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The Development of the Swedish Banking Industry during the Implementation of Basel II

A study of the development of capital ratio, net credit loss level, and degree
of disclosure for the four largest banks in Sweden

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Abstract

Common international regulations and frameworks for the banking industry are of great importance for the reliability and development of financial systems and countries' economies. One such framework is Basel II which was presented in 2004. It is based on Basel I which consisted of a credit risk measurement guideline and minimum capital requirements. Basel II consists of three pillars in which minimum capital requirement, the supervision process, and market discipline are regulated (Finansinspektionen, 2002). The intention of Basel II is to lower banks' capital requirements by offering banks the ability to choose a method that reflects their reality when calculating risk (BCBS, 2004).

BCBS, the Basel Committee on Banking Supervision, presented a study called the fifth Quantitative Impact Study (QIS 5) in 2006 that was based on data from the fall of 2005 (Finansinspektionen, 2006). The purpose of the study was to examine how Basel II can be expected to affect banks with regard to their capital requirements. The study showed that the minimum capital requirement could be reduced with Basel II in comparison to Basel I. BCBS had not presented any other study after QIS 5 indicating how Basel II had affected the banking industry. This study aims to fill part of that gap by examining how capital ratio, the net credit loss level, and the degree of disclosure have progressed for the four largest banks in Sweden during the implementation of Basel II as this has not previously been looked at. Hypotheses regarding the impact Basel II has had on these variables will be presented based on these observations. To be able to make better hypotheses regarding the impact of Basel II, the impact of the economic climate on these variables was investigated by creating a market indicator which consisted of the banks' average net profit index.

No clear tendencies between all years could be observed for the variables for all banks. Specific developments for certain years were however observed. Regarding the capital ratio, no clear tendency could be seen throughout the whole studied time period but all banks showed a clear increase in their capital ratio during the last years of the studied time period. This was also true for the net credit loss level where all banks experienced a clear increase in the net credit loss level from 2007 and onwards. Regarding the degree of disclosure, even though variations between specific years exist, what was evident was that this variable had increased overall during the studied time period.

According to our analyses, we believe that the introduction of Basel II has affected the four major banks in Sweden regarding their capital ratio, net credit loss level, and degree of disclosure. We believe the progression of the banks' capital ratio to be a combination of Basel II and the development of the economic climate. In the case of the banks' net credit loss levels, we believe that Basel II has had an impact even though we believe that the economic climate also has had a large role to play. The size of the banks' annual reports has steadily increased during the examined time period with a few exceptions. According to our analysis, we believe that the introduction of new regulations, standards, and norms has an impact on the size of the annual reports. After the introduction of Basel II, the size of the annual reports has increased among all four banks, which indicates an impact.

Keywords: Basel II, Capital Ratio, Net Credit Loss Level, Degree of Disclosure, Swedish banking industry

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1 Introduction

Swedish banks are a central element of the financial system and contribute to economic growth and employment. The resilience of the financial sector and the financial system is fundamental for financial stability and is therefore based on clear rules and regulations (Finansplats Stockholm, 2008). One such regulation is Basel II. After disturbances to the international currency and banking markets, a group of ten countries¹, G10, founded the Basel Committee in 1974 in an attempt to increase financial stability. Their aim was to stabilize the financial system by formulating capital adequacy requirements and supervisory projects for banks. In 1988, Basel I was introduced which consisted of international capital requirements. However, as the financial market developed and became more complex, the need for a new framework was inevitable and in 2004, the Basel Committee therefore presented Basel II – the New Capital Accord (BCBS, 2009).

1.1 Why do we need bank regulations?

Efficient and authentic systems for managing risk, saving, financing, and mediating payments are vital for Sweden's welfare (Banks in Sweden, 2010). Several of these functions are very sensitive by nature as small disturbances can easily spread and threaten financial stability. As banks are the key providers of such services, it is more important to formulate regulations for banks than it is for other non-financial companies (Lind, 2005).

1.2 Who regulates banks?

The functionality and reliability of the financial system is of great importance to the economy and therefore laws and guidelines have been instituted by the Swedish parliament to control the financial system (Banks in Sweden, 2010). Finansinspektionen is a public jurisdiction serving under the government (Finansinspektionen, 2010) that handles both supplementary regulations and general guidelines regarding financial systems. To insure that financial institutes follow these regulations, Finansinspektionen also supervise financial institutes regularly. Riksbanken, the central bank of Sweden, is an independent authority under the parliament and their main mission is to maintain the value of money. They also publish analyses of the macroeconomic development as well as analyses of Sweden's four major banks and their borrowers (Banks in Sweden, 2010). Basel II is a framework where countries have the ability to choose to legislate all of Basel II or only parts of it (The Bankers Guide to Basel II, 2005). The EU chose to expand the standard to include not only internationally active banks, but also credit institutes and security companies. Since this is an EU-directive, the Swedish government bill (2006/7:5) suggested that the framework should be legislated from the 1st of February 2007 (2006/7:5).

1.3 Basel

1.3.1 The Basel Committee

The Basel Committee on Banking Supervision, BCBS, was founded in 1974 by the central banks of the G10 member countries as a consequence of the severe disturbances to international currency and

¹ Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States (BCBS, 2009)

banking markets. Their purpose was to formulate broad supervisory standards and to recommend statements of practice to countries with internationally active banks. These statements do not have legal force, they are only normative. Therefore it is up to each individual country to implement either parts of the recommendation or the complete version depending on what they find most suitable. An important objective of the Basel Committee has been to decrease the gap between national and international supervision by assuring that no international bank can escape supervision and by making supervision adequate (BCBS, 2009).

1.3.2 Basel II

In 1988, the Basel Committee introduced a framework referred to as Basel I, consisting of a credit risk measurement guideline and minimum capital requirements. This would support the banking system and create equivalent competitive conditions. The standard was progressively introduced, not only to the member countries of the G10, but also to other countries with internationally active banks. By the end of 1993, all member countries met the minimum capital requirements. During the following years, until 1999, the Basel Committee published several amendments (BCBS, 2009) to ensure that the framework kept up with the development of financial institutes and the environment they were active in (Finansinspektionen, 2002).

Basel II was first proposed in 1999 and, after years of refinements, it was presented in June of 2004. It is based on the previous accord, Basel I, but includes several changes and measurements that were not previously present. It consists of three pillars in which minimum capital requirements, the supervision process, and market discipline are regulated (Finansinspektionen, 2002).

The intention of Basel II is to lower banks' capital requirements by offering them the ability to choose a method that reflects their reality when calculating risk (BCBS, 2004). With more realistic estimates, banks can lower their capital requirements even though the methods often require more time and more elaborate calculations.

1.3.2.1 Pillar one

The first pillar describes the different approaches of calculating the minimum capital requirements for credit, market, and operational risk. It states that the total capital ratio is not allowed to surpass eight percent. In order to be able to calculate the banks' total capital ratio, the banks' capital base and risk-weighted assets are needed in the following formula:

$$\text{Capital Ratio} = \frac{\text{Capital Base}}{\text{Risk - weighted assets}}^2$$

The purpose of the first pillar is to, with help of the different approaches that are described, quantify risk and estimate it in an accurate way (The Bankers Guide to Basel II, 2005). There are differences between banks regarding the systems that they use and the quality of internal controls. Therefore, each

² The capital base consists of primary and supplementary capital where the primary capital consists of equity, accrual funds and tax equalization reserve and must at least equal the supplementary capital which consists of subordinated debt securities with a maturity of at least five years (Lag (2006:1371) om kapitaltäckning och stora exponeringar, 2006).

bank has the ability to choose from different stated methods when calculating credit, market, and operational risk (BCBS, 2004). When referring to the three types of risk, Basel II focuses mainly on developing new calculation methods for credit and operational risk. Banks are now able to choose between two different methods when calculating credit risk and three methods when calculating operational risk. Regarding market risk, BCBS presented an amendment to Basel I which has now been integrated into Basel II (BCBS, 2004). The aim of the amendment is to increase risk sensitivity and to achieve more realistic measurements (The Bankers Guide to Basel II, 2005).

1.3.2.2 Pillar two

The second pillar's purpose is to discuss and describe the main principles of supervisory review: risk management support, supervisory transparency, and accountability. The supervisor function evaluates how banks are assessing their capital. This includes the right to intervene if the Basel Committee believe that a bank is not holding a sufficient amount of capital relative to their risk. There are other types of risks that are not taken into account in the first pillar, such as systematic risk, pension risk, and strategic risk. Here, the second pillar can be applied as a framework. (The Bankers Guide to Basel II, 2005).

1.3.2.3 Pillar three

The third pillar is to be seen as a complement to the first and second pillar (regarding capital requirements and supervisory review). The third pillar's focus is to obtain market discipline by formulating disclosure requirements regarding, among others, capital risk exposures and capital adequacy (BCBS, 2004). It is important that the way management and the board of directors handle the risk faced by the bank is consistent with the bank's disclosure. The aim of the third pillar is to make banks contribute to market discipline by making vital information available to other market entrants.

1.4 Market Development

The National Institute for Economical Research (NEIR) is a government run agency, which provides analyses and forecasts of the Swedish economy. According to their Economic Tendency Indicator, which is based on companies' and households' future expectations, there have been two major downfalls and one boom in the economy since 2000 (Konjunkturinstitutet, 25 August 2010). This section will take a deeper look at each of these.

Economic Tendency Indicator

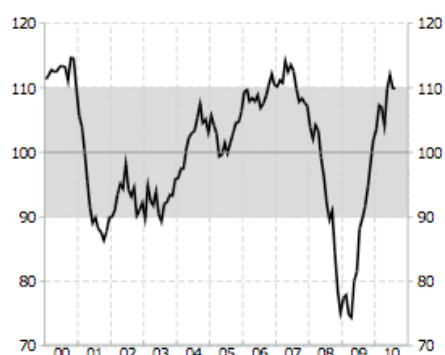


Figure 1 Economic Tendency Indicator, NEIR (2010). Households and companies. Range: >110 much stronger than normal; 100-110 stronger than normal; 90-100 weaker than normal; <90 much weaker than normal

1.4.1 The Dotcom Bubble

The first recession during the studied time frame started in 2000 and has, afterwards, been named the Dotcom Bubble. A podcast from a Swedish radio station (P3, podcast *IT-bubblan*, 2007) describes how a few companies started to launch internet to households in the middle of the 1990's. New companies that were oriented towards e-commerce and consulting were then founded in the late 1990's. At this time, interest and inflation were low which made individuals more interested in acting on the Stock Exchange and fund market. The number of share investors therefore increased. The future expectations of the internet were enormous and the value of IT-companies began to increase. After years of rapid growth, people started to realize that the companies were overvalued and on the 6th of March 2000, inevitably, the bubble burst. Although much invested money was lost and almost four hundred Swedish companies went bankrupt (P3 documentary, *IT-bubblan*, 2007), as seen in Figure 2, the growth of the Swedish economy never decreased and the impact was therefore not extensive through a macroeconomic perspective (Nyberg, 2009).

GDP

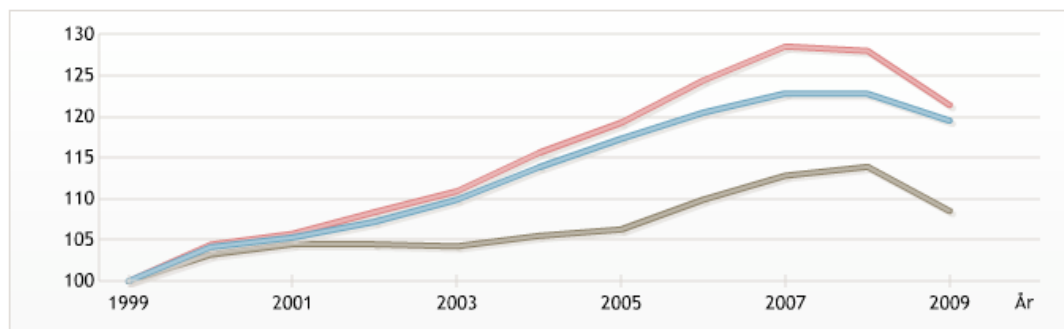


Figure 2 Sweden's GDP between 1999 and 2009, OECD (2010).
Index, base year 1999. Code: Sweden - pink, Germany - brown, USA - blue.

1.4.2 The Financial Crisis

The second major crisis was the Financial Crisis, which occurred in 2008. In the US, banks had been lending money to people with poor credit ratings - subprime loans. To diversify risk and attract more capital, the banks sold these loans to different mortgage lenders. These, in turn, divided the securities into mortgage bonds and sold them to international investors. The crises really took off when the borrowers were unable to pay interest and were therefore forced to sell their houses. The house prices fell, the securities became impossible to value, uncertainty spread, and the banks became more restrictive when lending money (Svartvik, Figure 2). As a result, several banks around the world were nationalized. In Sweden, the National Bank lowered the repo rate. Also, the vehicle industry as well as the steel and engineering industry suffered substantial losses and were forced to lay people off. As seen in Figure 2, unemployment in Sweden increased due to the financial crisis and Swedish growth started to fall (P3 podcast, *Ett år med finanskris*, 2009). During 2010, the Swedish economic development has been strong. The labor market experienced a significant improvement and the households' expectations are bright according to the National Bank (Sveriges Riksbank, 2010).

1.4.3 Boom

After the dot-com bubble burst in 2001, the Swedish economy started to recover and according to the Economic Tendency Indicator, the Swedish growth phase started around 2004 and continued until 2007 (Figure 1). This period was characterized by very favorable conditions including low interest rates and a low and stable inflation rate. Due to the low interest rate, there was an increased willingness to invest and increased debt. At the same time, banks and credit institutions facilitated credit terms to increase their market share (Nyberg, 2008).

1.5 Problem Discussion

Sound financial systems are of great importance for the development and stability of countries' economies. Common international regulations, such as Basel II, are used to insure this. Due to their importance, we knew early on that we wanted our thesis to focus on the banking industry and more specifically Basel II due to its novelty.

Our first idea was to examine how the implementation of the framework had affected a specific bank. However, due to the current market conditions, most banks had a policy stating that they would not help students with their theses at that time. We continued our research and found out that BCBS had presented a fifth Quantitative Impact Study (QIS 5) in 2006 which was based on data from the fall of 2005 (Finansinspektionen, 2006). The purpose of the study was to examine how Basel II could be expected to affect banks with regard to their capital requirements. The study showed that the minimum capital requirement could be reduced with Basel II in comparison to Basel I. When we started working on this thesis, BCBS had not presented any other study after QIS 5 indicating how Basel II had affected the banking industry.

Due to the lack of a study regarding the actual effects of Basel II, our next thought was to carry out a quantitative study where we would look at how Basel II had affected the Swedish banking industry. This would be done by looking at several specified key figures for a group of Swedish banks. We chose to focus on capital ratio, net credit loss level, and degree of disclosure as these figures are both important elements of Basel II and as this information would be accessible as it is disclosed by all large banks. More detailed reasons why we chose these variables will be presented in 3.1 Basel Theory where we further analyze these variables in relation to Basel II. As there is no given value for the degree of disclosure, we decided to use the size of each annual report for this value. At the time of this thesis, no other study regarding these variables had been carried out.

Soon after we started to collect data from the various banks, it became evident that only the four largest banks in Sweden and a few other banks made their annual reports easily accessible. An option was to purchase the needed annual reports but due to the total sum that would imply, this was not deemed feasible. We have therefore chosen to focus on Sweden's four major banks since they together cover about 80 percent of the market (Cederberg, 2010) and because they have participated in the QIS 5 study. The banks examined in this thesis are therefore Handelsbanken, Nordea, Swedbank, and SEB.

This thesis looks at how capital ratio, net credit loss level, and degree of disclosure have progressed during the implementation of Basel II. We aim to start a discussion regarding the effects Basel II has had

but do not aim to prove the causality of Basel II on these variables due to the difficulty of doing so in the given time frame for this thesis. One common example showing this difficulty is that, using statistics, one could show that the reason for celebrating Christmas is that Christmas cards are sent out. Sending out Christmas cards is of course not the cause of Christmas, even though this causality could be shown. Therefore, we instead want to show how the investigated variables have progressed around the time of the implementation of Basel II. Once this has been done, hypotheses regarding the causality of Basel II are formulated which can be the source of continued studies in the area. To be able to make more accurate hypotheses, a market indicator was created to give an idea of the role that the economic climate has had on the progression of each variable.

We assume that if a bank can make a more accurate assessment of its risks, their net credit losses will decrease, which will reduce the banks' capital requirement, *ceteris paribus*. We also assume that if the requirement for greater disclosure increases, then the size of the banks' annual report will increase. For example, with Basel II, each bank must account for the risk assessment methods used and describe changes that are caused by new rules and regulations. Even though banks will publish additional reports during the fiscal year, we believe this to be a plausible assumption.

The studied time period is from 2000 to 2009. During 2004, Basel II was presented and banks therefore started to prepare for the implementation in 2007. We therefore wanted the time period to cover several years before the presentation of Basel II so that changes due to the preparation of the implementation could be covered. The study covers all annual reports that were presented from year 2000 to the present at the time of writing. The reason for this was to be able to analyze several years after the implementation as well as well.

While working with this thesis, BCBS have announced plans to launch a new framework called Basel III in a few years (Caruana, 2010). As no study had been conducted regarding the effects of Basel II, this motivated us further to realize this thesis. It is aimed primarily to banks interested in the development of these variables during implementation of Basel II, but also to individuals who would like to gain greater insight into the four largest banks in Sweden. Our study could also be used to get an idea of how the implementation of Basel III might affect banks regarding our selected key figures, even though this will just be based on hypotheses and should therefore be taken at face value. Basel III will further improve banks' risk assessment but also require the banks' capital base to consist of more qualitative capital such as common shares and retained earnings which, in the end, may affect the capital ratio.

1.6 Research Question

As discussed in the problem discussion, the objective of this thesis is to look at the progression of capital ratio, net credit loss level, and degree of disclosure during the time of the implementation of Basel II. Hypotheses regarding the causality of Basel II on these variables will be formulated. The chosen research question for this thesis is therefore:

How has capital ratio, net credit loss level, and degree of disclosure progressed during the implementation of Basel II for the four largest banks in Sweden? What hypotheses regarding the effects of the implementation of Basel II can be formulated based on this progression?

1.7 Disposition

This thesis will be divided up in the following parts:

Method

Here the way the thesis was carried out will be presented. The aim of this section is to give the reader a clearer image of the working process behind what they are about to read. This way, the reader will have better insight into the topic.

Theory

In this section of the essay, the theory behind the topic will be presented to give the reader the information they need to be able to understand, analyze, and question the findings of the study.

Findings

Here the findings of the investigation will be presented. The data will only be analyzed to the degree where changes over time will become evident, greater conclusions will not be made in this section.

Analysis

In the Analysis section, a more in depth analysis of the findings will be conducted. This section is separate from the findings section so that the reader can get a clearer image of what information was gained from the investigation, analyze this on their own, and then read the analysis presented in this thesis. This way the reader can be more critical towards the analysis and see if they agree with the conclusions that are made. The section starts off by presenting adaptations of the data that needed to be made as discrepancies were present. After this, all of the potential market indicators will be presented and analyzed. The one that has the highest similarity to market fluctuations and the Economic Tendency Indicator (1.4 Market Development) will be selected as the market indicator that will be used later on. All of the investigated variables in the research question are then presented and analyzed. After this, the investigated variables are analyzed further in depth by using the market indicator to be able to formulate hypotheses regarding the effect Basel II has had on the investigated variables.

Conclusion

Here the results of the study will be concluded and clearly presented to the reader. Suggestions for further studies within the area will also be made.

1.8 Summary

The aim of Basel II is to maintain financial stability and to improve the resilience of the banking sector. To do so, the framework is divided into three major parts called pillars which focus on various risks, supervisory review, and disclosure requirements. Even if Basel II is designed to prevent turbulence on banking markets, the economic situation plays a significant role. During the past ten years, Sweden has experienced two recessions, the last of which had a negative impact on Swedish growth. Sweden has experienced several years of prosperity in-between these periods. After a period of issues within the banking sector and Basel II, we found it interesting to examine how capital ratio, net credit loss level, and degree of disclosure had progressed during the implementation of Basel II. These variables were chosen due to the central part they play in Basel II. How the thesis was carried out and how these variables were analyzed based on the research question is the topic of the next section.

2 Method

This thesis aims to study the progression of the investigated variables over time during the implementation of Basel II. How the thesis was carried out and how data was analyzed will be presented below in detail. Here, general information regarding the study will first be presented to then become more narrow and present the type of data used, and then the data collection and data processing process.

In simplified terms, the chosen method was to create graphs showing how these variables had developed over time and then analyze the progression of these along with a market indicator. Hypotheses regarding how Basel II has affected these variables were then formulated by also taking the market indicator into account. This method was chosen as the development over time of each variable could clearly be seen and hypotheses regarding this development could be formulated.

2.1 Type of Study

Due to the nature of the information collected and analyzed, this is a *quantitative study*. This thesis follows the *deductive approach* as the aim of this thesis is to draw conclusions regarding specific cases (Lee, Lee, Lee; 2000). This will be done by collecting data published by the banks in their annual reports and thereafter analyzing the data to see how each variable has progressed over time. A discussion of if this progression follows what is to be expected after the implementation of Basel II will then follow. Such causality will however not be proved but instead discussed.

2.2 Type of Data

As the main source of data that was used in this study were annual reports and as the data that these contain was not collected specifically for the needs of this study, primarily *secondary data* was used. (Lee, Lee, Lee; 2000)

2.3 Data Collection

The data that was collected from each annual report was both directly and indirectly needed for the study. The values that were directly needed were those that are included in the thesis topic, namely the capital ratio, net credit loss level, and degree of disclosure. To look at degree of disclosure, it was decided that the number of pages in each annual report would be used as an indicator as an increase in the degree of disclosure should mean an increase in the space needed to share the information and therefore the size of the annual report.

Also, due to the fact that most of the variables that were being studied can be influenced by fluctuations in the market, several variables that were not directly needed in the study were collected that could be used as market indicators. Here, the level of loans to credit institutions, loans to the public, deposits and borrowing from the public, and net profit were deemed to be possible market indicators. This information was available in the annual reports. The market indicators were analyzed and then one variable, the one deemed to be the best representative of market fluctuations, was chosen to be used as a market indicator in the analysis.

The data from each annual report was collected in an Excel file that had been created to be able to collect the data in a structured way and to facilitate analysis. Here, it was important to keep in mind that different banks could use different scales in their annual reports. Therefore, an extra column by each variable was constructed where the scale was noted. Nordea does not express the figures in their annual reports in Swedish kronor but in euro. Therefore, the exchange rate used each year, which could easily be found in each annual report, was also included in the data collection process. This way, the data collected could be changed into SEK so that Nordea could easily be compared to other banks.

During the collection process, it became evident that several of the banks had discrepancies in the data that they published between different annual reports. Values for a specific year could change depending on which annual report was being analyzed. Due to this, the discrepancies that were present were noted down as well. These are presented and discussed in section 4.1, Adaptation of Data. Here, many of the discrepancies were due to changes of accounting principles through the years and the bank therefore went back and recalculated previous years' figures to fit the new accounting principle. There are of course various ways of handling these discrepancies, each of which can be argued for. Since the aim of this thesis is to see how values have changed over time, the original values were used. The logic behind this argument can be illustrated using the following example: If recalculated values for all years were available to better reflect the conditions of Basel II, the recalculated values would partly hide the effect of the change and therefore partially defeats the purpose of the study.

2.4 Data Processing

After the data discrepancies had been handled and the data was prepared in Excel, a table was used to summarize this information to be able to produce graphs in Excel. The table was used to recalculate the data to show an index of the values where year 2000 was used as the base year. This was calculated by taking the value for each year and dividing it by the value for the base year, year 2000, and then multiplying this by one hundred. The point of this was to easily be able to see how each variable had progressed during the studied period and to be able to compare the banks on the same basis. As the capital ratio and net credit loss are already presented in percent, these were instead presented by taking the difference between each year and the base year, year 2000, which therefore gave the percentage point change since 2000.

Once this table had been produced, graphs to show how each variable had changed during the period of the study were made using Excel. In the section Findings and Analysis, a graph representing the indices of all banks will be presented.

After the graphs had been produced, the graph for each of the potential market indicators were analyzed by looking at how each had progressed for the banks. Here common trends that were present between all banks and if these were contingent with market fluctuations was mainly looked at. The market indicator that had the highest similarity to market fluctuations presented in 1.4 Market Development and figure 1, Economic Tendency Indicator, was chosen to be used during the analysis. Once the decision had been made regarding which variable to use as a market indicator, each of the variables in the research question were analyzed to see how each had progressed for each bank and what trends were present for all banks. Once these two analyses had been carried out, the two were put

together to see how each investigated variable had progressed over time when the market indicator was taken into account to see if market fluctuations potentially had a role to play.

From this analysis, the research question is answered by discussing the present trends and hypotheses that can be formulated based on this which can be investigated further in another thesis.

2.5 Validity and reliability

Validity refers to that the conclusion of a study is well-grounded, justifiable and logically correct whereas reliability refers to the extent to which a study gives the same results if it is repeated (Merriam-Webster, 2010).

There are ways in which the reliability and validity are ensured in this thesis, as well as several ways through which these were challenged. Firstly, the validity and reliability were insured due to how the information base used in this thesis is most likely the same as that which someone else would use if they were to repeat the study, namely the annual reports. Also, the data that was gathered was not manipulated or recalculated in any way, apart from during the analysis stage when the graphs were based on calculated indices. Great caution was also taken when collecting the data to make sure that the values were comparable. The number of pages in each annual report was collected from the number of pages that Adobe Reader says that the annual report is. The reason behind using this value is that all annual reports are not numbered and variations between the number of pages that Adobe Reader says a document is and the page number on the last page exist. The net credit loss level was collected from the post of the same name in the income statement. As different banks can use different scales, the scale of each value was also noted. The capital ratio was collected from the five year overview that is presented in each annual report. When all of this was done, all the values were checked to ensure that they had been collected correctly, thereby minimizing the non-sampling error (Lee, Lee, Lee; 2000). Due to the great caution that was taken, it is unlikely that someone repeating the study will get different values.

One of the ways that the validity and reliability was challenged in this thesis was due to the choice that needed to be made regarding which values to include due to data discrepancies. This means that if someone were to repeat the study, they may come to the conclusion to include other values than those that were decided upon. To handle this problem, great consideration was taken when choosing which values to include and these discrepancies are presented in the thesis as well as the reasons behind choosing the value that was included.

Even though different choices regarding discrepancies in the data could have been made and even though it is possible that such decisions could have lead to a different conclusion, the aim of this thesis is to evoke discussion. There are several ways of analyzing the issue and this is just one way. Analyzing this topic in other ways is something that we hope will happen as this will further decrease the knowledge gap in the area. This thesis only covers one of the many ways that this issue can be analyzed and given that the same method is kept, the validity and reliability of this thesis are ensured to a high degree.

2.6 Summary

In summary, this thesis will be carried out by going through all annual reports for Sweden's four largest banks between 2000 and 2009. Here, values for the three investigated variables (capital ratio, net credit loss level, and size of annual reports) will be collected as well as four other variables that are potential market indicators (loans to credit institutions, loans to the public, deposits and borrowing from the public, and net profit). Each of the potential market indicators will then be analyzed. The one that shows the greatest similarity to market fluctuations, the Economic Tendency Indicator, will be chosen to be used as a market indicator later on in the thesis.

After this, each of the investigated variables in the research question will be analyzed by looking at how the collected values have progressed over time. Any further analysis regarding why values have progressed in the way that they have will not be done at that point. This will be done later on in the thesis when the market indicator is included in the analysis of each variable.

Once this has been done, we will draw conclusions regarding how each variable has progressed over the studied time period. The point of including the market indicator in this process is to get an indication if the change of the variable could be due to market fluctuations.

In the next chapter, the theory behind this study will be presented so that the reader will have greater insight into the topic and more critically read the analysis that is presented.

3 Theory

3.1 Basel II Theory

3.1.1 Capital Ratio

Capital ratio measures an institution's capital base relative to its risk-weighted assets. It is calculated using the following formula (Swedish National Debt Office, 2008):

$$\text{Capital Ratio} = \frac{\text{Capital Base}}{\text{Risk - weighted assets}}$$

The capital base consists of primary and supplementary capital where the primary capital must constitute at least half of the capital base. Equity, accrual fund and tax equalization reserve is included in the primary capital while the supplementary capital consists of subordinated debt securities with a maturity of at least five years (Lag (2006:1371) om kapitaltäckning och stora exponeringar, 2006).

3.1.1.1 The influence of economic cycles

There are mainly two things in a recession that could lower banks' capital ratio. The first occurs if the bank experiences a loss since this reduces the bank's equity which decreases the numerator in the formula, the capital base, and the capital ratio therefore declines. If the rating on an asset deteriorates during a recession, it leads to an asset risk-weight increase. This means that the denominator will increase and the capital ratio will therefore decline.

The opposite is possible in a boom. A large net profit increases the equity and provides a higher capital ratio. If the rating on an asset is improved it would lead to a decrease in its risk-weight and the capital ratio will increase (Riksbanken, 2001).

3.1.1.2 The influence of Basel II

Basel II require banks to have a capital ratio of at least eight percent in order to be able to cover up for credit, market, and operational risks that they are exposed to (Finansinspektionen, 2007). BCBS has also formulated regulations for the elements eligible for the capital base (Basel II, 2004).

3.1.2 Net Credit Losses

Net credit losses arise when the debtor cannot pay interest or repay the debt (Nationalencyklopedin, 2010).

3.1.2.1 The influence of economic cycles

In his speech on monetary policy and financial stability, the governor of the Swedish central bank, Stefan Ingves, said that banks' net credit loss levels will increase in a recession as a result of the increased number of bankruptcies (Stefan Ingves, 2008). Usually banks' net credit loss levels follow macroeconomic developments, which means that banks' credit loss levels are relatively low (Sveriges Riksbank 2000:2, 2000).

3.1.2.2 The influence of Basel II

The aim of Basel II is to make it easier for banks to make more accurate risk assessments by supplying banks with different approaches to calculate this. The risks discussed in Basel II are credit risk, operational risk, and market risk. With regard to credit risk, there are two broad methodologies to choose from: the standardized approach and the alternative approach, which is also called the internal rating based approach. The former is supported by external credit assessments such as Standard & Poor's whereas the latter is based on internal assessment systems, which, in Sweden, requires the approval of Finansinspektionen (Basel II, 2005). When calculating operational risk, banks can choose from three different methods: The Basic Indicator Approach, The Standardized Approach and the Advanced Measurements Approach (AMA) (Basel II, 2004).

3.1.3 Degree of Disclosure

The New American Oxford Dictionary defines disclosure as "the action of making new or secret information known" (2008). The degree of disclosure can therefore be taken to mean the extent to which you make information known.

3.1.3.1 The influence of economic cycles

We did not find any theory that support that the economic situation has an impact on the degree of disclosure.

3.1.3.2 The influence of Basel II

The purpose behind presenting several disclosure requirements in Basel II is to encourage market discipline. With Basel II, it is required to disclose the scope of application, risk exposure, risk assessment processes, and the capital adequacy so that market participants can more easily assess it (p.184, paragraph 809, Basel II, 2005). It will be up to each country's equivalent to Finansinspektionen to ensure that this is followed (p.184, paragraph 811, Basel II, 2005).

3.2 Market Theory

3.2.1 Loans to Credit Institutions

'Credit institutions' is a common term for companies that lend money, such as banks (Nationalencyklopedin, 2010). In this case we refer to the interbank market with loans to other banks and credit institutions.

3.2.1.1 The influence of economic cycles

The target of Sweden's central bank is to maintain an inflation rate of two percent (Sveriges Riksbank, 2010) and in order to do this they use interest rate hikes and cuts. When the economy is in a boom and wages and prices begin to rise too much, the central bank raises the interest rate. Contrary is done when the economy is in a recession and wages and prices are falling. By doing this they contribute to a sound economic development (Gottfries, 2003).

The interbank market is where banks lend and borrow money between each other. At the end of each day, banks have either a surplus or a deficit of money and, to smooth this out, they often turn to the interbank market as this is more profitable than to lend or borrow from the central bank (Srejber, 2001).

A change in the repo rate by the central bank will mean a change of the rate on the interbank market (Hopkins, Linde, Söderström, 2009). The rate on the interbank market is therefore controlled by the repo rate.

The greatest risks on the interbank market are illiquidity and insolvency. If a bank fears that the bank wanting to borrow money will not be able to pay on time or pay at all, it can place its surplus with the central bank (Srejber, 2001). This did not happen in Sweden during the financial crisis (Ingves, 2008).

3.2.2 Loans to the Public

Loans to the public refer to loans to both households and companies.

3.2.2.1 The Influence of economic cycles

In an early recession, companies' try to adapt to a reduced demand by reducing overtime and the number of consultants. As a result of this, consumption and investments decline. Eventually companies are forced to lay off employees (Wickman-Parak, 2008) and as employment decreases, so does the banks' lending since fewer people can afford to borrow. At this point the central bank starts with monetary policies such as lowering the repo rate to ensure the economic situation does not deteriorate. After a crisis, the demand for loans decreases and banks' requirements for lending become more stringent so loans to the public often decreases in a recession (Riksbanken, 2009).

High levels of employment and a high consumption often characterize an economic boom. This, in combination with increased investment increases banks lending. In this situation, the central bank will raise the interest rate to try to cool down the economy so that fewer investments are made and so that people save their money instead of consuming them (Riksbanken, 2008).

3.2.3 Deposits and Borrowings from the Public

Deposits and borrowings from the public refer to deposits and borrowings from both households and companies.

3.2.3.1 The influence of economic cycles

As illustrated in Figure 3, in a boom it is common for the central bank to raise the repo rate. This leads to a rise in the market interest rates and a decrease in consumption and reductions in investments. People are more inclined to save money and therefore should bank deposits and borrowings increase.

In a recession the central bank lowers the repo rate, which leads to a lower market interest rate. Consumption and investments increases as well as demand and people want to spend their money instead of saving them in the bank (Riksbanken, 2008). It is the opposite of what is shown in Figure 3.

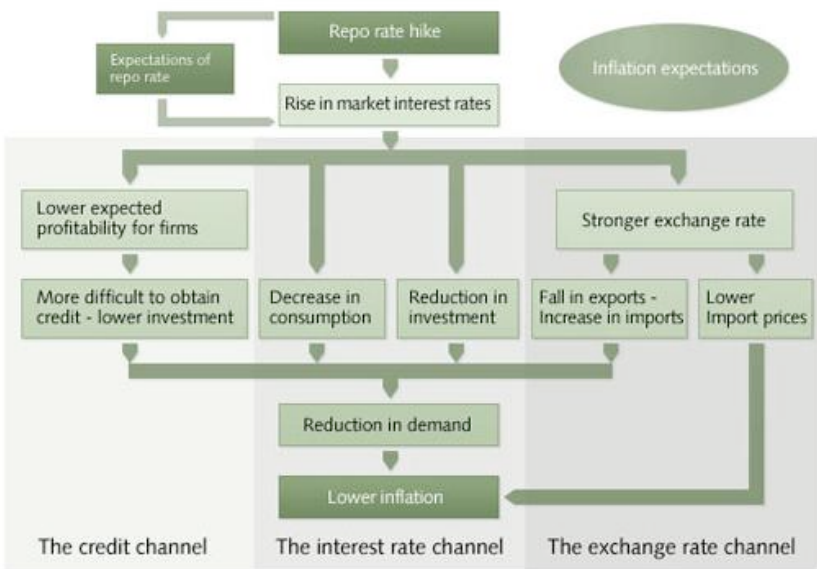


Figure 3 Schematic diagram over the monetary policy transmission mechanism (Riksbanken, 2008)

3.2.4 Net Profit

According to the New American Oxford Dictionary, net profit is defined as “the actual profit after working expenses not included in the calculation of gross profit have been paid” (2008).

3.2.4.1 Influence from cycles

Sweden is a small country with an open economy and a large export sector. Sweden is therefore greatly affected by what happens abroad and many economic cycles are therefore imported. A recession is often characterized by a declining demand. At first the company tries to adapt their production by cutting down on overtime and consultants. When this no longer works, companies are forced to lay people off and employment in the community decreases. During this time period, companies make very few or even no investments. When employment declines, people tend to not spend as much money as before and consumption therefore falls. If the demand for a company’s products fall, it is very common that their net profit also declines and companies may have difficulties paying back on loans (Wickman-Parak, 2008). The number of bankruptcies increases in a recession and leads to increased net credit losses for the banks (Ingves, 2008).

In an economic boom, the situation is reversed. Demand for a company’s products is higher than what they can produce so they have to work overtime and hire consultants. Many investments are made and employment and consumption are high. During this time, it is common for companies to have high net profits and little trouble with payments (Wickman-Parak, 2008).

3.3 Summary

In summary, we can say that the capital ratio requirement, stated by Basel II, does not allow the ratio to fall below eight percent even though a recession could affect the capital ratio in a negative way. The aim of Basel II is to give the banks the approaches they need to make more accurate risk assessments and in turn reduce their net credit losses. The disclosure requirements in Basel II regard scope of application, risk exposure, risk assessment process and capital adequacy and aims to make the market more easily assessable. Loans to credit institutions, loans to the public, deposits and borrowings from the public, and net profit, are all, to a large extent, effected by the economic climate. The theories presented in this chapter will help us to draw conclusions about how Basel II has affected the four banks after we have collected and analyzed all information needed.

4 Findings and Analysis

4.1 Adaptation of data

During the data collection process, discrepancies in the values of the variables were found when comparing values for a specific year in different annual reports. Since it is important to specify which value is to be used during the analysis process, these discrepancies are presented below as well as the reasons behind the choice of which value to include in the study. For certain values, discrepancies are present between years for all banks. These values are presented in the first table. For others, there were only discrepancies present for certain banks. These are presented in the second table.

Value	Year	Handelsbanken	Swedbank	Nordea	SEB	Unit
Loans to credit institutions 2004	2004	108,906	108,039	185,841	207,724	Million SEK
	2005	109,076	109,674	223,345	208,226	
Deposits and borrowing from the public 2004	2004	320,873	726,701	941,414	517,520	
	2005	342,243	726,675	943,938	516,513	
Net Profit 2004	2004	9,358	8592	17,470	6,590	
	2005	9,860	9949	18,967	7,382	
Loans to the Public 2004	2004	861,250	726,701	1,452,004	783,019	
	2005	861,252	726,675	1,452,798	783,355	

Table 1 Discrepancies present for all banks

Bank	Year	Net Profit 2000	Net Profit 2005	Loans to Credit Institutions 2000	Net Credit Loss Level 2008	Capital Ratio 2003
Handelsbanken	2000	9,092	11,365			10,0
	2001	9,105	11,354			10,2
Swedbank	2005			130,294	0,28	
	2006			130,196	0,24	
Unit		Million SEK			%	

Table 2 Discrepancies present for specific banks

After studying the annual reports in further detail, it became evident that all of these discrepancies are due to changes in accounting principles or due to the adaptation of Basel II. Due to the discussion that was presented in section 2.3, Data Collection and Processing, the original value from each annual report, meaning the value for each year that was presented in that year's annual report, were used in the study.

There were two discrepancies that were found in the annual reports that are not presented in the tables above. The first was regarding Swedbank's net credit loss level for years 2000-2002. When looking at annual reports from 2002 or earlier, all of these values are 0.2%. However, when looking at the annual report for 2003 or later, these values are 0.19, 0.21, and 0.23 respectively for 2000-2002. This is due to a change in the number of decimal places that the value is presented in – 0.19, 0.21 and 0.23 is 0.2 when rounded to one decimal place. Since using the values used in the annual report from 2003 or later only leads to a higher degree of information, the more exact values were used.

The second discrepancy that was found was regarding Nordea’s net credit loss level for 2004. In the annual report from 2004, the figure for the net credit loss level cannot be found. This value is not present in 2005’s annual report or any 5-year overview from 2006 to 2009 either. According to the CEO letter in the 2004 annual report, the “loan losses were close to zero”. We will therefore use this statement when setting a value for this variable for Nordea.

4.2 Investigated variables

In this section, each of the variables that are included in the research question will be analyzed. Each variable will be looked at in turn for all of the four banks. First, the development of each bank will be discussed and then tendencies that are present for all banks will be looked at.

4.2.1 Capital Ratio

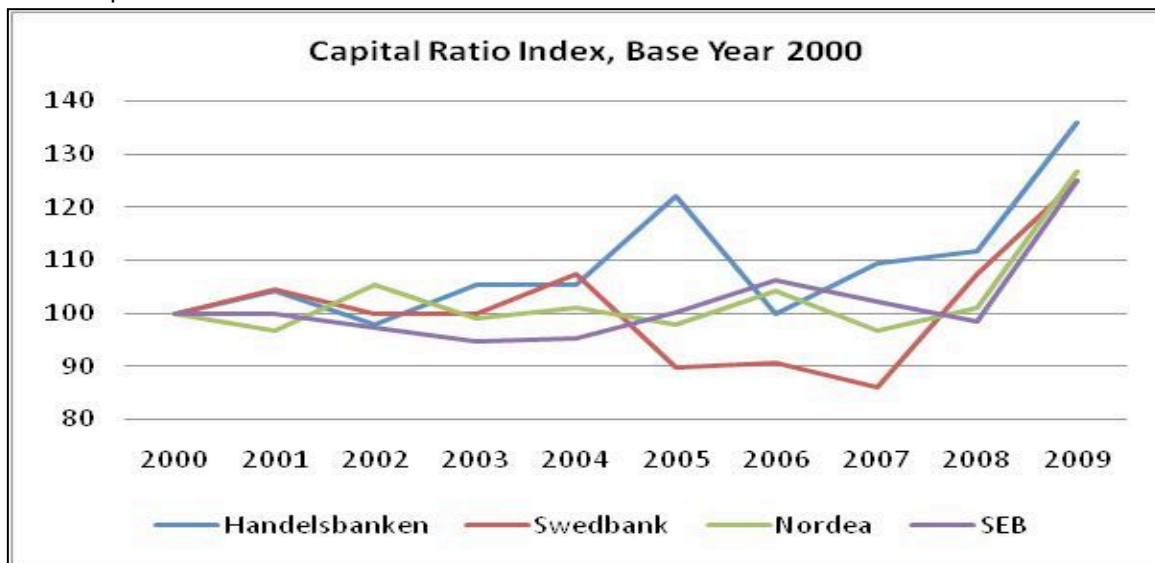


Figure 9 Capital Ratios for Handelsbanken, Swedbank, Nordea, and SEB

Handelsbanken’s capital ratio has always been above the required eight percent. This value has increased since 2000, even though this has not been a steady increase and dips have been present. The two dips that Handelsbanken experienced during this time frame were during 2002 and 2006. During 2004 there was no dip but this is the only year within this timeframe where the capital ratio did not change and remained constant at ten percent. From 2006, there has been a large increase in the capital ratio – an increase of 3.4 percent, the most evident of which was during 2008, when the capital ratio increased by 2.3 percent.

Swedbank experienced three dips in their capital ratio during the time frame that the study entails. These were during 2002, 2005, and 2007. Like Handelsbanken, Swedbank also experienced one year where the capital ratio remained at the same level – 2003. Since 2007, there has been a large increase in the capital ratio – an increase of 4.2 percent.

Nordea’s capital ratio has oscillated between nine and ten percent the first eight years of the study. In 2008, it began to rise and, by the end of 2009, it was almost at twelve percent. Even though the capital

ratio has dropped below the level of year 2000 several times during this period, it has never fallen below 9.1 percent. Since 2007, the increase in Nordea's capital ratio has been close to 31 percent.

The capital ratio of SEB has never fallen below ten percent. The capital ratio has been below the level of year 2000 five years in total during the studied time period. There have been two dips - between 2002 and 2005 and between 2007 and 2008. The capital ratio started to rise in 2008 and reached 13,5 percent by the end of 2009.

The period in which all four banks shows a capital ratio that goes in the same direction is in 2009. According to Basel II, banks must have a capital ratio above eight percent and during this time horizon, none of the banks have contradicted this requirement. Nordea showed the lowest measured capital ratio in 2001 and 2007, which was 9.1 percent. According to the banks' annual reports, the surge of the capital ratio that all banks experienced in 2009 was due to reduced lending, reduced risk-weighted assets, strengthening of the Swedish kroner, and an increase of the capital base. This is in accordance with what one would expect of a recession, where banks decrease their lending, particularly the loans that entail more risk, and the capital ratio therefore increases. In 2005, the banks started to prepare for the introduction of Basel II that would take place in February of 2007. Figures after 2007 are reported in accordance with Basel II and transition rules. Throughout this period, Handelsbanken increased their capital ratio by 22 percent, Swedbank by 16 percent, Nordea by 25 percent, and SEB by 27 percent. We cannot see a clear pattern for all banks during the whole time period studied. In most recent years, however, all banks have shown a clear increase in their capital ratios.

4.2.2 Net Credit Loss Level

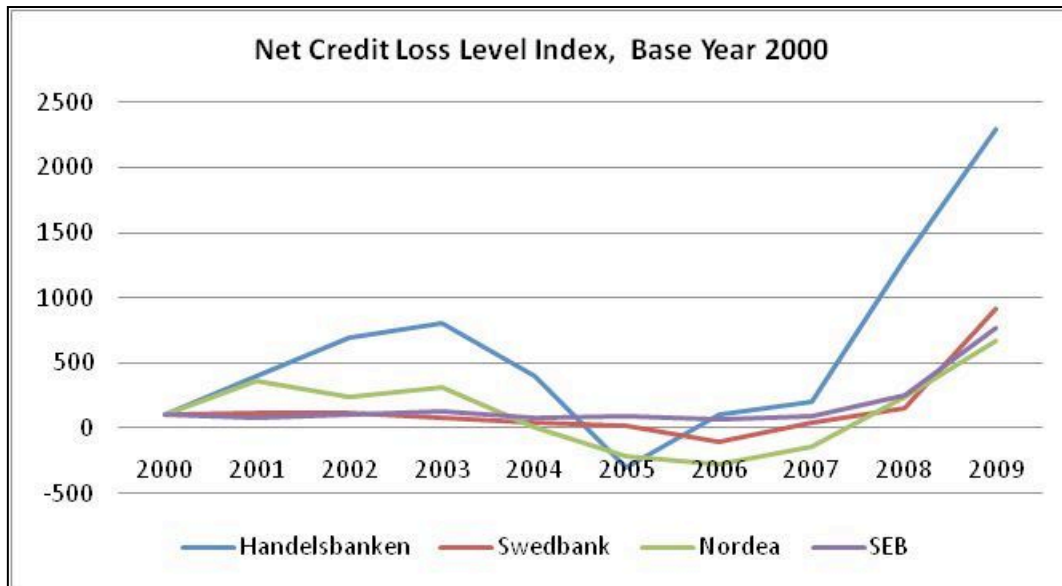


Figure 10 Net Credit Loss Level for Handelsbanken, Swedbank, Nordea, and SEB

When it comes to the net credit loss level, Handelsbanken experienced one dip during this period – between 2003 and 2005. There were times during the studied time frame that the net credit loss level went below zero percent. – during 2000 and then between 2005 and 2006. Since 2005, this value has

continued to increase without further dips. The largest of these increases took place during 2008, when the net credit loss level increased by 0.1 percentage points – the largest increase during this period. During the whole period, it has remained below 0.25%.

Swedbank has experienced one dip in their net credit loss level during this time frame – a decrease that occurred between 2002 and 2006. The lowest that the net credit loss level has been during this period was during 2006 when Nordea experienced a negative net credit loss level. Since 2006 the net credit loss level has continued to increase, the largest increase taking place 2009 when the net credit loss level increased by 1.46 percentage points, which is the largest change during any one year from this period. During the period, the net credit loss level has remained below 1.8%.

For Nordea, the net credit loss level has both risen and fallen throughout this period of time. In 2004, it fell and, in 2005, 2006 and 2007, Nordea had a positive level of credit losses, which all were lower than 2000 years level. The credit loss level started to increase again in 2008 and, in 2009, it had reached a new top – 54 percent.

SEB has maintained a stable net credit loss level, around 11 percent, between 2000 and 2007. The level started to increase in 2008 but it was not until 2009 that it really soared and reached a level of 0.92 percent.

SEB and Swedbank have had a similar progression during most of this time period while Nordea has experienced some volatility and Handelsbanken has experienced significant fluctuations in their net credit losses. For both Nordea and Handelsbanken, it seems that their net credit loss level has increased during the dot com bubble, while Swedbank and SEB's net credit loss level has remained at about the same level. The net credit loss level has remained stable or has reduced during the boom between 2003 and 2006 and, in 2006, three out of four banks had a positive net credit loss level. The impact of the recession was both that companies and households experienced difficulties paying on loans and, in 2008, all of the banks' net credit loss levels started to increase as a consequence of the financial crisis. In 2009, this increase was significant.

It is hard to see a clear tendency in the development of the net credit loss level for all banks during the studied time period. One development that is clear, however, is that the net credit loss level has increased for all banks between 2007 and 2009.

4.2.3 Degree of Disclosure

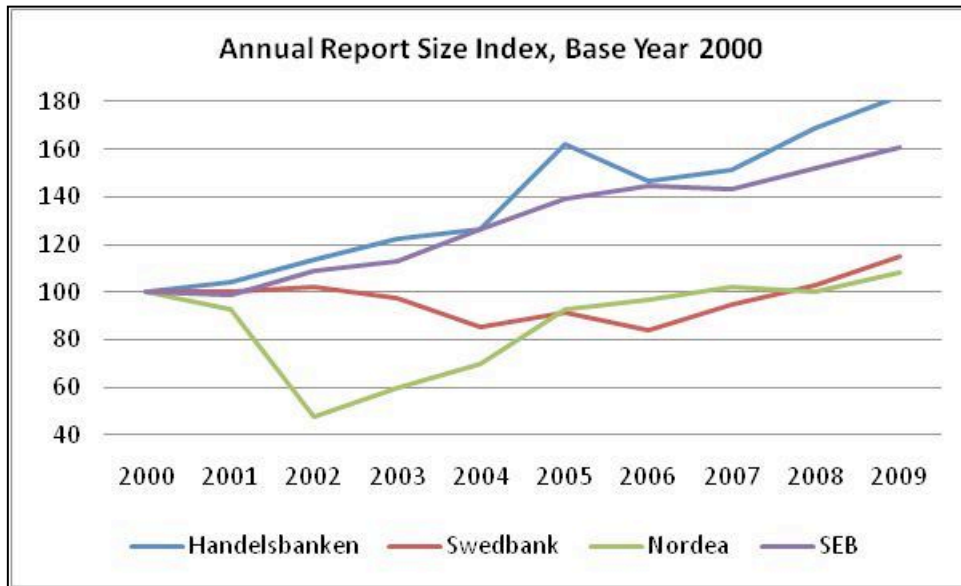


Figure 11 Size of Annual Reports for Handelsbanken, Swedbank, Nordea, and SEB

Handelsbanken has experienced a pretty constant increase in the number of pages in their annual report, apart from between 2004 and 2006, as visible above. The size of the annual reports has almost doubled during the period studied.

Swedbank has not experienced the same steady increase in the size of their annual reports, like Handelsbanken has. For many years, Swedbank has instead experienced a decrease in the size of their annual report in comparison to the 2000 Annual Report – between 2002 and 2007. It was first in 2008 and 2009 that the annual report size increased in comparison. Since then, however, the annual reports have increased in size and are now almost 15 percent larger.

Between 2001 and 2002, the size of Nordea's annual report decreased by 84 pages, or over 50 percent. After 2002, the number of pages started to turn upward and it has increased since then, with the exception of 2007. Throughout the time period studied, Nordea's annual reports have increased by 13 pages, or 8.1 percent.

The size of SEB's annual reports have steadily increased during the studied time period, with the exception of 2001 and 2007. The number of pages has increased by almost 38 percent during this time period.

Observing a common trend for all banks throughout the studied time period is difficult. Common for all four banks, however, is the fact that the size of their annual reports have increased in total throughout the studied time period. Despite small fluctuations, this trend is most evident in towards the end of the studied time period. The size of Nordea's annual report was reduced in 2001 and 2002, by 84 pages, and that is the largest reduction among the four banks. Handelsbanken and SEB have mostly followed an upward trend, with a few exceptions, while Swedbank and Nordea have showed both reductions and additions to their annual reports. IFRS, EU accounting standards, was legalized in Sweden in 2005 which

most likely contributed to the increase of the banks' annual reports that year. In the same year, Basel II was presented and the banks started to describe the future adaption, the new regulation, and what it would involve. Even if Base II was not legislated until the 1st of February, 2007, it is likely that the size of the banks' annual reports has increased due to knowledge of a future adaptation. Throughout the studied period, Handelsbanken has increased the size of their annual report by 82 percent, Swedbank by 15 percent, Nordea by 8 percent, and SEB by 61 percent.

4.3 Market indicators

In this section, each variable that could be used as a market indicator will be analyzed by looking at the trends that are present for each bank and then discussing to see if any trends are present for all four banks. In the end of this section, one of these variables will be picked to use as a market indicator further on in the analysis.

4.3.1 Analysis of Market Indicators

4.3.1.1 Loans to Credit Institutions

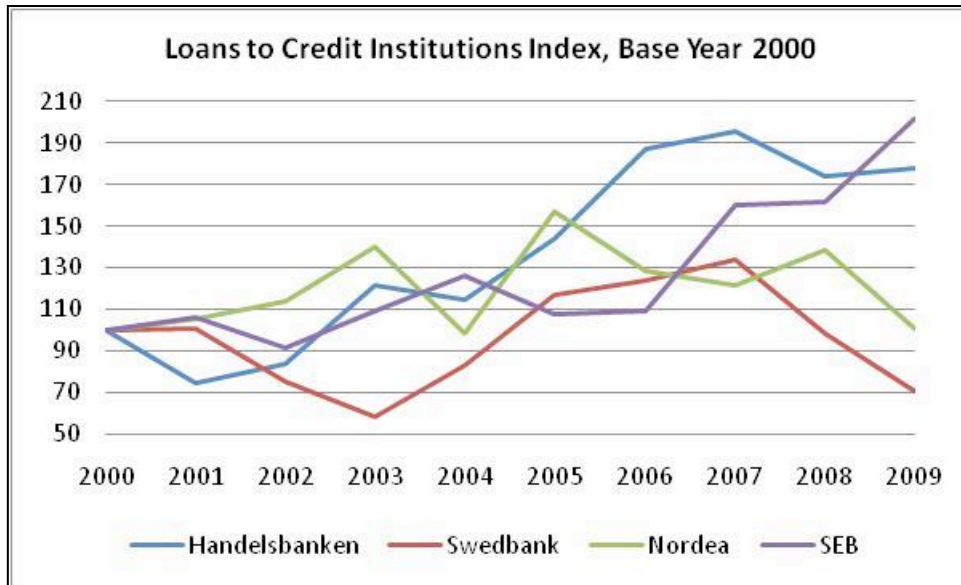


Figure 4 Loans to Credit Institutions, Handelsbanken, Swedbank, Nordea, and SEB

The above graph represents changes in the level of loans to credit institutions for each of the four largest banks in Sweden. For Handelsbanken, we can see that there was a dip in the level of loans to credit institutions in 2001, 2004, and 2008.

For Swedbank, substantial dips in the level of loans to credit institutions are evident both in the beginning of 2001, which turns around again in 2003, as well as in 2007. For the later, enough data is not present to see when this will turn around again as it still decreased between 2008 and 2009. One thing that is interesting when looking at this variable for Swedbank, that was not present for Handelsbanken, is that both of these times, the level of loans to credit institutions went below the 2000 value.

When looking at Nordea’s curve above, a reduction in the level of loans to credit institutions are present in 2004, 2006, 2007, and 2009. Loans to credit institutions have only fallen below the level of year 2000 once during this time period, in 2004. In 2009, Nordea’s level of loans to credit institutions was only marginally higher than in 2000.

SEB has shown a rising trend with some small dips in 2002 and 2005 during the analyzed period. In the chart, it seems as though SEB’s level of loans to credit institutions remained at the same level between 2005 and 2006 and between 2007 and 2008. In fact, there was a slight increase in both periods. SEB’s level of loans to credit institutions has fallen below the level of year 2000 once, in 2002.

The dot-com bubble burst in 2000 and in 2001 Nordea, SEB and Swedbank increased their loans to credit institutions while Handelsbanken reduced theirs. It is difficult to determine if the dot-com bubble has had any delayed impact on the banks’ loans to credit institutions as two of the banks showed an increase and two of the banks showed a decrease in their level of loans to credit institutions in 2002. After the dot-com bubble, a few years of economic growth followed and, between 2004 and 2007, we can see that the amounts lent increased for three of the banks. After the financial crisis in 2008, Swedbank and Nordea reduced their loans to credit institutions while Handelsbanken and SEB marginally increased their level of loans. Each of the four banks has had at least one year where the loans to credit institutions was below the 2000 years level. For Handelsbanken it was in 2001 and 2002, for Nordea in 2004, and for SEB in 2002. Swedbank’s level fell below, and didn’t go above, the year 2000’s level until 2005. Throughout this time period SEB has increased their loans to credit institutions by 101 percent, Handelsbanken by 78 percent, Nordea by one percent. and Swedbank by 41 percent. It is difficult to see any similarity to market fluctuations since the four banks’ loans to the public increases and decreases in both recessions such as in booms.

4.3.1.2 Loans to the public

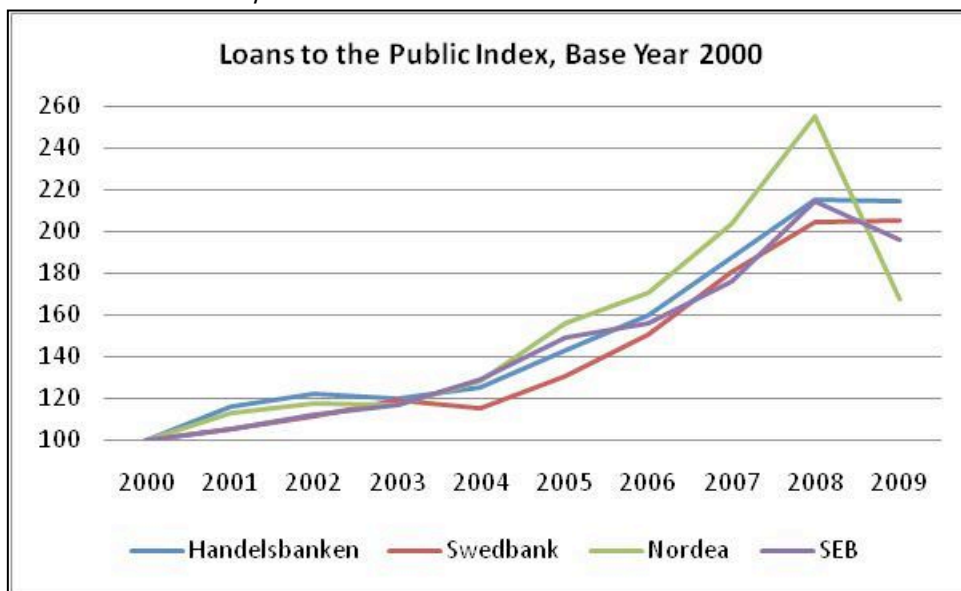


Figure 5 Loans to the Public, Handelsbanken, Swedbank, Nordea, and SEB

When looking at how loans to the public have changed over time for Handelsbanken, there was a slight decrease around 2003 and marginally 2009. Apart from this, the level of loans to the public has only seen a continued increase throughout the analyzed years. When further data becomes available, it would be interesting to see if this continues in a downward trend or if new figures show that loans to the public have turned around again.

For Swedbank, loans to the public have progressed according to a similar pattern as Handelsbanken. Swedbank experienced a decrease in 2004 instead and did not experience a drop in total loans to the public in 2009 even though the increase that it did experience was limited.

Nordea has had a positive trend with small and smooth increases between 2000 and 2004, with a marginal exception in 2003. After 2004, the increase started to take off and in 2008 the loans to the public was the highest shown during this time period. In 2009, the level of loans fell.

The change in SEB is similar to the change in Nordea regarding loans to the public. There is a small and smooth increase between 2000 and 2007, but with no exception. The increase between 2007 and 2008 is rapid but in 2008, a maximum level was reached. After this point, there is a reduction in the level of lending.

The dot com bubble in the early 2000's did not have any major effect on the banks' loans to the public since their lending continued to increase. The boom between 2004 and 2007 was marked by a sharp increase in the level of lending to the public. A delay may have occurred because the increase continued during 2008 and did not decline until 2009. Between 2000 and 2008, Swedbank increased their level of loans to the public by 104 percent, SEB by 114 percent, Handelsbanken by 115 percent, and Nordea with 155 percent. In 2009, after the financial crisis, all four banks reduced their lending but Nordea reduced their level of lending the most. By the end of 2009, Nordea had only increased their level of lending by 67 percent from year 2000, compared to 155 percent the previous year. The level of lending has not fallen below year 2000's level for any of the banks during this time period. The overall trend has been consistently positive except for the last year. Handelsbanken has increased its loans to the public the most, by 114 percent between year 2000 and 2009. Swedbank has increased their lending by 105 percent, and SEB by 96 percent.

4.3.1.3 Deposits and Borrowing from the public

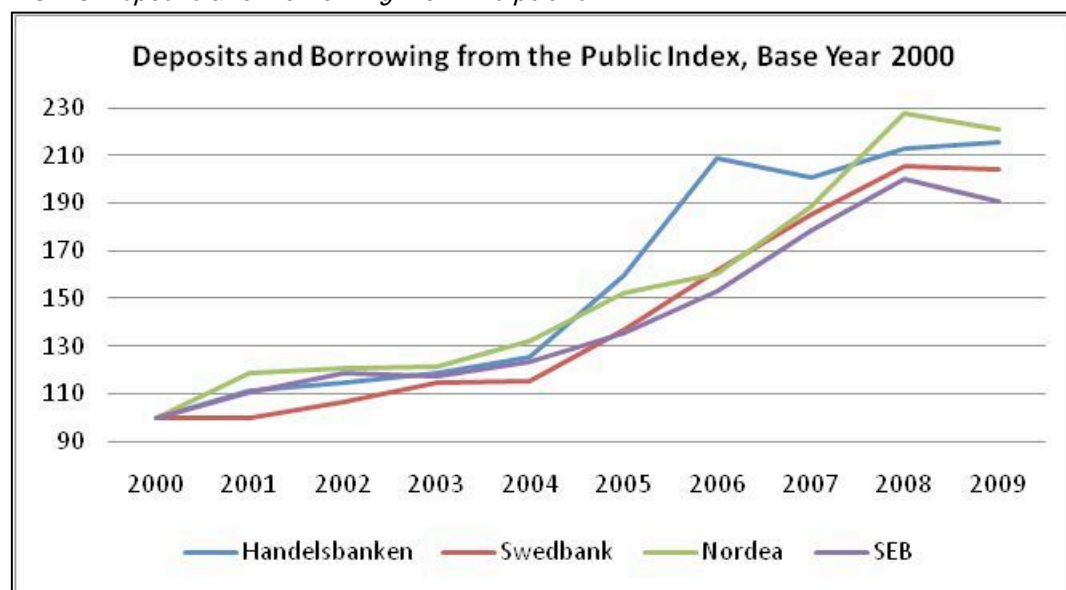


Figure 6 Deposits and Borrowings from the Public, Handelsbanken, Swedbank, Nordea, and SEB

Handelsbanken's deposits and borrowings from the public have mostly increased throughout the years, with an exception of 2007, where there was a dip. Handelsbanken has experienced two periods where the growth of deposits and borrowings from the public was sluggish – between 2001 and 2004 and from 2008 onwards. Here, it will be interesting to see how this variable progresses when the values for 2010 are published.

When it comes to deposits and borrowing from the public, Swedbank experienced a decrease both between 2000 and 2001, and between 2008 and 2009. The decrease between 2008 and 2009 is visible in the graph presented above but the decrease between 2000 and 2001 is almost not visible. Here the values from the annual reports had to be compared to see that there was a decrease. Between 2003 and 2004, there was an increase but, yet again, this was a very marginal increase and the figures from the annual report had to be compared to see if this actually was an increase.

Over the studied time period studied, Nordea's deposits and borrowings from the public have had a positive trend. It has increased every year up until 2008 even though there was only a marginal increase between 2001 and 2003. Between 2008 and 2009, Nordea experienced a drop of 8.4 percent.

There are similarities between SEB and Nordea and their development over the years regarding deposits and borrowings from the public. SEB's deposits have increased every year until 2008 with one exception: in 2003 there was a small decline, 5 506 million SEK. After the financial crisis SEB experienced a reduction in deposits with the amount 39 946 million SEK, which is a percentage drop of 4.7.

After 2001 and the dot-com bubble the banks increased their deposits and borrowings from the public. For Handelsbanken, Swedbank, and Nordea, the increase remained until 2006, while SEB reduced their deposits between 2002 and 2003 and then had a sustained increase until 2006. The banks thus increased their deposits and borrowings from the public during the economic boom between 2004 and

2007. Between 2000 and 2009, the percentage increase for SEB was 91 percent, for Swedbank 104 percent, for Handelsbanken 115 percent, and for Nordea 121 percent. Both Handelsbanken and Nordea have increased their deposits every year, except for one year, while Swedbank and Nordea have increased every year, except for two years. After the financial crisis in 2008, three out of the four banks reduced their deposits marginally while Handelsbanken experienced a marginal increase instead. During the time period studied, none of the banks have experienced levels below that of year 2000.

4.3.1.4 Net Profit

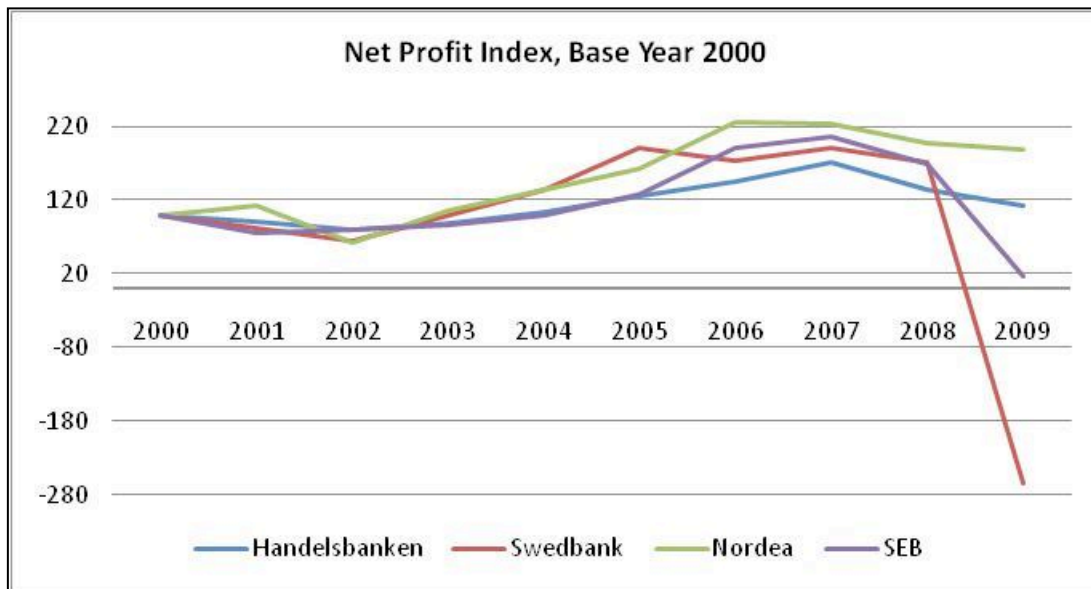


Figure 7 Net Profits for Handelsbanken, Swedbank, Nordea, and SEB

Handelsbanken’s net profit experienced two decreases during this time frame – between 2000 and 2002 as well as and between 2007 and 2009. When the 2010 Annual Report comes out, it will be interesting to see if this downward trend will continue even though the market now seems to be picking back up again. If it were to decrease yet again, it is possible that the net profit would return to the level it was in 2000.

Swedbank’s net profit level has decreased during three different periods – between 2000 and 2001, between 2005 and 2006, and yet again from 2007 onwards. The first two periods experienced large decreases, about 20 percent between 2000 and 2001 as well as between 2001 and 2002, and about a 10 percent decrease between 2005 and 2006. These are miniscule in the context, however, due to the percentage decrease that took place between 2008 and 2009 – a decrease of over 195 percent! This is also the first negative net profit Swedbank experienced during this timeframe.

During this time period, Nordea experienced two downfalls. The first one was in 2002 and the second between 2008 and 2009. Only the decrease in 2002 went below the level of year 2000. The decrease leveled out in 2009 compared to 2008.

SEB’s net profit decreased in 2001 and dropped below year 2000’s level. It was not until 2004 that the level of year 2000 was reached again and the following three years the net profit soared. In 2007, it

reached its maximum and then started to fall rapidly. Before 2009, it fell below year 2000's level and between 2008 and 2009 there was a decline of 89,5 percent..

In 2001, after the dot-com bubble, three banks experienced a fall in their net profit. In contrast, Nordea experienced a marginally increased net profit that year. The year after, 2002, Nordea, Swedbank, and Handelsbanken experienced a decline in their net profit while SEB experienced an increase. During the economic boom between 2004 and 2007, three out of four banks showed an upward trend. Swedbank experienced an increase in their net profit between 2002 and 2005 but, after that, it began to fall. All of the four banks experienced net profit levels below that of year 2000 at least once during the studied time period. In 2008, when the financial crisis had begun, the banks' net profits started to decrease which continued during 2009. For Swedbank and SEB, this change was very drastic. Throughout the time period, Handelsbanken and Nordea have increased their net profit by 13 and 90 percent respectively while SEB and Swedbank's net profit fell by 82 and 264 percent respectively.

4.3.2 Chosen market indicator

We have chosen to use the net profit as a measure of the market since we believe that it best reflects market fluctuations as represented by the Economic Tendency Indicator presented in chapter 1.4, Market Fluctuations. When the economy enters a recession, the banks' net credit loss level increases and the demand for banks' products decreases until the central bank tries to fix it with monetary policy. Therefore, the delayed effect from a recession or a boom is quite small. Effects of the dot-com bubble has been hard to see in the other graphs, but in the graph of the net profit, effects of the recession can clearly be seen for three out of four banks. It is also relatively easy to create an impression of the extent of recessions or booms by looking at the graph of the net profits. The graph also gives an indication to the seriousness of each recession or boom.

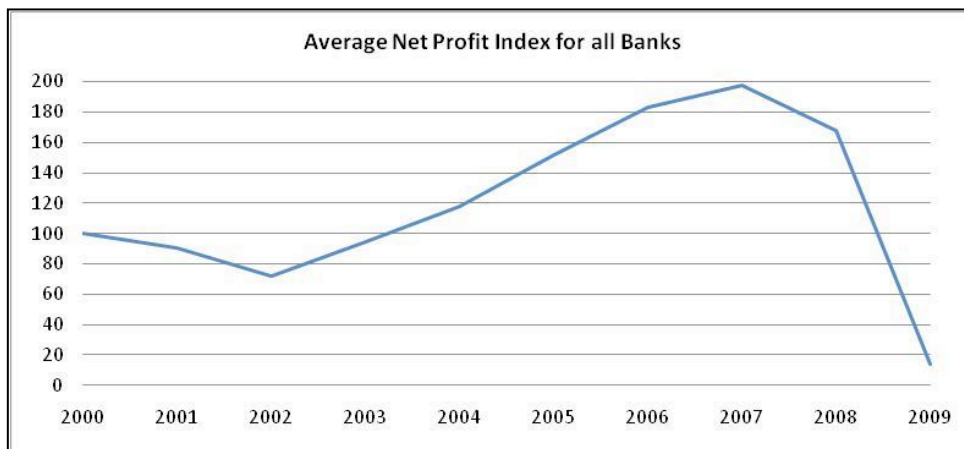


Figure 8 Market indicator - consolidated graph of all banks' net profit. Base year 2000.

When looking at the level of loans to credit institutions, there are always banks with surpluses and deficits of money, even if it is not always the same banks with surplus. To even out the effects, banks borrow and lend on the interbank market and do so regardless of the economic situation. Figure 4 reveals that, for most years, there are two banks that increase their lending and two banks that

decrease their lending. This makes it hard to see any similarity to market fluctuations and we therefore chose not to use loans to credit institutions as our market indicator.

To counter a recession, the central bank in Sweden uses monetary policy to reduce interest rates. This effects a bank's level of deposits and borrowings as a drop in the interest rate means that fewer people choose to deposit their money to the bank and the banks' deposits thus fall. The opposite occurs in a boom when everybody wants to lend money to the banks because of the high return and the banks' deposits increases. When looking at figure 6, there seems to be a delay of the effects. This can be seen most clearly in recent year, when the financial crisis hit. It was not until 2009 that the banks' deposits started to decline, suggesting a delay. Due to this we chose not to use banks deposits and borrowings as a market indicator.

When it comes to loans to the public and it's similarity to the market, the same problem regarding delays occurs when comparing the graph to market fluctuations. Another problem is that, in a recession, banks raise their requirements for loans. This means that fewer people can borrow money and that loans to the public therefore decreases. It takes time to get an application for credit tried which means that there is a delay in the statistics. These delays mean that we will not use loans to the public as a market indicator.

4.4 Changed Effect

In this section, the progression of each variable will be discussed, also taking into consideration market fluctuations with help of the chosen market indicator. The aim is to see if there has been any progress over time that could indicate that Basel II has had the wished effects and that this change is not only due to market fluctuations. The causality of Basel II will not be proved but instead we aim to start a discussion regarding the effects of Basel II on the Swedish banking industry.

4.4.1 Capital Ratio

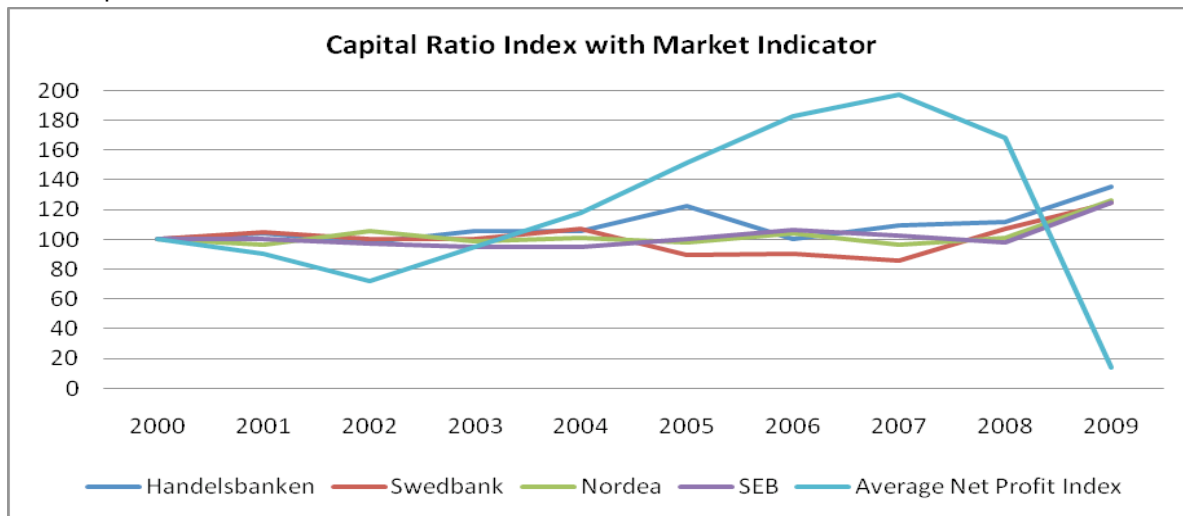


Figure 12 Capital Ratio Index with Market Indicator. Base year 2000.

The banks' capital ratio has been stable during the studied time period in comparison to the market indicator. However, one can see that from 2004, when Basel II was presented, the banks' capital ratios

started to slip away from each other and larger differences between banks occurred. The development of the capital ratio depends on how the capital base and the risk-weighted assets change. During 2009 in the above graph, we can see that even though the banks' net profits have fallen, all four banks' capital ratios have increased. A possible explanation to this is that, in a recession, banks become more restrictive with their lending and their lending to high-risk investments decreases. This means that banks can reduce the weight of high-risk assets and thus increase or keep the capital ratio on the same level despite the fall in the net profit and equity. Vice versa could occur in the opposite situation.

$$\text{Capital Ratio} = \frac{\text{Capital Base}}{\text{Risk-weighted assets}}$$

The aim of Basel II is to improve banks ability to manage crises and more specifically make sure that banks can keep a minimum capital ratio of no less than eight percent. We are therefore pleased to see that the banks' capital ratio does not seem to follow the market indicator to a large extent. With this said, we believe that it is difficult to predict how the banks' capital ratio will develop during economic cycles but we believe that Basel II has affected the banks through increased safety. Even though we should see a clearer effect on capital ratio due to market fluctuations, one reason why this does not clearly show could be that banks are able to influence the variables that create the capital ratio and are thereby able to influence how the capital ratio develops over time.

4.4.2 Net Credit Loss Level

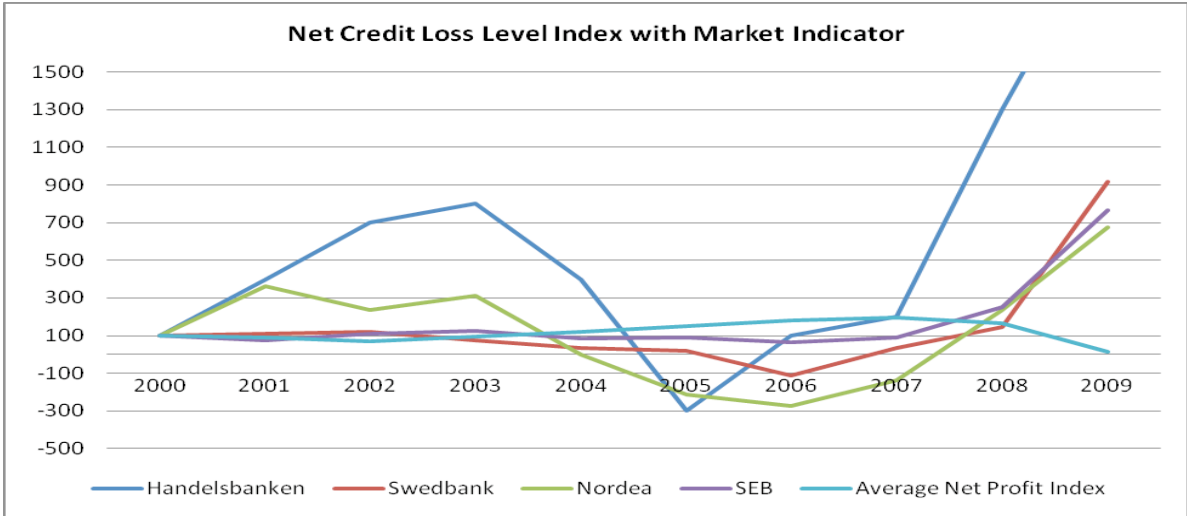


Figure 13 Net Credit Loss Level Index with Market Indicator. Base year 2000.

Regarding the banks' net credit loss levels and the market indicator, a similarity is difficult to see even if it is likely. One of the aims of Basel II is for banks to more easily be able to make more accurate risk assessments. Logically, this should contribute to a decrease in net credit losses as banks will find previously undiscovered risks and choose not to lend. It is important to remember that credit losses are measured as a percentage of the total lending. This means that if the level of lending increases and the

amount of credit losses is unchanged, the credit loss level will fall. Vice versa occurs if the lending is reduced and the amount of net credit losses is the same.

What we can see is that after the introduction of Basel II in 2007, the net credit loss level has increased while the market indicator has fallen. During this period, all four banks' net credit loss level follow the same upward direction as opposed to earlier when they developed in various ways. A fall in the banks' net profits is observed when the banks' net credit loss level increases and it is therefore difficult to formulate a hypothesis regarding if Basel II has had any decreasing effect on the banks' net credit loss level. That the banks' net credit loss levels are moving in the same direction could be a possible sign of better risk assessment. However, the financial crisis has been severe and it is therefore possible that this is the reason as to why the net credit levels seem to follow each other. We believe that Basel II has improved the banks risk assessments but in a harsh economic situation, there will always be increased net credit losses and it is therefore difficult to analyze the extent to which each variable has played a role. Therefore we find it difficult to formulate a hypothesis regarding the way in which Basel II has contributed to reduce the net credit loss level. To be able to see how this has developed, more data is needed through data mining, for example. Unfortunately, due to the constraints of this thesis, such an investigation will need to be studied further by another thesis.

4.4.3 Degree of Disclosure

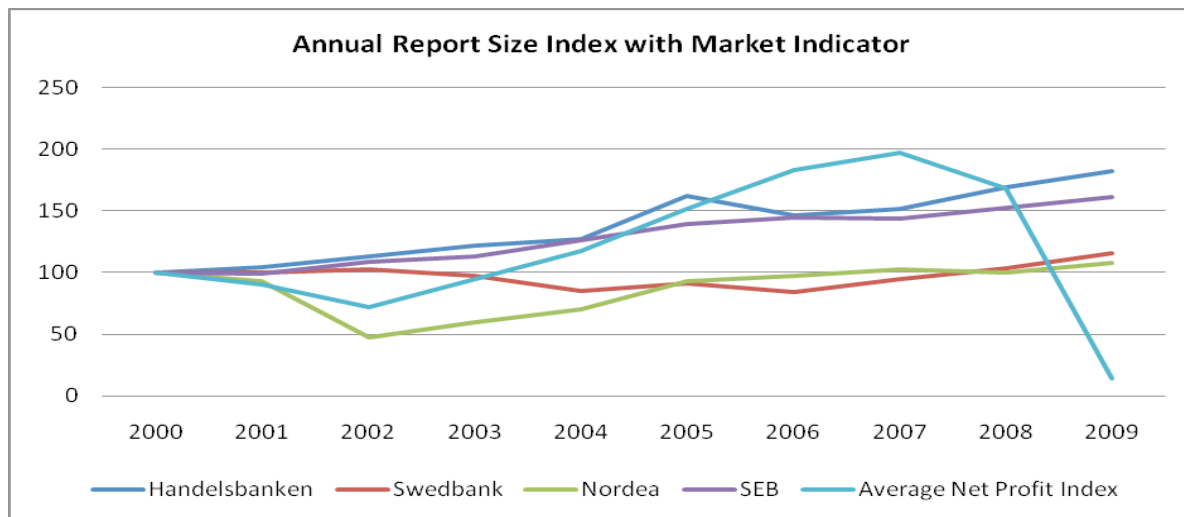


Figure 14 Size of Annual Report Index with Market Indicator. Base year 2000.

Regarding the banks' annual reports, we cannot observe a clear similarity to the market indicator. We believe that the amount of information given by the banks in a boom or a recession is the same, which is also hinted at by the fact that no theory regarding the causality between the two could be found. We believe that the differences instead depend on the introduction of various regulations. When new regulations are introduced, it is important to inform stakeholders of the changes and this often means that the size of the annual report increases. In the case of Basel II, it is not only the changed risk assessment that could cause banks' annual reports to increase in size, BCBS also seeks greater transparency, which could affect the size. Because of our quantitative approach, it is difficult to assess

the quality of the increased information. There is a risk that the increase in the size of the annual reports is largely made up of pictures or other irrelevant information making it difficult to understand the impact of Basel II. However, we believe that if this had been the case, there had not been such a high similarity between all banks regarding the development of this variable. Nordea and Swedbank have had a slower increase in the size of their annual reports but, since the introduction of Basel II between 2007 and 2009, the size of the annual reports has increased among all four banks.

4.5 Summary of our findings

When it comes to the capital ratio, we cannot see a clear pattern for all banks during the whole studied time period. In most recent years, however, all banks have shown a clear increase in their capital ratios. We find it hard to see any similarity with the progression of the market indicator. However, this does not mean that a similarity is not present. Since the capital ratio is defined as the capital base through risk-weighted assets, there is a connection to the economic situation. Several factors affect the capital ratio: a fall in a bank's equity or an increase in its high-risk loans would reduce the capital ratio and vice versa. We do not believe that the volatility of the banks' capital ratio present after the introduction of Basel II in 2007 has arisen only because of the economic situation or the adaption of Basel II. We believe it to be a combination and that the legalization of Basel II in Sweden meant that the capital ratio became more responsive to the economic situation. With this in mind, we believe that banks can use the Basel II regulations to affect the capital ratio in various economic situations.

It is hard to see a clear tendency in the development of the net credit loss level for all banks during the studied time period. One development that is clear, however, is that the net credit loss level has increased for all banks between 2007 and 2009. We believe that Basel II can have had an impact on this variable even though we believe that the economic climate also has had a large role to play. Basel II aims to improve banks risk assessment which affects banks' lending. If improved risk assessment means that banks lend more money, the net credit loss level will diminish while a reduction in the lending will lead to an increase in the level of net credit losses, but only if the credit loss levels are the same. Credit losses are not created by better risk assessment but by a poorer economic situation and therefore we believe that even though it is possible that Basel II has had an impact on this, the impact of the economic climate has probably been greater.

Observing a common trend for all banks throughout the studied time period is difficult. Common for all four banks, however, is the fact that the size of their annual reports have increased in total throughout the studied time period. Despite small fluctuations, this trend is most evident in towards the end of the studied time period. We do not observe a high similarity with the market indicator. According to our analysis, we believe that the introduction of new regulations, standards, and norms has an impact on the size of the annual reports. After the introduction of Basel II, the size of the annual reports has increased among all four banks, which indicates an impact. Even though increases have been present before the introduction of Basel II, it is only after this introduction that the size of the annual reports for all banks increased. When it comes to the size of the banks' annual reports, we believe that regulations, standards, and norms have a higher impact than the economic situation. This is however just what we have observed from our investigation and proving such a statement would require larger amounts of data.

In the next section, we will use our findings and the theories that were presented earlier on to formulate hypotheses based on the developments that we have observed regarding the three investigated variables and their development. Our aim is to come to the end of the red thread that the reader hopefully has experienced throughout this thesis.

5 Conclusion

5.1 Concluding Remarks

The purpose of this study was to investigate the progression of the capital ratio, net credit loss level, and degree of disclosure for the four largest banks in Sweden during the implementation of Basel II. This was formulated using the following research question:

How has capital ratio, net credit loss level, and degree of disclosure progressed during the implementation of Basel II for the four largest banks in Sweden? What hypotheses regarding the effects of the implementation of Basel II can be formulated based on this progression?

Proving the causality of Basel II regarding these variables would however require greater amounts of data and more time than that which is allocated to this thesis. Our aim with this investigation was therefore to start a discussion by formulating hypotheses based on the observations we have made during this study that could be investigated further later on. To try to distinguish the possible impact of Basel II from the impact of the economic climate, we created a market indicator which consisted of the banks' average net profit index as this showed the greatest similarity to the Economic Tendency Indicator.

For all variables, it was hard to see a clear trend throughout the whole studied time period even though certain tendencies could be observed. These observations and the impact we believe Basel II has had on each variable will be presented below. According to our analyses, we believe that the introduction of Basel II has affected the four major banks in Sweden regarding their capital ratio, net credit loss level, and degree of disclosure.

These hypotheses are meant to be the basis of a more extensive study on the subject. Hopefully such as a study would be able to confirm the hypotheses that we have formulated and built on the analyses in this thesis. Often there are several factors that affect the investigated variables and a more extensive study would be able to give a more assured conclusion. Even if the conclusion of such a study would be able to refute the hypotheses that we have built in this thesis, we see this as something positive as more research in the area is needed.

5.1.1 Capital Ratio

When it comes to the capital ratio, we cannot see a clear pattern for all banks during the whole studied time period. In most recent years, however, all banks have shown a clear increase in their capital ratios. We believe the progression of the banks' capital ratio to be a combination of Basel II and the development of the economic climate. The legalization of Basel II in Sweden meant that the capital ratio became more responsive to the economic situation. With this in mind, we believe that banks can use the Basel II regulations to affect the capital ratio in various economic situations.

5.1.2 Net Credit Loss Level

There was no clear tendency in the development of the net credit loss level for all banks during the studied time period. One development that was evident, however, was that the net credit loss level had

increased for all banks between 2007 and 2009. We believe that Basel II has had an impact even though we believe that the economic climate also has had a large role to play. Credit losses are not created by better risk assessment but by a poorer economic situation and therefore we believe that even though it is possible that Basel II has had an impact on this, the impact of the economic climate has probably been greater.

5.1.3 Degree of Disclosure

In general, the size of the banks' annual reports increased during the studied time period even though variations between specific years were present. According to our analysis, we believe that the introduction of new regulations, standards, and norms has an impact on the size of the annual reports. After the introduction of Basel II, the size of the annual reports has increased among all four banks, which indicates an impact. Even though increases have been present before the introduction of Basel II, it is only after this introduction that the size of the annual reports for all banks increased. These conclusions are however just what we have observed from our investigation and proving such hypotheses require larger amounts of data.

5.2 Suggestions for further studies

Apart from the suggested study presented above, there are also other studies that can be carried out from the basis of this study. Finansinspektionen created transition rules that would be applied due to the introduction of Basel II in 2007. These transitional rules end in 2011 (FFFS, 2009:8) and it would be interesting to examine the investigated variables when the framework is fully implemented and when the economy is not in a recession. In the aftermath of the financial crisis, a discussion about the extent to which the new capital requirements has offset the financial crisis has arisen. Another suggestion for further studies is therefore to examine a bank and try to evaluate the impact that Basel II has had on the financial crisis and what the impact would have been without the framework even though it will be difficult to distinguish between the two.

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