

## **Basel III and Its Impacts on International Swedish Banks**

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<p>This thesis will present the Basel III framework and discuss its possible implications on the banking industry, focusing specifically on the Swedish banking industry. There will also be an analysis of two Swedish banks, Handelsbanken and Nordea to map their readiness to comply with the Basel III requirements. The objective of this thesis was to gain in-depth knowledge of the current framework still in progress, of its final development and implementation. The two banks were examined to compare the impacts on the chosen banks. The author's professional background and personal interests were also behind the choice of topic. The thesis process began late in the spring of 2012 and the main methods used were collecting information from several reliable publications and making conclusions based on the gained information. The results of the thesis show that the Basel III framework has serious effects on the whole banking industry. Positive impacts include for instance increased financial stability. However possible additional costs may also occur due to up-coming changes in the banks. The banks analyzed, Handelsbanken and Nordea, proved to be extremely well equipped to comply with the Basel III requirements even though the Swedish government will most likely require higher requirements than proposed by the Basel III framework. This is justified due to the higher risks related to the Swedish banking industry compared to the European level, which is also discussed in the research.</p>	
<b>Keywords</b> Basel III, financial analysis, banking industry, liquidity risk management, capital requirements, Handelsbanken, Nordea	

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## **Abbreviations**

AFR Available Financial Resources

BCBS Basel Committee on Banking Supervision

BIS Bank For International Settlements

CET Common Equity Tier

EBA European Banking Authority

EC Economic Capital

IMF International Monetary Fund

LCR Liquidity Coverage Ratio

NSFR Net Stable Funding Ratio

RWA Risk-weighted Assets

# **1 Introduction**

## **1.1 Research Objectives and Methods**

The objectives of this thesis were to find out if the Basel III framework has significance importance on the chosen banks and how in general it will affect the banking industry. These objectives were chosen to gain information of the important concept causing changes in the global banking industry.

Qualitative research was used to conduct the thesis work. The author justifies the choice of the research method by Ghauri & Gronhaug (2010) who mention that with the qualitative method, the emphasis is on understanding the phenomenon and that is exactly the purpose of this thesis work. It is also said that "the experience of the researcher plays an important role in the analysis of the data" (Ghauri & Gronhaug 2010) and the author hopes that her experience in the banking sector will have a positive influence on the research of the thesis. "Research problems focusing on uncovering a person's experience or behaviour, or where we want to uncover and understand a phenomenon about which little is known, are typical examples of qualitative research". (Ghauri & Gronhaug 2010.)

The primary method of this thesis is qualitative research in order to gain in-depth information of the Basel III financial framework and its implications on the chosen banks. The information is gathered by the use of secondary data, mainly the reliable publications by internationally recognized authorities and the researched banks. The primary data is created by author's own findings and analysis conducted with the use of public information, thus making this thesis transparent to any inspection. However this also might lead to some differences in other studies that are based on confidential material.

Data was collected by the use of several reliable sources, mainly from the publications of internationally recognized financial institutions such as IMF, BIS and Sveriges Riksbank.

bank to name a few. Special attention was on using up-to-date information by selecting sources that are current.

## **1.2 Research Problem and Significance**

The aim of this thesis is to provide in-depth information on the Basel III framework and to analyze its influences on the important international Swedish banks. The purpose is to map the differences and similarities of the capital and liquidity situations of the researched banks and to provide some suggestions of where they need to make improvements to comply with the Basel III requirements. The research problem can be defined as what are the potential influences of Basel III framework on the banking industry, specifically the Swedish banking industry and Handelsbanken and Nordea.

This thesis has practical significance as it provides value to the analyzed banks by providing information that has been collected and analyzed from different reliable sources. Working with this topic has also provided value for the author by enabling her to deepen her knowledge of the banking industry and the requirements. The thesis has also had a positive impact on the author's professional development.

## **1.3 Structure and Demarcation**

Thesis will first present the reasons and background information why the framework was created, by introducing the economical reasons and briefly presenting the previous Basel accords, on which the current Basel III framework has been built on. Then the actual Basel III framework and its different aspects and requirements are explained to build up the theoretical background for the financial analysis of the banks. The requirements include capital and liquidity requirements as well as special criteria for the systemically important financial institutions and Swedish banks. Theoretical part will also include the scheduled implementation for the framework.

In the empirical part there will be an overview of the studied banks, Handelsbanken and Nordea and an analysis of the banks' abilities to comply with the Basel III framework. The results will be discussed and analyzed in the final part of the thesis. This

thesis is focused on the Basel III effects on the Swedish banking industry and the two analyzed banks; Handelsbanken and Nordea.

#### **1.4 About the Author**

The author has worked in both banks; a 5-month-period in Nordea bank in a branch focusing on personal clients and the author currently works for Handelsbanken Finance. This has had an influence on the choice of the analyzed banks, as for personal interests it is interesting to conduct a research of banks that are familiar to the author by professional experience and since there are still some contacts that the author can use to share the information gained from this research for these two companies. The author has sincere interest on the economical world and the global banking industry and hopes this thesis can be a stepping stone for further professional development.



## 2 Reasons Behind Basel III

### 2.1 Economical Environment

There are a number of factors that lead to the financial crisis, which in then resulted in the decision that the existing banking regulatory requirements had not been sufficient. The previous Basel I and II frameworks had been inadequate to prevent the crisis and it was clear that some new common rules were desperately needed to stop the crisis from happening again in the same magnitude.

The need for the Basel III regulatory framework rose from the financial crisis that started in the year 2007. It became evident that the problems many of the banks were facing were due to the insufficient liquidity risk management. Similarly Ötoker-Robe et al. (2010, 7) also discuss the problems leading to the financial crisis, that were related to the governance practices and risk management systems, but they add that the supervision was not adequate in identifying and fixing these short-comings. Ötoker-Robe et al. (2010, 5) also state that before the crisis began, there was a rise in the leverage as well as significant reliance on short-term wholesale funding and off-balance sheet activities. In addition the banks experienced problems related to maturities and increased revenue shares created by complex products and trading activities. According to Ötoker-Robe et al. (2010, 5) there was also a problem with regulatory ratios. They were not sensitive enough to the build-up various risks. Capital also lacked quality or it was simply inadequate to provide a buffer. (Bank for International Settlements 2010b, 3; Ötoker-Robe et al. 2010, 5.)

According to the Bank for International Settlements, banks in a number of countries had cumulated excessive on- and off-balance sheet leverage. BIS also points out, agreeing with Ötoker-Robe et al., that the level and quality of the banks' capital was also insufficient, which resulted in the banks' failure to absorb the trading and credit losses. The crisis revealed that since there was no common criteria for the capital, it could not be compared between different institutions. (Bank for International Settlements 2010a, 1.)

The financial crisis has revealed a lot of deficiencies in the regulation of the banking industry. In the future the banks are required of considerably higher amounts of high-quality capital to protect themselves against losses. Before the crisis, some banks had as little as 2 % of high-quality capital of banks' risk-weighted assets. All together the banks had to have at least 8 % of risk-weighted assets. However the criteria for the capital was not that strict and as it turns out most of those capital reserves were not actually available for covering the losses in the crisis. (Vauhkonen 2010, 21.)

The vulnerability of the banking industry was increased also by the calculations of the risk-weighted assets. There was a small requirement of own capital if at all for most of the risk type. This encouraged the banks to lower their capital requirements by taking advantage of the holes in regulations and by conducting harmful financial innovations. Banks among other things for example transferred their complex non-liquid financial instruments from their banking books to their trading books because they needed only a small amount of own capital for the financial instruments in the trading book. The risks related to these instruments were drastically underestimated. (Vauhkonen 2010, 21.)

Sveriges Riksbank (2011, 13) gives several reasons as to why banks decided to use other sources of funding and the amount of capital-funded assets gradually declined. Over the years banks have had substantial incentives to prefer debt financing to capital. The main reasons relate to the fact that banks aim to have lower costs on total capital costs and aim to maximize shareholders' returns. Costs are normally lower with funding operations through loans instead of capital for banks because lenders require smaller compensations for risks than shareholders, making loans cheaper. In addition banks can use their pre-tax profits to pay interest expenses. (Sveriges Riksbank 2011, 13.)

Vauhkonen adds that because of a low amount of own capital and underestimated risks, many of the banks did not have the means to cover for their losses, which was revealed for good in the fall of 2008. The losses created by the financial crisis almost lead to the downfall of the entire international banking industry and in many countries

the banks had to rely on massive amounts of public financing to survive. In order to avoid the same thing from happening again the G20 countries decided to authorize the Basel Committee on Banking Supervision (also referred to as the BCBS) to improve the Basel II regulations. The improvement was named the Basel III accords. It was created to amend the deficiencies of Basel II and to create completely new regulation instruments. (Vauhkonen 2010, 21-22.)

Before the financial crisis in 2008, banks' corporate and retail lending in Europe increased to a new level. The drivers of this development were among other things low interest rates, generous credit terms and a favorable economical situation. Banks' assets increased due to more lending but equity was not keeping up with the pace. Wholesale funding was mainly used to fund assets, leading to deterioration of capital adequacy. The leverage rose, as did the bank debt in relation to equity and the equity in relation to assets dropped. However the banks were able to increase their profitability because the market funding is comparably inexpensive form of funding. This would have not been possible to the same extent if the banks had used only equity and retained profits but at the same time they were facing larger risks because of this. When the crisis broke out it became evident that they lacked adequate capital to survive with the losses. (Sve- riges Riksbank 2011b, 46.)

## **2.2 The Basel Committee on Banking Supervision**

The Basel Committee on Banking Supervision (BCBS), founded in 1974, was created with the goal to provide a forum for the issues concerning banking supervisory. Although the Committee does not actually have any formal supranational supervisory authority (meaning that its decisions and regulations do not have any legal power), the Committee has over the years become a standard-setting body concerning all banking supervision. (Bank for International Settlements. 2009, 1.)

The BCBS has senior representatives of bank supervisory authorities and central banks from all G20 jurisdictions and important financial centers, working on to develop guidelines and standards for banking supervision. Since the Committee does not have legal power itself to enforce its developments, the expectation of the Committee is that

the standards and regulations will be implemented by the individual authorities of each member country in their own national systems. (Al-Darwish, Hafeman, Impavido, Kemp, & O'Malley. 2011, 18; Bank For International Settlements. 2009, 1.)

In the upcoming years the aim of the BCBS is to develop the accounting standards towards an expected loss approach, update its supervisory guidance as well as to provide some incentives in the regulatory capital framework system. Fundamental reviews of the trading book and securization framework are also on progress. (Al-Darwish et al. 2011, 19-20.)

The BCBS is an important institution and the creator of the Basel regulatory frameworks. It constantly reviews and monitors the progress of the banking supervisory developments, of which the Basel III framework is the most current example. It is highly vital for the global financial industry to have common rules in order for it to function properly.

### **2.3 Basel I and II**

To understand better how the Basel III was created and to give a short background of the previous frameworks that eventually lead to the development of Basel III requirements, presented as following is the Basel I regulatory framework that was the first of the Basel accords.

According to Jackson et al. (1999) Basel I was created with two objectives. The first was to help to strengthen the soundness and stability of the international banking system by motivating the international banks to boost their capital positions. The second was to reduce competitive inequalities by having the standard to apply to internationally active banks all around the world. The Basel I introduced a framework in order to have the regulatory capital to be more sensitive to the different risk profiles among the international banking institutions, to create an emphasis of the off-balance-sheet exposures when assessing capital adequacy and to reduce the disincentives of having low risk liquid assets. (Jackson et al. 1999, 1.)

Basel II was then further created to add new regulations to the Basel I accord. Basel II is defined by its three pillars, which have been created to enhance the financial position of banks in case of a stress scenario. Pillar 1 consists of the requirement of the minimum own capital to cover the bank's credit risk, market risk and operational risks. The minimum criteria of own capital required for the credit risk are influenced by amount of the bank's balance sheet items carrying credit risk, the risk level as well as the techniques used to reduce the risks with for example guarantees, securities and credit derivatives. Pillar 2 requires that the own capital reserves are estimated to measure the adequacy of them and the pillar 3 consists of the criteria for publishing the financially relevant information. (Vauhkonen 2010, 22.)

### **3 Basel III Regulatory Framework**

The Basel III framework was created to further develop the previous Basel accords with the objectives to improve the banks crisis tolerance abilities and to reduce the systemic risk. The Basel III accord aims to tighten the requirements for quality of capital, increase risk-weighted assets and require higher level of minimum capital. The scope of Basel III is to be applied to banks that are internationally active, on a fully-consolidated basis. (Al-Darwish et al. 2011, 18; Vauhkonen 2010, 23.)

Ötke-Robe et al. (2010, 5) state that the main goal of the Basel III framework is to support the economic growth by promoting a less leveraged and less risky financial system, which will then become more resilient. They also mention that the aim of Basel III is to improve the monitoring and governance of the banking industry. Al-Darwish et al. (2011, 18-19) mention that the Basel III was created to push the banking industry to build up buffers against periods of stress with the conservation of capital. They add that the capital buffers could then be adjusted to economical situations in case there would be any signs of credit growing to be too much to handle. (Al-Darwish et al. 2011, 18-19; Ötke-Robe et al. 2010, 5) The adjustments of the capital buffers will be conducted by national authorities to fit the buffers for each country's financial situation as will be further discussed later on.

Ötke-Robe et al. (2010, 5) and Al-Darwish et al. (2011, 18-19) both agree that the reforms that are currently happening in the financial and banking industry are meant to improve the quality and quantity of capital, liquidity buffers and risk assessment for counterparty credit exposures, which can arise from derivatives, repo and securities financing activities. According to Al-Darwish et al. (2011, 19) the reforms should in addition reduce procyclicality, meaning that the requirements should reduce the amplified swings of the economy.

### **3.1 Capital Requirements**

#### **3.1.1 Pillar 1**

According to the Al-Darwish et al. (2011, 18) the Pillar 1 is related to the amount of capital needed to run the business and the key resources to create the available capital to fulfill that need. It is therefore logical that the Pillar 1 consists of requirements related to capital and risk. According to the Bank For International Settlements (2012) the minimum Tier 1 capital will be increased to 4.5 % of risk-weighted assets after deductions and there will be more focus on common equity. Contractual terms of capital instruments are also to include a clause that will enable the private sector to resolve potential future banking crises easier. The clause allows that in the case a bank is deemed non-viable, the write-off or conversion to common shares can happen with the decision of a relevant authority. (Al-Darwish et al. 2011, 18; Bank For International Settlements 2012.)

Al-Darwish et al. (2011, 22) describe the determination of the required capital by a three-step process, where the amount of capital is first calculated and then classified into different categories. Finally the eligibility of instruments to go into the different categories is assessed. Al-Darwish et al. also state that although capital could sometimes be thought of merely the excess of assets over liabilities, the different types of capital should be taken into careful consideration, since not all capital can be described as equal capital. (Al-Darwish et al. 2011, 22.)

According to Ötoker-Robe et al. (2010, 10), in order to achieve a better loss absorption in a potential stress scenario, the common equity will represent a larger share of capital. The minimum of required common equity will increase to 4.5 % from the previous 2 % and there will be an additional 2.5 % capital conservation buffer. This will restrict distribution of dividends as well as bonus payments as banks try to achieve the requirement. Ötoker-Robe et al. also state that the amount of intangible and accepted assets, which can be added in the capital, will be limited to 15 %. Banks were expected to reach the revised requirements for better risk recognition and capital coverage by the end of 2011. (Ötoker-Robe et al. 2010, 10.)

One of the Basel III requirements is that Tier 1 capital consists of high quality capital concentrating on common equity. The requirements aim to harmonize Tier 2 capital instruments and Tier 3, originally meant for reducing the risks related to market, is to be eliminated over the period of time. (Al-Darwish et al. 2011, 18.)

Basel III framework introduces three tiers of capital. However according to Al-Darwish et al. (2011, 23), the classification structure has still been simplified into two tiers. Tier 1 being the going-concern capital and Tier 2 gone-concern capital. Tier 1 defines the common equity component, also known as CET1, as there is a minimum criterion for the common equity of capital. It is also stated by Al-Darwish et al. (2011, 23) that the classification criteria is related to issues concerning permanence, loss absorbency and flexibility with payments. The reforms have lead to that Tier 3 instruments are no longer eligible capital according to the Basel III requirements. Although Basel II still allows it to be used to cover market risk, large exposures in the trading book and fixed overhead requirements. (Al-Darwish et al. 2011, 23.)

Capital conservation buffer consists of 2.5 % common equity of risk-weighted assets with the total common equity standard being 7 %. "Constraint on a bank's discretionary distributions will be imposed when banks fall into the buffer range." The countercyclical buffer ranging from 0 to 2.5 %, consists of common equity and is imposed when authorities judge credit growth be the result of unacceptable build up of systematic risk. (Bank For International Settlements 2012.)

Furthermore it is commonly known that economic activity moves in cycles, having its ups and downs. The financial system moves in the same pattern and the events of real economy influence the financial system and the opposite. Sveriges Riksbank (2011c, 52) states the financial crisis showed that the regulations of the banks may have amplified the economic cycles and therefore it might have weakened the financial and economic stability. This is why the new Basel III capital requirements include countercyclical buffers. The buffers will protect the banking industry against potential losses that might occur after an excessive credit growth. And they will reduce the procyclicality of



credit growth by neutralizing excessive fluctuations of the credit cycle. When the economy is experiencing an upturn, the substantial credit expansion will activate the buffers, meaning the banks have to little by little increase their capital. This will lead to reducing the risk of excessive credit growth and increasing asset prices because of the restricted lending. On the other hand, when there is a downturn of the economy, the buffer requirement will be reduced, leading to banks' having more available capital and not affecting their lending to the same extent. As a result the banks would have less impact on the economic cycles. (Sveriges Riksbank 2011c, 52.)

According to the report by Sveriges Riksbank (2011c, 53), domestic banks which do not have any lending to customers abroad must follow the capital requirements within one year, not taking into account their size or their share of the impact on the expansion of credit. However the banks, which lend to customers in other countries, the capital buffer will be calculated as a weighted average of the buffer levels in the countries that the bank has exposures. (Sveriges Riksbank 2011c, 53.)

Since the Basel accord does not have legislative authority, the member countries have the responsibility of the implementation of the new requirements. Concerning the countercyclical capital buffers, the BCBS has agreed with the member countries, that each country will appoint an authority, which can decide for each quarter the most suitable size of the countercyclical buffer. This arrangement will enable to tailor the countercyclical buffer to the needs of each country. The buffer is meant to help the prevention of systemic risks. (Sveriges Riksbank 2011c, 55.)

BIS intends that the Basel III also strengthens the capital treatment for some complex securitizations and they require in the framework that the banks have to conduct stricter credit analyses of securitisation exposures to be rated by an external body. Bank For International Settlements (2012) adds that concerning the Basel III criteria, the trading book should also consist of considerably higher level of capital for trading and for derivatives activities. Complex securitisations should also be kept in the trading book. BIS adds that there should be a framework of stressed value-at-risk to deal with the procyclicality and a capital charge for incremental risk to consider the liquidity and val-

uate the risks related to the default and migration of unsecuritised credit products. (Bank For International Settlements 2012.)

Capital incentives are suggested by the BIS to encourage the use of central counterparties for derivatives. The framework aims to have a stronger counterparty credit risk framework by including tighter conditions for measuring exposure and higher level of capital for inter-financial sector exposures. In fact the proposal by the BCBS suggests that trade exposures to central counterparty will be given a 2 % risk-weight. The proposal suggests also that the default fund exposures to central counterparty will be capitalised with the risk-based method. This enables measuring the risk of this type of default fund. (Bank For International Settlements 2012.)

According to BIS, in order to control the possible system wide build-up of leverage the Basel III framework introduces a non-risk based leverage ratio, which has off-balance sheet exposures to act as a barrier to the required risk-based capital. Al-Darwish et al. (2011, 18) also state that a leverage ratio will provide extra protection in case of model risk and measurement error. (Al-Darwish, A. et al. 2011, 18; Bank For International Settlements 2012.)

Capital ratio means the percentage of the bank's risk-weighted assets that is capital-financed. Risk-weighted means that each asset is adjusted to its risks classified by the capital requirements. According to the new Basel III capital requirements, banks must maintain higher capital ratios, larger than a minimum of 7 % of risk-weighted assets in order to be able to repurchase shares or to distribute dividends to their liking. (Sveriges Riksbank 2011, 15.)

Table 1. Requirements for Capital

Tier 1 Capital	At least 4.5 % of RWAs
Common Equity Tier 1	6.0 % of RWAs
Total Capital (Tier 1 Capital + Tier 2 Capital)	8.0 % of RWAs

Source: Bank For International Settlements (2010a)

### 3.1.2 Pillar 2

The second pillar aims to encourage banks to have a better and proper risk management system concerning their operations and the framework sets the standards for supervision of the internally-active banks. Pillar 2 has been created to capture the risk of off-balance sheet exposures and securitisations activities. In addition it aims to manage the clusters of risk and the Pillar also answers the need for sound compensation and valuation practises as well as stress testing. It addresses the development of accounting standards for financial instruments and corporate governance as an important issue of today's international banking industry. (Bank For International Settlements 2012.)

### 3.1.3 Pillar 3

One of the key components of the Pillar 3 is to maintain market discipline. The framework requires detailed disclosures on the different parts contributing to the regulatory capital as well as the reconciliation related to the reported accounts. The banks must also reveal how they are calculating their regulatory capital ratios. (Bank For International Settlements 2012.)

## 3.2 Global Liquidity Standards

There are two internationally harmonised minimum standards in order to for the internationally-active banks to be able to absorb shocks of the financial market in a short- and long-term time period. The standards for funding liquidity were created with the

objectives to enhance the short-term resilience of liquidity risk profile in order for the banks to survive a significant stress over a time period of a month, as well as to "promote resilience over a longer time horizon by creating additional incentives for banks to fund their activities with more stable sources of funding on an ongoing basis."

(Bank for International Settlements 2010, 3.)

The Liquidity Coverage Ratio (LCR) was created to achieve the first objective and for second one, the BIS came up with the Net Stable Funding Ratio (NSFR). The Net Stable Funding Ratio was intended to indicate the possible structural issues in order to promote a sustainable maturity structure of assets and liabilities. That is why the Net Stable Funding Ratio has a time horizon of one year. (Bank for International Settlements 2010, 3.)

### **3.2.1 Liquidity Coverage Ratio LCR**

The Liquidity Coverage Ratio "aims to ensure that a bank maintains an adequate level of unencumbered, high-quality liquid assets that can be converted into cash to meet its liquidity needs for a 30 calendar day time horizon under a significantly severe liquidity stress scenario---." The standard is defined as

$$\frac{\text{STOCK OF HIGH-QUALITY LIQUID ASSETS}}{\text{TOTAL NET CASH OUTFLOWS OVER THE NEXT 30 CALENDAR DAYS}} \geq 100 \%$$

(Bank for International Settlements 2010, 3.)

Bank for International Settlements (2010, 4) discusses the assumptions that have to be made for the LCR standard's liquidity stress scenario. It is listed as following:

- "a significant downgrade of the institution's public credit rating;
- a partial loss of deposits;
- a loss of unsecured wholesale funding;
- a significant increase in secured funding haircuts; and

- increases in derivative collateral calls and substantial calls on contractual and non-contractual off-balance sheet exposures, including committed credit and liquidity facilities”. (Bank For International Settlements 2010, 4.)

### 3.2.2 Net Stable Funding Ratio NSFR

The Net Stable Funding Ratio, known as the NSFR, was designed to improve banks’ medium and long-term funding and activities, and to tackle the structural financial issues. It was created to set the criteria ”for a minimum acceptable amount of stable funding based on the liquidity characteristics of an institution’s assets and activities over a one year horizon.” The standard aims to make the banks assess the risks related to liquidity more thoroughly by limiting the banks from relying too much on short-term wholesale funding. The NSFR is defined as

$$\frac{\text{AVAILABLE AMOUNT OF STABLE FUNDING}}{\text{REQUIRED AMOUNT OF STABLE FUNDING}} > 100\%$$

(Bank For International Settlements 2010, 25.)

### 3.3 SIFIs – Systematically Important Financial Institutions

Due to the major impact the big players of the financial industry have on the entire global economy, the BIS has created additional requirements for the global systemically important financial institutions, also known as SIFIs. Although the financial institutions classified as SIFIs have to comply with the Basel III requirements, they also have to have a higher loss absorbency capacity since they create a bigger threat to the economy if they get into financial trouble. ”The additional loss absorbency requirements are to be met with a progressive Common Equity Tier 1 (CET1) capital requirement ranging from 1 % to 2.5 %, depending on the bank’s systemic importance.” In order to determine the importance of a bank, the BCBS has created a methodology that takes into account both the quantitative and qualitative aspects of the financial institution. The banks ranked to be on the top of the SIFIS and faced with the highest systemically

important bank surcharge, there could be an additional loss absorbency of 1 %. (Bank For International Settlements 2012.)

Vauhkonen (2010, 29) states that previously the Basel II requirements tended to favour the bigger banks because they could use advanced methods to calculate their own assets to create a requirement for a smaller amount of required capital. However with the new Basel III requirements, the view has changed to the direction that the bigger banks are required to have more capital since they pose a greater risk to the financial system. Vauhkonen adds that this can also be seen for example as the government of Switzerland has made a proposition to demand 8.5 % common equity requirement for the large banks in Switzerland. (Vauhkonen 2010, 29.) Other countries have also demanded extra requirements for their banking sectors.

### **3.4 Additional Requirements for Swedish Banks**

After a wide discussion of the banks' adequate capital requirements for them to cope better with potential future financial shocks, Sveriges Riksbank has analyzed the balance of the long-term benefits and the costs to the society of the higher capital requirements. As a result of this analysis, Sveriges Riksbank has concluded that the Basel III capital requirements are too low for Swedish banks. (Sveriges Riksbank 2011, 7.)

Every country has its own unique banking system and therefore the risks related to the banking industry are also different and the appropriate capital requirements for banks can vary. According to the research by Sveriges Riksbank (2011, 8), the Swedish banks are large compared to the size of the Swedish economy. Therefore also the consequences of a banking crisis in Sweden are larger than in other countries, which have a smaller banking sector. In addition the Swedish banks have also a lot of operations in foreign countries that could be seen as a positive sign normally, but it might make it more difficult for the banks to handle distress, as there are more authorities and legal frameworks involved. (Sveriges Riksbank 2011, 8.)

Moreover the Swedish banks rely more on foreign funding than comparable banks in other countries, which means that the Swedish banks are more vulnerable. Sudden

problems in the international financial market can lead to great problems for the Swedish banks. In addition few large banks dominate the Swedish banking industry: Handelsbanken, Nordea, SEB and Swedbank. These banks are also greatly interconnected to one another and they lend to each other on a regular basis, which means that one's problems could quickly spread to the other banks as well. (Sveriges Riksbank 2011, 8.)

The Swedish government, The Swedish Financial Supervisory Authority and Sveriges Riksbank have a common view that the future capital requirements for Swedish banks should have more far-reaching criteria. Both minimum and buffer requirements need to be higher than what the BCBS requires on a European level. Swedish authorities want to introduce a special capital adequacy add-on for the Swedish SIFIs and the planned introduction would take place in two phases from 2013 to 2015. In addition to this the Swedish Financial Supervisory Authority is thinking of proposing an increase on the risk-weights for mortgage loans. (Handelsbanken 2011, 4.)

### **3.5 Scheduled Implementation and Monitoring**

Basel III is an "accord" and it has no legislative power, therefore in order for this framework to be implemented globally, it relies on the domestic authorities to transform the Basel III into a law or a regulation. This implementation is monitored by the BCBS to ensure, that the content of the laws and regulations created to put Basel III framework into place, correspond to the framework itself. The level and the content of the domestic laws are reviewed by the BCBS and reported to keep track of the Basel III implementation. (Al-Darwish et al. 2011, 5.)

BCBS has created several levels for the monitoring and the implementation of the new Basel III regulations. The level 1 consists of evaluating the timely adoption of Basel III and its objective is to make sure that the Basel III is being transformed into a law or a regulation in the countries within the international timelines. The level 1 assessment only concentrates on the processes to implement the Basel III accord into a law and does not take into account the content of the domestic law. (Bank For International Settlements 2012b, 9.)

The level 2 considers the regulatory consistency and its objective is to make assessments of how well the domestic laws or regulations comply with the international minimum requirements. The BCBS will look into the details of the rules that are not consistent with the common international Basel III requirements and it will assess the impact of those on the international level and in terms of the financial stability. Any lackings found in the level 1 assessment will also have impact on the level 2 assessments. (Bank For International Settlements 2012b, 9.)

The level 3 will monitor the risk-weighted assets consistency. In other words it is suppose to ensure that the final outcome of the domestic law is being consistently implemented throughout the banking industry of the countries. It focuses on the bank level of the implementation. The BCBS will review and estimate how the banks are calculating their RWAs with its two specialized expert teams. One team is focused on the banking book and the other on the trading book. The analysis of the teams will assess the consistency of RWAs in the banking book and in the trading book and the aim is to identify the inconsistencies in the calculations of RWAs in the banking industry, as well as to estimate the broad consistency. Four-grade scale will be used to put together all the level assessments. The four-grade scale goes from compliant, largely compliant, materially non-compliant to non-compliant. The scaling has been created to be in-line with the Core Principles for Effective Banking Supervision.

(Bank For International Settlements 2012b, 10.)

BCBS has begun the process of reviewing members' implementation of Basel III in September 2011. The coordination of policies and their implementation is very important for the success of the Basel III international implementation among the member countries. In order to raise the resilience of the global banking sector and to ensure the market confidence and to avoid distorting competition, it is vital that the Basel III regulations will be implemented on the allocated schedule and consistently. It is also important that the new requirements do not hinder the growth and innovation of the financial industry. The monitoring is meant to give additional incentives for member countries that comply with the new standards within the agreed timelines. (Bank For International Settlements 2012b, 1; Ötcher-Robe et al. 2010, 28.)



Basel III is effective from January 1<sup>st</sup> 2013 but some requirements will be phased in. Al-Darwish et al (2011, 19) list them as following:

- “The Leverage Ratio must be disclosed beginning in 2015 and becomes a Pillar 1 requirement in 2018;
- The Minimum Common Equity Capital Ratio reaches its ultimate level in 2015;
- Various deductions from common equity are phased in between 2014 and 2018;
- The Minimum Tier 1 Capital requirement reaches its maximum in 2015;
- The Capital Conservation Buffer is introduced in 2016 and reaches its ultimate level in 2019;
- Capital instruments that no longer qualify as noncore Tier 1 or Tier 2 capital are phased out over a 10-year horizon beginning 2013; and
- Minimum standards will be introduced for the LCR in 2015 and the NSFR in 2018.”

It is likely that for market reasons, that Swedish banks will be forced to comply with the new regulations earlier. (Al-Darwish et al. 2011, 19; Sveriges Riksbank 2010a, 61.)

Ötcker-Robe et al. (2010, 18) add that the supervision has to be more intensive in order to prevent a new cycle of leveraging and excessive risk-taking of the banks. In other words, so that the banking crisis does not repeat itself. This is even more important during the build-up time of liquidity and capital buffers. The supervision has to proactively stay alert for systemic risks, especially with the large and complex financial institutions. (Ötcker-Robe et al. 2010, 28.)

Table 2a. Implementation Schedule of Basel III.

	2013	2014	2015
CET1 requirement	Gradual implementation 3.5 %	Gradual implementation 4 %	Final implementation 4.5 %
Tier 1 Capital	Gradual implementation 4.5 %	Gradual implementation 5.5 %	Final implementation 6 %
Total Capital requirement	Final implementation 8 %		
Capital conservation buffer			
Phasing in of new deductions from capital base		Gradual implementation 20 %	Gradual implementation 40 %
Leverage ratio	Observation	Observation	Publication
Liquidity Coverage ratio	Observation	Observation	Final implementation
Net Stable Funding ratio	Observation	Observation	Observation

Source: Sveriges Riksbank 2010a.

To add more detail to the earlier listing by Al-Darwish et al. of the phasing in of the Basel III requirements, the above table is presented. Table 2a. shows the gradual process of the key requirements related to Basel III framework from 2013 to 2015.

Table 2b. Implementation Schedule of Basel III.

	2016	2017	2018	2019
CET1 requirement				
Tier 1 Capital				
Total Capital requirement				
Capital conservation buffer	Gradual implementation 0.625 %	Gradual implementation 1.25 %	Gradual implementation 1.875 %	Final implementation 2.5 %
Phasing in of new deductions from capital base	Gradual implementation 60 %	Gradual implementation 80 %	Final implementation 100 %	
Leverage ratio			Final implementation	
Liquidity Coverage ratio				
Net Stable Funding ratio	Observation	Observation	Final implementation	

Source: Sveriges Riksbank 2010a.

Table 2b. continues to show the implementation of the Basel III requirements from the year 2016 until the year 2019. The gradual implementation of the Basel III should then be completed unless there will be changes to the schedules.

### 3.6 The Impact of Basel III on Banking Industry

There are a lot of consequences of the introduction of the Basel III framework. Some of these impacts are argued to be positive and some of them negative to the global economy. There has been a lot of discussion whether these new requirements are enough to tackle the problems the global banking industry is facing and to prevent the possible future problems. In the following the different views on the influences of the

Basel III framework on the banking industry in general will be presented and discussed.

### **3.6.1 Increased Complexity and Possible Distortion of Competition**

The development of the Basel III has caused a hot debate over its impacts and there has been some discussion whether the new Basel III accord is too complex and hinders the competition. Åkerholm (2012) at least criticizes the Basel III framework by stating that it is based on the assumption that we can objectively measure future risk while the truth is that in estimating them for a longer time period into the future accurately is doubtful. "A good case in point: this framework has not been able to predict that the sovereigns would exert the most significant risk to the financial sector, as is the case today. On the contrary, financing of the sovereign has been seen as risk-free for which, in most cases, no capital coverage has been required." (Åkerholm 2012.)

Åkerholm also points out that the efforts to pinpoint the objective measures of risk, the regulatory authorities have created complex technical risk assessment methods. According to Åkerholm these extremely precise methods of risk assessment can make banks to over-rely on them and give them a false sense of security. Once the banks have complied with the regulations, they might forget to use their critical thinking and just automatically assume that everything is fine since they have followed the technical rules of the regulations. Åkerholm states that "As a result of this, the focus in the financial sector has come to be concentrated on technicalities rather than economic fundamentals." (Åkerholm 2012.)

Vauhkonen (2010, 29-30) adds that lately there has been a discussion if the Basel III reforms are even appropriate. Some known experts think that creating stricter capital requirements is not the correct way to do things and they have suggested to return to simpler methods such as the Basel I accord. The debate of the correct direction of the financial regulation continues on forward. (Vauhkonen 2010, 29-30.)

According to the article by Brunsden (2012.a), one other concern is that the competition might get distorted if SIFIs have to face surcharges while other large domestic

banks get away without additional requirements since they are not operating internationally. This could cause a problem with otherwise equal banks competing in the same national market if only the other bank has international business. It would create an unequal situation for the two banks since only the other with internal business would have to carry a bigger capital requirement. This could even lead to negative impact on international activity, pushing banks to retreat back to their home markets in the fear of additional requirements they have to face otherwise. (Brunsden 2012.a) This is an interesting question also when thinking about the comparative analysis of Handelsbanken and Nordea since both of them can be considered as important banks in their domestic markets but only Nordea is considered as a SIFI and it will face additional requirements. This will be discussed further later on.

Cosimano & Hakura (2011, 6-7) also bring up the issue of distorting the competition, since the additional capital requirements would influence the SIFIs by creating an additional tax on these institutions. This is due to the extra cost of equity leading to higher loan rates or to smaller return on equity. The smaller banks would benefit from this because they are not subject to these extra capital requirements and investors would prefer them. As a result Cosimano & Hakura argue that the bigger, complex banks would loose business to the smaller banks with simpler operations. Cosimano & Hakura (2011, 6-7) also add that "If the additional capital requirements reduce loan growth by 2.5 percent, then the increase in central banks' policy rates aimed at slowing an expansion would need to be modified to avoid an excessive slowdown in economic activity." (Cosimano & Hakura 2011, 6-7.)

Cosimano & Hakura (2011, 6-7) also raise a concern on the lending rates, stating that lending rates are not expected to change hugely but that the regulations could still have some negative effects on them. These include the increased temptation of regulatory arbitrage and shadow banking. While still promising to fund their assets in case of an emergy, the Basel II capital requirements inspired the banks and the large financial institutions to move their assets away from their balance sheets, leading to shadow banking. Cosimano & Hakura add that in order to cope with this possible issue, there

should be more monitoring of the shadow-banking sector. (Cosimano & Hakura 2011, 6-7.)

### **3.6.2 Impacts by the Banking activities and Geographics**

It is also interesting to consider the type of banks and their geographics that might be most affected by the Basel III framework. Ötoker-Robe et al. (2010) conducted a study of this with a sample group of banks located in different areas and with different operational areas. According to the research by Ötoker-Robe et al. (2010, 5) the regulation on market risk weights will have the most impact on investment banks. This is due to the large share of trading and securitization activities in their operations. Universal banks will also be affected because they similarly have investment bank type of activities. They discovered that the core capital ratios of investment, universal and commercial banks would fall around 1 %. Traditional commercial banks would experience the smallest effect because of their business focus is more limited. Ötoker-Robe et al. (2010, 12) conducted the analysis with a sample group that included 20 countries and 62 banks. The banks were chosen from three regions: 15 from Asia, 33 from Europe and 14 from North America, and they had three different business models. The main objective of the research was analyzing the impacts of Basel III on the banks given their different business strategies and activities. (Ötoker-Robe et al. 2010, 5; 12; 15-16.)

Geographically speaking the new Basel III regulations will have the greatest impact on the European and the North American banks, followed by the Asian banks. "In North America, the drop in core capital would reflect the significant impact of increased market RWA, while in Europe the most significant impact would come from asset deductions." Ötoker-Robe et al. (2010, 15) also state that this is due to the significant concentration of universal banks, which have a network of important subsidiaries in the region and business operations in bank-insurance. (Ötoker-Robe et al. 2010, 15.)

According to Al-Darwish et al. (2011, 7) there are also different risks related to different banking activities. For example the commercial banks, which main activities are related to loaning, are subject to credit risk as well as to liquidity risk in case there is short-term funding included. In general market, counterparty and operational risks in-

fluence the investment, universal and commercial banks through their trading books. (Al-Darwish et al. 2011, 7.)

### **3.6.3 Improved Capital, Liquidity and Lower Risk**

Arguably there are also a lot of potential positive impacts from the Basel III framework. Ötker-Robe et al. (2010, 27) point out that the framework will improve the quality, quantity and the overall comparability of banks' capital. (Ötker-Robe et al. 2010, 27.)

According to Sveriges Riksbank's research (2011, 16) another consequence of banks having more capital is that at the same time their risk-taking reduces. Higher capital ratios mean that the bank has to endure more costs related to capital increases, since capital financing is more expensive than debt financing. Higher cost of capital leads to less willingness to lend money to projects that are likely not to give adequate return to cover the higher costs. This means that the total risk-taking of banks reduces and this also reduces the risk of a banking crisis. In addition experience shows that banks with better capital ratios do not need to decrease the amount of lending as much as banks that have lower capital in a financial downturn. The research shows that higher capital ratios limit the risk of substantial shortages in the credit supply in a financial downturn and amplified effects on cyclical fluctuations are reduced. To conclude, higher capital ratios limit the banks' risks and make them stronger, which leads to positive effects on the economy. (Sveriges Riksbank 2011, 16.)

The research by Sveriges Riksbank about the social benefits of having higher capital requirements for the banking industry, suggests that a number of benefits can be achieved due to the new regulations. One of the most important benefits is that the probability of a banking crisis is reduced. This is because the capital creates a buffer against sudden losses. Banks that have higher capital ratios are more stable and their operations are not subject to the volatilities of the economic downturns. When the banks have these types of capital buffers, they are more unlikely to need government's capital injections to help them in the case of financial problems. (Sveriges Riksbank 2011, 15-16.)

### 3.6.4 Costs of Basel III on the Economy

Considering the possible costs the reforms will cause, Roger & Vitek (2012) discuss the short- and medium-term output costs and the effects generated in the case that individual countries would raise capital requirements. They also study the situation assuming all of the countries would take action simultaneously. The results that they found with the multicountry model analysis while assuming that the banks widen lending spreads in order to build up their capital, was that in the absence of a monetary policy response (interest rates are being held constant), the real market interest rate increases while real equity wealth drops. (Roger & Vitek 2012, 9.)

Roger & Vitek (2010, 10) conclude that if there is a simultaneous increase of 1 % in capital requirements, it would contribute to the output around 0.5 %-points in the case there would not be any monetary policy response. Roger & Vitek (2010) estimate that of this 0.5 %-points, around "0.1 %-points reflects the international spillover effects of the simultaneous global introduction of higher capital requirements." (Roger & Vitek 2012, 10.)

Higher capital ratios will also have potentially negative social effects. If the banks choose to transfer the increased costs of higher capital ratios to their lending rates and if at the same time the lending volumes decrease, it can lower the level of GDP. (Sveriges Riksbank 2011, 16-17.)

Due to the recent financial crisis, also leveraging has become an important topic around the world. Banks are now increasing their equity to meet the Basel III capital criteria. Some argue that if the deleveraging is too rapid and un-controlled it could threaten the recovery of the economy of Europe. However the past experience shows that the negative impacts of deleveraging should not cause huge problems if the other underlying problems of the banking sector are dealt at the same time. The consequences of deleveraging depend on the chosen strategy by the bank. If the bank decides to increase its capital ratio by increasing capital, it will have minor impacts on the real economy. On the contrary if the bank decides to dial down its lending volume to cre-



ditworthy households and companies, this could lead to negative impacts on the GDP. This is emphasized if the majority of the banks perform the same act simultaneously. Other countries might also be affected if the banks decide to restrict their international operations. Deleveraging might also have negative impacts on the banks if they are forced to sell their assets at an unfavourable price. In this situation the banks would suffer major losses, which would not improve their capital adequacy but worsen it. (Sveriges Riksbank 2011b, 46-47.)

Vauhkonen (2010, 29) also discusses the potential influences of Basel III framework, stating that the framework is a large reform on the banking industry, that will surely have impacts on the financial system's stability, banks' capital build-up as well their operations and the real economy. Vauhkonen (2010) points out that there are various opinions on the impacts of the Basel III accords. The BCBS has estimated that the tightened regulations will have a relatively small impact on the loan pricing for the banks' customers as well as the availability of loan. On the contrary the new regulations can strengthen considerably the long-term growth of the world economy if the regulations succeed in minimizing the likelihood of new financial crisis and their costs. (Vauhkonen 2010, 29.)

According to Cosimano & Hakura (2011, 22) it is very important to coordinate the 2.5 % increase in capital ratios of the countercyclical capital requirement under the declaration of excessive credit growth with correct monetary policies. Since this declaration could potentially decrease the loans of largest banks by 2.5 % it could have significant countercyclical impact on the economies of developed countries. (Cosimano & Hakura 2011, 22.)

Some banks have also raised concerns of the possible unintended impacts of the Liquidity Coverage Ratio (LCR), saying that it might encourage the banks to reduce the amount of loans by forcing them to reserve more cash and buy government bonds. Global regulations have responded by stating that they would improve the requirement to avoid these types of consequences. They however defend the standard by reminding that the reasons why Lehman Brothers Holdings Inc and Dexia SA collapsed unex-

pectedly, was due to some extent because of they ran out of short-term funding. (Brunsden 2012.b.)

Sweden's Finansinspektionen (2012, 17) estimates that the new liquidity requirements might have the biggest impact on the costs of the banks. Swedish banks have relatively large mortgages compared to their overall balance sheet totals and in order to meet the liquidity requirements, they should extend the maturity of their funding and maintain liquidity buffer. Finansinspektionen has estimated that the cost of maintaining a liquidity buffer and adapting to the other regulations would be around 0.15 %-points. The cost estimate varies between 0.10-0.20 %-points and it rises from the banks' need to invest a part of their borrowings in long-maturity assets with relatively low return. (Finansinspektionen 2012, 17.)

Cosimano & Hakura (2011, 5) argue that the new regulations will have indirect effect on indirect tax on loans as well as excessive credit growth. According to their research about Basel III regulations' impact on banking behaviour, they found that loan rate and loan demand estimations would seem to imply that a 1.3 %-point increase in the equity-to-asset ratio would decrease loans for the 100 largest banks by 1.3 %-points in the long run. They add that an additional 2.5 %-point increase in the equity-to-asset ratio required by the declaration of 'excessive credit growth' would reduce loans around 2.5 %-points in a longer time period. Cosimano & Hakura (2011, 5-6) conclude that these requirements would influence the lending volume of large banks in developed countries. They estimate that the lending volumes of banks would reduce on average 14.8 % in countries that were not impacted by a crisis and 4.6 % in the ones that were impacted by one. (Cosimano & Hakura 2011, 5-6.)

## 4 Financial Analysis of the Banks

The following analysis of the banks, Handelsbanken and Nordea, is based on an extensive research of different reliable sources. The banks were chosen to be comparable with each other and because they have international activity and therefore are bound to follow the new Basel III regulations. The chosen banks are universal banks, combining the commercial and investment banking activities.

The financial analysis will be conducted with a short overview on both banks; their operations and main functions. The banks' capital and liquidity positions will then be analyzed as well as lending of the banks for the public. Finally there will be a comparison of the banks' situation in terms of the Basel III framework and other analysis of the Swedish banking sector will be discussed. The author's own suggestions for the banks are also presented.

### 4.1 Handelsbanken

Handelsbanken was founded 1871 and it is a universal full-service bank for personal and corporate clients. The bank has over 11,000 employees and operations in 22 countries with the main domestic markets in Sweden, Denmark, Finland, Norway and the UK. Handelsbanken is based on its decentralised organisation, meaning that the branch is the bank. The decision making is distributed to the branches so that they will take the responsibility for their decisions made in line with the bank's strategy. This makes e.g. the customer service more efficient and creates more satisfaction. The bank also pays focus on its customers, not specific products. Handelsbanken maintains its long-term perspective and states that profitability has always been given higher priority than volumes. (Handelsbanken 2012a) This is reflected also on the choice of clients. There is a clear strategy when it comes to the selection of the new customers in Handelsbanken. Rather than being a mass-market bank, Handelsbanken requires that its borrowes are high quality and selects its customers to ensure that they fit the criteria. This quality requirement is never forgotten to achieve higher loan volumes or for higher returns. Handelsbanken also does not distribute bonuses to encourage risk-taking

but it has its own Oktogonen profit-sharing system, where shares are distributed evenly to everyone that took part in producing the results for that specific year. (Handelsbanken 2011, 8.)

Handelsbanken's business operations, operations-related risk control, central risk control and capital planning are a part of the bank's risk and capital management. The bank has a clear division of responsibility and each part of the business operations are given full responsibility of their business and risk management. Because of this distribution of responsibility, there are strong incentives for high-risk awareness and prudence in the business operations. Local risk control in the regional banks and other business areas complement the accountability of business decisions by the individuals. This ensures the proper level of risk-taking in an individual transaction or in local operations and that the transactions will be in line with the Bank's view of risk-taking. Handelsbanken has had lower loan losses and a consistent financial performance compared to its competitors for a long period of time. This is mainly due to the bank's risk management activities. (Handelsbanken 2011, 6.)

The goal of the bank is to have higher profitability than its competitors by average and Handelsbanken aims to achieve this goal by having lower costs and more satisfied clients than its competitors. For the past 40 years the bank has achieved its goal of having higher profitability and this is due to the fact the bank pays close attention on cost control and on customer satisfaction. According to the surveys, which started in 1989, the bank has had the highest level of customer satisfaction and in Europe the bank has been the most cost-effective for years. (Handelsbanken 2012a.)

The bank's return on equity has been maintained quite consistently on a good level and higher than the Bank's competitors. There was a decline in the years 2008 and 2009 because of the global financial downturn but it has gradually increased since that and now maintains in a high level. The development of the bank's return on equity is shown in the Table 3. below.

Table 3. Handelsbanken's Return on Equity

Handelsbanken's Return on Equity					
Q2/2012	2011	2010	2009	2008	2007
14.40%	13.50 %	12.90 %	12.60 %	16.20 %	23.30 %

Source: Investor Relations. Financial Reports. Handelsbanken.

#### 4.1.1 Meeting the Capital Requirements

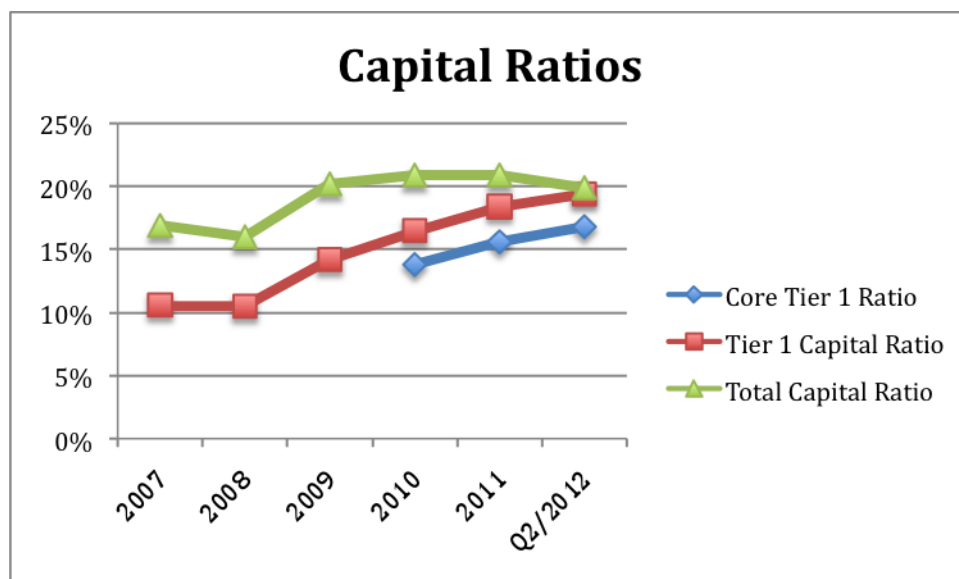
Table 4. Handelsbanken's Key Capital Figures

Handelsbanken's Key Capital Figures						
	Q2/2012	2011	2010	2009	2008	2007
Core Tier 1 Ratio	16.80 %	15.60 %	13.80 %			
Tier 1 Capital Ratio	19.40 %	18.40 %	16.50 %	14.20 %	10.50 %	10.60 %
Total Capital Ratio	19.90 %	20.90 %	20.90 %	20.20 %	16.00 %	16.90 %
Tier 1 Capital SEKm	98,781	93,548	87,796	85,600	75,854	
Tier 1 Capital EURm	11,450.6	10,589.4	10,064	8,830.07	6,597.95	

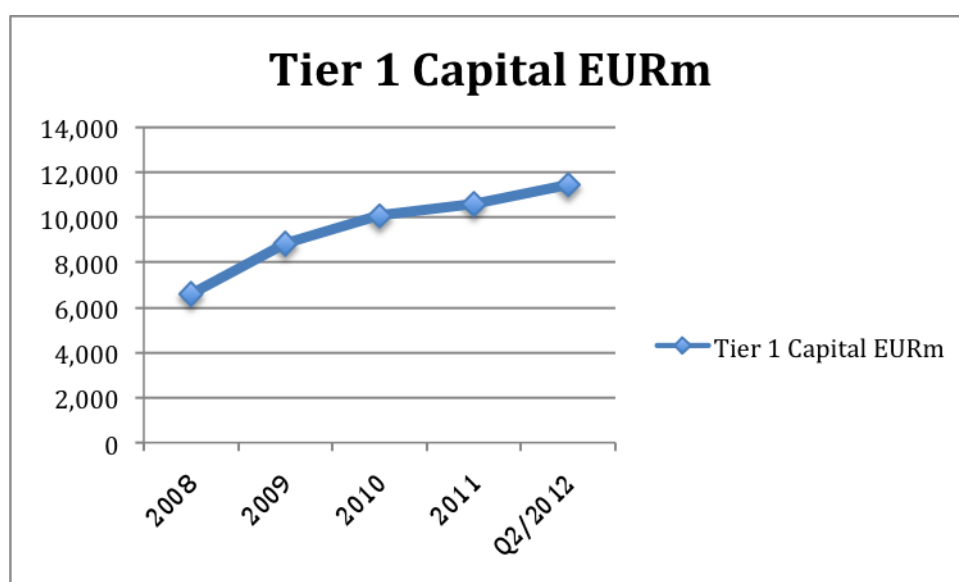
Source: Investor Relations. Financial Reports. Handelsbanken

Looking at the Table 4. and graphs shown below, made to summarize Handelsbanken's key capital figures in the recent years, we can see a positive development. Due to the upcoming requirements the bank has increased its capital and improved its ratios.

Graph 1. Development of Handelsbanken's Capital Ratios.



Graph 2. Development of Tier 1 Capital of Handelsbanken.



Common equity Tier 1 capital ratio was 14.1 % at the end of 2011 for Handelsbanken. Handelsbanken (2012, 7) estimates that the transition from Basel II to Basel III requirements will reduce the common equity Core Tier 1 ratio by around 1.5-1.8 %-points. At the end of 2<sup>nd</sup> quarter in 2012, the Common Equity Tier 1 ratio complying Basel III was around 14.6 %. (Handelsbanken 2011, 4; Handelsbanken 2012, 7.)

Handelsbanken experienced a strengthening of its capital situation during the year 2011 and its earnings have been consistent. The bank also had decreased loan losses and this

had a positive impact on the strong position. Handelsbanken's credit portfolio's low risk profile has lead to lower capital requirements for credit risks in comparison to other banks. The bank has prepared itself to sudden substantial losses by holding capital to ensure its survival even in an extreme financial shock. Handelsbanken's capital planning is based on assessing the capital situation to the legal capital requirement and in addition by conducting calculations of economic capital and stress tests. (Handelsbanken 2011, 6.)

According to Handelsbanken's 2<sup>nd</sup> quarter interim report, the capital base decreased to SEK 106 billion because of redeemed subordinated loans valued SEK 9 billion during the quarter. In addition the capital ratio dropped to 19.9 % compared to 20.9 % at the end of the year 2011. Equity also decreased to SEK 92.7 billion due to dividend payments of the year 2011 of SEK 6.1 billion. However Core Tier 1 capital increased to SEK 81.9 billion and the Core Tier 1 ratio climbed up to 16.4 %. The Tier 1 ratio was 19.1 % because of an increased volume of collateral and the fact that the new lending volumes were of better quality than the previous ones leaving the portfolio. In addition other credit risk effects had a positive impact on the Tier 1 ratio. All in all the quality of credit of the loan portfolio has continued to improve. (Handelsbanken 2012, 7.)

One of the key assumptions of the capital adequacy regulations is that the exposures of the institution in question are classified into the exposure groups defined by the regulations. The number of these exposure groups depend on the method of calculating the credit risk. 15 different exposure classes are calculated using the standard approach and 7 exposure classes are defined by the IRB approach. Sovereign, institutional, corporate, retail, equity exposures and securitisations positions are divided into exposure classes that are calculated with the IRB model. As well as the exposures without counterparties, in other words the assets, which do not require any performance by counterparty. (Handelsbanken 2011, 9.)

The Board of Handelsbanken decided that the bank should have a Tier 1 ratio between 9-11 %. However this requirement will be changed into a higher criteria because of the

Basel III requirements and because of the demand of the Swedish authorities for higher requirements than in Basel III. (Handelsbanken 2011, 33.)

#### 4.1.2 Meeting the Liquidity Requirements

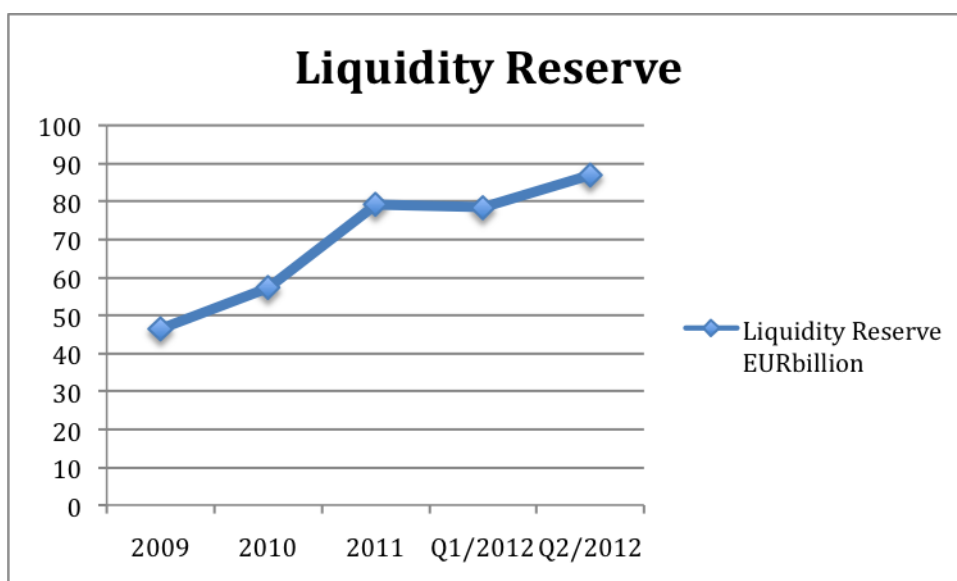
Table 5. Handelsbanken's Liquidity Reserve

Handelsbanken's Liquidity Reserve					
	Q2/2012	Q1/2012	2011	2010	2009
SEKbillion	750	700	700	500	450
EURbillion	86.9	78.3	79.2	57.3	46.4

Source: Investor Relations. Financial Reports. Handelsbanken.

Handelsbanken has in the recent couple of years increased its liquidity reserves considerably. Currently the bank has a strong reserve of liquidity reserves and according to the bank (Handelsbanken 2011, 5-6) the total amount of the liquidity reserve covers Handelsbanken's liquidity requirements for more than two years without access to new market funding in case of a stressed scenario. Furthermore due to the bank's historically low tolerance of risk, stable capitalization and strong liquidity situation, Handelsbanken is well prepared to survive even more difficult market situation than what experienced during the year 2011. (Handelsbanken 2011, 5-6.)

Graph 3. Development of Liquidity Reserve of Handelsbanken.





Handelsbanken has a strict approach to risk, which means that the bank consciously avoids high-risk transactions even if the return might be high. The low risk tolerance is maintained with a strong, sustainable risk culture, which is applied to all areas of the bank group. Lending is influenced by a strong local involvement. This is logical since the local employees are closer to their customers than any other members of the bank, and therefore they have the first hand knowledge of the customers' financial situations and this normally leads to lower credit risks. Concerning market risks in the banking operations, the bank only participates as part of meeting customers' investment and risk management needs and in conjunction with the bank's funding. Handelsbanken plans its liquidity in a way that its business operations are not restricted in case of disruption in the financial market. (Handelsbanken 2011, 5.)

Even during the financial crisis, Handelsbanken has had a great access to liquidity. The bank uses its short- and long-term funding programmes to gain access to the financial markets. These programmes were expanded in the year 2011. To diversify the long-term funding and to gain access to a broader base of investors, Handelsbanken issued a new programme in US dollars in the summer of 2011. A Part of the bank's liquidity reserve consists of the Central Treasury's loqidotu portfolio, which has a low risk profile and is mainly consisted of government and covered bonds. The bank's liquidity reserve gives a high level of resistance to the potential financial market disruptions. (Handelsbanken 2011, 5-6) At the end of the 2<sup>nd</sup> quarter of 2012, Handelsbanken total liquidity reserve exceeded SEK 700 billion. Liquid assets including cash funds invested with central banks totaled in SEK 341 billion and the volume of liquid bonds was SEK 98 billion. The rest of the liquidity reserve consists of unutilized covered bonds at Stadshypotek. (Handelsbanken 2012, 7.)

Handelsbanken's Central Treasury has the overall responsibility of the issues concerning the bank's liquidity and funding. Liquidity risk can be defined as the risk were the bank is not able to meets its payment obligations when they fall due without experiencing unacceptable costs or losses. One of the main criteria for funding operations is that they must limit market and liquidity risks by aiming for long-term stable growth of profits. In order to achieve this objective, Handelsbanken matches its cash flows be-

tween funding and lending. This leads to minimizing the economic risks related to funding and enables the bank to be able to determine stable and long-term internal interest rates for the business operating units. (Handelsbanken 2011, 39.)

Handelsbanken enjoys the continuing confidence of the market and the market's assessment is that the bank has a very low credit risk in the funding market. A proof of this is the fact that the CDS spread, cost of insuring a credit risk on the bank, is one of the lowest compared to European banks. Handelsbanken (2011, 5) also states that it has no direct exposure and limited institutional exposure to the countries facing financial trouble but however the stress on the financial markets does impact Handelsbanken's home markets. (Handelsbanken 2011, 5; 39.)

### 4.1.3 Lending Volumes

The lending volume has not been influenced because of Basel III framework so far. It has increased slightly over the years but there have not been any dramatic drops.

Table 6. Handelsbanken's Lending Volume

Handelsbanken's Lending						
	Q2/2012	2011	2010	2009	2008	2007
Lending to the public SEKm	1,632,464	1,591,128	1,481,678	1,477,183	1,481,475	1,292,988
Lending to the public EURm	183,569	180,112	169,843	152,379	112,467	136,627

Source: Investor Relations. Financial Reports. Handelsbanken.

## 4.2 Nordea

Nordea is also a universal bank providing broad range of financial services for personal and corporate clients. The bank has operations in the Nordic countries including Finland, Sweden, Norway and Denmark, as well as in Russia, Poland, Lithuania, Latvia and Estonia. The bank has around 1,400 branches and Nordea has the largest customer base, of 11 million customers, than any other financial services group in the Nordic countries. The vision of Nordea is to be a Great European bank and the bank aims to

achieve this by its New Normal strategy. Nordea's New Normal strategy has led to improved capital efficiency and that had a positive effect on the capital position. (Nordea Group 2011, 9; Nordea 2012a.)

Nordea's net loan losses decreased to a loan loss ratio of 23 basis points improving the Bank's credit quality in 2011. Rating migration also maintained positive in the second half of the year and the impaired loans ratio has maintained quite the same, dropping to around 139 basis points. Due to increases from corporate and household segments, Nordea's credit exposure increased by 13% in 2011. The Bank's market risk-taking activities can be described as diversified and directed to Nordic and European markets. Interest rate risk is the main driver of Nordea's market risk and the total market risk VaR was on average EUR 72 million in the year 2011. (Nordea Group 2011, 3.)

In order to evaluate the bank's ability to endure an economic downturn and the possible impacts, Nordea performed several internal stress tests in the year 2011. In addition the bank participated in external stress test by financial supervisors, central banks and equity analysts. Nordea also took part in the EU-wide stress test and recapitalization exercise coordinated by the European Banking Authority (EBA) and the results showed clearly that the bank has a strong capital position. (Nordea Group 2011, 5.)

Nordea states that it has a strong focus on capital, liquidity and risk management and it's well prepared to achieve the new Basel III requirements. In the near future Nordea will experience some changes related to these requirements on capital and liquidity. According to Financial Stability Board, who is responsible of making the list of the systemically important financial institutions, Nordea has also made it on the list of SIFIs and therefore it is highly likely they have to comply with the additional Basel III requirements. Nordea states also in its financial report 2011 that the bank has been the only Nordic bank listed in the 29 most important banks for the global economy by the Financial Stability Board. (Financial Stability Board 2011; Nordea Group 2011, 3; Nordea 2011, 7) However even if this sounds like a great thing for the bank, it means that they have to comply with extra requirements in terms of their capital.

Nordea's return on equity has stayed quite stable through the years, experiencing a small drop in the years 2008-2009 and gradually improving towards the current year. The development can be seen in the Table 7. presented below.

Table 7. Nordea's Return on Equity

Nordea's Return on Equity					
Q2/2012	2011	2010	2009	2008	2007
12.50%	10.60 %	11.50 %	11.30 %	15.30 %	19.70 %

Source: Investor Relations. Financial Reports. Nordea.

#### 4.2.1 Meeting the Capital Requirements

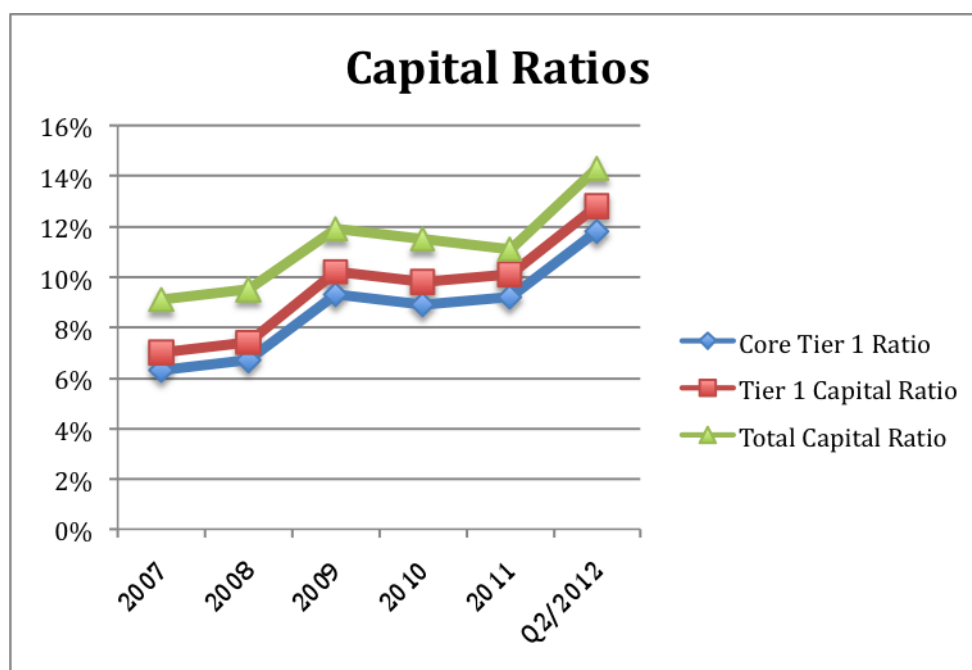
Table 8. Nordea's Key Capital Figures

Nordea's Key Capital Figures						
	Q2/2012	2011	2010	2009	2008	2007
Core Tier 1 Ratio	11.80 %	9.20 %	8.90 %	9.30 %	6.70 %	6.30 %
Tier 1 Capital Ratio	12.80 %	10.10 %	9.80 %	10.20 %	7.40 %	7.00 %
Total Capital Ratio	14.30 %	11.10 %	11.50 %	11.90 %	9.50 %	9.10 %
Tier 1 Capital EURm	23.288	22.638	21.049	19.577	15.76	14.23

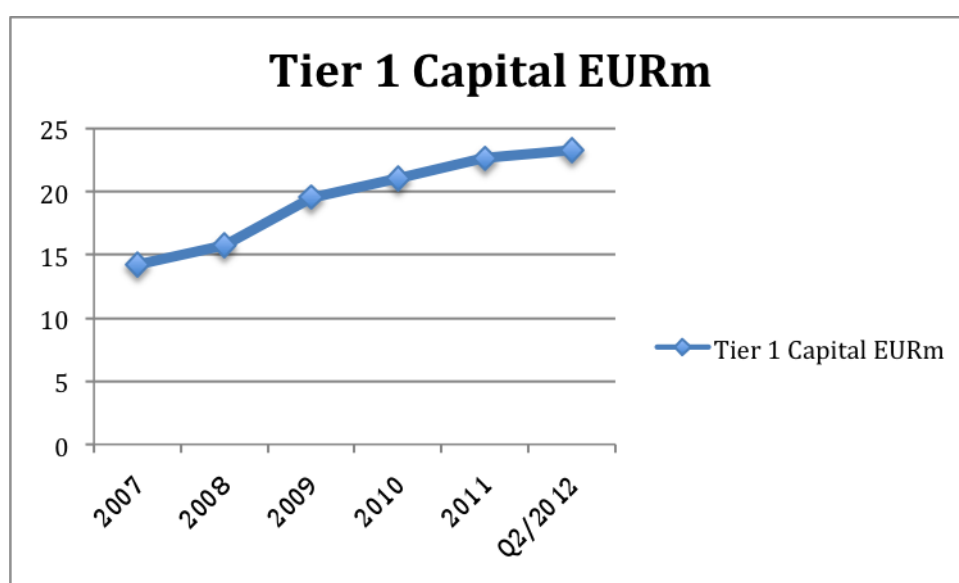
Source: Investor Relations. Financial Reports. Nordea.

Nordea has also great solid figures for its capital. However the Swedish government has demanded a higher Core Tier 1 Ratio requirement for domestically and globally systemically important banks. Nordea states that its Core Tier 1 Ratio is already above the expected requirement for 2013-14 of 10 % (excluding countercyclical buffers). This ratio will likely further improved with the retained profits after dividends. (Nordea Group 2011, 3.)

Graph 4. Development of Nordea's Capital Ratios.



Graph 5. Development of Tier 1 Capital of Nordea.



Since the internationally active banks need to maintain sufficient capital to cover their risks over a foreseeable future, Nordea aims to get to this goal by attaining efficient use of capital through active balance sheet, liability and risk category management. The bank also aims to improve its shareholders' returns while maintaining its prudent risk and return relationship. Nordea's strong capital and RWA management provides the bank cover for unexpected losses that might occur due to risks taken by the bank. Nordea adds that its overall credit quality is strong due to quality clients. The portfolio

of the bank is well diversified by industry and geography and it has no direct exposure to the Euro crisis. (Nordea Group 2011, 9; 12.)

#### 4.2.2 Meeting the Liquidity Requirements

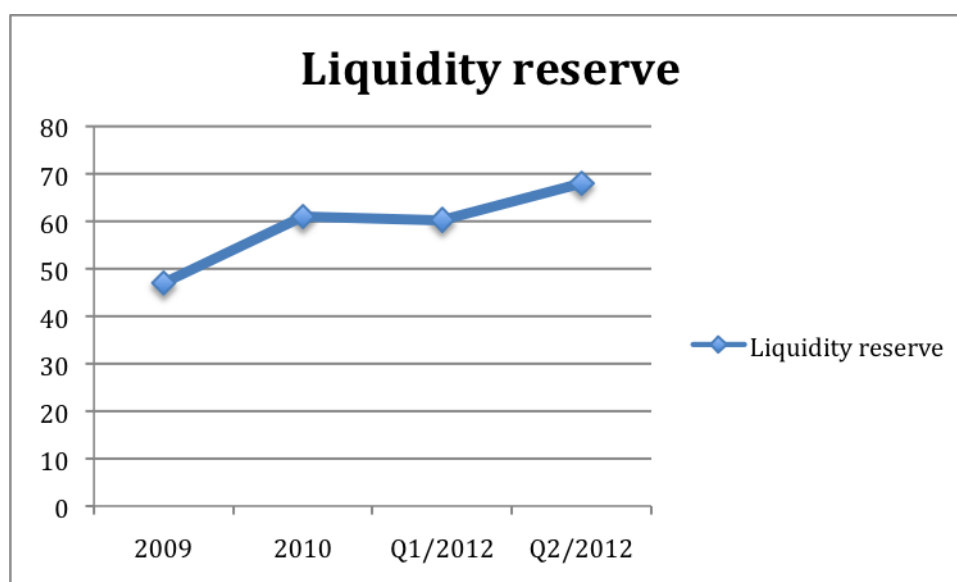
Table 9. Nordea's Liquidity Reserve

Nordea's Liquidity Reserve EURbillion				
Q2/2012	Q1/2012	2011	2010	2009
68	60.3	?	61	35-59
LCR 144% in Q2/2012				

Source: Investor Relations. Financial Reports. Nordea.

The development of Nordea's liquidity reserve has been consistent and it has been in more focus in the recent years. The liquidity buffer is made of highly liquid central bank eligible securities similar to the Basel III liquid assets and it amounted to 68 billion euros looking at the end of the second quarter of 2012. (Nordea 2012, 9)

Graph 6. Development of Nordea's Liquidity Reserve.



Even with the macroeconomic recovery slowing down in the Nordic countries, Nordea has maintained its solid risk position as well as it has continued to have a strong name in the funding market and high activity in the long-term funding market.

The bank has an excellent access to the international funding market and it is also LCR-compliant. Currently the LCR of Nordea is 144%. (Nordea Group 2011, 3; Nordea 2012, 2; 9.)

### 4.2.3 Lending Volumes

Nordea's lending volumes have also increased slightly and steadily over the years and the Basel III framework has not had a dramatic negative impact so far. The development of Nordea's lending can be seen in the Table 10.

Table 10. Nordea's Lending

Nordea's Lending EURbillion						
	Q2/2012	2011	2010	2009	2008	2007
Lending to Public	350.3	337.2	314.2	282.4	214.1	207.2

Source: Investor Relations. Financial Reports. Nordea.

## 5 Comparison of the Banks and Recommendations

The comparison of the banks is focused on the different capital and liquidity positions presented in the banks' own chapters. What makes this comparison interesting is that the banks have to comply with different requirements. Even though they both have to meet the general requirements imposed by the Basel III framework and the additional requirements created by the Swedish government, Nordea is also classified as a SIFI and therefore it has higher standards to live up to. The comparability might be hindered slightly because of the different methods of calculating the figures and the issue of currency. Most of the provided figures from Handelsbanken are given in SEK but for Nordea in EUR. Therefore the author has also transformed the SEK figures into EUR to be able to compare the figures between the banks. This currency change has been made with the currency rates for the publication dates of the financial reports where the figures have been published the first time.

Table 11. Summary of Handelsbanken & Nordea's Current Key Figures

	Handelsbanken	Nordea
Return on Equity	14 %	12.50 %
Net Interest income	1,523 EURm	1,462 EURm
Tier 1 Capital ratio	19.40 %	12.80 %
Core Tier 1 Capital ratio	16.80 %	11.80 %
Total Liquidity Reserve	86.9 EURbillion	68 EURbillion

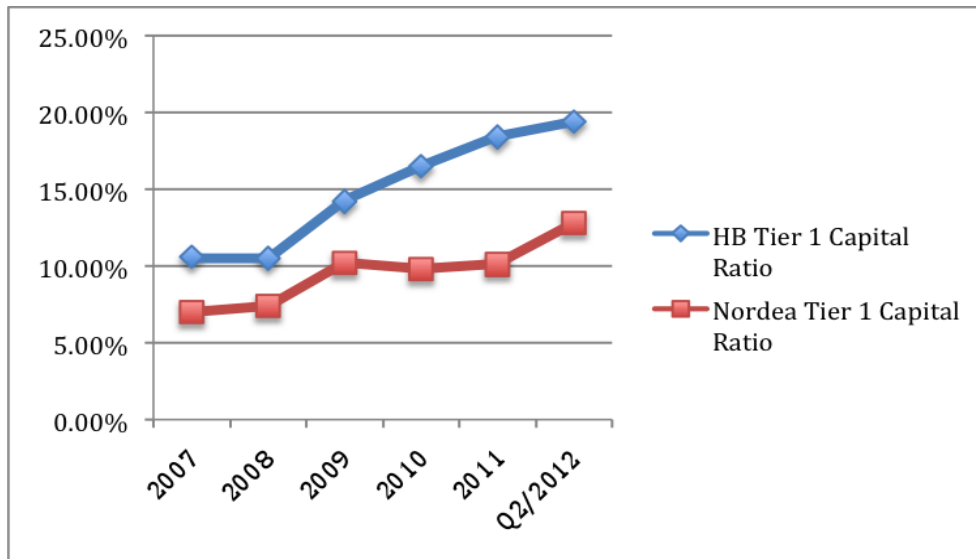
Source: Investors Relations, Handelsbanken & Nordea. 2012.

As can be seen in the summary in the Table 11. in and the comparison graphs below made from the key capital and liquidity figures of the banks, it would seem that Handelsbanken has stronger figures. Handelsbanken's return on equity has stayed throughout the studied timeline better than Nordea's ROE. Also the capital ratios are considerably stronger than Nordea's figures and the liquidity reserve of Handelsbanken exceeds the one of Nordea. It goes to show that even though Nordea has more customers and volumes, the quality of Handelsbanken is better than Nordea's. Nordea has strong

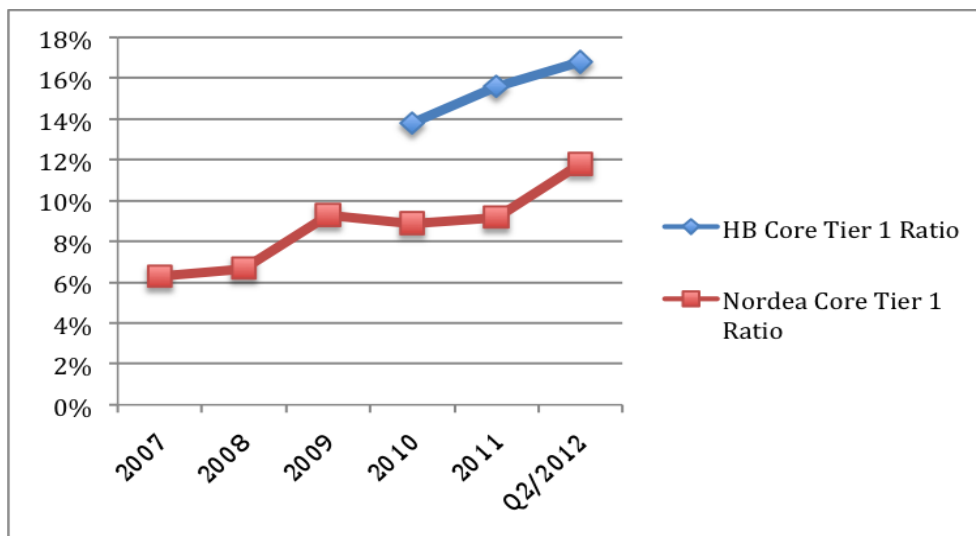


capital and liquidity figures in general but by comparison it is left behind of Handelsbanken.

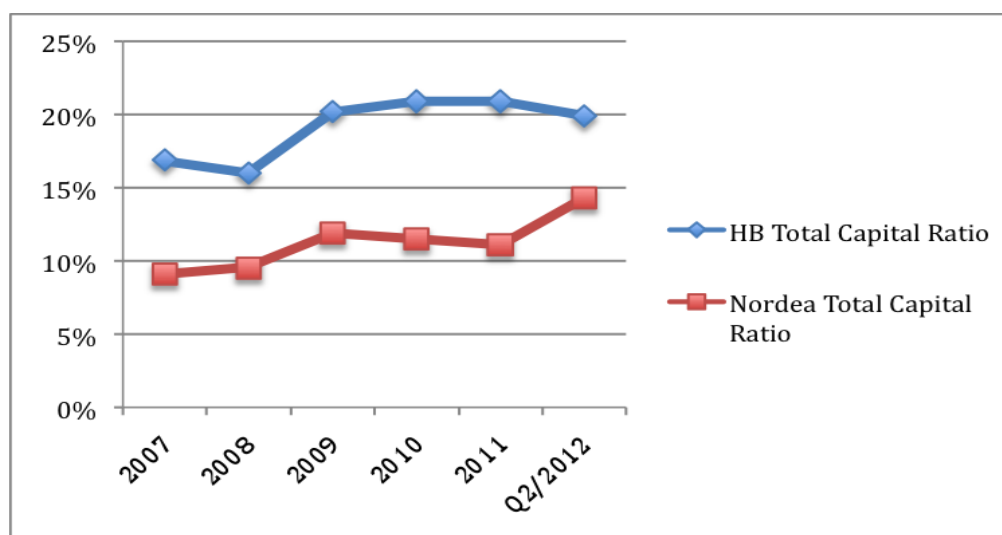
Graph 7. Comparison of the Banks' Tier 1 Capital Ratios



Graph 8. Comparison of the Core Tier 1 Ratios



Graph 9. Comparison of the Bank's Total Capital Ratios



## 5.1 The Main Results

Both of the banks are well prepared for the Basel III requirements. Nordea has to comply with additional requirements and still its capital and liquidity position is currently worse than Handelsbanken's. This been said, both banks are stabile and strong.

Sveriges Riksbank (2010a, 61) also conducted an analysis of how well the major banks (Handelsbanken, Nordea, SEB, Swedbank) in Sweden meet the Basel III requirements. The results show that the Swedish banks have already achieved the new capital requirements, but they have still some progress to do in order to comply with the new liquidity requirements. (Sveriges Riksbank 2010a, 61.)

The analysis of Sveriges Riksbank (2010a, 61) shows also that in order to for the banks to comply with liquidity regulations, they will increase the amount of liquid assets and as a result, the lending rates may increase up to 10 %-points. This analysis is based on the assumption that the banks would transfer all of their cost increases due to Basel III, to their borrowers. In the case were the banks, instead of transferring their costs to their borrowers, decrease dividend payments to their shareholders, the increase in lending rates would not be quite that large. (Sveriges Riksbank 2010a, 61.)

Sveriges Riksbank (2010a, 63) analyzed how the four major Swedish banks; Handelsbanken, Nordea, SEB and Swedbank, will deal with the new Basel III regulations. In terms of the capital requirements, the research was done based on the forecasts of the banks' financial reports (income statements and balance sheets) for the years 2011-2016. The forecasts were based on the market expectations, the banks' historical growth and Sveriges Riksbank's growth forecast. Dividend payments were expected to be 40 % of the banks' profits. The analysis of the Sveriges Riksbank concludes that the major Swedish banks already have Common Equity Tier 1 Ratio to achieve the Basel III requirements as well as the capital conservation buffer and counter-cyclical buffer of 2.5-%-points. (Sveriges Riksbank 2010a, 63.)

Sveriges Riksbank (2010) points out that it is more difficult to analyze the effects of the Basel III liquidity requirements than the capital requirements. This is mainly because the liquidity requirements can still be changed and all of the details of the liquidity positions are not specified in the financial reports of the banks. However when the Riksbank conducted their analysis in 2010 of the four major Swedish banks and their positions in terms of the Basel III requirements, they found that some of the banks did not yet comply with the LCR requirement. Currently however Nordea has stated to comply with the requirement and Handelsbanken has also considerably raised its liquidity reserves making it highly likely also to be able to comply with this regulation. Sveriges Riksbank also found that none of the banks complied with the NSFR requirement but this can be disregarded for the moment as the requirement is still taking its final shape. Sveriges Riksbank suggests that the banks could improve their NSFR by changing the conditions for deposit accounts, decreasing their commitments and assets demanding stable funding and by extending short-term. (Sveriges Riksbank 2010a, 63-64.)

Sweden's four major banks, Nordea, Handelsbanken, SEB and Swedbank, have core Tier 1 capital ratios of at least 11.2 % according to Ewing (2012). All four banks rejected ECB's emergency cash and have issued senior unsecured debt this year. In November 2011 Sweden's government stated that it expects the four major banks to aim for higher capital buffers than the Basel III requirements and to achieve these six years before the Basel III deadline, the year 2019. In addition for the reached core Tier 1

capital ratios, all of the four banks' credit-default swaps trade at a lower price than the average European banks. This means that the investors are willing to pay less in case of default at the four banks compared to the European banks. (Ewing 2012.)

To conclude the comparison, the author's own findings suggest that Handelsbanken has a stronger position in terms of its capital ratios and its liquidity reserve. This is considered to be possible due to the concentration on high quality clientele as well as a conservative grip on risk management. Nordea also has strong figures and has grown to be one of the most important banks in its home markets. This can be seen also by the status of belonging into the group of SIFIs.

The comparative analysis made by the Sveriges Riksbank was presented to add some valuable information concerning the other important Swedish banks to map a little the situation of the Swedish banking industry as a whole from the perspective of the Basel III. The results of that analysis show that the banks possess strong capital positions but could improve in their liquidity. Since that analysis was published, Handelsbanken and Nordea both have increased their liquidity reserves and are now more equipped than at the time of that research. Time will add clarity to the liquidity standards, LCR and NSFR and how well the banks can comply with them. Nordea has already stated that it has achieved the LCR criteria. However these standards were left to little inspection in the thesis due to the fact that there still can be some changes to the final criteria and the timeline to comply with them is set further along to the future.

## **5.2 The Probability of Meeting the Requirements**

Nordea and Handelsbanken have achieved a lot of the Basel III requirements but there are still some things left open due to the fact that the framework is still under final development. However it can be said with some confidence that these two banks are very likely to comply with the Basel III requirements as well as with the additional requirements required by the Swedish government. Nordea will also highly likely comply with the SIFIs requirements. The author feels this conclusion is logical due to the historical evidence of the stable operations and financial positions of the banks. If Handelsbanken and Nordea were to fail to meet these types of global standards on time that would

have to be the cause of great financial distress of the banks since in a sense these two banks are too important and strong financially to let it happen otherwise.

## 6 Conclusion

To conclude the Basel III framework will have a lot of consequences on the global banking industry. Some of them argued negative but mainly positive for the stability of the banking and financial field. There are a lot of requirements the banks have to take into consideration. There are also additional requirements for SIFIs such as Nordea and the Swedish government will impose also additional criteria for Swedish banks.

At first this sounded a bit unlogical considering the Swedish banks are strong and the analyzed banks proved to have good capital and liquidity situations. These extra requirements are however justified by the fact that the Swedish banks are extremely interconnected with each other. The interconnectedness of the Swedish banking sector creates more risk to their operations. This results to a domino effect in the case some of the banks in the same Swedish banking sector would experience financial difficulty and therefore it is reasonable that there will be higher standards and criteria in terms of capital and liquidity requirements for these banks. The analysis has shown that even though the banks possess a strong position and have started to build up their capital buffers and already comply with the capital rules, the liquidity issues might cause some challenges. However it might be a bit premature to address this issue because there will likely be some modifications on the existing criteria for the liquidity requirements. Currently the banks have benefited from their concentration on the Nordic markets but this might not always be the case. Therefore the banks should be prepared for potential future financial shocks.

In terms of the validity of the thesis, the results and information used in this project can be considered as reliable. This was achieved by a strict selection of sources. Only the internationally recognised and important financial institutions and papers were used to gather the information needed to analyze the effects of the Basel III requirements. The objectives of the thesis were to map the positions of Handelsbanken and Nordea and they were achieved. Although there was little numerical analysis made by the au-

thor, the information gained from the extensive research of different reliable sources made it possible to make logical conclusions.

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