taken out of their context and used as absolute neutral truths[325]. The authors fear that if some employees in Bank B lack understanding for the intent of the framework, every calculated scenario will be taken for a truth, and any errors in the system will more easily be missed.

Further, as argued by Porter, the reliance on numbers minimises the need for intimate knowledge and personal trust[326], and as we can see it is Bank A who puts more emphasis on education and less on calculations and who regards itself as a relation-bank. Further, the article by Chua states that the tradition of believing in numbers can be explained by people being convinced of the superiority of numbers[327], and this convincing superiority might explain Bank B's trust for calculations.

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[321] Report on Capital Adequacy and Risk Management Bank A, 2008
[322] Briloff, A.J., *Unaccountable accounting revisited,* (1993), pp. 301-335; Lee, T.A., *The war of sidewardly mobile corporate financial report,* (2006), p. 445
[323] Porter, T., *Trust in Numbers—The Pursuit of Objectivity in Science and Public Life,* (1995), p. 6
[324] De Larosière Report (2009), p. 16
[325] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), pp. 154-155
[326] Porter, T., *Trust in Numbers—The Pursuit of Objectivity in Science and Public Life,* (1995), p. ix
[327] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), p. 144

Bank B showed a greater reliance on calculations, which the authors attempt to explain through the discussion of Latour and Woolgar. They argue that an important aspect when people accept a statement is the fact that other similar statements have been made[328]. More than one statement has been seen as evidence that the statement is true[329]. Hence, the authors fear that when enough authorities have confirmed the strength of these models, it may become a truth for employees at Bank B. We believe the risk to be greater in Bank B due to the smaller emphasis on understanding the intent of the framework.

Regarding the discussion above, the authors can see that both banks have internal systems for supervising compliance with the Basel II Framework and that both banks appear to fulfill the demands from the Swedish Financial Supervisory Authority. Furthermore, both banks have a centralised structure of their work in assuring compliance with the Basel II Framework even though decentralised features can be distinguished in Bank A. The main difference in their assurance lies in what they emphasise. Banks A has a stronger emphasis on education thereby ensure that their employees understand and increase the possibilities that the employees will follow the intent of the framework. Bank B, on the other hand, put their emphasis on the use of calculation and the authors are concerned that they may risk becoming too convinced of the superiority of numbers.

Based on the discussion above, the authors believe that it is dangerous to rely too much on calculations. Bank B's replies about the employees' knowledge about the intent of Basel II was of concern to the authors and just as Chua, the authors believe it to be dangerous when numbers are taken for neutral truths[330]. As argued, many models have their flaws and we do not think that the Basel II Framework is any exception, why the authors believe it to be risky when people have too little understanding for the framework's intent. In the long run, the authors believe that there will be a greater uniformity in a bank where the employees understand the intent behind their calculations. When ensuring the knowledge about the intent, the chances for uniform application are increased. When employees only know how to work with the system, without understanding the intent, they will not as easily react to disturbance or holes in the system. If there are any holes or any disturbances in the calculation system, the authors believe that these will be more easily discovered in Bank A.

5.4.3 Assurance of Knowledge

Earlier a deputy credit manager in Bank A talked about that in order to secure that their work is applied in uniformity the employees need to understand the intent of the framework. Hence the authors further questioned how the knowledge about Basel II is assured.

According to the private market manager in Bank A, the employees get education on a regular basis. He explains that it is one thing to calculate the numbers in the system, but it is another thing to understand the intent of them.

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[328] Latour and Woolgar, *Laboratory Life – The Construction of Scientific Facts,* (1986), p. 83
[329] Ibid., p. 84
[330] Chua W.F., *Teaching and Learning only the Language of Numbers* (1996), pp. 154-155

In Bank B, on the other hand, the employees received more education in the early stages of implementing Basel II and no further education is given on a regular basis. Instead, according to them, when the education has been completed, it is completed. However, the risk coordinator within risk management at Bank B explains that, they have had a test to follow up the knowledge of the employees. An office manager at Bank B states that when it comes to the practical application of the framework, there is enough competence. But when it comes to the intent of the framework and how the calculations are built, there is a very little knowledge.

Hence, one again it is confirmed that Bank A puts more focus on understanding the intent of the framework whist Bank B are more interested in learning the practical application of it.

As argued by Lind, the roles of the Board and other senior officers are important in order to ensure certain knowledge about the degree of risk that the bank is subject to[331]. The authors believe that Bank B should keep this in mind since there is a risk that some of their employees have less of an understanding of the intent of the Basel II Framework. It should lie in the interest of the Board and other senior officers to ensure the knowledge in the organisation. This because if an employee has less of an understanding of the intent, the authors believe there is a risk that they do not entirely understand the risks the bank is facing.

5.4.5 Reflection over Answers

In general, both banks apply the framework and supervise the compliance in similar ways. Both banks' have centralised systems of risk management and supervision. The authors believe that this is a result of the centralised structure of the framework. Though, as stated, some decentralised features could be distinguished in Bank A's organisation.

Lind argued that the aim of the supervision is to ensure that each bank is frequently analysed by a number of parties[332], and as can be seen both banks have their internal systems for supervising compliance with the Basel II Framework and are supervised by the Swedish Financial Supervisory Authority on a regular basis. It appears that both banks fulfill the demands from the Swedish Financial Supervisory Authority.

The main difference in the application is that Bank A puts more emphasis on getting the employees to understand the intent of the framework whilst this is not considered as important in Bank B. Regarding the compliance Bank A has a stronger emphasis on education whilst Bank B instead lays their emphasis on the use of calculations. Hence, the authors are concerned that Bank B risk becoming too convinced of the superiority of numbers. When the employees have little understanding of the intent of the framework, they have less understanding for the risk the bank is facing.

As stated by Wallander, the use of a complicated system will not be a solution for the banks[333]. Hence, complicated calculation will not protect banks from future crisis. Instead,

[331] Lind, G., *Basel II – nytt regelverk för bankkapital* (2005), p. 12
[332] Ibid., p. 13
[333] Wallander, J., *Budgeting - an unnecessary evil*, (1999), pp. 412-413

according to Wallander, it is important that the organisation works in the same direction and is ready for changes.

5.5 An Evaluation of the New Framework

As stated, different risk models such as CAPM and value-at-risk have faced harsh criticism. It has been argued that the interpretations of CAPM are flawed, why its ability to provide value for investors in reality has been questioned[334] and according to McGoun, CAPM is not a good measure when estimating risk[335]. In times of crisis these models tend to fall apart. Most models are built on assumptions that market data is random. Though, market prices cannot be seen as independent and random since people's behaviour is influenced by risk measurements. Consequently, these models will not work in times of crisis.[336] Further, when managers use value-at-risk methods for controlling the market risks, their actions become similar which in turn amplifies the effects of the crisis.[337] Hence, many risk models are ineffective and the problems arise in times of crisis. As argued by the De Larosière Report this is also true for the Basel II Framework, as in its creation too much emphasis has been put on recent economic data from periods of good liquidity[338].

As argued by Young, there has been an increase in "risk management devices" and she explains this by stating that risk has come to be seen as a manageable phenomenon[339]. In relation to these criticised measurements and the ever increasing focus on risk management devices, the authors have focused on the Basel II Framework, with the intent of evaluating the opinions of this framework after the implementation in 2007. Earlier research was made before its implementation why the authors sought our respondents' thoughts of the framework now, after it has been in use for some time.

5.5.1 A General Optimism

In accordance with the study done by Wahlström in 2009[340], respondents from the more centralised Bank B have had a more positive attitude towards the new framework even after its implementation. A risk coordinator within risk management in Bank B described this new framework as a win-win-win-situation, where everybody gained. According to him, the bank's capital requirements are lowered and the authorities have gained more control because of the increased transparency. Further, the clients have gained since the interest rates have been lowered.

The optimism towards the framework is general for Bank B and a credit manager in Bank B argues that *"the main strength with this framework is that you will set the right price on the*

334 McGoun, E. G., *The CAPM: A Nobel Failure*, (1992), p. 170
335 McGoun, E.G., *The CAPM: A Nobel Failure*, (1992), p. 170
336 Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), p. 1274
337 Ibid., p. 1276, Dunbar N., *Inventing Money* (2001)
338 De Larosière Report (2009), p. 16
339 Young J., *Risk(ing) Metaphors* (2001), pp. 618-621
340 Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 59

right customer." He continued by explaining that in accordance with this new framework, the bank looks at the customers' probability of default (PD). If a customer has a low PD, the bank will have a lower risk and hence they can set a lower price. Whoever has a higher PD should pay a higher price.

An office manager at Bank B states that this new framework provides better tools for calculating the return. She explains that it becomes easier to calculate what price to put on the customer and the system is more transparent than before.

But unexpectedly, even Bank A has a positive attitude towards the new framework. The fact that Bank B expressed big pros with the framework was not surprising for to the authors since the Basel II Framework has an emphasis on using numbers and promotes uniformity, which is less in line with decentralised management[341].

A private market manager in Bank A states that the main strength of the framework is that stable customers will cost less money and, when looking at the total mass of customers, the framework is profitable for the bank. Further, an employee within credit risk in Bank A argues that the framework gives them an advantage in relation to their competitors because of their history of low losses and their way of viewing risk.

Additional support of the Basel II Framework strengths is confirmed by the Swedish Financial Supervisory Authority. An employee states that there are four big strengths of this framework; there is an increase in risk sensitivity, more focus at risk management and risk evaluations, and finally, the operational risks have gained more attention due to the more clear capital requirement.

According to the private market manager in Bank A, with this new framework good and stable customers will cost less money. Further, stated by the deputy credit manager at Bank A; *"Less stable customers will cost us more which is good since it is not economic defendable to keep bad customers."*

As written earlier, Bank A has had lower credit losses than its competitors. Therefore Basel II allows it to hold a lower level of required capital, thus the bank gains competitive advantages in relation to its competitors. The Basel II Framework has also strengthened the focus of the bank's risk management.[342] An explanation to the positive opinions toward the framework could therefore be that Bank A has realised the profitable benefits of the framework and seen that it strengthens their position compared to their competitors.

A further reason as to why Bank A may have a positive attitude to Basel II could be their attitude to risk. In the report on capital adequacy and risk management for 2008 Bank A states that each local office is a profit centre, hence each office takes the costs of bad clients. This results in bank employees having a more careful attitude towards risk.[343] This view is further

[341] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 60
[342] Report on Capital Adequacy and Risk Management Bank A, 2008
[343] Ibid.

strengthened by a respondent stating that the bank is more risk averse. An employee within credit risk in Bank A argues;

> *"It has been proven that we are pretty risk averse, we do not like to take risks that are too large… When we cross over to Basel II, that is a risk sensitive control measure, it pays to have low risks… In total we have lower capital needs…. Compared to our competitors we have greater benefit, partially based on a historically low level of loss and also because of our attitude towards risk."*

As such, Bank A is not only positive to Basel II due to the fact that they make profits as a result of it, but also their attitude to risks creates benefits for them compared to competitors.

As seen respondents from both banks have experience strengths of the Basel II Framework. However this was unexpected on the part of Bank A since the framework is less in line with decentralised management. As stated, different authors have argued that people are more open towards change when they matches their pre-existing beliefs[344]. However, Bank A's unexpected positive attitude might be explained by the fact that, despite resource demanding process of implementing the framework, it has lead to a decrease in the required capital base and the bank has had the possibility to earn more money and it has gained competitive advantages in relation to its competitors.

5.5.2 Concerns of Complexity

The discussion above has presented a number of positive opinions on Basel II after it has been in use for some time. However, the study has also come across some negative opinions.

A general complaint from both banks concerned the complexity of the framework. According to a risk coordinator within risk management at Bank B;

> *"…it is a big disadvantage that the framework is so complex."*

A deputy credit manager at Bank A explains that all frameworks have their limits and regarding this framework he is concerned over the large amount of data that needs to be quantified and documented. He further states that the framework's main difference from Basel I is that it contains more requirements for documentation. Hence, the framework is more complex and more resource demanding. This is confirmed by the Swedish Financial Supervisory Authority that the Basel II Framework is more demanding for both banks and authorities. Further, Wahlström argued that decentralised banks worried that there would be a lack of applicability of the models in practise and that they were overly resource intensive and that the framework would lead to disadvantages for decentralised bank.

Though, according to the Basel Committee on Banking Supervision it is important to repeat the objectives of the framework on a regulatory basis and the Committee intends to

[344] Hedberg, B. et al., *Designing semi-confusing information systems for organizations in changing environments*, (1978), pp. 47-64; Young, J.J., *Constructing, persuading and silencing*, (2003), pp. 621-638

continuously keep a dialogue with the banking industry and to continuously develop and improve the framework[345].

As stated, both banks were discontent with the complexity of the framework and the fact that the deputy credit manager at Bank A complained over the large amount of data that needs to be quantified is not surprising since decentralised banks lays more focus on developing personal relationships with its customers[346] than on using numbers. The decentralised Bank A has even stated that they are a relation bank and hence it is not surprising that they are more sceptical towards the increase in risk quantification.

However, the complexity and the large amount of data might get reduced in time. Since the Basel Committee on Banking Supervision aims to repeat the objectives and improve the framework on a regular basis[347], the authors believe that the end result has not yet been seen.

5.5.3 Over-reliance on Measurements

An employee at the Swedish Financial Supervisory Authority is concerned that there is a risk related to the IRB-models. He argues that;

> *"…there is a risk that there will be an over-reliance on these models."*

According to him, under certain circumstances these models will not cover all risk aspects why they cannot be the only basis for evaluating risk. Hence, his advice is to avoid focusing too much on these models and realising that all models have their flaws.

As has been argued, the Basel II Framework has an emphasis on using numbers[348] and an over-reliance increases the risk for banks following the models to the letter but not by the intent. Hence, it is important that the people working with these models and numbers can interpret the information behind them[349]. As stated earlier, it is important that the banks put enough effort into education of their employees, avoiding a loss of understanding. The authors' concern is that a more centralised bank, such as Bank B, will more easily fall into this trap of over-reliance. According to a study by Wahlström, who found that employees in more centralised organisations defined the quality of organisation partially by the ability to create models and collect data. Furthermore, the study showed a tendency among the employees towards feeling safe based on the idea that the information from risk measurements would reduce the risk of "bad" customers.[350]

Talking to employees at Bank B suggests that the reliance on measurements has increased with the Basel II Framework and a credit manager at Banks B said that as a result of the transfer to Basel II the bank had seen an increase in the focus on using calculations. Further,

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345 www.bis.org/publ/bcbs107.htm
346 Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 63
347 http://www.bis.org/publ/bcbs107.htm
348 Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 60
349 ter Bogt, H.J., *Performance evaluation styles in governmental organizations*, (2003), pp. 311-332; Young, J.J., *Institutional thinking: the case of financial instruments*, (1996), pp. 487-513
350 Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 63

an office manager at Bank B states that she is so involved in the system that she does not question the directives form the authorities. She does not consider whether the directives are good or bad. When the respondents from Bank B described both the application of Basel II and how compliance was ensured, they put a lot of emphasis on risk measurements. For example when describing the process of deciding on granting a credit, there was a lot of weight put into the risk category into which the client was placed by the internal risk measurement systems. This was unlike Bank A where we saw greater tendencies into valuing relationships with clients.

Hence the authors see a more clear reliance on numbers and calculative measures in Bank B. And even if Bank A uses these measures as well, they put more focus on human relations and educating their employees in the intent of the framework[351].

5.5.4 Potential Enhancements on the Framework

When evaluating the framework after its implementation the authors further asked the respondents if they would make any changes to the framework.

What was common for all respondents was that they did not have any suggestions as to what they would improve in the framework, and if they had the opportunity they would only make smaller adjustments. In their views Basel II is a good framework in general and nothing big needs to be enhanced.

However, the private market manager at Bank A argues that sometimes it feels like there is no logic as to the amount of work they need to put down on smaller credits. According to him, there should be a certain difference in the amount of work for bigger and smaller credits. He argues that when a framework is developed, which is supposed to be applicable in many situations, the framework easily becomes very extensive. And according to him there might bee too many lawyers involved in the development and too few persons with practical experience. His statement is far from surprising for us. The Basel Committee on Banking Supervision are constantly engaging the banking industry to produce quantified measures[352] and as stated, Bank A has a history of being a relationship bank and the increased focus of quantification is not in line with their organisational structure. Further, the new framework demands that people report to the headquarters[353] and this is less in line with their decentralised organisation structure[354].

Since the framework has been designed to be more forward-looking and the Basel Committee on Banking Supervision works with developing the framework when needed[355], the respondents were further asked what they thought about possible changes of the framework in the future. They were all convinced that there will be further enhancements to the framework in the future.

[351] Report on Capital Adequacy and Risk Management Bank A, 2008
[352] www.bis.org/publ/bcbs107.htm
[353] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 61
[354] Ibid.
[355] www.bis.org/publ/bcbs107.htm

The deputy credit manager in Bank A believes that there will be increased demands for supervision in the future. He believes that the framework will become more extensive with more requirements on documentation. He further believes that supervisory authorities will set higher requirements for stronger risk measurements and greater supervision over how these measurements are applied. According to an employee within credit risk management in Bank A, enhancements to the framework are coming but he does not know exactly what they will regard. But he believes that rules regarding exposures in certain customer-groups will be enhanced. Finally, a risk coordinator within risk management at Bank B agreed, stating that the framework will not stand still. He believed that people will learn from what has just happened and the framework will be adjusted there after.

Based on the replies of the respondents and comments made about the framework today the authors believe that the framework is going to change. As stated earlier, the Basel Committee on Banking Supervision intends to rework the framework when it is needed and hence let it evolve over time [356]. Further, as written, that the Basel Committee on Banking Supervision has taken actions to strengthen the Basel II Framework and intend to implement a program that increases the financial confidence and that avoids worsening current market conditions.[357]

5.5.5 Basel II - disadvantageous for decentralised banks?

Another concern voiced in Wahlström's study was that Basel II would be disadvantageous for decentralised banks[358]. There was a concern since the framework puts emphasis on using numbers while decentralised organisations, such as Bank A, focus on developing personal relationships with its customers[359]. The question is if this concern has become realised with the implementation of Basel II. This study suggests that Bank A has changed. It has gone from having a more holistic approach to risk management to becoming more numeric. In addition to this the attitude in the bank seems to be changing from the initially pragmatic attitude to a more calculative attitude. Based on the words of the respondents the authors drew the conclusion that Bank A has had a more difficult time coming to terms with the more quantitative nature of the framework than Bank B.

However, the employees in Bank A are not entirely negative to the new Framework. The study has come across a number of positive opinions about the framework when interviewing respondents from Bank A. The respondents have commented that the transfer to Basel II has been profitable for them, also giving them a competitive edge to competitors. However, the authors question if the decentralised bank can be representative for other decentralised banks in this matter. This is due to the fact that a great deal of the reason behind why the respondents from Bank A have been positive to Basel II lies in the fact that it has been profitable. Yet the reason for the profitability lies in the fact that their risk averse nature is promoted by Basel II allowing them to gain a competitive edge on competitors. Thus it may

[356] www.bis.org/publ/bcbs107.htm
[357] www.bis.org/press/p090116.htm
[358] Wahlström, G., *Risk management versus operational action: Basel II in a Swedish context*, (2009), p. 61
[359] Ibid., p. 63

be their risk averse nature and not their decentralised structure that lies behind their positive attitude to Basel II.

The conclusion that can be drawn from this discussion is that Bank A seems to have gained from the transfer to Basel II. However, the authors believe that their risk averse nature has played an important role in giving the bank competitive advantages and thereby making the transfer more profitable. Therefore, the authors believe that even though Bank A might not have been disadvantaged, this conclusion cannot be valid for other decentralised banks that might not have the same risk averse nature as Bank A. Also, one must consider the fact that Basel II has caused Bank A to become more numeric in their approaches to risk management. This not in line with their more decentralised organisational structure which may be viewed as a disadvantage.

5.5.6 Reflection of Answers

In general both banks are positive towards the Basel II Framework which, according to the respondents helps set the right price on the right customer and hence it is profitable. As argued earlier, many risk measures have faced harsh criticism why one might wonder why they are so popular. Besides the fact that the framework has been profitable for the banks, as argued by Young, another explanation could be that risk is a phenomenon that can be controlled[360].

The results also showed that both banks felt that the framework was complex. Further, Bank A complained over the framework demand of resources. The authors also found that Bank B showed a greater reliance on risk measures why the authors are concerned that they may risk relying too much on the risk measures the use.

According to both banks future changes to the framework are to be expected, and as stated by the Basel Committee on Banking Supervision they intend to implement a program that increases the financial confidence. Hence, the end result of the framework has not yet been seen.

In line with the evaluation of the Basel II Framework the authors were curios to study how Basel II copes with financial crises, especially since its intent is to strengthen the financial stability[361]. The curiosity was amplified by Daníelsson's argument that Basel II only focuses on risks that are present in times of non-crisis[362].

However when interviewing the respondents in this matter the authors found that they believed it to be too soon to have an opinion about this. For example, a deputy credit manager in Bank A stated that;

> *"…you need one or maybe even two recessions to get a credible judgement of the performance."*

[360] Young J., *Risk(ing) Metaphors* (2001), pp. 614-618
[361] www.bis.org/publ/bcbs109.htm
[362] Daníelsson J., *The emperor has no clothes: Limits to risk modelling* (2002), p. 1293

He further stated that they have not fully implemented the framework yet, why the actual outcome of the framework cannot be analysed. In addition to this, an employee within credit risk management at Bank A argued that since the framework was not implemented in the U.S. when the current financial crisis arose, it is not possible to draw any lines between the Basel II Framework and the current financial crisis. Furthermore this respondent also argued that it is too soon to evaluate whether this framework is successful or not.

The De Larosière Report assured that the Basel II is not to be seen as a cause of the financial crisis. The reason is that Basel II fist came into force on the 1 January 2008 and will not be enforced in the U.S. until 1 April 2010. Hence, it is too early to evaluate the effects framework and since it is not yet fully enforced, and as a result no lines can be drawn between the quality of the framework and the fact that another crisis has developed.

Even if it is too soon to evaluate the success of the Basel II Framework regarding its ability to give financial stability, the study has shown that it has been profitable for the banks, why the opinions in general are positive.

5.6 Chapter Summary

The following sheets will give a short summary of the answers of the respondents. The answers are heavily shorted since the questions were extensive. In addition to this the authors have separated the answers on different sheets depending on the questions given. The first sheet contains the answers from the employee at the Swedish Financial Supervisory Authority. The second sheet contains the answers from the central and regional offices of Bank A and Bank B and the final sheet contains the answers from the local offices of Bank A and Bank B.

Questions	Employee at the Swedish Financial Supervisory Authority
In general how have you experienced Swedish banks' implementation and work with Basel II?	Good! They have managed their commitments seriously
Have you noticed any differences in the implementation process of centralised and decentralised Swedish banks?	That I cannot answer. Though, there is a difference between smaller and larger Swedish banks
Have you noticed that banks of different organisational structure have had an easier or harder time implementing Basel II?	That is hard to answer
Do you perceive that Basel II is applied uniformily among different Swedish banks?	Yes, they all have to live up to certain critera
Do you perceive that Basel II is applied uniformly within Swedish banks?	Yes, they have criteria to follow
How do you ensure Swedish banks' compliance with Basel II?	We have done random sampling, and there are criteria for them to follow. Further, we annually supervise their work
Have you experienced any negative aspects of Basel II?	Yes, there is risk for over-reliance on measurements
Have you experienced any positive aspects of Basel II?	Yes, there is an increase in risk sensitivity, more focus at risk management and risk evaluations, and finally, the operative risks has gained more attention
If you had the opportunity, would you change anything about the framework?	I cannot point at something specific. I would only make smaller adjustments

Questions	Risk Coordinator within Risk Management in Bank B	Employee within Risk Management in Bank A	Deputy Credit Manager in Bank A
Would you describe your organisation as centralised or decentralised?	Both	Mainly decentralised	Decentralised
How does your process for implementing the Basel II Framework look?	It has been implemented gradually with a large work in the IT-department	Through supportive systems adjusted for the needs of Basel II. Decisions for Basel II are taken from the central organisation	The central organisation has the formal responsibility of organising the adoption, while the local and regional offices are responsible for the day-to-day application
Has your current organisational structure had any effect on the implementation process?	No, the organisational structure is the same now as then	No, but our culture made us implement the frame-work in line with the organisational culture	Prior to Basel II, the bank was less formalised
With regard to your organisational structure, are there any positive and negative aspects of the framework?	Clients in some Business areas have not understood the new system	That fact that we are very risk averse has given us advantages in relation to Our competitors. The pro- cyclicality is the main negative aspect	The framework sets the right price on the right customer, while less stable customers will cost more
How did you experience the Implementation of Basel II?	Nothing bad to remark	It has been time demanding	Now there is more to quantify
Have offices of different size have experienced the implementation process differently?	Hard to answer	Yes, in a large office you have more people to ask	Yes, smaller offices with smaller credits will less affected
Have you experienced any negative aspects of Basel II?	Complex	The complexity	Now there is more to quantify and document and it is more complex
Have you experiences any Positive aspects of Basel II?	A win-win-win situation with lowered capital requirement, Interest rates and more control	We have gained competitive advantages	It has not been used long enough, we cannot evaluate it yet
Do you think that Basel II is applied uniformly by all your offices?	Hard to say since the process is not complete yet	Yes	Yes
Do you think that Basel II is applied uniformly by other banks?	It is not fully implemented yet	Hard to answer	Yes, but there will be larger differences when the more advanced method is implemented

How do you ensure compliance with Basel II within the organisation?	We focus on the use of calculations	Through the use of internal systems and education	Through education, random sampling and supportive systems. But mainly through education
How do you ensure that your employees have enough knowledge and understanding of Basel II?	Education in the beginning, then only some random tests	Education	Education
If you had the opportunity, would you change anything about the framework?	No	Maybe some practical parts in the reporting, nothing big	Hard to answer
With regard to the current financial crisis, what is your general opinion of Basel II?	It is good	It would have been good if the framework was in use three years ago	It is a good framework. The financial crisis is rather an effect of other effects
Do you think that there will be any changes made to the framework in the future?	Yes	Yes	Yes

Questions	**Office Manager in Bank B**	**Credit Manager in Bank B**	**Private Market Manager in Bank A**
Would you describe your organisation as centralised or decentralised?	Both	Both	Decentralised
How does your process of implementing the Basel II Framework look?	The implementation was managed by the central organisation	The implementation was managed by the central organisation	We have people in charge on both central and regional level, and the office managers worked with the practical application
Has your current organisational structure had any effect on the implementation process?	No	Hard to say, it has been smooth process	Since we only have three levels, central, regional and offices, it did not take long to get the information out in the organisation
With regard to your organisational structure, have you experienced any positive or negative aspects of the framework?	Good guidelines to respond to, it is more clear now	Not in particular	Not in particular
How did you experience the implementation of Basel II in your office?	Some parts where easy to implement, some needed more work	The process ran smoothly, any holes have been corrected gradually	More fair parameters, but much more to take into account
Do you think offices of different size have experienced the implementation process differently?	It is easier to niche the competence in a larger office	Yes, you have more people to ask in a bigger office	Yes, there is more knowledge in a larger office
Have you experienced any negative aspects of Basel II in your office?	No, we are raised to believe the authorities	No	It is more complex now
Have you experiences any positive aspects of Basel II in your office?	Better tools now	Yes, now you put the right price on the right customer	Stable customers will cost less
Do you think that Basel II is applied uniformly by all offices within the organisation?	Yes, it is a very hard control	Yes	Yes
How do you ensure compliance with Basel II within the organisation and your office?	Through supervisory systems	We have a supervised system	Through continuous testing and education

How do you ensure that employees within the office have enough Knowledge and understanding of Basel II?	Education in the beginning	Education in the beginning. Not On a regulatory basis	Education
If you had the opportunity, would you change anything about the framework?	Maybe even better tools	No	Less resource demanding regarding smaller credits

6. Conclusions

This chapter will summarise the answers to our focus questions. The authors will further reveal the theoretical contribution of our thesis. The chapter ends with suggestions for further research.

6.1 Introduction

This thesis has examined how two Swedish banks with different organisational structure practically apply the Basel II Framework and further look into whether the framework is applied in uniformity, how the banks secure compliance and the respondents'' opinions of the framework now that it has been in use for some time.

Starting the discussion in the current financial crisis it has been argued that many models for risk assessment underestimate risk exposure. Further, the study has looked deeper into risk measures stating that many of these models tend to fall apart in times of crisis and that they as such are not always reliable measures.

The Basel II is a relatively new framework which was available for implementation first in the year-end 2007, and compared to its predecessors it is a more flexible and adaptable framework. Hence, the authors were curious to examine the opinions towards this framework since other risk measurements have received harsh criticism.

In the chapter of current discussion the authors stated that the framework is intended to constantly evolve with the market why it was even more interesting to examine the opinions of the respondents and whether the framework needs further enhancement.

Furthermore Wahlström found that the Basel II Framework was less in line with a decentralised structure and it was argued that it would be disadvantageous for a decentralised organisation. With this in mind the authors wanted to study two banks of differing organisational structure, one more centralised and one more decentralised, to see if the opinions of the frameworks differ.

Furthermore, according to Mikes, systematic variations in risk management exist in practice why the authors further questioned if there was any variation in the practical application of the Basel II Framework between the two banks of different organisational structure.

This discussion led down to the focus questions; how do these two Swedish banks practically apply the Basel II framework? Are their any variations in their practical application? How do they secure uniform application and compliance with the Basel II Framework? And further, what are their opinions on the Basel II Framework now when it has been in use for some time? The answers to these questions will be presented in the section below.

6.2 Answers to the Focus Questions

6.2.1 How do these two Swedish banks practically apply the Basel II framework?

In Bank A the central organisation is in charge of the formal work with Basel II and they are as such responsible for the interpretation of the regulation and also the development of the models required by Basel II. The central organisation also prepares the ground work for the rest of the organisation to work with. Furthermore Bank A has a central credit department that prepares decisions taken by the board or its credit committee. This department also has the task of ensuring that credit decisions are made uniformly throughout the organisation and that the decisions are taken in line with decisions made by the board. The regional organisations are responsible for the education of all involved personnel within the region and they are responsible for making sure that the local offices apply the framework. The local office employees are those who conduct the daily practical implementation of Basel II. Bank A argues that the local offices are best suited to judge the credit worthiness of clients and as such the bank has emphasised the importance of support functions and education in order to aid the local offices in making their decisions. Bank A has an internal risk measuring system that ensures reliable and uniform measurements of credit risk. Risk is classified according to internal ratings based on the client's possibilities of paying back the loan.

In Bank B there is a central organisation that directs and controls the practical implementation of Basel II within the bank. The central organisation develops the models for risk management that are later to be applied throughout the organisation as required by the Basel II Framework. The bank has different decision levels concerning credit issues. The larger the size of the credit, the higher up in the organisation the credit decision will be made. Bank B has a committee that works with the identification, defining, measurement and monitoring of risks as set out by external and internal regulation. The overall responsibility for ensuring the complete risk management as set out by the Board lies upon the President and Chief Executive Officer of the bank. Bank B has two committees that have been assigned the task of ensuring the practical application of the Board's intentions of risk management and control. The committees accept policies for implementation of risk management and control and the handle the overall risk levels of Bank B and its divisions. One of the committees also has decisive powers in areas such as methods for measuring risk, limitations to risk and capital management. The bank also has a committee that monitors credit, market, operational and liquidity risk. The daily risk management within the bank is the responsibility of its divisions, treasury and support functions. When considering granting credit to a client, Bank B considers the creditworthiness of the client, the type of credit, covenants or collateral as well as the client's current and predicted future financial situation. All clients are rated using the same risk classes and probability of default scale with adjustments made for the industry of the client.

6.2.2 Are their any variations in their practical application?

Throughout the completion of this thesis the authors noticed that Bank A and Bank B had different responses to the initial implementation of Basel II within the banks. Bank A was more sceptical to the quantitative material that was needed in the applications to the Swedish Financial Supervisory Authority. The bank had in the past not been impressed by quantitative analysis and preferred to describe themselves a bank emphasising client relationships. Furthermore the bank was convinced that the employees at local offices could best make credit decisions of the clients. Bank B on the other hand was more positive to the initial implementation of Basel II. They did not mention that they had had any difficulties or problems with the quantitative analysis required by Basel II nor did they offer any negative opinions as to the use of such analysis.

Based on these responses the conclusion was drawn that Bank A was less positive to the quantitative dynamics required in the implementation of Basel II. The authors argue that the reason for this is the organisational culture of the bank, where client relations are important, and thus other parameters than quantitative may be seen as more important. The authors argue that the fact that Bank B is more positive to the quantitative dynamics of Basel II is a result of the fact that a greater emphasis on numbers contributes to uniformity within the organisation, which is more in line with the goals of a centralised organisation.

In addition to the differences in attitudes towards risk quantification, the study showed differences in the banks' approaches to risk management and their calculative cultures. The authors found that the approach to risk management in Bank A has been altered with the transfer to Basel II. The interviews suggested that initially Bank A had a more holistic approach to risk management. Little focus was put on risk quantification, and in essence it was not popular within the organisation. However, with the transfer to Basel II the bank is moving towards a more numeric approach to risk management. The Bank has since the transfer to Basel II increased the supervision of risk evaluations, and deviations from projected risk evaluations are analysed and added to statistical databases. Moreover there has been an increase in the number of risk classifications into which a client can be classified and the employees must look at a greater number of parameters when evaluating potential clients. The respondents also believed that there is an increase in documentation and follow-up still to come. However, despite these more numeric tendencies within Bank A the bank still shows traces of its more holistic approach to risk management. For example employees within the bank have argued that the quantitative analysis that is used is only complementary when evaluating risk in clients. The authors also received answers that argued that the parameters introduced since the implementation of Basel II were insufficiently focused upon differences in clients, and as such the same parameters were reviewed and amount of work needed to be done concerning a smaller loan was the same as a larger loan within the same category. Another holistic tendency in Bank A took the form of the focus of the education about Basel II given to the employees where emphasis was put on understanding the reasoning behind Basel II and risk taking within the bank.

Compared to Bank A, the study suggested that Bank B had a more numeric approach to risk management. In general Bank B seems to have adopted Basel II with a more positive attitude than Bank A. Already in 2006 the bank introduced a tool for better registering issues related to risk within the bank. Furthermore the bank has a department that follows up credit granting documents to see if the projections were correct. The bank also follows up compliance with the risk calculation templates to ensure that they are used. There is also a system in place that identifies faulty risk evaluations. This is done in order to enable improvements of the system. Furthermore employees in the bank have stated that the bank makes use of numerous procedures for following up and examining the use of models. Based on this information the conclusion was drawn that prior to the implementation of Basel II the bank may have had a more numeric approach to risk which is shown by for example the implementation of a risk tool in 2006. Furthermore the study suggests that the bank has chosen to implement Basel II in line with the numeric approach, submitting all levels of the bank to studies of compliance and to see if systems for risk management within the bank can be improved.

The study also showed differences in calculative cultures between Bank A and Bank B. Prior to the implementation of Basel II Bank A had a more calculative pragmatic tradition within the bank, where client relationships were important and quantitative analysis was not widely used. However, with the introduction of Basel II, the bank seems to be moving towards becoming more calculative idealistic. The evidence for this is shown by the increase of documentation on risk evaluation practices and the follow-up of such evaluations. Also the bank has introduced a greater number of parameters on which to base client evaluations and respondents argue that these parameters give a better and a more fair evaluation than what was done before.

Concerning Bank B the study found evidence to suggest that the bank has a calculative idealistic approach. The bank makes frequent use of quantifiable evaluations. Furthermore the Bank puts great emphasis on the improvement of systems that are used within the bank. Also, compliance with Basel II within the bank is mainly judged by making use of calculations. In addition to this the respondents have not voiced any negative views on the bank’s risk management techniques. The authors judge this lack of critique as a sign of a positive attitude to quantitative evaluations within the bank.

It has been argued that these differences in approaches and attitudes of Bank A and Bank B are consequences of the differing organisational structures within the banks. Bank A is a more decentralised bank that believes in the delegation of responsibilities to local and regional offices. The authors believe that Bank A’s initial dislike for the quantitative analysis linked to Basel II can be explained by linking this to Wallander’s disbelief in the success of complicated systems and the importance of working towards the same goal. The authors believe that Bank A in line with this chooses rather to focus on education, perhaps in order to secure that employees are working in the same direction, rather than promoting the use of quantitative analysis.

Bank B on the other hand has a more centralised structure which means that they may be more inclined to like uniformity and improved systems of control. Uniformity can be achieved by emphasising the use of numbers. As such the authors believe that the centralised structure of the bank makes them strive for uniformity which they achieve through emphasis on evaluation of risk management and a focus on numbers.

The conclusion that is reached is that there are variations in how the two banks practically apply the Basel II Framework. It has been argued that one of the main reasons for this is the differing organisational structure of the banks. However, the study has also seen evidence that the decentralised Bank A may be becoming more like the centralised Bank B as a result of the increased emphasis on numbers and quantitative analysis that is a result of the implementation of Basel II.

6.2.3 How do they secure uniform application and compliance with the Basel II Framework?

All of the respondents from both Bank A and Bank B were convinced that the Basel II Framework was applied uniformly throughout the banks. Within Bank A the internal models for observing and evaluating work with Basel II cause different offices to apply the framework in the same way. A respondent from Bank B argued that that the tough control within the framework results in uniform application. However, even though the banks both appear to have uniform application of the framework, there are differences in what they believe is important to assure uniformity in application. Bank A focuses on creating an understanding of the intent of the framework among employees who apply it. However, in Bank B the study found that greater emphasis is put on being able to apply the framework but not so much on the actual intent. Thus, even though both the banks believe that the framework is applied in uniformity we can still see that there are differences between them. In addition to this one of the respondents has commented that with time, the differences will increase between applications in different banks. Not only the banks themselves believe that the framework is applied in uniformity but so does the Swedish Financial Supervisory Authority who says that they have no reason to believe otherwise. The authors believe that the similarities between how the banks have chosen to apply the framework can be explained by the centralised structure of the framework, making it contribute to a certain way of application.

In order to secure compliance with the Basel II Framework the authors found that Bank A believes in the education of employees. Employees within the bank have also stated that compliance can be ensured by support from internal systems. The internal systems give the employees information on how to rate customers and how to report failures. In conclusion the general matter of ensuring compliance is a centralised matter within Bank A, with a central organisation supervising the application of the entire organisation. Furthermore employees must follow a certain structure in their application. However, despite the centrality of compliance, the local offices carry a lot of responsibility for ensuring compliance and supervision, enabling the authors to distinguish a decentralised structure in their organisation.

When Bank B works with ensuring compliance with the Basel II Framework, they emphasise the use of calculations. Further the assurance of performance is managed by central units and all credit decisions are numerated and stored in a central database where a central unit supervises and controls the decisions. In general the study has found that the assurance of compliance is a more centralised in Bank B who put more emphasis on calculations and greater responsibility on the central organisation's supervision.

The authors have found earlier studies stating that quantitative arguments are less easily dismissed and a reliance on numbers should decrease the need for intimate knowledge and personal trust. The study found evidence of this in the banks, where Bank B relied more on numbers than Bank A who preferred to put more emphasis on education and less on calculations. Other studies have said that the tradition of believing in numbers may explained by people being convinced of the superiority of numbers, which may explain Bank B's trust in calculations.

The authors have also attempted to discuss Bank B's reliance on numbers through the studies of Latour and Woolgar who argue that statements are taken for truths depending on how the statements are made. Further they state that when statements have been repeated enough times they tend to transfer into truths that are no longer questioned. In Bank B, there is more of a culture of believing in numbers when discussing whether to approve a loan or not. As the culture of believing in numbers is repeated by people with authority, such as the managers, it has become the truth in the bank. Furthermore Latour and Woolgar can also be used to explain the less quantitative nature of Bank A. The bank has a long tradition of focusing on client relationships and not using quantitative analysis. As such this has become the truth in the bank, making it more difficult for them to accept the quantitative nature of Basel II and also explaining why they have been less prone to rely on numbers.

The study has also touched upon the assurance of knowledge about Basel II. Bank A argues that in order to achieve uniform application there is a need for an understanding of the intent of the Basel II Framework among the employees. This has resulted in education of employees on a regular basis. However in the case of Bank B, the employees are primarily educated in the beginning and thereafter education is not given on a regular basis. In the opinion of Bank B, one education opportunity is enough and the main priority is that employees can work practically with day-to-day issues.

The conclusion reached in this area is that both of the banks appear to apply the Basel II Framework uniformly. However, there banks have differing focus. Bank A believes in compliance and uniformity through a greater understanding of the framework and its intent. However Bank B has a greater focus on numbers in achieving compliance.

6.2.4 What are their opinions on the Basel II Framework now when it has been in use for some time?

When conducting interviews for this thesis the authors found that the general opinion among the respondents concerning Basel II now when it has been implemented for some time is positive. Bank B has described the adoption of the framework as a win-win-win situation where all involved parties gain. The bank further argued that the framework enabled them to make better judgements of clients and thereby they could set the correct price. Another respondent said that the framework enabled better calculations of return and made it easier to put a price on the risk of a client.

The authors, in their opinion somewhat unexpectedly, also found that Bank A had a positive attitude towards the new framework. The authors had not thought that they would find such results, as earlier studies have argued that Basel II is less in line with decentralised management and fears have been expressed that the framework would be disadvantageous for decentralised banks, due to the emphasis on numbers.

One of the positive opinions expressed by Bank A was that the framework gave the bank an advantage in comparison to other banks. This was due to the risk averse nature of Bank A. Other respondents also commented that stable customers cost less money, which on the whole was profitable for the bank.

The authors have argued that one of the reasons for Bank A's positive opinions of Basel II has been that despite the resource demanding process of implementing the framework, it has been a profitable process for the bank as it has lead to a decrease in the capital base which has also given them advantages in relation to other banks. The reason that they have been able to have a lower capital base is that the historically low level of loss, which is a result of the bank's risk averse nature.

The discussion above focuses on the positive opinions of Basel II that we came across during this study; however, even if the general opinion of Basel II was positive, some negative opinions were also voiced.

The authors found that one of the more general complaints from both banks was the degree of complexity of the framework. A respondent from Bank A commented that the framework brought with it a greater need of documentation, and also larger amounts of data needed to be both quantified and documented.

Another concern noted in relation to the Basel II Framework concerns an over-reliance on measurements. This concern was raised by an employee at the Swedish Financial Supervisory Authority. As is known the Basel II Framework emphasises the use of numbers and an over reliance on such numbers may risk models being followed by the letter but not the intent. The authors' concern is that Bank B may more easily fall into the trap of over reliance, due to their focus on matters of quantitative nature. Furthermore, Bank B does not put as much emphasis on their employees understanding the intent of the framework with which they are working.

In order to get a clearer picture as to our respondents' thoughts on Basel II, the study included a question on potential enhancements in our interviews. The general picture was that the respondents did not want to make any drastic changes to the framework and that in general it was a good framework.

The conclusion drawn concerning the capabilities of the Basel II Framework now that it has been in use for a while is that the general opinion among both banks and the Swedish Financial Supervisory Authority is positive. However, both banks and the Swedish Financial Supervisory Authority have areas of the framework which they would like to improve. Concerning the complaints we have seen how the opinions of Bank A are very much in line with their decentralised structure and how they do not like to focus on quantitative analysis.

Prior to the implementation of Basel II concerns were raised that the framework would be disadvantageous for decentralised banks. The study has found that Bank A seems to have gained from the transfer to Basel II, however this may be a result of their risk averse nature. However, Bank A is evolving, becoming more numeric in their attitude towards risk management, something which may be considered a disadvantage.

6.3 Theoretical Contribution

Earlier methods of risk management have received critique for not holding in times of crisis or for being fundamentally flawed. The Basel II Framework is based on a division of risk into three categories and the Framework is more flexible and adaptable than earlier regulation in the area. Other studies have been conducted in relation to Basel II but this study contributes to the discussion in several ways.

Earlier studies, such as those of McGoun, have focused on theoretical analysis of portfolio models and CAPM as forms of risk management. McGoun chose to take a theoretical approach to risk management where he has used logic reasoning to reach the conclusion as to the flaws of the portfolio model CAPM. The study has not looked at how the portfolio models were used practically, something which has been central to this study of the Basel II Framework.

Other studies, such as that of Mikes, have had a structure more similar to ours. However, Mikes has not looked at the practical application of the Basel II Framework. Instead her study has looked at enterprise risk management. The conclusions reached by Mikes can therefore not be applied to the application of Basel II. This study focuses on the application of Basel II, in order to enable such conclusions on the behalf of this framework.

Furthermore the authors have, just as Wahlström, looked at differences between centralised and decentralised banks. However, Wahlström’s study aimed at looking into the banks’ opinions on the Basel II Framework while this study has looked at the practical application of the framework in banks of differing organisational structure.

In addition to this, earlier studies have been conducted and completed prior to the actual implementation of Basel II. Basel II was not in use when these studies were conducted and therefore they have only been able to cast a light on beliefs about Basel II and what the consequences of the framework were thought to be. Contrary to earlier studies this study has been able to draw conclusions based on the practical application of Basel II when it is actually in use.

6.4 Reflections on the Conclusions of the Thesis

When conducting this thesis the authors have only looked at two Swedish banks. This may appear to be a small sample of Swedish banks but the goal was not to study the practical application of Swedish banks in general. Instead it was the aim of this thesis to look at the practical application within one centralised and one decentralised Swedish bank. Furthermore the authors wanted to compare banks of similar size. If the authors had interviewed a greater number of banks they would also have had to look at smaller Swedish banks. This would have enabled the authors to draw more general conclusions but it would also have added another component to the analysis. The authors did not want to add another component as it would have lead to a broader purpose of this thesis. A broader purpose may have made the extent of the thesis too wide to handle given the amount of time given for writing to the thesis.

Furthermore as the study continued the authors came to notice that the decentralised bank in the study may not be completely decentralised. The authors found that the risk management within the bank was to some extent centralised. Perhaps it would have been possible to find a bank that was more genuinely decentralised. However, when deciding on which bank to choose, the authors found that this bank is strongly portrayed as a decentralised bank. As the authors only noticed the more centralised tendencies after the study had begun, they did not want to go back to search for another bank.

For the completion of this thesis three respondents from each bank were interviewed. If more respondents were interviewed then perhaps more strength could have been added to the conclusions. However, as is in line with the grounded theory approach the authors have interviewed the number of respondents needed until the respondents started repeating themselves. When the authors found that they were receiving the same or similar answers from the respondents they chose to not to search for more respondents. Also, the authors ended each interview by asking the respondents if they knew anyone else that could be interviewed. The authors found that the respondents started referring to each other and as such drew the conclusion that they had conducted enough interviews. One may still argue that the authors should have interviewed more respondents from the same offices and departments; however, when attempting to find such people to interview, the potential respondents that the authors reached often said that the authors should speak to the same people as they had already interviewed. The authors also found that in the smaller offices there were often only one or two people who felt they were knowledgeable enough to answer the questions. When these people had been interviewed, there were no further people left to interview.

A reader may also question the logic of which questions the authors chose to give to the respondents. As can be seen in appendices 3-4 the study had two sets of questions for the employees at the banks which were interviewed. The reasoning behind this was that the authors believed that employees at more local offices may have a difficult time answering some of the more detailed questions and that these may be more suited for the central or regional organisations. What may seem illogical is that two respondents from Bank A were asked the more central questions while only one person at Bank B was asked these questions. The authors' original plan was to ask the more central questions to employees at the headquarters and regional offices of the banks. The authors were able to achieve this with Bank A. However, the respondent from the headquarters of Bank B did not have time to answer the questions and instead referred the authors to a respondent at a regional office for a more central response. The employee at the headquarters of Bank B was the boss of this respondent from a regional office. As such the authors received a more centralised response from the regional respondent at Bank B. Instead of finding another respondent at a regional office to interview, the authors decided to look at two local offices of Bank B. Despite the differences in questions, the authors still believe that the choice of respondents is in line with the study as the aim was not to study how application differed between central offices and local offices in the banks. However, the authors did aim to find a spread of respondents so that they did not just interview employees from the central or local organisation. The authors still believe that they have managed to achieve a spread between the respondents.

6.5 Suggestions for Future Research

A conclusion that can be drawn when reading this thesis is that it is of the type that perhaps creates more questions than it is in itself able to answer. As such the authors have a number of ideas for potential future studies that should be undertaken.

This study has mainly focused on looking at differences between centralised and decentralised banks. When choosing banks, the authors also chose to look at larger Swedish banks. However the authors feel that if this subject were to be further pursued a study of potential differences in practical application of Basel II in banks of varying sizes would beneficial. This is a relevant issue due to the costs of implementing Basel II and that such costs may be felt more by smaller banks. Furthermore, the larger and smaller banks vary in complexity and as such Basel II has opened up for the possibility of choosing different levels of complexity[363]. These choices may be mirrored in the practical application. The authors also suspect that there will be different levels of expertise in banks of varying sizes, something which may contribute to varying practical applications of the framework.

Another issue worth pursuing is the practical application of Basel II in different countries. The Basel II Framework has a basis which is the same for all. However if different countries can provide a good reason, there is a possibility of choosing options that allow for national rules that differ from Basel II.[364] As such, it would be of interest to study the degree to which such options have been used and also how these may affect the application of Basel II. It would also be of interest to look the application of Basel II in branches of Swedish banks in other countries.

Yet another interesting area for future research is linked to the timing of this study. When writing this thesis the financial crisis has not blown over and as such many questions regarding Basel II and the financial crisis cannot yet be answered. It may therefore be

[363] Lind, G., *Basel II – nytt regelverk för bankkapital* (2005), p. 14
[364] Ibid.

interesting to, in the future, study any changes in the application of Basel II prior to and after the financial crisis.

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Interviews

Face-to-face
Credit manager Bank B
Office Manager Bank B

Private Market Manager Bank A
Risk Coordinator within Risk Management Bank B

Telephone
Deputy Credit Manager Bank A
Employee at the Swedish Financial Supervisory Authority
Employee within Credit Risk Management Bank A

Appendix

Appendix 1 - Specification of Interviewees/respondents

The purpose of this appendix is to give the reader a more detailed specification on our respondents.

Respondent from the Swedish Financial Supervisory Authority

Employee at the Swedish Financial Supervisory Authority

This respondent works at the Swedish Financial Supervisory Authority, Finansinspektionen. The respondents duties are to overlook compliance with Basel II among Swedish Banks. Furthermore the respondent works at the Stockholm office of Finansinspektionen.

Respondents from Bank A

Employee within Credit Risk Management

The respondent works at the headquarters of Bank A and is responsible for the calculation, analysis and reporting of credit risk within capital adequacy.

Deputy Credit Manager

The respondent works at one of the regional offices of Bank A. The respondent is the deputy credit manager in this region.

Private Market Manager

The respondent works at one of the local offices in the southern region of Bank A. The respondent is further more manager of the private market side of the office and responsible for credit granting within this area.

Respondents from Bank B

Risk Coordinator within Risk Management

The respondent works at one of the regional offices of Bank A. The respondent works within risk management had has the role of risk coordinator and is also responsible for operative risks.

Credit Manager

The respondent works at one of the local offices in the southern region of Bank B. The respondent has the role of credit manager for a district within the southern region.

Office Manager

The respondent works at one of the smaller local offices in the southern region of Bank B. The respondent is the office manager of this office and as such is utmost responsible for the risk management within the office.

Appendix 2 - Interview Questions to the Swedish Financial Supervisory Authority

1. I allmänhet, hur upplever ni svenska bankers implementering av och arbete med Basel II? *In general how have you experienced Swedish banks' implementation and work with Basel II?*
2. Upplever ni någon skillnad i implementeringen av Basel II hos decentraliserade och centraliserade svenska banker? *Have you noticed any differences in the implementation process of centralised and decentralised Swedish banks?*
3. Har ni upplevt att banker med olika organisationsstruktur har haft lättare eller svårare att implementera Basel II? Have you noticed that banks of different organisational structure have had an easier or harder time implementing Basel II? *Have you noticed that banks of different organisational structure have had an easier or harder time implementing Basel II?*
4. Upplever ni att Basel II tillämpas enhetligt av olika svenska banker? *Do you perceive that Basel II is applied uniformly among different Swedish banks?*
5. Upplever ni att Basel II tillämpas enhetligt inom svenska banker? *Do you perceive that Basel II is applied uniformly within Swedish banks?*
6. Hur säkerställer ni svenska bankers efterlevnad av Basel II? *How do you ensure Swedish banks' compliance with Basel II?*
7. Ser ni några nackdelar med Basel II? *Have you experienced any negative aspects of Basel II?*
8. Ser ni några fördelar med Basel II? *Have you experienced any positive aspects of Basel II?*
9. Om ni fick möjlighet, skulle ni förändra något med regelverket och i så fall vad? *If you had the opportunity, would you change anything about the framework?*

Appendix 3 - Interview Questions to the Central and Regional Organisations

1. Skulle ni beskriva er organisation som centraliserad eller decentraliserad? *Would you describe your organisation as centralised or decentralised?*
2. Hur ser arbetsgången ut vid implementering av Basel II? *How does your process of implementing the Basel II Framework look?*
3. Hade er befintliga organisationsstruktur någon inverkan på hur smidigt eller svårt det var att implementera Basel II-regelverket och i så fall hur? *Has your current organisational structure had any effect on the implementation process and in that case how?*
4. Med hänsyn till er organisationsstruktur vilka för- och nackdelar finns det med Basel II? *With regard to your organisational structure, are there any positive and negative aspects of the framework?*
5. Hur upplevde ni implementeringen av Basel II? Var något lättare eller svårare vid implementeringen? *How did you experience the implementation of Basel II? Was anything more or less easy?*
6. Tror ni att bankkontor av olika storlek har upplevt implementeringsprocessen olika? Fanns det för- och nackdelar för kontor av olika storlek vad gällde implementeringsprocessen? *Do you think offices of different size have experience the implementation process differently? Concerning the implementation process, were there any advantages or disadvantages for offices of different size?*
7. Har ni upplevt några nackdelar med Basel II? *Have you experienced any negative aspects of Basel II?*
8. Har ni upplevt några fördelar med Basel II? *Have you experienced any positive aspects of Basel II?*
9. Tror ni att Basel II tillämpas enhetligt av alla era kontor? *Do you think that Basel II is applied uniformly by all your offices?*
10. Tror ni att regelverket tillämpas enhetligt av andra banker? *Do you think that Basel II is applied uniformly by other banks?*
11. Hur säkerställer ni efterlevnaden av Basel II inom organisationen? *How do you ensure compliance with Basel II within the organisation?*

12. Hur säkerställer ni att de som arbetar med Basel II har tillräcklig förståelse för regelverket? *How do you ensure that your employees have enough knowledge and understanding of Basel II?*
13. Om ni fick möjlighet, skulle ni förändra något med regelverket och i så fall vad? *If you had the opportunity, would you change anything about the framework?*
14. Mot bakgrund av finanskrisen, vad är er generella åsikt om Basel II? *With regard to the current financial crisis, what is your general opinion of Basel II?*
15. Mot bakgrund av finanskrisen, tror ni att det i framtiden kommer att ske några förändringar inom Basel II? *With regard to the financial crisis, do you think that there will be any changes made to the framework in the future?*

Appendix 4 - Interview Questions to Local Offices

1. Skulle ni beskriva er organisation som centraliserad eller decentraliserad? *Would you describe your organisation as centralised or decentralised?*
2. Hur ser arbetsgången ut vid implementering av Basel II i ert kontor? *How does your process of implementing the Basel II Framework look?*
3. Hade er banks organisationsstruktur någon inverkan på hur smidigt eller svårt det var att implementera Basel II-regelverket och i så fall hur? *Has your current organisational structure had any effect on the implementation process and in that case how?*
4. Med hänsyn till er organisationsstruktur upplever ni några för- och nackdelar med Basel II? *With regard to your organisational structure, have you experienced any positive and negative aspects of the framework?*
5. Hur upplevde ni implementeringen av Basel II i ert kontor? Var något lättare eller svårare vid implementeringen? *How did you experience the implementation of Basel II in your office? Was anything more or less easy?*
6. Tror ni att bankkontor av olika storlek har upplevt implementeringsprocessen olika? Tror ni att det fanns för- och nackdelar för kontor av olika storlek vad gällde implementeringsprocessen? *Do you think offices of different size have experience the implementation process differently? Concerning the implementation process, were there any advantages or disadvantages for offices of different size?*
7. Har ni upplevt några nackdelar med Basel II hos ert kontor? *Have you experienced any negative aspects of Basel II in your office?*
8. Har ni upplevt några fördelar med Basel II hos ert kontor? *Have you experienced any positive aspects of Basel II in your office?*
9. Tror ni att Basel II tillämpas enhetligt av andra kontor inom organisationen? *Do you think that Basel II is applied uniformly by all offices within the organisation?*
10. Hur säkerställs efterlevnaden av Basel II inom er organisation? *How do you ensure compliance with Basel II within the organisation?*
11. Hur säkerställs efterlevnaden av Basel II på ert kontor? *How do you ensure compliance with Basel II within the office?*
12. Hur säkerställs kunskapen om Basel II på ert kontor? *How do you ensure that employees within the office have enough knowledge and understanding of Basel II?*

13. Om ni fick möjlighet, skulle ni förändra något med regelverket och i så fall vad? *If you had the opportunity, would you change anything about the framework?*