THE BANK CRISIS’ FINANCIAL RATIOS
-A comparative research of the UK and Sweden during 2006-2010

Bachelor thesis in consolidated accounting, 15 hp
2011-05-24

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Acknowledgments

We would like to acknowledge and extend our gratitude to the persons who have made this Bachelor thesis possible.

We would also like to thank our tutor, Hans Mörner, for guidance and feedback during this study together with Abertay University Dundee for guidance and late opening hours at the library during this period.

Dundee 17th of May 2011

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Abstract

The credit crunch that started the 9th of August 2007 is generally viewed as the most significant crisis to affect the financial markets and the global economy since the 1930s. The UK financial sector was heavily hit by the crisis which resulted in a dry up in lending and left a black hole in the British banks’ finances. During the last quarter of 2010 the GDP shank unexpectedly with 0.5 percent from the third quarter which created concerns about going back into the recession. Contrarily, for Swedish economy 2010 was an impressing year with an unexpected GDP growth of 7.3 percent in the last quarter.

The purpose of this study is to analyse how the finance crisis has affected the leading banks’ performance within the two countries and see whether the differences in values can explain the difference in GDP growth during the last quarter of 2010. The analyse is performed through a financial ratio analysis of the different banks.

The final results of the research indicates to that the Swedish banks have been more profitable, have had a more secure and higher quality of lending and more capacity to lower cost related to income than the British banks. The more distinctive negative influence is mostly based on the larger amount of credit losses the British banks had to experience which contributed to their significant decrease in earnings per share which created scepticism on the credit market followed by a severe slowdown in consumption and in GDP growth. Since the credit losses never got to same levels in Sweden as in the UK the scepticism of the Swedish banking system did not affect the reduction in credit use and house prizes to the same extent and GDP growth could recover back to normal levels sooner than in the UK.
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1. Introduction

This chapter provides a background description of the research to introduce the reader to the topic. Additionally, the chapter incorporates a problem discussion which acts as a foundation for the problem question together with a purpose. The chapter ends with a description of the delimitations of the research.

1.1 Background

1.1.1. Reason for the finance crisis worldwide 2007-2010

The credit crunch that started the 9th of August 2007 is generally viewed as the most significant crisis to affect the financial markets and the global economy since the 1930s. The name ‘Credit Crunch’ refers to the sudden and very significant tightening of lending conditions in the financial system which happened independently of official interest rates. It was a pronounced fall in lending both between banks on the interbank market and between banks and their clients. An increased risk aversion combined with declines in the price of risky assets (equities and treasury bonds) appeared.

The Credit Crunch is generally considered to have been trigged by losses on subprime mortgages in the USA but due to the crisis width and depth it cannot be explained by that sector alone. The crisis led to mortgage financing giants Fannie Mae and Freddie Mac, combined loans of total $5.5 trillion, being place under the control of the US government and in 2008 Bear Stearns had to be rescued through a merger with Bank of America. Shares in most of the top banks around the world plunged dramatically in value. The 29th of September 2008 the investment bank Lehman Brothers was placed into bankruptcy and the crisis took a particularly nasty turn and it set off a significant fall in global stock markets around the world\(^1\).

The Federal Reserve was one of the big players of the creation of the credit bubble. By reacting after the fall in stock market, following the dot com bust in 2000 and the 9/11 terrorist attack, with a loosening of American monetary policy the Federal Reserve lowered the federal funds rate from 6.5 percent in May 2000 to 1 percent in June 2003, the lowest rate in 45 years. This resulted in a rapid expansion of lending, mortgage lending and rapid rise in house prices. Trouble started when the interest started to rise when the home ownership reached a saturation point. In year 2005 home prices started to fall (40 percent in US) and Subprime borrowers couldn’t withstand the higher rates and started default on their loans. 2004 the interest rate was 5.75 percent and remained so until august 2007. In August 2007 the repayment problems of the subprime mortgages in the US triggered a tidal wave of concern about lending around the world\(^2\).

Legislative changes and deregulation

The banks’ increase in mortgage exposure is one important factor to the finance crisis. Basel I Accord of 1988 required banks to hold less capital for loans made for mortgages, which were regarded as relatively safe, than for consumer loans that was regarded as relatively risky.

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\(^2\) Andrew Oxla, “What’s next for Britain?”,*This is money*, 27 April 2011, retrieved 2011-02-02 from http://www.thisismoney.co.uk/credit-crisis.
This increased the banks incentives to increase their mortgage lending. The repeal of the Glass Steagall Act (prohibiting commercial banks from engaging in investment banking activities) got commercial banks like Citigroup involved in the issuance of CDOs and mortgage backed securities and other conduits\(^3\) which will be explained later in this chapter.

**Financial innovation and the credit rating agencies**

The deterioration in the quality of bank lending was one important factor for the credit crisis to arise, especially the rapid lending to the subprime sector i.e. mortgages made to people with a poor credit rating and high risk of default. Between year 1999 and 2006 the subprime loans raised from 13 percent ($160 billion) to 20 percent ($600 billion) of total mortgage originations. By March 2007 the total exposure amounted to $1.3 trillion. Since the subprime mortgages were viewed as very risky the interest charges were significantly higher than the charges for prime mortgages and alt-A mortgages (loans with a risk profile between subprime and prime loans)\(^4\). The barmy notion was that if the borrowers ran into trouble with their repayments, rising house prices would allow them to remortgage their property\(^5\). It resulted in attracting a larger proportion of borrowers who would default on payments since the mortgage brokers encouraged people to take on bigger loans at higher risk than they could afford\(^6\).

Obviously, the relationship between compensation for lending out large amounts of capital in the financial sector and profitability was a significant triggering factor to the credit crunch. Since the system of annual bonuses was primary linked to revenues and short-term performance it created incentives for traders and financial institutions to take on too much risk to maximize short-term performance at the expense of longer term viability and returns\(^7\).

After increasing their risk issued by subprime mortgages, the banks believed that they could reduce a large part of their risk exposure and save on regulatory capital through securitizing the mortgage loans by issuing mortgage – backed securities or by bundling the various loans (high, medium and low risk loans) and pack them into a ‘Collateralized debt obligation’ (CDO), consisting of different tranches with different risk. To be able to sell on the securities the rating had to be issued by credit rating agencies. The investor was promised to receive a cash flow in a prescribed sequence based on how much cash flow the CDO collected from the pool of bonds or other asset it owned.\(^8\) Crucially, the credit rating agencies under-rated the risk involved of the securities and securities that should have merited BBB and lower ratings was issued with AAA and AA ratings. The reason was that the credit rating agencies assumed continued house prices rise and unrealistically low default rates when making the ratings\(^9\). When the borrowers couldn’t pay back their mortgages the CDOs became worthless and during February and March 2007, more than 25 subprime lenders filed for bankruptcy. It was obvious that the finance crisis in the US couldn’t solve the subprime crisis on its own and the problem continued outside the US\(^10\).

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\(^3\) Pilbeam, 2010, pg. 429-432.
\(^4\) Pilbeam, 2010, pg. 432.
\(^7\) Pilbeam, 2010, pg. 453.
\(^8\) Pilbeam, 2010, pg. 413.
1.1.2. The effects of the Finance crisis in UK

While the crisis started in the US, it quickly spread throughout the world. Many UK banks had invested large sums in subprime backed investments and had write off billions of pounds in losses. The problem was that many of the UK’s banks had been using the investment markets to fund their mortgage business as a securitization, so when the investors became nervous about buying any investment linked to mortgages, no matter how high their quality, it got impossible to sell these investments. This resulted in a dry up in lending and ended up leaving a black hole in the British banks’ finances\(^\text{11}\).

During September 2007, the British bank, Northern Rock, found itself unable to fund its mortgage book and was facing a ‘bank run’ i.e. which is when the bank’s customers were queuing to withdraw their deposits since its reserves might not have been sufficient to meet the withdrawals. The UK government failed to make any guarantee to protect debtors beyond the statutory commitment to protect the first £20,000. The bank of England was forced to step in as a lender and guarantee all Northern Rock deposits. In 2008 the Northern Rock was unable to finance itself and the bank was nationalized which contributed to that its shares became worthless. The same year the government took over Brad Ford & Bingley’s £50 billion mortgage and loan book and sold it off to Santander, but the full extent in British banking happened when the government was force to bail out the largest banks in the UK\(^\text{12}\).

The demise of Northern rock was later eclipsed by the problems at the Halifax of Scotland (HBOS) which was rescued through a merger with Lloyds TSB bank. The losses in HBOS led Lloyds into the crisis and had to be rescued by the UK taxpayer who now had a 45 percent stake in the bank. The Royal bank of Scotland which during several years has become the largest bank in the UK made in December 2007 the decision to take over Dutch Bank ABN Amro. Due to less scrutiny than needed during the takeover, losses of approximately € 22 billion coupled with the problems on its own loan book, RBS had to be rescued by the UK government holding a majority stake of 70 percent in the bank. The UK financial sector was heavily hit by the crisis in general with a fall off in mergers and acquisitions, underwriting activity, IPOs, commercial paper and corporate bond issue lending to tens of thousands of job losses\(^\text{13}\).

The UK’s response to the financial crisis was initially much tougher than that of the US. The US was only in recession for four consecutive quarters (12 months) which is less than Britain, which remained in recession for a further two consecutive quarters (18 months in total), making the UK economy was the last major economy to come out of recession (behind Japan, China, France and Germany)\(^\text{14}\). In 2007, Bank of England’s figures showed that household debt in the UK was standing at nearly almost as much as their entire annual gross domestic product. Borrowings had almost doubled since 2000 with rising house prices and the biggest consumer-spending boom in the UK’s history\(^\text{15}\).

\(^{11}\) Budworth.

\(^{12}\) Pilbeam, 2010, pg. 446-447.

\(^{13}\) Pilbeam, 2010, pg. 427-429.

\(^{14}\) Stock Market for beginners, “The recession of 2008/2009- was it different in the UK than in the US?”, Stock markets for beginners, 20 April 2010, retrieved 2011-02-15 from http://www.stockmarketforbeginners.co.uk/the-recession-of-20082009-was-it-different-in-the-uk-than-in-the-us

The economic heartache began when gross domestic product fell by 1.5 percent during the final quarter of 2008\textsuperscript{16}. On 8\textsuperscript{th} of October 2008 the UK announced an unprecedented £500 billion bank rescue scheme to restore market confidence and to stabilize the British banking system. Despite the huge scale, the October 2008 bailout was not sufficient to stabilize the British banking system or the UK financial markets and in January 2009 the government announced a second bank rescue package of £50 billion of funds, which were available for large corporations, and an Asset Protection Scheme to be able to increase the ability of British banks to lend money\textsuperscript{17}. In March 2009 The Bank of England made its final attempt to boost the UK's economy by cutting the interest rate. In October 2008 the rate was as high as 5 percent and by March 2009 the rate was down to measly 0.5 percent which still in May 2011 was unchanged\textsuperscript{18}. In the final quarter of 2009 the UK economy announced a weaker than expected GDP growth of 0.1 percent and they barely made it out of the recession, compared to the US who had a GDP growth of 3.5 percent. The UK residents definitely felt the effect of the recession in 2009 when the economy shrank 5 percent\textsuperscript{19} and the number of people declared insolvent reached 134,142 including 74,670 bankruptcies, 47,641 Individual Voluntary Arrangements and 11,831 Debt Relief Orders\textsuperscript{20}.

![GDP Growth](http://www.thisismoney.co.uk/credit-crisis)

During the last quarter of 2010 the GDP shrank unexpectedly with 0.5 percent from the third quarter due to the bad weather conditions and the collapse in the construction industry. According to Bloomberg analysis, GDP was supposed to increase 2.7 percent compared to the corresponding quarter 2009. The unexpected GDP fall resulted in an even deeper decrease in

\textsuperscript{16} Stock market for beginners.
\textsuperscript{17} Pilbeam, 2010, pg. 446-447.
\textsuperscript{19} Oxlade, 27 April 2011.
\textsuperscript{20} Stock Markets for beginners.
the pound by the end of 2010\textsuperscript{22}. The UK had the worst budget deficit in the EU in 2010 with a decrease of more than 10 percent of GDP. Before the shocking GDP figures, the primary concern was inflation but due to a sudden inverted economic growth the growing concern was ‘Stagflation’ which happens when the inflation rate is high and economic growth is low. Finally the British GDP marginally rose in early 2011 with a growth of 0.5 percent and thereby avoided a technical return to the recession\textsuperscript{23}.

1.1.3. The effects of the Finance crisis in Sweden

Sweden is a small open economy heavily dependent on what is happening internationally. A global financial crisis combined with a recession, is having painful effects on the Swedish economy\textsuperscript{24}.

Finance Crisis 1990-1994

During the years of 1990-1994 the Swedish economy was hit by a deep recession as a result of the high economy in the western world. Due to the devaluation of the SEK 1982, Swedish investors could start invest internationally and got an advantage against other countries. This led to an increase in consumption which contributed to rising prises and a rising inflation. The lending demand increased rapidly and house prices rose. In 1990 the inflation went the other direction due to capital became scarce, it became more expensive to lend money, the lending demand decreased and house prices fell. This unpredictable dramatic change in Swedish economy led to a disastrous increase in credit losses for the banks due to a miscalculation of credit estimation. The situation was changed and Sweden was hit by a credit crisis worst than ever expected\textsuperscript{25}.

Finance Crisis 2008

Before the summer of 2008, the Swedish banks managed to avoid being affected by the finance crisis even though it had become a global problem. Many Swedish banks had invested in finance instruments at Lehman Brothers and due to their collapse in September 2008, the Swedish banking system was strongly affected and the borrowing cost for the banks rose. Swedbank was the bank with most difficulties to get new loans due to future concerns about their bank branches in the Baltic countries. The concerns involved the risk of a possible devaluation in the Baltic counties which would had aggravated the economic situation even more involving credit losses of billions of SEK for Swedbank and SEB\textsuperscript{26}. Carnegie Investment bank AB was the first Swedish bank who went down during the finance crisis. In the beginning the bank received financial help from the national bank of Sweden, Riksbanken, but when the bank lost its banking license the loans was taken over by the National Debt Office, Riksgälden, which resulted in a nationalization of Carnegie Investment bank AB\textsuperscript{27}.

\textsuperscript{23} Oxlade.
The year 2009 was the most affected year by the global recession, which resulted in a negatively GDP growth of -5 percent in Swedish economy due to decreased consumption internationally. Riksbanken normally have a policy to prioritise low inflation but made the mistake of waiting too long to decrease the interest rate and the consumer price index had already increased with 1 percent. In the summer 2009, Riksbanken lowered the repo rate down to 0.25 percent with the purpose to fix the inflation rate, prevent devaluation and to contribute to an increased consumption.

2010 was an impressive year for Swedish economy. According to Statistiska Central Byråns, the total GDP growth during 2010 was 5.5 percent, with a GDP growth of 7.3 percent during the last quarter of 2010. Leif Petersen, macro reporter and analyst at the Swedish newspaper Svenska Dagbladet, forecasted the economic growth to continue to increase with approximately 3-4 percent during 2011. Increased utilization of resources and raising commodity prices made the “Riksbanken” to raise the repo rate to 1.25 percent by the end of 2010 and is expected to reach 2 percent by the end of 2011. The reason for the increasing repo rate is to prevent a possible increasing inflation rate due to the surprisingly positive development in Europe, especially in Swedish economy. The house prices in Sweden showed unlike in many other countries, no major corrections during the financial crisis. Even though they had a slightly decrease the prices have continued to rise and many analysts believe that the Swedish housing is overvalued.

1.2. Research problem

It is now 2011 and the world is recovering from the last years’ financial crisis. Even though some countries have been more affected then others, the financial improvement is now visual all around the world. The UK has been one of the economies that have struggled a lot to get their self out of the recession with an economy worse than expected in the last quarter of 2010, while Sweden unexpectedly had the highest GDP growth since the quarterly records began in 1970.

The extreme differences in GDP growth figures during the last quarter of 2010, created an interest of investigating how such a small economy like Sweden could get out of the recession so successfully while a powerful economy as UK ended up being the last major economy to escape the recession. By comparing the economic situation between the banks of the two

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35 Pedersen.
countries’ during the recession, would make it possible to get a deeper understanding of what could have been causing this. The presence of a financial crisis is affecting the banks’ performance and by analysing the financial information from the major banks in both the UK and Sweden during this time, might give the research the answer to how the recession affected these countries differently. To carry out this research a Financial Ratio Analysis will be used as a tool to analyse and evaluate the differences between the banks during 2006 to 2010. A Financial Ratio analysis is also used to evaluate the stability within the bank which is of major interest for this research. Difficulties during the application of the financial ratios are likely to appear during the analysis section since bank’s operations differs from non-financial operations. Consequently, special financial ratios used for financial institutions had to be added to the investigation to give it a more accurate picture.

1.3. Research question

Based on the research’s problem discussion, the research question is developed as followed:

- How do the British banks’ financial ratios differ from the Swedish banks’ during the period of 2006-2010?
- Can these numeric values be used to compare the two countries’ situation during the end of the financial Crisis and if so, what conclusions can we make?

1.4. Purpose

Based on the research question the purpose of this research is to investigate how the finance crisis has affected the leading banks’ performance within the two countries. This is made by a financial ratio analysis to see whether the differences in values can explain the difference in GDP growth during the last quarter of 2010.

1.5. Delimitations

This research has chosen to limit the investigation to the four largest commercial banks in Sweden and The UK. Since the interest is to examine whether any similarities or differences existed between these countries’ financial ratios during 2006 to 2010, choosing these banks would be able to give the researcher a broad picture of the two countries’ situation and discover any potentially performance trends.

This research is investigating the banks’ performance during the financial crisis and to be able to discover the performance trends with high accuracy, the years 2006 to 2010 has been chosen. We decided to include the years that were affected during the crisis, with 2006 as a supplement in order to see how prepared the banks were before the crisis. The information will be based on the annual reports from these five years and the financial ratios will serve as the basis of the analysis. The ratios have been limited to the ones used by financial services. The ratios consist of risk-, effective- and performance related ratios with the purpose to see the financial crisis’s impact on the banks performance.
1.6. Outline

Chapter 1: Introduction
In the first chapter the background and the problem discussion is introduced followed by a research question and purpose.

Chapter 2: Methodology
In chapter two a description of the course of action is presented including the choice of banks and financial ratios. It ends with a discussion of the method’s credibility.

Chapter 3: Literature review/ Theoretical framework
The third chapter is introduced by an explanation of credit risk and a model of preventing banking failure. It is followed by an explanation of the selected ratios and the regulatory framework that governs the banks’ operations.

Chapter 4: Empirical data and analysis
In this chapter the empirical data in terms of ratios is presented in charts followed by an empirical and analytical reflection.

Chapter 5: Final discussion
The fifth chapter contains a final discussion of the two sub queries with the purpose to come to a conclusion.

Chapter 6: Conclusion
In the last chapter the research question are answered together with suggestions of further research within the same area.

1.7. Previous Research

A research made by Dobrimil Serwa, Larger crises cost more: Impact of banking sector instability on output growth, (2010) contains an investigation of whether banking crises cause economic slowdown and to what extent the size of a crisis affects the GDP growth. The research came to the conclusion that after controlling the impact of the recession on the size of crisis, the banking crises cause output growth to slow down. The reduced growth in credit use cause a reduction in accumulated four year GDP growth by around 2 percentages. A significant relationship was also found between credit and money dynamics and output growth suggested that credit and monetary transmission channels are responsible for transferring banking crisis to real economy. The method used to obtain the result was an event-study approach and multi-equation models which applied measurements of different banking crises received from banking sector aggregates containing dataset of over 100 banking crises. The results based on the method and data suggested that crises are costly for economies at least in short term and it is the size of the crisis that matters for economic growth. Lower credit and money growth during crises cause GDP growth to decline. The research by Dobromil Serwa will be used as a tool during the final discussion to connect it with the different GDP growth changes in both countries in the final quarter of 2010.

This study is also influenced by two bachelor theses both focused on comparing the Swedish banks’ financial situation during the finance crisis 2008 and the crisis 1990-1994. The research rapports by Emma Karlsson and Karin Neuman (2008) and Jeanette Nilsson and Cynthia Osorio Navarro (2009) are both based on whether the Swedish banking system have learned its lesson from the previous crisis to prevent itself from turning into the same situation 14 years later. The final conclusion of the research rapports is that the recent finance crisis has not affected the Swedish economy as greatly as the first one did. Swedish banks have shown a higher level of profitability and stability during the later finance crisis and based on the CEO’s comments the banks’ have changed their routines, guidelines for the operation together with new knowledge that have changed their attitude to risk management. If it is due to the experience of the previous crisis still remain as a matter of interpretation. The rapports are written in 2008 and in the beginning of 2009 which means they do not contain an evaluation of the last 2 years of the crisis, including 2009 which was the major year for the crisis in Sweden. Consequently the rapports are not complete, but still a useful material for this study by acting as a foundation for this research’s final discussion.

The research by Domingos Rodrigues Pandelo Junior, Contribution to the analysis and measurement of bank insolvency, (2009) is an article sought to present a theoretical model to assess and try to understand the Phenomenon of bank insolvency since it is of fundamental importance to the economy. The basic justifications is that without stability in the banking system monetary stability cannot be achieved and banking crises will contribute to greatly costs for the society. The research generated a theoretical model to be capable of identifying the main aspects of bank insolvency in order to gain further understanding of the issue and the implantation of more effective preventive measures. The conclusions made from the research are that banking crises, with the consequent insolvency of financial institutions, can be assessed in three dimensions: macroeconomic, microeconomic, and institutional. However, banking crises are most associated with macroeconomic shocks and less effective regulatory or legal systems. Depending on the minimum capital requirements established by regulating agencies, banks may operate with a higher weighted average cost of capital (WACC). A higher WACC can cause them to take bigger risks to compensate the higher cost of capital. In this case, regulators should be aware that fixing minimum capital requirements for financial institutions can have the opposite effect to the one desired.

“Prediction of banking failure” by Paul A. Meyer and Howard W. Pifer (1970) is a model which forecasts bankruptcy in the banking sector. This model has been used as a tool to find the most accurate financial ratios for this research. The model will be further explained in the theoretical chapter.

2. Methodology

In the methodology chapter a review of the research’s methodological choices is provided followed by an explanation of the method used for data collection. The selected samples of the banks and financial ratios are then introduced to give the reader an idea of the width of the research.

2.1. Description of choosing a method

A methodology is ‘an approach to the process of the research, encompassing a body of methods’ and a method is ‘a technique for collecting and/or analysing data’ \(^{41}\).

According to D.I. Jacobsen, methodology is a working technique of collecting empirical data to give a description about the reality. The problem is that there are disagreement of what the reality really is and how to collect this information to get the best possible approximation to reality. Therefore it is important that the chosen method is of great relevance to the research problem \(^ {42} \).

2.2. Overall methodological choices

The research is investigating and comparing the four main banks in The UK resp. Sweden during the years of 2006-2010. The reason of choosing this research topic is to get a deeper understanding of why the two countries came out of the recession differently. The overall goal with this research is to investigate, with help from a financial ratios analysis, whether there are any differences between the ratios of the four main banks in The UK and Sweden during these eventful years. The numeric values will be compared and evaluated to be able to make a conclusion if these values can be used to compare the two countries’ situation during the end of the financial crisis.

The purpose of using the financial ratio analysis is to develop a deep understanding of what happens with the banks finances in times of crises. This is put into practice by analysing the relevant ratios followed by an investigation of possibilities to discern any patterns or abnormalities among the main banks in the two countries. Using the annual reports as a tool to evaluate, analyse and compare companies is the most common using area for this type of information. The methodology choice has been evaluated through the four characteristics of the research; the purpose, the process, the outcome and the logic.

The purpose

The research is classified as a descriptive research since the purpose is to describe phenomena as they exist and identify and obtain information on characteristics of the problem. A descriptive research cannot describe what caused a situation even though the data is factual, accurate and systematic. The phenomena of this research are the different ratios which will be identified and will contribute to obtain information on the characteristics of the problem. The choice of method is based on the assumption that the financial ratios are relevant to the

\(^{41}\) Jill Collis and Roger Hussey, Research methods. 2009. pg. 73.

research problem. A descriptive research method is applicable when already well researched ratios act as the foundation for a financial ratio analysis of the banks’ performance during the years of 2006-2010\(^\text{43}\).

**The process**

A qualitative research often has the aim of description and researchers may follow up with examinations of why the observations exist and what the implications of the findings are. A qualitative research is concentrating on data in terms of words, sentences and stories which includes public records, annual reports etc. The research will be designed as a descriptive research based on annual reports for a small number of banks in Sweden and the UK. This research will therefore be classified as a document study with a qualitative inquiry approach to give the research a deep description of the problem.

This research is excluding the idea of a quantitative inquiry approach since this type of method is more suitable when generalization based on a larger number of samples is prioritized. In the case of this research, a qualitative inquiry approach makes it possible to investigate more deeply in the phenomena and get a higher internal validity\(^\text{44}\).

**The outcome**

The outcome of this research is to give a general understanding of the research problem rather than solve it and therefore a basic research is suitable. A basic research is designed to make a contribution to general knowledge and theoretical understanding rather than solve a specific problem.

**The logic**

To classify this research according to the logic, an inductive approach is chosen. This basically means developing theory from observation of empirical reality. Due to being uncertain of the outcome an inductive approach is suitable since openness is necessary for this research\(^\text{45}\).

**2.3. Data collection**

Collecting data for a research can be done in two ways; through primary data or secondary data. When collecting primary data, the researcher is collecting the data for the first time, specifically tailored to match the problem. Secondary data is on the other hand not collected directly from the source and is instead based on information collected from others in terms of annual reports, textbooks and newspapers\(^\text{46}\).

Since the data for this research are mainly retrieved from the banks’ annual reports followed by textbooks, internet pages and newspapers, this study is based on secondary data. As the research is based on a very recent topic many of the data had to be collected from electronic sources. The secondary data has most likely been collected for another purpose than what this research wants to investigate and therefore the data provided has been critical examined. The method was chosen principally to get a comprehensive picture of the problem using already excising data.

\(^{43}\) Collin and Hussey, 2009, pg. 73.
\(^{44}\) Jacobsen, 2000, pg. 57
\(^{45}\) Collin and Hussey, 2009, pg. 74.
\(^{46}\) Jacobsen, 2000, pg. 153
2.4. Methodological criticism

For a study to be perceived credible, it should have a high reliability and validity. A drawback using a qualitative method is the demand of recourses. For this reason a qualitative research is focusing more on further variables and fewer units. Due to the limited amount of participants it will also limit the chance to generalize which impeaches the external validity. A qualitative research method is also limiting the ability to scrutinise the data provided from a critical perspective and to give a critical reflection 47.

2.4.1. Difficulties with ratios

Like all other management tools, ratios can be misused and misleading if used mechanistically. Therefore a proper valuation of each variable has to be done before calculation of a ratio. Figures might be made up in published financial statement to hide a falling trend in certain important ratios or a group of assets or liabilities may or may not include certain figures. Unless this is not taken into consideration and adjusted properly before the calculation wrong interpretation may vitiate the analysis 48.

2.4.2. Reliability

A research with high reliability has repeatedly proven the same result independently of the investigator 49.

To prove this study’s reliability the study will be based on the companies’ annual reports. This will give a fair picture of their actual financial situation due to strict rules about how to establish these reports are implemented in both the UK and Sweden. If these rules are not followed correctly the company will be punish significantly to ensure is not a risk worth taking. The reliability is also further enhanced due to the requirement of accounting. From this reason an equivalent result of this data would probably be obtained independently of the investigator.

2.4.3. Validity

High validity is achieved through measuring the relevant components in the context. To be able to investigate the problem, the relevant information needs to measure what it is suppose to measure 50.

To increase the validity of the research it is important to choose the most relevant ratios for the research. The precaution, for the comparison to be relevant, is that the ratios must use only data that are representative in context and composition. The approach to achieve as high validity as possible is to use ratios that have proven to be significant financial instruments in previous studies of banks. The relevant financial ratios in this research are those who are focused on evaluating a bank’s financial situation and exhibit difference in value when the banks financial situation is influenced by the crisis.

47 Jacobsson, 2000, pg. 20-21
48 Bhattacharya Hrishikes, Banking strategy Credit appraisal and Lending decisions. New Delhi, 1997, pg. 505-682.
49 Jacobsson, 2000, pg. 255
50 Jacobsson, 2000, pg. 257-258
To be able to give an as accurate picture as possible, without being influenced of the banks calculations and potential promotional intentions, the study will be based on own calculated ratios. This will result in a more accurate comparability between the eight chosen banks.

2.5. Sample of banks

Since the purpose of the research is to examine differences in ratios between the banks in The UK and Sweden during the financial crisis, the research has been narrowed down to the four largest commercial banks in each country.

As indicated by the English magazine, Global Finance, the largest banks in the UK are listed as; The Royal Bank of Scotland (RBS), Barclays, HSBC and Lloyd’s Banking Group. The RBS and Barclays were also ranked as the world’s biggest banks measured by total assets 2009. Since the research is of qualitative approach, the sample of banks is small and to be able to collect data as accurate as possible these banks were chosen.

<table>
<thead>
<tr>
<th>Banks</th>
<th>Market Capitalization (As of 3 May 2011)</th>
<th>Total Assets (As of 31 December 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSBC Holdings</td>
<td>1 765.95*</td>
<td>15 850.53**</td>
</tr>
<tr>
<td>Royal Bank of Scotland group</td>
<td>457.254*</td>
<td>15 252.55**</td>
</tr>
<tr>
<td>Lloyds Banking Group</td>
<td>399.456*</td>
<td>10 406.57**</td>
</tr>
<tr>
<td>Barclays</td>
<td>347.658*</td>
<td>15 620.59**</td>
</tr>
</tbody>
</table>

Table 1: The four biggest British Banking Groups

*GBP/SEK rate 3rd of May 9.96
**GBP/SEK rate 31st of December 10.49

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53 HSBC Holdings, annual report (2010)
55 RBS banking group, annual report (2010)
57 Lloyds banking group, annual report (2010)
59 Barclays, annual report (2010)

~ 13 ~
The four biggest Swedish Banking Groups

<table>
<thead>
<tr>
<th>Banks</th>
<th>Market capitalization (As of 6 May 2011)</th>
<th>Total Assets (As of 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Billion SEK</td>
<td>Billion SEK</td>
</tr>
<tr>
<td>Nordea</td>
<td>280,9[^60]</td>
<td>5 233[^61]</td>
</tr>
<tr>
<td>SEB</td>
<td>122,5[^62]</td>
<td>2 179[^63]</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>127,1[^64]</td>
<td>1 602[^65]</td>
</tr>
<tr>
<td>Swedbank</td>
<td>108,5[^66]</td>
<td>1 715[^67]</td>
</tr>
</tbody>
</table>

Table 2: The four biggest Swedish Banking Groups

According to a publication by Svenska bankföreningen (2008), the largest banks in Sweden are Swedbank, Nordea, Skandinaviska enskilda banken (SEB) and Handelsbanken, together responsible for approximately 77 percent of the public’s total deposits. Consequently, these banks are therefore of great of relevance to this research[^68].

![Deposits from Swedish public to banks, dec -09](image)

Figure 2: Deposits from Swedish public to banks, dec-09[^69]

[^61]: Nordea, annual report (2010)
[^63]: SEB, annual report (2010)
[^65]: Handelsbanken, annual report (2010)
[^67]: Swedbank, annual report (2010)
2.6. Sample of financial ratios

This research is based on a number of selected financial ratios. Financial ratios are widely used to analyze a bank's performance, specifically to interpret and benchmark the bank's financial performance. A ratio analysis makes it possible to evaluate an organization’s operations, performance and financial position, past or present, in terms of established or recognized standards based on historical experience. The ratios highlights significant, abnormal and changing trend as variations in the data being assessed. They serve as a planning basis to predict future trends, which provide management with a comparative means for assessing "what happened" when variances occur. Standard ratios are used to measure an organization’s performance relative to other representative organizations in a particular industry.\textsuperscript{70}

Since the purpose is to evaluate the eight banks’ performance based on historical experience during a period of five years, a ratio analysis is a useful tool to be able to achieve this. It assists the research to analyse the banks’ financial situations and makes it possible to compare the result within the bank industry in the UK and Sweden to find a “what happened” relationship.

Mentioned in the method criticism, it is important that the chosen method is having both high reliability and validity. To achieve this, the research will be based on relevant ratios, calculated by the researcher, with information taken from the annual reports. Financial institutions such as banks, financial service companies, insurance companies, securities firms and credit unions all have very different ways of reporting financial information. Consequently, six different financial ratios have been used to get an overall view over the banks’ financial situation by measuring it from six various performance related perspectives.

Since this research topic is influenced by previous studies and models, “Prediction of banking failure” by Meyer and Pifer (1970)\textsuperscript{71}, the sample of the financial ratios will coincide with their sample with some small adjustments. The investigation has been based on the annual reports from the years 2006 to 2010 since they are the most relevant years for the financial crisis. To get a high reliability, the ratios from the annual reports have been recalculated to ensure all banks have been using the same information. A few of the ratios require information which has not been possible to collect, whereas the ratios calculated of the banks have been used. Three ratios are identified in the literature as being relevant ratios for analyzing banks’ and financial institutions’ operations while the other three are identified as relevant for analyzing a corporation’s operation generally regardless of the industry.

The financial ratios have been consolidated in charts and tables which will make it easier to discover any possible trends between the banks during the crisis. The empirical data has been chosen to incorporate with the analysis to facilitate the understanding for the reader and to try to avoid unnecessary repetition. In the final discussion, the analysis from the empirical data and the theory will be connected with the problem question and it might give an idea of how the financial ratios differ between the banks in UK and Sweden during these years.

The sample consists of:

- **Credit loss ratio** - measures the relation between credit losses for the bank and operating balance of lending.

- **Cost/income ratio** - measures the relation between cost and revenue. Before and after credit losses.

- **Net interest margin ratio** - measures the relation between net interest profit and their interest earning assets.

- **Earnings per share ratio** - measures the net profit in relation to numbers of shares.

- **Return on equity ratio** - measures the profit after financial revenues and costs in relation to equity.

- **Capital adequacy ratio** - measures the capital base in relation to risk-weighted assets.
3. Theoretical framework

In the theoretical framework chapter the financial ratios, which will act as a foundation for the analysis of the banks’ financial situation, are introduced. Subsequently, a description of the international regulation of the financial institutions is given followed by an explanation of the problems reviled of the regulatory framework by the financial crisis.

3.1. The banking sector

Banks are the major type of a deposit-taking institution. They make their living mainly by taking deposits which represent their liabilities and making loans of these funds to borrowers which represent their assets. They lend out funds to a higher interest rate than they pay to raise the funds, and the difference represents their gross profit margin before expenses and tax\textsuperscript{72}.

3.2. Credit risk analysis

Credit risk is simply defined as the risk the bank is taking of not getting a payment of services due to a loan in time. The services includes payment of interest and other charges, and repayment of the amount of the loan by instalments or otherwise. If these are not paid when they are due, credit risk is involved since the banks not only loose the cost of funds to carry this loan but also the profit that would have been earned on of this amount. A default, therefore, reduces the present value of the loan and consequently the value of the bank’s business. The Credit risk has two components: Business risk and Borrower risk\textsuperscript{73}.

Business risk

This risk is defined as the inability of a business to serve its debt in time. This inability stems the income generation capacity of the business which is affected by the nature of business, the products it sells, the external economic or market environment, the internal manufacturing organization and product mix of an enterprise. If all these variables are in steady state, the business will suffer from no risk but if not, the business will suffer from volatility. This will directly be reflected in the profitability of the business. Banks do not like volatility in the business they are lending to since it causes uncertainty of the repayment of the loan but in the same way the risk is also inevitable. Consequently, it is important to measure the volatility to estimate the risk involved and take a lending decision based on the risk bearing capacity of the lender to get ready to minimize the impact of the risk on lending if the risk becomes reality. The business risks essentially comprise the volatility in the four sectors; Sales, Operations, Finance and the industry\textsuperscript{74}.

Borrower risk

The borrower risk forces the attention of the lender to the promoters and management of an enterprise. It is based on that lending still continues to be a personal business to a large extent. Mutual confidence and clear understanding is the base of good lending which means knowing the lender is like knowing the business. The borrowers risk is consequently a combination of the five Cs:

\textsuperscript{72} Pilbeam, 2010, pg. 47.
\textsuperscript{73} Bhattacharya, 1997, pg. 636.
\textsuperscript{74} Bhattacharya, 1997, pg. 637.
• **Character**- Honour, trustworthiness and commitment.
• **Capacity**- The ability of the borrower to generate cash flows and repay the loan.
• **Capital**- Net worth of the business which provides a safety net in case of upcoming adverse changes in external and internal environment of the business.
• **Condition**- Have to be aware and alert to the changes in the economic and financial environment in which in the borrower operates.
• **Collateral**- A third party guarantee to lower the risk to the lender using it as a securitization to increase the credit worthiness of the borrower\(^{75}\).

### 3.3. Financial ratios

The ultimate success of a company is the value that it creates. A company which destroys value or adds value to one or more groups of stakeholders only at an expense of another is unlikely to survive for long. A way to monitor the value of a company is by creating and assessing the benefit that is being shared among its participant through financial ratios\(^{76}\).

Financial ratios are one of the most common tools of managerial decision making. They are used to evaluate the overall financial condition of a company which involve the comparison of various figures from financial statements, in order to gain information about a company’s performance. Each ratio is intended to assist the process of identifying some aspects of a company i.e. profitability, efficiency or liquidity. Due to this simplification, the opportunity to make a more deep analysis of the company’s financial situation exists.

A ratio by itself is usually a meaningless number since financial ratios have a different signification in different sectors. To make the ratios useful they always have to be compared with other companies, or a trend has to be reviewed. The comparison is usually used with similar -sized companies within the same industry or a trend is observed and detect by looking at the same ratio for the same company in different years. This makes the ratios effective as early indicators of problems or benchmarks for performance measurement but they are also capable of different interpretations, which mean it is necessary for more than one ratio to be considered at a time. Apart from the fact that ratios are comparable, they can also be used in mathematical models, analysis and possess the advantage of high reliability since the financial ratios are calculated from data supervised by the law\(^{77}\).

\(^{75}\) Bhattacharya, 1997, pg. 675-682.
3.4. Prediction of bank failure

“Prediction of bank failure”, is a model by Paul A. Meyer and Howard W. Pifer from 1970, which forecasts bankruptcy in the banking sector. This model claims that four reasons may be cited for bank failures: (a) local economic conditions, (b) general economic conditions, (c) quality of management and (d) integrity of employees.

The following variables were found to be the most important:

- **Error in predicting the ratio of cash flow and securities to total assets.** It is not the actual liquidity level which is important but the unpredicted change in liquidity.
- **Variation in the rate of interest on time deposits.**
- **Ratio of time to demand deposits.** It is suggested that the explanation for the effect of this ratio lies in the differences in cost to the bank of accepting the two different types of deposits.
- **Operating Revenues/operating Costs.**
- **Operating income as a ratio of total assets.**
- **Growth of consumer loans relative to total assets** was negatively related to failure.
- **Growth of cash and securities relative to total assets.**
- **Variation of total loans.** This variation is greater in well managed banks, as they do not seem to follow rules of thumb rigorously and are therefore more abatable to changes in market conditions.
- **Real estate loans as a ratio of total assets.** This ratio was negatively liked to failure owing to the low default rate on these loans and the rise of property values which minimized losses on the foreclosure during this period.
- **Fixed assets to total assets ratio.** Failed banks were characterized by high fixed ratios.

The “prediction of bank failure” model acts as a foundation of the choice of financial ratios.

3.5. Financial ratios used within banks

Financial institutions such as banks, financial service companies, insurance companies, securities firms and credit unions have different ways of reporting financial information. They require special ratios which relate to the provision of services (such as loans) to the financial resources available (such as deposits). Since banks’ profits are based on the net interest received they are depending on the economic situation to be able to maintain as high interest rate margin as possible. This research is analysing six financial ratios with a sample decision based on information from the model “Prediction of bank failure” by Meyer and Pifer.

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81 Paul A. Meyer and Howard W. Pifer (1970)
Credit loss-ratio
The credit loss ratio is a measurement used to determine the quality of a bank’s total lending in the context of default loans. It is desirable not to have a credit loss ratio exceeding 1 percent.

\[
\text{Credit loss ratio} = \frac{\text{Net credit losses}}{\text{Total lending}}
\]

The credit losses appears when the banks have been lending and the bank assume that a certain percentage of loans will default or become slow-paying. Banks enter a percentage as an expense when calculating their pre-tax incomes. This guarantees a bank's solvency and capitalization if and when the defaults occur. High amount of credit losses is a negative sign for the bank’s business but to be able to use the credit losses in comparisons of other banks it has to be put in relation to total lending. The lower value of the credit loss ratio, the better the bank is handling itself in regards to default loans\(^82\). The model by Meyer and Pifer indicates in the first variable the importance of being able to predict liquidity changes. Being able to predict the defaulting loans is more significant than the change itself.

Cost/income ratio
The forth variable in the model of Meyer and Pifer (1970) indicates the importance of considering the operating revenues in relation to operating costs. This ratio is a measurement of the bank’s capacity i.e. the operating revenue’s capacity to cover the operating costs and therefore a high value as possible is sought.

\[
\text{Income/Cost ratio} = \frac{\text{Income}}{\text{Cost}}
\]

During the recent financial crisis it has been more common to put expenses in relation to income. The C/I ratio is not measuring the capacity to cover the operating cost but instead the bank’s capacity to minimize their cost of earning one pound/SEK\(^83\). Consequently, a low value as possible is instead sought. This research will therefore be based on the C/I ratio to give a more accurate picture related to the crisis.

\[
\text{Cost/Income – ratio} = \frac{\text{Cost}}{\text{Income}}
\]

Net interest margin ratio
According to the Fifth variable in the model of Meyer and Pifer (1970) operating income should be put as a ratio of total assets. Since banks’ profits are based on the net interest received, the net interest margin is the ratio to use to find a relationship between the operating income and total assets.

\[
\text{Net interest margin} = \frac{\text{Net Interest Income}}{\text{Average Total Assets}}
\]

The net interest margin ratio measures the difference between the net interest income generated by banks or other financial institutions and the amount of interest paid out to their


lenders in relation to the amount of their interest-earning assets. It is similar to the gross margin of non-financial companies. The net interest is the greatest revenue source for a company’s income statement, the investment margin is therefore an interesting ratio to study while analysing a company’s profitability84.

**Earnings per Share (EPS)**

Earnings per share is the most substantial ratio used to measure a bank’s and other non-financial companies’ profitability. EPS indicates the profitability of the company from the shareholders perspective. It’s a figure widely used in financial analysis and it’s there to reward the ordinary shareholders for their investment.

\[
\text{Earnings per share} = \frac{\text{Net profit}}{\text{Number of issued shares}}
\]

Net profit is the bank’s profit after interest, tax and minority interests but before payment of dividends to ordinary shareholders. The number of shares means the weighted average of issued ordinary shares of the accounting period85.

**Return on equity (ROE)**

Return on equity measures the profit after financial revenues and costs in relation to equity. It measures and values the company and its profitability by revealing how much profit it generates with the money shareholders have invested.

\[
\text{Return on Equity} = \frac{\text{Net profit attributable to shareholders}}{\text{Shareholders’ equity}}
\]

A ROE of 20% means the bank is creating 20 pence of assets for every pound originally invested. This ratio encompasses the three pillars of corporate management; profitability, asset management, and financial leverage. Since this ratio reveals how well the bank balances these components, investors can not only get an excellent sense of whether they will receive a decent return on equity but can also access management’s ability to get the job done. Net profit attributable to shareholders is the net profit after deduction of interest, tax and all other items except dividends (paid and payable). It is the amount available to the shareholders. Equity in this context means the value of assets which may be regarded as owned by the shareholders86.

Return on average equity (ROAE) is an adjusted version of the return on equity (ROE), in which the denominator of shareholders' equity is changed to average shareholders' equity. Return on average equity refers to a company's performance over a fiscal year, so the average-equity denominator is usually computed as the sum of the equity value at the beginning and end of the year, divided by two. A measure of return on average equity can give a more accurate depiction of a company's corporate profitability, especially in instances where the value of the shareholders' equity has changed considerably during a fiscal year. In situations where the shareholders' equity does not change or having small changes during a fiscal year, the ROE and ROAE numbers should be identical, or at least similar87.

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85 Leach, 2010, pg. 3.
86 Leach, 2010, pg. 47.
87 Leach, 2010, pg. 49.
**Capital adequacy ratio (CAR)**

The CAR is a ratio that regulators in the banking system use to ensure banks and other financial institutions have sufficient capital to keep them out of difficulty and can absorb a reasonable amount of loss\(^\text{88}\).

\[
\text{Capital adequacy ratio} = \frac{\text{Tier1} + \text{Tier2 capital}}{\text{Risk weighted assets}}
\]

It determines the capacity of a bank in terms of meeting the time liabilities and other risk such as credit risk, market risk and operational risk i.e. it is a measure of how much capital is used to support the bank’s risky assets. Among the bank’s assets there are loans, credits, which the bank has left out due to the risk of default loans. The CAR is a percentage and according to Basel II standards, it can not fall under 8 percent. Two types of capital are measured for this calculation. Tier one capital is the capital in the bank’s balance sheet that can absorb losses without a bank being required to cease trading. Tier two capital can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors\(^\text{89}\).

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3.6. Regulation of financial institutions

By the authorities, regulation is not only seen as a means of exerting some degree of control over the financial markets but also as a means of maintaining confidence and stability in the financial system. The banking sector has always been more tightly regulated than any other part of the financial sector, both for historical reasons and the fact that most significant financial crises have been associated with problems in the banking industry rather than in other financial intermediaries.

3.6.1. Credit rating agencies

The largest international agencies giving corporate credit ratings are Moody’s Investors service, Standard & Poor (S&P) and Fitch. These companies keep a careful watch on companies’ balance sheets, cash flows and activities and sell these ratings to subscribers to their services. The higher the credit rating given by one of these credit rating agencies are the lower the presumed risk of investment and therefore also the lower expected return to the investor. This means that highly rated corporations can borrow more cheaply than those assumed to have higher risk (i.e. have lower credit ratings).

<table>
<thead>
<tr>
<th>Moody’s grade</th>
<th>Moody’s</th>
<th>Standard &amp; Poor’s</th>
<th>Standard &amp; Poor’s grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best quality</td>
<td>Aaa</td>
<td>AAA</td>
<td>Highest rating</td>
</tr>
<tr>
<td>High quality</td>
<td>Aa</td>
<td>AA</td>
<td>Slightly below highest</td>
</tr>
<tr>
<td>Upper medium</td>
<td>A</td>
<td>A</td>
<td>Strong</td>
</tr>
<tr>
<td>Medium grade</td>
<td>Baa</td>
<td>BBB</td>
<td>Adequate protection</td>
</tr>
<tr>
<td>Speculative elements</td>
<td>Ba</td>
<td>BB</td>
<td>Potential vulnerability</td>
</tr>
<tr>
<td>Speculative</td>
<td>B</td>
<td>B</td>
<td>Greater vulnerability</td>
</tr>
<tr>
<td>Poor</td>
<td>Caa</td>
<td>CCC</td>
<td>Identifiable vulnerability</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>CC</td>
<td>Highly vulnerability</td>
</tr>
<tr>
<td>Highly speculative</td>
<td>Ca</td>
<td>C</td>
<td>Bankruptcy filed</td>
</tr>
<tr>
<td>Extreamly poor</td>
<td>C</td>
<td>D</td>
<td>In payment default</td>
</tr>
</tbody>
</table>

Figure 3: Credit rating agencies


The growing internationalization of finance has made the question of international financial regulation a major issue. Banks increasingly interact with their counterparts in other countries which raises the possibility that the failure of a foreign bank would create significant problems for domestic banks.

The Basel Committee on Banking Regulation and Supervisory Practice, consisting of senior central bank officials from the G10 countries, conducted a review of capital adequacy provisions of banks internationally with the Basel Accord as a result. The Basel Accord had the overall aim of ensuring the soundness and stability of the international banking system. This was done by setting a minimum capital adequacy ratio on all banks so the risk and impact of the collapse of any bank on the system as a whole would be reduced. The other aim

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91 Pilbeam, 2010, pg. 463.
92 Pilbeam, 2010, pg. 133
was to try to improve capital adequacy standards to reflect the risk profile of different banks. All banks were expected to maintain a capital ratio that is risk weighted on the basis of their assets so that if they have to write off some of their assets the bank would not be endangered. The minimum required capital adequacy was decided to be eight percent which means the bank need to have a capital that covered eight percent of their risk. The banks’ capital is separated into two tiers where the tier 1 capital is the core capital, consisting of common stock equity, whereas the tier 2 capital is the supplementary capital consisting of loan-loss reserves. To be able to calculate the ratio, the guidelines consists of a five-category credit risk weighting for bank assets i.e. the more risky an asset is perceived to be, the greater the weight attached to it. The categories consist of 0 percent risk, 10 percent risk, 20 percent risk, 50 percent risk and 100 percent risk. The Basel 1 Accord was the first attempt to ensure some degree of global regulation of the banking system but inevitably it was far from a perfect system and a number of criticisms were made. The biggest problem since the Basel Accord came into operation in 1992 is known as regulatory arbitrage with a result of an increase of the capital adequacy in US, UK and Germany from around 10-10.5 percent in 1992 to 12-13 percent in 2003, well above the required 8 percent. In 1999, the Bank for International Settlements undertook a number of studies to investigate a new approach to the capital adequacy issue. The result was the adoption of the Basel II Accord in 2004.

As the Basel I Accord, Basel II required capital to be at least 8 percent of risk weighted assets. It introduced greater flexibility by allowing approved banks to utilise their own risk management models to ensure sufficient capital adequacy subject to certain minimum. The Basel II Accord is based upon three pillars. The main purpose of the accord is to improve banks’ stability by trying their capital more closely to the riskiness of their assets. By introducing some flexibility, the banks are given the possibility of two approaches to credit risk, the standardized approach and the internal rating based approach, to ensure that they meet capital adequacy requirements.

Pillar 1: Minimum capital requirements. The Accord breaks regulatory capital into three parts to match credit risk, market risk and operational risk. Market risk deals with trading losses and is almost the same as in Basel I. The operational risk is the added risk which represents the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events.

There is two ways of determine the capital required, the standard approach and the internal rating based approach (IRB) The standard approach is the approach prescribed by the Basel I Accord but with some modifications. The purpose is that lending to AAA companies would require a lower risk weighting than lending to BBB-rated companies. The weights to be assigned are generally more detailed than in Basel I. For the internal ratings based approach the banks are approved to use their own risk-management models to determine the riskiness of their portfolios and therefore the amount of capital they need to allocate to hold as a reserves to protect themselves against potentially losses.

Pillar 2: Supervisory review process. Those banks opting for the IRB approach to credit risk will be required to test their models to prove the strength of their capital adequacy and satisfy their supervisory bodies that they are sufficiently well protected against adverse economic and

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market conditions. Pillar 2 means that banks and their supervisors will have to take a view on whether the bank should hold additional capital against risk not covered in pillar 1.

Pillar 3: Market discipline. This pillar is created to complement the other two. It deals with the requirements of the banks to publish information. The purpose is that the banks’ counterparts, investors and customers, should have access to the information to be able to make a judgement about the banks’ risks and financial situation. The hope is to encourage the banks to better manage themselves with respect to dealing with credit risk, market risk and operational risk.

The Accord only covers internationally active banks, but European Union has decided that Basel II Accord should apply to all EU banks whether internationally active or not. India and China have decided to opt out of Basel II entirely. The Basel II was implemented in stages by the end of 2006. However it was overtaken by the credit crisis which started in 2007\(^{94}\). Since January 2007 the Basel II Accord has been applied in Sweden, UK and the other international banks in the G10 countries\(^{95}\).

### 3.6.4. Issues for regulatory reform raised by the credit crunch

Some argue that the new accord exacerbated the problems of the credit crisis by forcing banks to cut lending and raise capital when global economy was in recession. The credit crunch and the extent of failure of the banking system and problems revealed in financial institutions around the globe have made a change of the banking system a hot topic especially in UK and the US whereas the problems where shown to be the greatest. A far more robust framework for the supervision and regulation of financial institutions is about to be put in place. The Key areas for reform includes first of all the issue of capital adequacy meaning 8 percent risk-adjusted assets is too low and it should instead be countercyclical, raised during times of economic expansion to limit credit growth and lowered during times of economic recession to encourage economic growth. The liquidity of the financial institutions has to be better supervised and rules about maintaining levels of liquidity that adequately reflect degree of liquidity risk should be introduced. The model by Meyer and Pifer also argues about the importance of predicting cash flow changes to be able to predict failure. Another key area is the role of the credit agencies which has to be better supervised to prevent over-optimistic ratings to occur. Their role was enhanced by the Basel II Accord 2004 since the amount of capital needed as a reserve on the debt the banks held was determined by the credit rating given by the agencies. As executive performance related pay within the finance industry contributed to executive risk taking of employees, remuneration in the financial sector is another important key area. According to Meyer and Pifer\(^{96}\), the loyalty of employees is a major factor of prediction of failure and has to be controlled carefully to prevent the incentive of self interesting performance. The bad regulation of the over-the-counter market played a significant role for the crisis. The reason why the CDO lending could lead to such ordinary losses was due to the transparency in the OTC market since no one knew precisely who had the losses, the rolling over in debt and rising in capital became very difficult. The CDOs became too complex and lack of standardization made it difficult to understand the risk borne. Also the creation of the off balance sheet entities made it unclear which banks was holding the real risks. There have therefore been suggestions of a centralized reporting clearing system for OTC instruments to be able to report them. The most major improvement in the

\(^{94}\) Pilbeam, 2010, pg. 476-477.


\(^{96}\) Tamari,1978, pg. 45.
regulatory framework is consumer and investor protection, safeguards need to be enhanced in particular deposit guarantee systems. ‘Predatory lending’ in the subprime sector has to be controlled.

According to the “prediction of failure” model by Meyer and Pifer 1970, growth of consumer loans relative to total assets was negatively related to failure. The same applied for real estate loans as a ratio of total assets which was negatively linked to failure due to the low default rate on these loans and the rise of property values which minimized losses on the foreclosure during this period. Having the hindsight accessible, evidences shows this was not the case during the latest finance crisis, the default rate was not low and the rise of properties fell instead of rose. The main reason is found in the drawback in the regulatory system which created incentives and made it possible to lend to the subprime sector without having to think of the disastrous outcome that could occur.

3.6.5. International regulation: The Basel III Accord

After the finance crisis the regulatory framework was questioned and to response to the crisis the Basel Committee on Banking Supervision agreed to strengthen the regulation, supervision and risk management of the banking sector. The Basel III Accord was formed in September 2009 and set out concrete proposals in December 2009 with a comprehensive set of reform measures. The aim is to:

- Improve the banking sector’s ability to absorb shock arising from financial and economic stress, whatever the source.
- Improve risk management and governance.
- Strengthen banks’ transparency and disclosures.
- Bank-level or micro prudential regulation, which will help raise the resilience of individual banking institutions to periods of stress.
- Macro prudential, system wide risks that can build up across the banking sector as well as the pro cyclical amplification of these risks over time.

The Basel III capital standards and new capital safeguard will require banks to hold more capital and higher quality of capital than under Basel II rules. The new leverage and liquidity ratios introduce a non-risk based measure to increase the risk-based minimum capital requirements and measures to ensure that adequate funding is maintained in case of crisis. The capital adequacy will remain 8 percent however, the capital safeguard of 2.5 percent will increase the total amount of the capital a bank must hold to 10.5 percent of risk weighted assets, of which 8.5 percent must be tier 1 capital (core capital). Basel III will be phased in from early 2013 and take full effect in 2019. Indicatively of the Organisation for Economic Co-operation and development (OECD), the implementation of Basel III will decrease annual GDP growth by 0.05 to 0.15 percentage point a year.

According to the Swedish ministry of finance, Anders Borg, the Swedish banks will have to get use to rising requirements of equity and capital adequacy in the next few years. The purpose of the rules is to make the Swedish banks more stable in times crisis. The rules are

considered to be tougher than its European competitors and mistrusted by the industry since the new rules will probably contribute to increased interest rates.\textsuperscript{100}

4. Empirical data and Analysis

In this chapter the banks are introduced. This is followed by a presentation of the financial ratios based on the empirical data and analytical reflection.

4.1. Presentation of the banks

The Royal Bank of Scotland group
RBS group is a British bank and insurance holding company with operations located in Europe, North America and Asia having its head office placed in Edinburgh. RBS group is the largest banking group in Scotland and has been the second largest in the UK and Europe together with the fifth largest in the world by market capitalization. The banking group was rated as the biggest bank in the world measured by assets according to the magazine, Global Finance (2008) with assets valued as $3.65 billion. Their operations involve a wide variety of banking brands offering personal and business banking; Private banking, insurance and corporate finance. The RBS group controls the Royal Bank of Scotland plc which was founded in 1727 having around 700 branches mainly in Scotland though there are branches in many larger towns and cities throughout England and Wales.

In 2007 the RBS group made a faithful decision to take over the Dutch Bank ABN Amro. Due to less scrutiny huge losses was later emerged of approximately €22 billion together with problems from their own loan book which resulted in that they had to be bail out by the UK Government, which took a major 70 percent holding in the bank. The 19th of January 2009 RBS released full year trading losses before write downs of between £7-8 billion. The group also announced write downs of goodwill mostly related to the takeover of Dutch bank of £20 billion. These two write downs of a total of £24.1 billion was be the biggest annual loss in UK corporate history with a drop in RBS group’s share price of more than 66 percent in one day.

The Hong Kong and Shanghai Banking Corporation Limited (HSBC)
HSBC is one of the largest banking and financial services organization in the world. In March 1865 the bank opened its doors for local business in Hong Kong and today it serves customers across the globe as the World’s local bank. The head quarter is placed in London and its international network comprises around 7,500 offices in 87 countries in Europe, the Asia-Pacific region, the US, the Middle East and Africa. HSBC provides a comprehensive range of financial services to around 95 million customers through four customer groups and global businesses: Personal Financial Services including consumer finance, commercial banking, global banking and markets and global private banking.

In the twenty-first century HSBC decided to renewed focus on its birthplace and grew its business in China. Due to the banks diversification and core values of financial strength and

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103 Pilbeam, 2010, pg. 429.
stability the bank had a steady ground during the financial crisis to deal with an uncertain world. In 2002, HSBC expanded further in the US and spend £9bn to acquire the US credit card issuer and subprime lender “Household Finance corporation” (HFC). Under the new name HSBC finance it was the second largest subprime lender in the US. In March 2009 the analyst, Colin Morton said “The takeover was an absolute disaster” and the bank decided to shut down the HSBC finance business and only keep the credit card business operating. Even though the HSBC was in the centre of the subprime storm and had $34 billion in losses when it was forced to write down subprime assets it was still able to handle the finance crisis better than other global banks. The reason was that they has set aside about $53 billion to cover bad loans during the past three years and avoided taking UK government funding.

According to the Forbes magazine’s measures (2010), HBCD was rated as the world’s six-largest banking and financial services group with total assets of $2.418. According to Bloomberg’s analysis, HSBC’s market capitalization is larger than the three other banks; RBS, Lloyd’s bank and Barclay’s all together.

The Lloyd’s Banking Group plc
The Lloyd’s banking group plc is a major British financial institution and the largest retail bank in the UK serving over thirty million people. The Lloyd’s banking group’s operations are organised into four business divisions: Retail banking including mortgages, pensions & insurance and wealth & international. Their head quarter is located in London but their operations are international, operating in US, Europe, Middle East and Asia.
Lloyds TSB was established in 1995 through a merger between the two rival banks, Lloyd’s bank plc and TSB group, to create largest retail bank in the UK at that time. The Lloyd’s Banking Group plc was then formed the 19th of January 2009 through Lloyd’s TSB’s acquisition of Halifax Bank of Scotland (HBOS). HBOS was in a crucial financial situation at this time and it was rescued through the merge with Lloyds TSB. It proved to be fateful to Lloyds TSB as losses in HBOS led to Lloyd’s TSB itself was drawn into the finance crisis. It resulted in that Lloyd’s had to be rescued by the UK government which took a 45 percent stake in the bank.
According to The Lloyd’s Banking Group (2011) the acquisition of HBOS will be a success and it will present them with many opportunities and superior returns.
Barclays plc
Barclays is a global financial service provider engaged in retail banking, credit cards, corporate & investment banking and wealth management, founded in 1690. According to the Forbes magazine (2010), Barclays was rated as the 21st-largest company and the 10th-largest banking and financial services group on the basis of composite measures; sales, profits, assets and market value. The banking group’s headquarter is located in London but has an international presence in 50 countries in Europe, The US, South America, Asia and Africa serving a customer group of approximately 48 million customers. According to Bloomberg analysis the 30 of June 2010 the bank was rated as the third largest bank worldwide measured in total assets of €1, 94 trillion.

Unlike other UK banks during the finance crisis, Barclays did not want accept a bail-out from the UK government and said the move would keep it “strong and independent”. The bank instead insisted to raise £6.5 billion in new capital and not pay out the £2 billion dividend to its shareholders to be able refuse help from the government. Along with the foreign-owned HSBC, Barclays opted not to seek cash from the government and became the only British owned high street bank to be fully independent.

Swedbank
Swedbank was the Swedish bank holding the biggest percentage of deposits from the Swedish public 2009. The bank’s history consists of many fusions and name changes and dates back as far as to 1820, when Sweden’s first savings bank was established. The bank was founded in its present form in 1997, when Sparbanken Sverige merged with Föreningsbanken. In 2006 the bank changed its name from its former name Föreningssparbanken to Swedbank with a vision to enable people, businesses and society to grow. Swedbank has 9, 5 million private customers and about 688,000 corporate customers with 340 branches in Sweden and 220 branches in the Baltic countries. In December 2010 their market capitalization amounted to 109 billion SEK with total assets in March 2011 of 1745 billion SEK.

Swedbank was the most affected Swedish bank during the finance crisis. When Lehman Brothers went bankrupt in September 2008, Swedbank lost a 9 billion SEK loan they had lent them earlier together with their recent investments in the Baltic countries containing loans of 197 billion SEK. Due to high credit loss gained when the Baltic customers were not able to repay their loans, Swedbank was facing a major economic crisis. For Swedbank to be able to survive, Riksbanken had to step in and lend them money. In 2010 Swedbank’s credit

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116 Barclays 2011.
losses was almost non-existing, due to Riksbanken’s “zero interest rate policy” and liquidity support, Swedbank went above all expectations of minimize their credit loss. The Baltic countries, Russia and Ukraine had improved their financial situation dramatically during 2010 which reduced Swedbank’s credit losses from 600 million SEK to 1.5 SEK in one year.\(^{123}\)

**Skandinaviska enskilda banken (SEB)**

SEB was founded in 1856 under the name “Stockholms enskilda bank”. In 1972 Stockholms enskilda bank merged with Skandinaviska banken to form Skandinaviska enskilda banken. Today they have branches in Sweden, Germany, Russia, Ukraine and the Baltic countries.\(^{124}\) SEB has more than five million customers and about 21 000 employees. Their market capitalisation amounted to 123 billion SEK in the end on 2010 with total assets of 2285 billion SEK.\(^{125,126}\) SEB was also struggling with large credit losses in the Baltic countries as Swedbank during the crisis. SEB is the second largest Swedish lender in the Baltic countries consisting of 159 billion SEK, compared to Swedbank’s 197 billion SEK and did also increase their credit losses dramatically after the improvement of the Baltic counties’ economic situation.\(^{127}\)

**Nordea**

Nordea is the result of plenty mergers and acquisitions of Swedish, Norwegian, Danish and Finnish banks; Nordbanken, Kreditkassen (Christiania Bank), Unibank and Merita Bank, during 1997 and 2000.\(^{128}\) However, the family tree of Nordea goes back as far as to 1820. Nordea has branches in Sweden, Denmark, Finland, Norway, Poland, Russia and the Baltic countries with a vision is “To be a great European bank, acknowledged for its people, creating superior value for customers and shareholders. Nordea has 11 million customers of which 700 000 is corporate customers with a work force of 34 138. Their balance sheet amounted to 33 million Euros at the year-end of 2010 with a market capitalisation of 32 billion Euros.\(^{129}\) According to the CEO of Nordea, Christian Clausen, the bank has not been strongly affected by the crisis and they even had plans to merge with Swedbank 2008 to rescue them from having to raise capital to survive the problems in the Baltic countries.\(^{130}\)

**Handelsbanken**

Handelsbanken was founded in 1871 under the name Stockholms Handelsbank. In 1919 Stockholms Handelsbank changed name to Svenska Handelsbanken while listing the company on the stock exchange. Handelsbanken mainly operates in Sweden, Norway, Denmark, Finland and Great Britain. Their goal is to have higher profitability than the average for its competitors and the goal should be achieved by the Bank having more satisfied customers and lower costs than its competitors.


\(^{127}\) Dagens Industri, 2009.


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Handelsbanken has 11 000 employees working in 22 different countries. Their balance sheet amounted to 1603 billion SEK and market capitalization to 134 billion SEK at the end of 2010. Handelsbanken is the bank that’s survived the crisis the best of the Swedish banks included in this research. The reason is mainly because they did not invest in the Baltic countries like the other Swedish banks, but also because they were able to take cheap long-binding loans just before the crisis.

4.2. Financial ratios

4.2.1. Credit loss ratio
Credit loss-ratio shows how much a bank has lost of the total lending due to default loans. The ratio is calculated by dividing credit losses with total lending (both to customers and banks). In the graph and table below a positive credit loss ratio shows the percentage of the banks’ total lending that has been lost.

<table>
<thead>
<tr>
<th>Credit loss ratio</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>-0,0185%</td>
<td>0,0473%</td>
<td>0,2229%</td>
<td>1,7820%</td>
<td>-0,0014%</td>
</tr>
<tr>
<td>SEB</td>
<td>0,0638%</td>
<td>0,0764%</td>
<td>0,2091%</td>
<td>0,8193%</td>
<td>0,1436%</td>
</tr>
<tr>
<td>Nordea</td>
<td>-0,1067%</td>
<td>-0,0223%</td>
<td>0,1612%</td>
<td>0,4937%</td>
<td>0,2664%</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>-0,0043%</td>
<td>0,0018%</td>
<td>0,0975%</td>
<td>0,2062%</td>
<td>0,1225%</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>0,3418%</td>
<td>0,2029%</td>
<td>0,7969%</td>
<td>1,8228%</td>
<td>1,4115%</td>
</tr>
<tr>
<td>Lloyds</td>
<td>0,6793%</td>
<td>0,7341%</td>
<td>1,0625%</td>
<td>2,5173%</td>
<td>1,7583%</td>
</tr>
<tr>
<td>HSBC</td>
<td>1,0038%</td>
<td>1,4145%</td>
<td>2,2949%</td>
<td>2,4617%</td>
<td>1,2034%</td>
</tr>
<tr>
<td>Barclays</td>
<td>0,6877%</td>
<td>0,7250%</td>
<td>1,0635%</td>
<td>1,7494%</td>
<td>1,2178%</td>
</tr>
</tbody>
</table>

Table 3: Credit loss ratio

Empirical data
By examining the graph for the Swedish banks it is visual that they all more or less are following the same pattern. In 2006 three banks even had a negative ratio, this is explained by loans that once got reserved as uncertain, gradually has been reclaimed, and consequently became safe again. This makes the banks credit loss negative which also makes the credit loss ratio negative. Regardless if the ratios were negative or positive they all were around 0 percent during 2006 and 2007, in 2008 the credit losses started to increase and in 2009 the increase was dramatic. Table 1 demonstrate that the biggest difference in the credit loss ratio exist in 2009 where Swedbank by far obtained the highest ratio whereas Handelsbanken were not showing a big difference at all from previous years. Swedbank’s credit loss ratio increased with as much as 1, 56 percentages 2009, SEB’s with 0, 61 percentages and Nordea’s with 0,

33 percentages, while Handelsbanken’s increase was not more than measly 0.11 percentages. The graph below shows Swedish banks credit loss-ratio:

The British banks credit loss ratio is slightly more alternating during these years. They all had credit loss ratios higher than the Swedish banks but the credit loss trend is the same as in Sweden with a massive increase of the ratio in 2009. HSBC’s ratio was already 1 percent in 2007 and steadily increased to 2.46 percent in 2009. Royal Bank of Scotland had a low ratio of 0.20 percent in 2007 which increased to as much as 1.82 percent in 2009. Lloyds had the largest upturn of all banks when they increased their credit loss ratio with 1.45 percentages between 2008 and 2009. The most stable bank during these years was Barclays, with an upturn of 0.69 percentages between 2008 and 2009.

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Analysis
The Credit-loss ratio is measuring the credit losses in relation to total lending. The ratio changes therefore dependently of the changes in credit losses. The aim is to have a small percentage as possible which demonstrates that the bank’s total lending only consists of a small amount of possible defaulting loans.

The income of a bank is the net interest received on their loans. The cost for a borrower is the interest payable for taking the loan. A way for the bank to control its total lending is done by changing the lending interest rate to either increase or decrease lending demand. During the finance crisis the banks had been lending too much capital and capital became scarce. To be able to decrease the lending demand the banks increased the interest rate which resulted in that people, especially in the subprime sector, was not able to repay their loans and the defaulting loans started to rise. Due to the lack of capital the secured loans, mostly properties, fell in price and couldn’t cover the value of the mortgage which contributed to a wave of increased credit losses on the market.

Based on the empirical data we can determine that the two countries are following the same credit loss trend during the 5 years even though the Swedish banks’ ratios were significantly less than the British’s. The only Swedish bank which exceeded 1 percent in its credit loss ratio was Swedbank during 2009, while the same year all the four major banks in the UK had exceeded 1 percent by far. According to the theory above, 2009 was an eventful year with an extreme increase in credit losses. The 19th of January 2009 the Lloyds banking group TSL plc was formed though a merger with HSBO which ended up in a bail out of the government and the same day RBS announced that due to the unfortunate takeover of Dutch Bank Amro they had write downs in trading losses of between £7-8 billion. Lloyds banking group and RSB group had both from 2008 to 2009 a steep rise in credit losses with an increase of the ratio with 1, 45 resp. 1, 02 percentages. Swedbank had a credit loss ratio of 1, 78 percent 2009, a ratio corresponding the same ratio level as the British banks. The reason was based on the loss of 9 billion SEK loan to the Lehman Brothers in September 2008 and the high credit loss gained from the default loans in the Baltic countries at this time. All the three of these banks; RSB group, Lloyds banking group and Swedbank had to be rescued from the government. HSBC which was the second subprime lender in the US and had to write down $34 billion in subprime loan assets, and had during the beginning of the crisis by far the highest credit loss ratio of 2,4 percent due to the takeover of HSF. However, the bank succeeded, without any help from the government, to decrease the ratio with 1,26 percent from 2009 to 2010 due to a safety net of $53 billion to cover bad loans. As HSBC, Barclays also decided not to receive help from the government and instead chose to raise new capital resulted in that banks were able to decrease their ratio the most to a low 1, 20 resp. 1, 21 percent 2010. SEB, the bank after Swedbank with large amounts of lending to the Baltic, had the second highest credit loss ratio during 2009 in Sweden but still kept itself under the 1 percent limit. The most consistent bank during the finance crisis in Sweden and the UK was Handelsbanken, with a ratio the highest of 0.20 percent in 2009, mainly due to avoiding getting excessively involved in the lending market in the Baltic countries.

In the end of 2010 all eight banks had improved their credit loss ratio significantly, especially Swedbank which 2010 had a ratio of -0, 14 percent compare to the year before of 1, 78 percent. The reason was that the financial situation in the Baltic, Russia and Ukraine had improved, their credit losses decreased from 600 million SEK to as little as 1, 5 million SEK.
All Swedish banks ended up with a credit loss of less than 1 percent in 2010 while none of the English even reached the 1 percent goal. Lloyds bank’s total credit losses amounted to 10952 million SEK by the end of 2010. Based on our analysis the conclusion can be made that the Swedish banks were more successful in improving their credit losses than the British and also in increasing their quality of their loan stock.

4.2.2. Cost/Income ratio
The C/I ratio is a financial ratio measuring a bank’s efficiency. It is a proof of how much of the income is representing by costs. In this study the C/I ratio has been calculated by dividing the banks costs with their income. The ratio has been calculated both before and after credit losses to be able to see the credit losses impact on the bank’s costs in times of an economic crisis.

<table>
<thead>
<tr>
<th>C/I ratios before credit losses</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>51,85%</td>
<td>50,78%</td>
<td>49,52%</td>
<td>51,31%</td>
<td>56,83%</td>
</tr>
<tr>
<td>SEB</td>
<td>58,16%</td>
<td>57,35%</td>
<td>61,76%</td>
<td>64,23%</td>
<td>64,94%</td>
</tr>
<tr>
<td>Nordea</td>
<td>51,81%</td>
<td>51,56%</td>
<td>52,90%</td>
<td>49,73%</td>
<td>51,60%</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>42,12%</td>
<td>45,59%</td>
<td>44,26%</td>
<td>47,07%</td>
<td>56,21%</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>44,57%</td>
<td>46,39%</td>
<td>208,88%</td>
<td>55,51%</td>
<td>57,20%</td>
</tr>
<tr>
<td>Lloyds</td>
<td>26,95%</td>
<td>30,54%</td>
<td>86,31%</td>
<td>35,29%</td>
<td>30,53%</td>
</tr>
<tr>
<td>HSBC</td>
<td>47,88%</td>
<td>44,57%</td>
<td>55,43%</td>
<td>43,74%</td>
<td>47,10%</td>
</tr>
<tr>
<td>Barclays</td>
<td>57,17%</td>
<td>56,19%</td>
<td>61,52%</td>
<td>55,80%</td>
<td>62,01%</td>
</tr>
</tbody>
</table>

Table 4: C/I before credit losses

<table>
<thead>
<tr>
<th>C/I ratios after credit losses</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>51,15%</td>
<td>52,66%</td>
<td>58,18%</td>
<td>122,16%</td>
<td>65,88%</td>
</tr>
<tr>
<td>SEB</td>
<td>60,02%</td>
<td>59,87%</td>
<td>69,70%</td>
<td>92,38%</td>
<td>69,93%</td>
</tr>
<tr>
<td>Nordea</td>
<td>48,33%</td>
<td>50,80%</td>
<td>58,59%</td>
<td>66,11%</td>
<td>61,01%</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>42,24%</td>
<td>45,69%</td>
<td>49,63%</td>
<td>57,56%</td>
<td>62,03%</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>51,27%</td>
<td>53,23%</td>
<td>240,08%</td>
<td>94,15%</td>
<td>86,24%</td>
</tr>
<tr>
<td>Lloyds</td>
<td>61,74%</td>
<td>68,77%</td>
<td>91,83%</td>
<td>140,29%</td>
<td>97,06%</td>
</tr>
<tr>
<td>HSBC</td>
<td>62,97%</td>
<td>64,25%</td>
<td>83,59%</td>
<td>77,43%</td>
<td>64,65%</td>
</tr>
<tr>
<td>Barclays</td>
<td>66,88%</td>
<td>68,08%</td>
<td>84,73%</td>
<td>82,75%</td>
<td>79,63%</td>
</tr>
</tbody>
</table>

Table 5: C/I after credit losses

Empirical data
The graph of the Swedish banks clearly shows that SEB has been the bank which has been struggling the most having the highest C/I ratio during all these five years. The most successful bank during 2006-2009 was Handelsbanken with a stable C/I ratio only fluctuating from a level of 45 percent to 56 percent. Nordea on the other hand is the only bank with a lower C/I ratio in 2010 than in 2006, which seems promising for the bank’s future.

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137 Respective banks’ annual reports 2006-2010. Retrieved 2011-05-10

~ 35 ~
Looking at the graph of the British banks clearly indicates that RBS was very affected of the economic crisis in 2008 where their C/I ratio soared to a level of 209 percent from earlier 46 percent. Lloyds was also affected dramatically by the crisis, they almost tripled their C/I ratio from 2007 to 2008. Both HSBC and Barclays handled the crisis better and had a stable C/I ratio during all these years.

If we take a look at the C/I ratio after credit losses for the Swedish banks the big difference compared to the C/I ratio before credit losses is that Swedbank more than doubled their C/I ratio in 2009 when the crisis affected Sweden. SEB also had a tough year in 2009 but managed to stabilize their C/I ratio again in 2010 together with Swedbank. Nordea also managed to lower their C/I ratio in 2010, but not by much. The bank with lowest average C/I

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139 Respective banks’ annual reports 2006-2010. Retrieved 2011-05-10
ratio during these years, Handelsbanken, is the only bank who did not lower their C/I ratio in 2010. Instead it increased with almost 10 percentages in 2010.

Graph 5: Swedish banks C/I ratio after credit losses

The patterns of the C/I ratio for the British banks after credit losses follows the same trend as the one before credit losses. RBS went from 53 percent to 240 percent in 2007 and 2008 to more or less later stabilize it again in 2010. HSBC and Barclays were again pretty stable but their ratio increased in 2008 and 2009. Lloyds again had the lowest C/I ratio in 2006 and 2007 but had a big increase in 2008. In 2008 and 2009 they were once again lowest of all the British banks.

Graph 6: British banks C/I ratio after credit losses

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Analysis
C/I is a ratio that shows the relation between a bank’s cost and income and is calculated by dividing a bank’s cost with its income. A bank is aiming for an as low ratio as possible, around 50 percent is normally considered as really good since it shows that the bank has twice as much costs as revenue.

In 2006 and 2007 both the Swedish and the British banks are having C/I ratios before credit losses of around 50 percent. In 2008 the financial crisis hit Britain and which is revealed in the graphs of the C/I ratios. Especially RBS are having severe problems with costs which are more than twice as big as their revenues, mainly because of their poor decision to take over Dutch Bank ABN Amro. In 2009 the crisis hit the Swedish banking system as well, mostly because of the problems in the Baltic countries were for instance Swedbank and SEB had large investments which resulted in big credit losses. While RBS managed to lower the C/I ratio, Lloyds another British bank got in trouble after saving HBOS through an acquisition. This acquisition unfortunately led to big problems for Lloyds and their C/I ratio after credit losses increased to as much as 140 percent in 2009.

The Swedish banks’ average C/I ratio before credit losses during 2006 and 2010 is ending up with a value of 53 percent, but since the credit losses was the Swedish banks’ biggest concern the C/I after credit losses ended up to an average of 61 percent. The British banks on the other hand had an average ratio of 61 percent before credit losses and 86 percent after credit losses, mainly as a consequence of RBS and Lloyds big problems. Both in 2009 and 2010 the British banks have lowered their average ratios and if the UK gets a whole of their economy, they should be able to lower their ratio even more. The Swedish banks succeeded having a low ratio throughout the whole crisis, but in 2010 the C/I ratio before credit losses increased with 4 percentages which did not look promising. 2010 has however been a good economic year for both Sweden and the Swedish banks, so in 2011 their ratios should go back to normal levels.
4.2.3. Net interest margin

The net interest margin is a measurement to determine whether the bank has made a sensible investment decision or not. A negative net interest margin indicates that the interest expense exceeds the investment returns. The ratio has been calculated by dividing net interest income with average total assets. A high net interest margin indicates to high profitability and for that reason a high interest margin is sought.

<table>
<thead>
<tr>
<th>Net interest margin</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>1.2159%</td>
<td>1.2940%</td>
<td>1.2692%</td>
<td>1.1516%</td>
<td>0.5035%</td>
</tr>
<tr>
<td>SEB</td>
<td>0.7469%</td>
<td>0.7478%</td>
<td>0.7707%</td>
<td>0.8089%</td>
<td>0.7135%</td>
</tr>
<tr>
<td>Nordea</td>
<td>1.1507%</td>
<td>1.1637%</td>
<td>1.1801%</td>
<td>1.0760%</td>
<td>0.9480%</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>0.8878%</td>
<td>0.8554%</td>
<td>0.9568%</td>
<td>1.0276%</td>
<td>0.7811%</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>1.2857%</td>
<td>0.9140%</td>
<td>0.8682%</td>
<td>0.8054%</td>
<td>0.9021%</td>
</tr>
<tr>
<td>Lloyds</td>
<td>1.6950%</td>
<td>1.7502%</td>
<td>1.9555%</td>
<td>1.2337%</td>
<td>1.2429%</td>
</tr>
<tr>
<td>HSBC</td>
<td>2.0511%</td>
<td>1.7933%</td>
<td>1.7438%</td>
<td>1.6652%</td>
<td>1.6368%</td>
</tr>
<tr>
<td>Barclays</td>
<td>0.9518%</td>
<td>0.8642%</td>
<td>0.6993%</td>
<td>0.6945%</td>
<td>0.8731%</td>
</tr>
</tbody>
</table>

Table 6: Net interest margin

Empirical data

By looking at Sweden, we can determine that Swedbank answered for the highest average net interest margin of all the Swedish banks until 2009 while SEB for the lowest. Handelsbanken had the second lowest margin in 2006 but has ever since then increased its margin up until 2010. 2010 was the year where all the banks had a decrease in their margins, especially Swedbank with a decrease of 0.65 percentages.

![Swedish banks net interest margin](image)

Graph 7: Swedish banks net interest margin

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144 Respective banks’ annual reports 2006-2010. Retrieved 2011-05-10

~ 39 ~
Among the British banks the net interest margin is more scattered. During the years of 2006 to 2008 HSBC and Lloyds banking group had a much higher interest margin than RBS and Barclays. In 2009 all banks had a decrease in their net interest margin, especially Lloyds banks which diminished their margin with 0.72 percentages that year. The bank with the most stable margin during this period was Barclays with fluctuations from only 0.95 to 0.87 percent. In 2010 all the banks margins increased apart from HSBC which decreased their margin with 0.030 percentages.

![Graph: British banks net interest margin](image)

**Analysis**

Changes in the net interest margin depend on changes in the net interest or in total assets. To maintain a high margin a high net interest in relation to total assets is required. This is made principally through an increase in the net interest received since a reduction in total assets would indirectly affect the net interest due to less capital available for investment.

Since the net interest is the bank’s most important source of income a maximization is therefore sought, which then is dependent on the size of deposits and lending. The net interest is also dependent on changes in the repo rate which determines the interest rate the bank can charge, the lending demand and the market’s capital supply. If there is a high demand of capital on the market the banks can charge a higher interest and receive a higher net interest margin. The same applies to when a deficit in supply of capital exist, the bank are then able to charge a higher interest.

The banks’ net interest margin 2009 is lower than 2008 except for Handelsbanken and SEB. The reason the margin profile ended up like this for these two banks is when the economy goes from high economy, where capital is not scarce and lending demand is high, to low economy where capital supply has decreased and so has the demand. This contributes to an increase in the net interest margin since the total assets is reduced roughly due to unexpected credit losses. Consequently there is some misguidance with this ratio since it can show a higher profitability value for a bank with lower net interest and total assets than other banks with higher net interest and total assets.

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The trend in Sweden shows that when Riksbanken lowered the repo rate to 0.25 percent in 2009, SEB and Handelsbanken increased their interest margin markedly while Swedbank and Nordea had a slightly decrease. The result may be due to two things, increased lending and consuming demand leading to a total assets increase and a lower net interest margin or due to the enormous credit losses this year which contributed to a write down of the total assets and the net interest margin rose for that reason. As mentioned before, Swedbank had enormous credit losses in 2009 but their decrease in the ratio was only 0.11 percentages which is evidence to the ratio’s drawback. Swedbank’s net interest decreased from 2008 to 2009 although their total assets decreased more than 0.94 percent which made them look more profitable than they actually were. When Riksbanken increased the repo rate again in 2010, Swedbank’s net interest dropped with 65 percent whereas their total assets only decreased with 38 percent. Since the net interest were reduced more than the total assets the ratio also suddenly dropped and ended up with the lowest net interest margin of all the Swedish banks 2010. The other three had pretty much the same decrease in the margin between 2009 and 2010.

During 2007 when the lending demand started to decrease the margin for RBS, Barclays decreased drastically since their assets increased to a great extent while HSBC only felt a slightly decrease and Lloyds continued to increase. The reaction to the UK government’s attempt to stimulate the economy by an extreme drop in the repo rate in 2009 resulted in a decrease in most of the banks’ assets except for Lloyds which had a remarkable increase in total assets 2009 and therefore such a deep drop in the ratio.

In 2006 the British banks had an overall higher net interest margin than the Swedish and after four eventful years, the British banks had recovered and overtaken the Swedish banks in the average net interest margin.

Only by looking at the bank’s net interest margin, the British banks should have been more profitable 2010 than the Swedish. Since previous analysis of ratios shows the opposite, we consequently reject this hypothesis. The net interest margins increases are most likely to be dependent on the reduced total assets due to credit losses instead of profitability. Because the ratio can be misleading, to be able to analyse it we had to look at the total assets and the net interest margin separately.
4.2.4. Earnings per share
The earnings per share ratio is used as an indicator of a bank’s profitability. It is calculated by dividing profit attributable to ordinary shares with the diluted weighted average number of shares. The diluted EPS is used with weighted average number of shares instead of basic EPS since this calculation is then more precise.

<table>
<thead>
<tr>
<th>Earning per share</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>21.11</td>
<td>23.28</td>
<td>19.44</td>
<td>-10.66</td>
<td>6.43</td>
</tr>
<tr>
<td>SEB</td>
<td>18.54</td>
<td>19.88</td>
<td>14.66</td>
<td>0.58</td>
<td>1.24</td>
</tr>
<tr>
<td>Nordea</td>
<td>10.94</td>
<td>11.37</td>
<td>11.29</td>
<td>6.17</td>
<td>5.95</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>20.41</td>
<td>24.84</td>
<td>19.46</td>
<td>16.44</td>
<td>17.72</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>25.61</td>
<td>9.65</td>
<td>-23.70</td>
<td>-0.78</td>
<td>-0.11</td>
</tr>
<tr>
<td>Lloyds</td>
<td>6.62</td>
<td>7.44</td>
<td>1.62</td>
<td>0.86</td>
<td>-0.05</td>
</tr>
<tr>
<td>HSBC</td>
<td>9.54</td>
<td>10.62</td>
<td>3.77</td>
<td>2.54</td>
<td>5.01</td>
</tr>
<tr>
<td>Barclays</td>
<td>9.41</td>
<td>8.62</td>
<td>6.60</td>
<td>9.45</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Table 7: Earnings per share

Empirical data
The most unstable Swedish bank is once again Swedbank which had the highest EPS in 2006 and the lowest in 2009. Nordea had the lowest EPS in 2006 but has been fairly stable throughout all these years and never went under 5.95 SEK. SEB’s EPS dropped a lot in 2009 and went from 15 SEK in 2008 to 0.59 SEK in 2009 and ended up being the bank with the lowest EPS in 2010. The bank with highest average EPS is Handelsbanken, their lowest level during these years was 16.43 SEK. In 2010 Swedbank and Nordea had a EPS of approximately 6 SEK, SEB has the lowest EPS of 1.24 SEK while Handelsbanken is by far the most profitable bank with an EPS of 17.72 SEK.

Graph 9: Swedish banks earnings per share

146 Respective banks’ annual reports 2006-2010. Retrieved 2011-05-10
147 Respective banks’ annual reports 2006-2010. Retrieved 2011-05-10
Three of the British banks are relatively stable during 2006-2010, but RBS’s dropped from 25.60 SEK in 2006 to -23.70 in 2008. HSBC and Barclays both had an EPS about 9.5 SEK, while Lloyds had the lowest EPS in 2006 of 6.62 SEK. In 2008 all the British banks’ EPS decreased and in 2009 Lloyds’ and HSBC’ EPS continued to drop, while RBS’ and Barclays’ increased. In 2010 HSBC and RBS had an increasing EPS whereas Barclays’ and Lloyds’ declined again. Lloyds bank is the only bank with a constant decrease in EPS from 2007 to 2010.

Graph 10: British banks earnings per share

Analysis
Earnings per share is a ratio that measures a bank’s profitability. It is calculated by dividing the bank’s net profit with number of issued shares after full dilution, this can also be called “Diluted earnings per share”. Since the bank report in different currencies we have restated all currencies into SEK, using the exchange rate of the last day of the investigated year. The higher the EPS ratio is the better a bank looks on paper, but it’s important to acknowledge that a rights issue could make the ratio much lower from one year to another.

Looking at the empirical data of the banks EPS ratio the Swedish banks have a higher average ratio during all these years. It is possible to distinguish that the Swedish banks had a decrease in the EPS ratio in 2009, especially Swedbank and SEB with an absolutely outstanding decrease in their EPS ratio. The big reason for this two banks two drop almost twice as much as Nordea and Handelsbanken is the credit losses increasing in the Baltic countries in 2009, and since credit losses directly affect the net profit it is clearly shown in the EPS ratio. As mentioned earlier SEB and in particular Swedbank had a lot of investments in these countries, their credit losses had increased to the consequence that Swedbank had a negative result in 2009. To save their economy some banks did not pay out any dividends, e.g. Swedbank who withheld their dividends in 2008 and 2009.

The British banks had this decrease one year earlier, in 2008, and it was RBS in particular which nosedived down to a level of -24 SEK, mainly because of the losses after taking over Dutch Bank ABN Amro. Barclay seemed to get back on its feet again already in 2009 when

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149 Swedbank, Annual report (2010)
they was the only bank in this research with a positive EPS ratio, but a big decrease in net profit made their EPS ratio in 2010 even lower than in 2008. Due to almost non existing investments in the Baltic countries and long low-cost loans taken before the crisis, Handelsbanken was the only bank which could maintain a high EPS ratio throughout the whole financial crisis. Handelsbanken is also the only bank which seems to have a certain future, since their net profit has been stable during all these years.

All the other banks in Sweden and Britain still have a long way to go to return to its earlier EPS ratio in 2006, especially RBS and Lloyds future is doubtful since they both had a negative net profit in 2010.

150 Neurath.
4.2.5. Return on equity

Return on equity is a financial ratio that indicates a bank’s profitability by revealing how much profit a company generates with the money shareholders have invested. The ratio is calculated by dividing the profit for the year attributable to the shareholders with shareholders equity.

<table>
<thead>
<tr>
<th>Return on equity</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>19.15%</td>
<td>18.75%</td>
<td>14.12%</td>
<td>-11.95%</td>
<td>8.07%</td>
</tr>
<tr>
<td>SEB</td>
<td>20.36%</td>
<td>18.96%</td>
<td>12.55%</td>
<td>1.22%</td>
<td>2.75%</td>
</tr>
<tr>
<td>Nordea</td>
<td>22.31%</td>
<td>19.29%</td>
<td>15.35%</td>
<td>11.55%</td>
<td>11.36%</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>19.89%</td>
<td>22.04%</td>
<td>16.23%</td>
<td>12.96%</td>
<td>12.86%</td>
</tr>
</tbody>
</table>

Table 8: Return on equity

**Empirical data**

In 2006 all the Swedish banks had about the same ROE, Nordea accounted for the highest value and Swedbank the lowest. In 2007 all the banks except Handelsbanken had a decreasing ROE, which continued in 2008 when all the banks ratios decreased. Swedbank and SEB decreased a lot in 2009, from 14.12 to -11.95 percent resp. 12.55 to 1.22 percent. In 2010 Swedbank accounted for the highest increase from -11.95 to 8.07 percent, SEB also had an increasing ROE while Nordea and Handelsbanken both had a slightly decrease. Again Handelsbanken is the most stable bank during the analysed years and has the highest ROE four out of five years.

![Swedish banks return on equity](image)

Graph 11: Swedish banks return on equity

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Looking at the British banks we find three banks that follow a similar pattern whereas RBS is the only bank which stands out. In 2006 the banks are divided into two groups; Lloyds and Barclays, and RBS and HSBC. In 2007 Lloyds and HSBC improved their ROE while the two other banks were declining. During 2007 and 2008 RBS had a decreasing ROE from 15,66 to -43,13 percent, the other banks also decreased, but not to the same extent. In 2009 all the banks had an increasing ROE and RBS improved their ratio the most, despite this they still had a negative ROE. RBS continued to improve their ratio in 2010 together with HSBC while Barclays and Lloyds had decreasing ratios, where Lloyds ended up with a negative ratio for the first time during the analysed years.

Graph 12: British banks return on equity

Analysis
Return on equity is another ratio that measures a bank’s profitability i.e. how much profit a bank generates with the money shareholders have invested. It is calculated through dividing the net profit attributable to shareholders with shareholders equity. The higher the return on equity is the better profitability within the bank.

By comparing the graphs of EPS and ROE it is easy to see that they are very similar. The reason to this is that they are both profitability ratios and that the financial crisis affected them in a similar way. By looking at the graph of the C/I ratio a similar pattern is visual between Swedbank and RBS since they were the banks having the highest cost increases. The increased costs of Swedbank’s were mainly depending on the high credit losses in the Baltic countries, which can be seen from the graph of credit loss ratio. RBS’s biggest increase in cost was not mainly because of credit losses, instead RBS’s higher costs can be deduced to bad investments and take-overs during these years.

As mentioned in chapter one, the high risks the banks were taking contributed to that the crisis became as severe as it did. By looking at the change in the banks’ own equity during this period, it is easy to tell that the British banks were taking on much more risk than the Swedish banks. In 2006 the British banks had a high ROE ratio, mainly because of their low capital of own equity which made their average ratio lower than the Swedish banks. However, during

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the economic crisis the British bank’s ratio decreased dramatically, not just because of a decrease in profits, instead due to having to lower their risks by increasing their own equity. By comparing the British banks’ annual report from 2006 with 2010 the increase in the ratio is shown. Lloyds and Barclays doubled for example their own equity with a significantly lower ROE ratio as a result. Since the Swedish banks were more risk averse than the British they did not have to increase their own equity as dramatically, which made the Swedish banks average ROE ratio twice as high as the British banks in 2010.

The Swedish banks’ forecast for the upcoming years looks promising and during their process of getting the credit losses under control, their ROE ratio will continue to increase. The British banks on the other hand will have a harder time to return to the high ratios they had in 2006 if it is even possible after taking on such big risks. Having a ROE ratio over 20 percent might be considered too risky after the financial crisis’ awakening and the new Basel-rules might make this difficult to achieve in the future.

4.2.6. Capital Adequacy

Capital adequacy is a measure of how much capital is used to support a bank’s risky assets. Due to lack of information in the official reports it has not been possible to calculate the capital adequacy our self. Consequently the numbers reported by the banks in their annual reports have been used instead.

<table>
<thead>
<tr>
<th>Capital adequacy</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>9.80%</td>
<td>9.30%</td>
<td>11.20%</td>
<td>13.50%</td>
<td>13.30%</td>
</tr>
<tr>
<td>SEB</td>
<td>11.47%</td>
<td>11.04%</td>
<td>10.62%</td>
<td>13.50%</td>
<td>12.40%</td>
</tr>
<tr>
<td>Nordea</td>
<td>9.80%</td>
<td>9.10%</td>
<td>9.50%</td>
<td>11.90%</td>
<td>11.50%</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>9.50%</td>
<td>16.90%</td>
<td>16.00%</td>
<td>20.20%</td>
<td>20.90%</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>11.70%</td>
<td>11.20%</td>
<td>14.20%</td>
<td>16.30%</td>
<td>14.00%</td>
</tr>
<tr>
<td>Lloyds</td>
<td>10.70%</td>
<td>11.00%</td>
<td>11.20%</td>
<td>12.40%</td>
<td>15.20%</td>
</tr>
<tr>
<td>HSBC</td>
<td>13.50%</td>
<td>13.60%</td>
<td>11.40%</td>
<td>13.70%</td>
<td>15.20%</td>
</tr>
<tr>
<td>Barclays</td>
<td>11.70%</td>
<td>12.10%</td>
<td>13.60%</td>
<td>16.60%</td>
<td>16.90%</td>
</tr>
</tbody>
</table>

Table 9: Capital adequacy

Empirical data

All the Swedish banks’ capital adequacy ratio was more or less the same in 2006, except SEB holding the highest CAR of 11.47 percent. In 2007 Handelsbanken improved its ratio from 9.5 percent to 16.9 percent, while the three other banks’ ratio was decreasing. No great changes exits in 2008, but Swedbank and Nordea had both a small growth and SEB and Handelsbanken a small decline. 2009 was a good year for all four banks and they all had a growing CAR ratio, Handelsbanken grew the most with 4.2 percentages. Handelsbanken continued to grow in 2010, while the other three banks all had a decreasing CAR.

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Before the credit crisis 2006, HSBC had the highest CAR ratio out of the British banks of 13, 5 percent and the remaining banks were still above the required 8 percent. In 2007, only a slightly change in the ratio occurred, Lloyds, HSBC and Barclays grew with 0,3, 0, 1 resp. 0,4 percentages whereas RBS had a decreasing ratio of 0,5 percent.

In 2008, RBS increased its CAR ratio with approximately 3 percentages together with Barclays and Lloyds while HSBC was the only bank with a decreasing CAR ratio of totally 2, 2 percentages. In 2009 all British banks increased their CAR ratios. Barclay had the biggest increase of 3 percentages and ended up having the highest CAR of the British banks, followed by HSBC.

In 2010 the situation looked bright for the bailed out Lloyds banking group which had the highest increase of 2,8 percentages followed by HSBC with an increase of 2,5. The bank with a situation not as bright was RBS which ended up with a declining ratio of -2,3 percentages by the end of 2010.

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Analysis
A high CAR is sought since the higher ratio the greater protection the bank has against future risks e.g. recession. The ratio is also a measurement used for credit rating which means a high CAR results in low borrowing costs. During these five years all the investigated banks had reached the minimum capital requirement of 8 percent according to Basel II.

The only bank with an outstanding CAR was one of the Swedish banks, Handelsbanken, with a superior CAR from 2007 and forwards. Handelsbanken is also the bank that was least affected by the crisis in terms of credit losses and had therefore enough capital to cover their risky assets. HSBC on the other hand, had a decline in CAR in 2008 mostly depending on the $53 billion capital reserve they had to use to cover the credit losses made from the subprime loans to avoid being rescued by the UK government. By 2010, the British banks had a much higher average CAR than the Swedish, with the lowest value of 14 percent. Aside from Handelsbanken the remaining Swedish banks did not even reach 14 percent.

When calculating CAR according to Basel II one of the elements is to determine the riskiness of their portfolios and the amount they need to allocate to hold as a reserve to protect themselves against potentially losses. Two methods have been used, the standard approach and internal ratings based approach, to determine the capital required. In this study all the Swedish banks and three of four British banks used the IRB approach. For the internal ratings based approach the banks are approved to use their own risk-management models to determine the riskiness of their portfolios and therefore the amount of capital they need to allocate to hold as a reserves. As a consequence of the tree year implementation period for Basel II accord 2004 the new rule began to apply in 2007 Handelsbanken is showing a major increase in the CAR ratio that year compared to 2006.

According to previous theory, there has been criticism against the Basil II Accord’s CAR requirements since the new accord hands over the estimation of risk and capital requirements to the banks themselves which makes the ratio less reliable and it complicates the analysis. Since the requirements are based on internal assessments it complicates the accurate comparison between the banks due to different risk estimations and the values are not fairly assessed. Even though the British banks have a higher CAR 2010 it does not necessarily mean

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they have more capital to cover their risky assets since it is based on assumptions of risk and it is dependent on the degree of risk aversion. According to the article by Yvonne Edenholm (2011)\textsuperscript{157} the Swedish government are talking about increasing the requirements for equity and capital adequacy of Swedish banks to prepare them for upcoming crisis. There has been criticism against this proposal since tightening the capital requirement earlier than other countries when Swedish banks already have a good capital situation would be unnecessary.

\textsuperscript{157} Edenholm.
5. Final discussion

In this chapter a final discussion based on the research question is provided followed by a discussion about reflections encountered during the process to contribute to a conclusion.

5.1. Variance in financial ratios between the banks in the UK and Sweden.

In this chapter the research problem will be discussed to develop sufficient knowledge to draw a conclusion. In the first part the first sub query will be discussed, finding the difference in the financial ratios between banks in the two countries and whether these differences can be applied on why the two countries financial situation ended up being distinguishing different in the end of 2010.

- How do the British banks’ financial ratios differ from the Swedish banks’ during the period of 2006-2010?

The discussion will be introduced with the credit loss ratio which was the ratio that came to be the most distinctive ratio during the crisis. By reviewing the credit loss ratio of both countries, it is possible to notice the same trend among these. Both Sweden and the UK have been following the same credit loss patterns during the crisis with a major increase in 2009 even though the British banks’ average amounted to a much higher value due to larger credit losses in relation to their total loan book. During this time period all Swedish banks, apart from Swedbank 2009, had a credit loss ratio not exceeding 1 percent whereas for the British banks that had not been the case since 2007. In 2010 the Swedish banks had an average credit loss ratio of 0.133 percent while the British ended up on an average of 1.397 percent. This shows that the credit quality and security was a lot higher within the Swedish banks during the crisis.

The British banks’ average C/I ratio before credit losses is slightly higher than the Swedish banks during the crisis, with 61 percent compared to 53 percent. A reason for this is due to RBS’s extremely high ratio in 2008, were they had more than twice as big costs than income of 209 percent. When RBS is excluded in the calculation the average ratio for the British banks is almost as low as the Swedish, with a ratio of 54 percent. Looking at the situation in 2010, the Swedish banks are having their highest ratio during the crisis whereas the British banks are on their way back to their normal ratio. Since the credit loses had a major impact of the banks’ financial situation during the crisis it is important to include the credit losses in the ratio. This gives a clearer picture of where the both countries had their biggest problems. The C/I ratio increases dramatically after adding the credit loss especially for the British banks with an average of 86 percent compared to the 62 percent the Swedish banks received. It should be noticeable that the Swedish banks almost did not have any credit losses at all in 2006 and 2007 and it was not until the middle of 2008 their credit losses started to increase. The British banks have not during these years had an average C/I ratio after credit losses lower than 60 percent and the exceptionally high ratios in 2008 and 2009 showed that the banks were in big trouble.

By comparing earnings per share between the countries it shows that the Swedish banks have had a much higher average ratio throughout all the analyzed years. It is again the same trend within the countries, where the British banks having their biggest decrease in 2008 and the Swedish in 2009. This is a consequence of the banks’ credit losses in both countries during these years. In 2010, 50 percent of the British banks had a negative EPS, which means that
they are still suffering from the crisis and that they have a long way back to being as profitable as they were before. Since the EPS is a profitability ratio this shows that the Swedish banks have a higher profitability 2010 and should be able to increase the EPS even further in 2011.

The Net interest ratio which also measures profitability shows that the British banks have been more profitable than the Swedish during the crisis. As mentioned before, the ratio can be manipulated by increasing or decreasing one of the two components in the ratio, the net interest or the total assets. Since the other ratio earnings per share shows the opposite, the reason why the British banks ended up with a high net interest margin during the crisis mainly depends on their high credit losses which reduced their total assets and in this reversed way increased their net interest ratio. Consequently, this ratio is not usable to compare these countries profitability during the crisis since it is more misleading than leading.

The return on equity for all banks follows the same trend, starting with a similar average of around 20 percent the first two years but again the vast decrease in the ratio for Britain happened in 2008 while it was delayed with one year for the Swedish banks. The main reason for the decrease is a consequence of the big credit losses caused by the economic crisis. It is also possible to tell that the Swedish banks presumably only needed one year to get their profitability continuously up again, while the British banks had a decrease again in 2010. It is showing once again that the Swedish banks have got much further in recovering their profitability level to the one before the crisis while the British banks have a longer process of improvement ahead of them.

Capital adequacy which measures the banks stability is hard to use as a comparison tool due to internal assumptions for risk and capital requirements among the banks. A major part of the banks are using the IRB method containing various estimations from every bank which makes the comparison slightly difficult with lack of accuracy. According to the values taken from each bank’s annual report, the British banks would have had a much more stable economic situation with a higher preparation level for upcoming crisis than the Swedish. 2009 when both RBS and Lloyds bank were bailed out from the government due to major financial difficulties their CAR was as high as 16, 3 resp. 12, 4 percent. Since the CAR is a measurement used as credit rating tool, it was not totally unexpected that the credit rating agencies was able to give a bank an AAA rating just before the bank went bankrupted.

- Can these numeric values be used to compare the two countries’ situation during the end of the financial crisis?

After analysing the different values and trends of the banks’ financial ratios a visual connection between the countries different economic situation during the end of 2010 was found. As concluded earlier in this chapter the financial ratios as a whole tells us that the Swedish banks have a more prosperous economy than the UK. In particular the credit loss, C/I and earnings per share are showing big differences between the countries, these three ratios are also the ratios being the most reliable.

Before starting the analysis, complications about reliability appeared. For the reason that the banks have different names of the components in their annual reports i.e. banks have different ways of how to structure their income statements, it is very important to carefully read and understand the income statement before analysing it. An example is how the banks rapport the net profit attributable to the shareholder, where some banks clearly wrote profit of the
shareholder’s and others divide them into different types of shareholder’s and other groups. It requires that the researcher has a lot of knowledge about the financial ratios, to understand and to know what to include and exclude in the calculations. Since there is a big chance of misunderstanding while reviewing the annual reports of the different banks, the outcome of the comparison might easily be misleading. The reviewing of the annual reports during this research has been done by great accuracy and carefulness which will enhance the reliability.

During the analysis, complications and deficiencies appeared which made the analysis more difficult than expected. Mostly due to three financial ratios were not accurate enough to use as a comparison tool which made the research impaired and the reliability and validity got decreased. The return on equity ratio indicates that the Swedish banks had been more profitable during the crisis but the distinction is not as large as it should have been if the ratio was totally accurate. Since the ROE will be higher when the shareholder’s equity is reduced the ROE had a major decrease during the crisis when the banks increased their equity to protect themselves from insolvency. Due to the implementation of Basel III Accord 2013 the capital required as a safety net for the banks will be higher which will result in a lower ROE even though the banks are as profitable as they were before the crisis.

The capital adequacy ratio which, due to different internal models how to determining the capital requirements to cover the risk related assets, was not accurate enough for the CAR ratio to be used as a comparison tool. Since the ratio was increased after the Basel II was implemented and the British banks ratio were symbolising a higher profitability than the Swedish, shows the affect of the internal incentives of window-dressing the banks stability. Due to all criticism related to Basel II and the drawbacks about using the ratio as a credit rating tool by the credit agencies the Basel III was implemented. This might be a solution of being able to use the ratio as a comparison tool again, as it could be used during Basel I, but since it is still influenced by internal judgment it is not a useful tool for this research.

Another financial ratio that had deficiencies in validity is the net interest margin ratio. It is a good tool to use to judge a banks’ profitability but since it is easily manipulated, it showed a totally different profitability pattern than the other ratios and was therefore misleading by itself. Since the amount of the total assets that had to be written down in value due to the default loans, the total assets were reduced more than the net interest and the ratio showed an increase in profitability which was not the case.

To conclude, complications with reliability appeared while analysing and using the financial ratios as a comparison tool. Although, the remaining three ratios were usable since they showed a clear relationship between their values and the economic situation for both countries. Since the research is investigating banks from two different countries difficulties of interpreting the values appeared and had therefore to be reviewed with precision and carefulness.
5.2. Further reflections

Apart from the discussion connected to the financial ratios, there have been some further reflections connected to the reason why these countries could end up getting out of the recession differently.

According to the research report concerning the Swedish banks’ financial situation during the crisis 1990-1994 and the crisis 2007-2008 the banks financial ratios showed a more stable and profitable profile during the later crisis. If this can have something to do with Sweden’s successful fourth quarter of 2010 is worth to discuss. According to the research by Jeanette Nilsson & Cynthia Osorio (2009), Sweden had more extensive credit losses during the previous crisis than during the recent crisis. If Sweden has learned anything from the previous crisis was a discussed phenomenon. Since the Swedish banks’ credit loss ratio was much lower during the crisis 2008-2009 it might be a proof of increased risk aversion during this crisis and was therefore not too involved in risky securities and subprime mortgage lending. There are plenty of similarities between the emergences of both crises even though the first one was not global. Both crises started with a high economy which contributed to an increase in investment and consumption growth followed by rising inflation, rising lending demand and rising house prices. The economy got fed up in the end and went unexpectedly the other direction and interest rate rose, lending demand fell and house prices fell and massive credit losses emerged. During the recent crisis Handelsbanken had exceptionally low credit losses together with Nordea. According to the research by Emma Karlsson and Karin Neuman (2008) all banks in Sweden had a credit loss ratio higher in 1992 (the most affected year of that crisis) than in 2009 with no bank having a ratio below 2, 8 percent. During 2009 which was the most affected year during the recent crisis, Sweden had an average credit loss ratio of 0, 82 percent which was as low as one third of the credit loss ratio 1992. To try to find a relationship with the British banks during 2009 and the Swedish banks 1992, the British banks were almost touching the same credit loss ratio with an average of 2, 14 percent. Since the UK bank’s were not as risk averse and did not have the experience of a recent banking crisis it was easier to be more risk neutral and incentives of taking on more risk was created.

Based on the research by Dobrimil Serwa (2010) banking crises do cause a slowdown in output growth. The reduced growth in credit use causes a reduction in accumulated four year GDP growth by around 2 percentages. Dobrimil also indicates that economic crises are expensive for an economy at least in short term and it is the size of the crisis that matters for economic growth. On the basis on the model, the size of the crisis might be a reason why the UK had to pay a higher price for the financial crisis than Sweden. Using the financial ratio analysis, the Swedish banks were more stable, secure, efficient and had a higher capacity to cover their costs after credit losses than the UK by the end of the crisis. Sweden also had a GDP growth of 7, 3 percent compare to the UK’s 0, 5 percent the last quarter of 2010. There is sustainable evidence to confirm that the size of the crisis in UK was bigger than in Sweden due to higher reduction in credit use. Based on the model by Dobrimil Serwa this would be the reason why the GDP growth in the UK was affected with a major slowdown during this period.

According to previous theory about the issues for regulatory framework, it states that the relationship between the crisis and the extent of failure of the banking system and problems revealed in financial institutions has been very spoken about in the UK. The capital adequacy problem has been one of the key areas meaning the minimum 8 percent risk adjusted assets was too low and it was too misleading having it constant during different economic conditions.
and it should be adjusted more to the economic environment. Even though The British banks had an average capital adequacy of 14.75 percent in 2009 two British banks had to be bailed out the same year. Consequently, the minimum CAR should have been higher during 2009 since a ratio of 14.74 were clearly not enough. The credit agencies which got an enhanced power by the Basel II accord 2004 played a significant role in starting the banking crisis. The amount of capital needed as a reserve on the debt the banks held was determined by the credit rating given by the agencies which ended up being obviously over optimistic credit ratings, especially in the UK. The British banks were also heavily involved in the OTC market and CDO lending, which due to transparency and drawbacks in the regulatory framework the British banks did neither know who was bearing the risk or the riskiness of these investments. The lack of costumer and investor protection in the UK, for instance the bank run of Northern Rock 2007 as a result since the UK government failed to make any guarantee to protect debtors beyond the statutory commitment, the faith in the banking system in UK dropped and so did the credit use.

The research by Domingos Rodriguez Pandelo Junior (2009) is used to reinforce the previous assertion. The research indicates that crises are most associated with macroeconomic shocks and less effective regulatory or legal systems. The stability within the banking system is brought up again, and he states that without stability in the banking system monetary stability cannot be achieved and banking crises will contribute to greatly costs to the society which adds to the previous discussion about the drawbacks with the regulatory framework and this might affected the British banks more than Sweden.

In indication of the “prediction of failure” model by Meyer and Pifer 1970, the reasons for bank failures are local economic conditions, general economic conditions, quality of management and integrity of employees. This means it is not only the internal management that is responsible for banking failure. The external factors i.e. economic conditions the bank itself can not affect are as responsible. The UK banks could have affected their situation by not being as risk neural but the changes in the economy is harder to predict. The model is made 1970 and states that growth of consumer loans relative to total assets are negatively related to failure. The same is applied for real estate loans as a ratio of total assets which is also negatively linked to failure due to low default rate because of rising property value. This was the way the mortgage lenders looked at the economy until the credit crunch showed them the opposite and that the risk connected to the subprime loan was totally underestimated. Sweden had gone through this once before during the crisis 1990-1994 and was therefore more sceptical in subprime mortgage lending and the banks kept their credit loss below 1 percent throughout the financial crisis, except for Swedbank 2009, compared to the UK.
6. Conclusion

This research report sought to answer whether the financial ratios within the British banks differ from the financial ratios within Swedish banks during the period of 2006-2010. The reason is to determine if these differences can be used to compare the financial situation of the two countries during the end of the financial crisis.

• How do the British banks’ financial ratios differ from the Swedish banks’ during the period of 2006-2010?

Based on the result of the calculated ratios, it confirms that the Swedish banks have been more profitable, have had a more secure and higher quality of lending and more capacity to lower cost related to income than the British banks. Some of the banks have distinguished themselves more than others during the analysis but based on the average economic profile of the banks the argument is still valid. The trend among the two countries’ banking situation follow, in most cases, the same patterns but as mentioned earlier the Swedish banks’ ratios have in general been more stable. The more distinctive negative influence in the UK is mostly based on the larger amount of credit losses the British banks had to experience which contributed to their significant decrease in earnings per share, return on equity and the increase in the C/I after credit loss and in the credit loss ratio.

• Can these numeric values be used to compare the two countries’ financial situation during the end of the financial crisis and if so, what conclusions can we make?

Since the research had to reject three of the ratios (net interest margin, capital adequacy and return on equity) due to lack of comparability and reliability the result is only fully based on three financial ratios. However, using the remaining three, a visual relationship is found between the outcome of the analysis and the difference in GDP growth between the countries during the end of 2010. According to the ratio analysis the huge credit losses affected the British banks’ economic situation more than the Swedish’ since its size and influence happened to be much bigger in the UK. Out of the remaining three ratios the credit loss ratio was the most usable for our question since the credit losses was affecting the earnings per share ratio and C/I after credit loss as well.

As an answer to the question, the financial ratios can be used to compare the two countries’ financial situation during the end of the financial crisis but only to a certain extent. As mentioned in the theoretical chapter, financial ratios are only numeric values easy to manipulate and they have to be evaluated with caution. They are giving us an overview of the financial situation and the relationship between the components in the ratio but they are not explaining why the relationships appear. By only using the ratios in the analysis and not taking any other theory into consideration, the outcome would have been too simplistic. For this thesis, more than an analysis of the ratios was necessary to be able to give an answer to the question. By bringing in evidence from other scientific articles, the analysis of the ratios could be more accurate and a deeper understanding of the results was made possible.

According to regular macro-economic theory GDP are dependent on economic stimulation. Through the ratio analysis it was possible to notice the difference in the credit loss ratio between the two countries. The ratio was continuously higher in the UK during these five years and when the decreased confidence for the banks appeared in the UK, a huge drop in consumption came as a result which contributed to a slowdown in GDP growth.

~ 56 ~
Consequently, it was possible to use the ratio analysis to see the exact difference between the two countries’ credit loss ratio. But to get a deeper understanding of the GDP growth differences during the last quarter of 2010 the ratios themselves were not reliable enough and scientific articles had to be taken into consideration.

The conclusions that can be made on basis of the financial ratios analysis, external scientific articles and theory is that Sweden obviously had a stricter lending policy resulting in less credit losses than the UK. The Swedish banks’ credit loss ratio were significantly lower than the British’ during the whole crisis being a result of the changes in attitude to risk and the experience Sweden had embraced from the previous crisis. The evidence from the research by Dobrimil Serwa (2010) further supports the relationship saying it is the size of the crisis that matters for GDP growth. Since the credit losses never got to the same levels in Sweden as in the UK the scepticism of the Swedish banking system did not affect the reduction in credit use and house prices to the same extent, which made it possible for the Swedish GDP growth to recover back to normal levels earlier. As a consequence of the slowdown in British GDP growth the margins for not falling back into the recession were small and due to the severe weather conditions in December 2010 the UK ended up with a GDP growth of 0.5 percent and was on the edge of falling back into the recession.

6.1. Suggestions for future research

Since both countries are still recovering from the economic crisis, it could be interesting to develop a new study concerning the two countries recovery from the crisis as a final result of how it all ended up. That would make it possible to explain questions what finally made the British bank to recover back to normal economy and if it could have been possible to come to such a conclusion already at this point? What lessons did the banks learn from the crisis? What changes have they done to prevent this to happen again? These are questions that are too early to answer in this thesis. By involving an additional country from outside Europe, e.g. the United States or China would give the research a global approach and a deeper understanding of the impact of the crisis.

Another thing that would have been interesting to investigate is how Basel III regulations come to affect the banking system and the economy in general. Since Basel III is not fully implemented until 2019, that study has to be put on hold, until at least 2020, before having perspective enough to come to a good conclusion.

For the reason that the house prices in Sweden proved to be unexpectedly little affected by the financial crisis, there have been discussions about whether the Swedish houses are overpriced. The households debts have also continued to increase in a pace exceeding the income growth which have led to a discussion concerning the situations sustainability. The house price situation in Sweden today has similarities with the situation in the US before the financial crisis. Since the widespread fall in house prices that occurred in the US contributed to major economic problems there are worries that Sweden could face a similar development. It would therefore be interesting to investigate whether Sweden is capable of facing such a disastrous future or if Sweden has a better financial foundation to avoid such thing to occur.
References


Barclays, annual report 2006-2010


Handelsbanken, annual report 2006-2010


HSBC, annual report 2006-2010


Lloyds banking group plc, annual report 2006-2010


Nordea, annual report 2006-2010


Royal Bank of Scotland banking group, annual report 2006-2010

SEB, annual report 2006-2010


Swedbank, annual report 2006-2010


Supplements

Supplement 1

This supplement shows the British and Swedish banks’ balance sheet amounts during 2006 and 2010.

![Swedish banks balance sheet amount](chart1)

![British banks balance sheet amount](chart2)
<table>
<thead>
<tr>
<th>Balance Sheet amount</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedbank</td>
<td>1 352 989 kr</td>
<td>1 607 984 kr</td>
<td>1 811 690 kr</td>
<td>1 794 687 kr</td>
<td>1 118 504 kr</td>
</tr>
<tr>
<td>SEB</td>
<td>1 934 441 kr</td>
<td>2 344 462 kr</td>
<td>2 510 702 kr</td>
<td>2 308 227 kr</td>
<td>2 179 821 kr</td>
</tr>
<tr>
<td>Nordea</td>
<td>3 128 948 kr</td>
<td>3 274 642 kr</td>
<td>3 801 914 kr</td>
<td>3 555 623 kr</td>
<td>3 125 479 kr</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>1 790 008 kr</td>
<td>1 859 382 kr</td>
<td>2 158 784 kr</td>
<td>2 122 843 kr</td>
<td>1 602 626 kr</td>
</tr>
<tr>
<td>Royal Bank of Scotland</td>
<td>11 668 474 kr</td>
<td>11 197 901 kr</td>
<td>9 951 753 kr</td>
<td>10 065 040 kr</td>
<td>9 141 322 kr</td>
</tr>
<tr>
<td>Lloyds</td>
<td>4 600 777 kr</td>
<td>4 415 234 kr</td>
<td>3 923 889 kr</td>
<td>3 968 557 kr</td>
<td>3 604 343 kr</td>
</tr>
<tr>
<td>HSBC</td>
<td>12 727 585 kr</td>
<td>12 039 104 kr</td>
<td>14 606 950 kr</td>
<td>13 285 812 kr</td>
<td>12 504 294 kr</td>
</tr>
<tr>
<td>Barclays</td>
<td>13 346 978 kr</td>
<td>12 808 713 kr</td>
<td>11 383 308 kr</td>
<td>11 512 890 kr</td>
<td>10 456 296 kr</td>
</tr>
</tbody>
</table>
This supplement shows a comparison of the different financial ratios between the countries. It is made by using the average figures per ratio and year of the four banks of every country.

### Credit Loss

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>-0.0164%</td>
<td>0.0258%</td>
<td>0.1727%</td>
<td>0.8253%</td>
<td>0.1328%</td>
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<tr>
<td>UK</td>
<td>0.6781%</td>
<td>0.7691%</td>
<td>1.3044%</td>
<td>2.1378%</td>
<td>1.3977%</td>
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### C/I before credit losses

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>50.99%</td>
<td>51.32%</td>
<td>52.11%</td>
<td>53.09%</td>
<td>57.39%</td>
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<tr>
<td>UK</td>
<td>49.34%</td>
<td>49.79%</td>
<td>96.79%</td>
<td>55.93%</td>
<td>54.87%</td>
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### C/I after credit losses

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>50.43%</td>
<td>52.26%</td>
<td>59.02%</td>
<td>84.55%</td>
<td>64.71%</td>
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<tr>
<td>UK</td>
<td>60.72%</td>
<td>63.58%</td>
<td>125.06%</td>
<td>98.66%</td>
<td>81.89%</td>
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### Net interest

<table>
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<tr>
<th></th>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
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</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>1.0003%</td>
<td>1.0152%</td>
<td>1.0442%</td>
<td>1.0160%</td>
<td>0.7365%</td>
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<tr>
<td>UK</td>
<td>1.4959%</td>
<td>1.3304%</td>
<td>1.3167%</td>
<td>1.0997%</td>
<td>1.1638%</td>
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</table>

### EPS

<table>
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<tr>
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<th>2008</th>
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<th>2010</th>
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<tbody>
<tr>
<td>Sweden</td>
<td>17.75</td>
<td>19.84</td>
<td>16.21</td>
<td>3.13</td>
<td>7.84</td>
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<tr>
<td>UK</td>
<td>12.79</td>
<td>9.08</td>
<td>-2.93</td>
<td>3.02</td>
<td>1.96</td>
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</table>

### ROE

<table>
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<tr>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>20.43%</td>
<td>19.76%</td>
<td>14.56%</td>
<td>3.45%</td>
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<tr>
<td>UK</td>
<td>20.73%</td>
<td>20.14%</td>
<td>-3.93%</td>
<td>8.28%</td>
<td>3.65%</td>
</tr>
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### CAR

<table>
<thead>
<tr>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>10.14%</td>
<td>11.59%</td>
<td>11.83%</td>
<td>14.78%</td>
<td>14.53%</td>
</tr>
<tr>
<td>UK</td>
<td>11.90%</td>
<td>11.98%</td>
<td>12.60%</td>
<td>14.75%</td>
<td>15.33%</td>
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</tbody>
</table>
Credit loss ratio

Net interest ratio
Supplement 3

In this supplement the used exchange rates are demonstrated. Every exchange rate is taken from the last day every year, since that is the date the annual reports been based on.

<table>
<thead>
<tr>
<th>Historic exchange rates</th>
<th>2006-12-31</th>
<th>2007-12-31</th>
<th>2008-12-31</th>
<th>2009-12-31</th>
<th>2010-12-31</th>
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</thead>
<tbody>
<tr>
<td>GBP/SEK</td>
<td>13.39</td>
<td>12.85</td>
<td>11.42</td>
<td>11.55</td>
<td>10.49</td>
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<tr>
<td>USD/SEK</td>
<td>6.84</td>
<td>6.47</td>
<td>7.85</td>
<td>7.14</td>
<td>6.72</td>
</tr>
<tr>
<td>EUR/SEK</td>
<td>9.02</td>
<td>9.44</td>
<td>10.96</td>
<td>10.25</td>
<td>9.01</td>
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