	Bachelor Essay Spring 2013
Department of Economic History	
CAN LOW RISK IN THE SWEDISH BANKING SI	ECTOR PAY IN THE LONG RUN?
A comparison between Svenska Handelsbanken ar	
Based on financial crises in general and Swedi	
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Foreword

In 2009 I retired from Industrivärden, a major Swedish industrial holding company, where I served as a group controller for many years. After retirement I was commissioned to write a book about Industrivärden's history from its founding in 1944. The book was published in 2010.

In 2011 I resumed my academic studies in Lund where I originally graduated in 1970 in Business Administration. My renewed studies first focused on History of Ideas and Sciences and then on Economic History. My Bachelor Essay in Economic History essentially concerns a comparison between the two major Swedish banks Svenska Handelsbanken and S-E-Banken with the purpose to verify my hypothesis that the low risk profile of Handelsbanken has resulted in a better financial outcome over the last thirty years than that of S-E-Banken.

Industrivärden has been a shareholder of Handelsbanken since 1963 and is today one of the two major shareholders of the bank. The links between Industrivärden and Handelsbanken are very tight. I have therefore asked Anders Nyrén who has been President of Industrivärden and member of the Handelsbanken board since 2001 and who as from 2013 also has been elected Chairman of Handelsbanken to grant me an interview, which he kindly has agreed to. Furthermore, Anders Nyrén was Executive Vice President and Chief Financial Officer from 1992 to 1996 of Securum, a so called bad bank for winding up credit losses, during the worst financial crisis which so far has hit the Swedish banking sector. Mr. Nyrén thus has a deep knowledge of Swedish finance and has given excellent background information to my bachelor thesis.

Erik Röjvall is a leading financial analyst at Industrivärden and has a thorough knowledge of Handelsbanken and the current and future regulations in the financial sector. Mr. Röjvall has also granted me an interview, which has resulted in an even deeper understanding of the concept of risk in the financial sector.

Svarte, Ystad, May 2013

Christer Bartholdi

Summary

Banks are normally heavily indebted with equity levels of 5-10 percent of total assets or even lower. The assets consist mainly of short-term and long-term loans, funded by deposits which can be withdrawn at short notice. In order to avoid excessive withdrawals, which is called a bank run, deposit insurance systems, guaranteed by the state, are generally in operation.

The financial sector is characterized by a high degree of interrelation, as the liabilities of one bank are the assets of other banks. To prevent uncontrollable domino effects when financial crises occur the central bank will have to step in as lender of last resort.

A financial crisis generally happens when the economy is out of balance and a financial bubble is created by a rapid increase of asset prices. The economic indicator which signals a bubble is normally credit expansion far in excess of the growth of the economy

The Swedish banking crisis of the early 1990s was caused by regulations which meant that credits were not directed to the most profitable investments. When the regulations were abolished in mid-1980s there was a major expansion of credits and a surge in property prices followed by a crash. The credit losses increased from 1 percent of total lending in 1990 to 8 percent in 1992. The state had to intervene to save the banking sector. The Bank support board was created to manage contingency loans and issuing guarantees. Nordbanken was temporarily taken over by the state and divided into a õgood bankö and a õbad bankö. S-E-Banken applied for support but subsequently withdrew its application. Handelsbanken was the only major bank which did not apply for support.

The international financial crisis of the 2000s hit the Swedish banks relatively mildly but the authorities reacted quickly and guaranteed a total of some 3,500 billion SEK. However, S-E-Banken and Swedbank totally dominated the Baltic banking sector which experienced a classical bubble with a five-fold increase of property prices followed by a sharp fall. The two banks suffered heavy losses and had to issue new equity capital in 2008-2009.

The Swedish state was heavily involved in the crisis of the 1990s when the existence of both Nordbanken and Swedbank was threatened. The crisis of the 2000s required far-reaching guarantees but no direct involvement as the banks were strong enough to handle the situation.

My hypothesis is that low risk pays in the long run in Swedish the banking sector. In order to test the hypothesis a comparison has been made for the two banks which suffered least from the financial crisis of the 1990s and the 2000s, namely Handelsbanken and S-E-Banken.

Handelsbanken, which has a historically low risk tolerance, has a decentralized organization, has made relatively few large acquisitions, is expanding organically abroad, has a credit policy based on responsibility by the local branch office and basically accepts a risk position only for customer related business.

S-E-Banken has a centralized organization, has made several aggressive acquisitions followed by divestments, has a credit policy based on a scoring system and even evaluates its risk position based on the õrisk appetiteö of the board.

The statistics for the period 1982 ó 2012 clearly speaks in favour of Handelsbanken both in regard of credit loss ratio, return on shareholders equity, dividend in relation to equity and Basel II primary capital ratio. Also, Handelsbanken has issued far less new equity capital than S-E-Banken over the last thirty years. The hypothesis of this paper is thus verified.

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1. Background

1.1 Why banking is such a risky business

Normally an industrial company operates with an equity ratio of some 20 -30 percent of total assets. An equity ratio below 10 percent for an industrial company would be regarded as risky from a creditor's point of view.

In the early 19th century many banks were partnerships with unlimited liability which meant that bank owners had to pay depositors from the bank's assets or from their own assets (Admati & Helwig p. 30). Equity levels of 40-50 percent were fairly normal. Bankers avoided to take on too much risk as they were personally liable for the debts of the bank.

Since the middle of the 19th century limited liability has been the general trend in the banking sector. Equity levels have decreased successively from some 25 percent in the early 20th century to 6-8 percent of total assets in the United States in the late 20th century and even less in most European countries (Admati & Helwig 2013: p. 31). Furthermore banks can borrow off the balance sheet or through derivatives. Banks are thus heavily indebted and are very sensitive to the value of their assets which mainly consist of short-term and long-term loans.

Loans are generally funded by deposits, which can be withdrawn at short notice, whereas the loans can extend over several years. There is thus an imbedded risk as long-term assets are funded by short-term liabilities. Normally withdrawals and deposits roughly balance each other. The bank will, however, get into trouble if many depositors are worried about the bank's solvency and want to withdraw their deposits. This is called a *bank run*. Such runs often occurred during the Great Depression in the United States which led to federally guaranteed deposit insurance system (Admati & Helwig p. 53). After the financial crisis of 2007 ó 2009 guaranteed deposit insurance systems have also been introduced in Europe.

The financial sector is characterized by a high degree of interrelation. If a major bank goes bankrupt it will affect effect many other financial institutions as the liabilities of one bank often are the assets of other banks. This phenomenon is called financial contagion. To prevent an uncontrollable domino effect, central banks then will have to step in as lenders of last resort to provide the banking system with cash. The alternative to sell assets in order to strengthen the balance sheet is normally worse as prices of the assets tend to fall in a state of general uncertainty in an economy.

So why are banks generally so short on equity? Banks with more equity are basically better placed to make loans to creditworthy businesses and individuals. The more equity a bank has the lower the required return on equity will be and the lower the risk for the bank.

Admati & Helwig recommend banks to have an equity ratio of 20 ó 30 percent, which is the normal ratio for industrial companies.

In a review of Admati & Hellwig in Financial Times issue of March 18, 2013, the well-known British journalist Martin Wolf summarizes that banks today are õso grossly complex and so undercapitalizedö.

1.2 Why do financial crises happen?

According to classical economic theory there are three factors of production: labour, land and capital. Financial risks are generally associated with capital. The reason to take financial risks is that it provides a possibility to make a profit ó otherwise there is no reason to take a risk. In addition the positive value of the possibilities which are associated with a certain capital ought to be bigger than the negative value of the risk associated with the capital. However, if the value of the risk exceeds the value of the possibilities the situation is out of balance. If this is the case not only in a single case for a person or a company but is generally prevailing in the economy the situation will sooner or later lead to a financial crisis.

A financial crisis generally occurs when the economy is out of balance, a situation which can be built up over a long period of seemingly stable conditions and then suddenly erupt in a financial crisis. In order for the economy of a country to be in balance certain criteria should be fulfilled in respect of employment, growth and inflation. These criteria vary from time to time. Also assets prices should not increase more than the economic growth in the long run. In reality few economies fulfill these criteria at the same time. Thus imbalances have a tendency to build up over an extended period of time, as when credit for investment in real property has expanded too much. A so called financial bubble has been created, which will normally burst when the situation is totally out of balance. A financial crisis has occurred. The crisis can be extended in time if corrective measures are not enough or are established too late.

Lybeck (1992) argues that financial risks could be classified as (1) credit risks, (2) market risks, (3) liquidity risks or (4) counter party risks (p. 11).

The essential definition of a financial crisis as stated by the International Monetary Fund in 1991 is õa sharp reduction in the value of bank assets, resulting in the apparent or real insolvency of many banks and accompanied by some bank collapses and possibly some runsö (Lybeck p. 17). The most important triggers of a financial crisis are (1) a recession in combination with a general price decrease, (2) contraction in monetary and financial politics especially in combination with exorbitant real interest rates and (3) deregulation of financial markets and introduction of financial innovations (p. 20).

Östrup et al (2009) argue that a financial crisis is caused by failures of legal, political and regulatory institutions (p. 178). The authors point out that an event must spread through the financial system in order to be regarded as a financial crisis. Furthermore the crisis must have real consequences by causing for example a credit crunch.

The four major Nordic countries all experienced a severe financial crisis during a period from the mid-1980s to the early 1990s. The crises were characterized by a major lending spree from banks and other financial institutions. Real estate values, especially of commercial properties, later fell heavily which triggered the crises (Östrup et al p. 185-186). The apparent safety of commercial property as collateral tempted banks to increase lending to real property (p. 187). This was the case especially in Sweden where prices of office buildings in the Stockholm area increased fourfold in real terms during the 1980s (p. 204).

A fall in real property prices is much more likely to cause a financial crisis than a fall in equity prices because real estate investments are normally highly leveraged which is not the case for equity investments (Östrup et al p. 190).

Cooper (2008) points out that markets are not always efficient but could be rather unstable on the contrary. Minsky's instability hypothesis says that financial markets can generate their own forces which will cause credit expansion and asset inflation which will be followed by credit contraction and asset deflation (p. 13). A central bank is necessary in order to stabilize the economy (p. 37). Financial instability thus caused the need for central banking.

There is a fundamental difference between markets of goods and services on one hand and asset and credit markets on the other hand. In the goods market higher prices trigger lower demand, whereas in the asset market higher prices trigger higher demand and vice versa (Cooper p. 101).

If investors do not have the necessary information to calculate the correct price of an asset then asset price bubbles could form without investors behaving irrationally (Cooper p. 112).

Credit rating agencies base their assessment of credit worthiness on the fact that debt grows in proportion to the valuation of the assets. As an asset bubble expands therefore debts never look excessive. The false impression is that balance sheets are improved whereas the leverage is dependent on rising asset prices. When asset prices begin falling debt will quickly be excessive (Cooper p. 114-115).

The economic indicator which signals a bubble is normally credit expansion. If debt is growing much faster than the economy or the income needed to service the debt is exorbitant then there is a probability that lenders will tighten their standards. Credit expansion is thus the most important macroeconomic variable to observe (Cooper p. 124-125).

1.3 Why do banks need a central bank?

Already during the 19th century the British economists Henry Thornton and Walter Bagehot pointed out the need of a central bank as a lender of last resort for banks in distress. The functions of the central bank would be to (1) protect the money stock, (2) support the whole financial system, (3) to enforce stable money growth and (4) to announce its policy in advance of crises so as to remove uncertainty from the market (Freixas et al, p. 63). Bagehot suggested that in a liquidity crisis a central bank should lend freely with relaxed collateral standard. Basically lending by the central bank should be restricted to solvent banks.

A solvent bank may be vulnerable to deposit withdrawals or the drying up of interbank lending in time of crises. The failure of a solvent bank would endanger the stability of the financial system. These are the two basic reasons for the central bank to provide liquidity to the market. Normally support should be provided to the whole market (Freixas et al, p. 79).

However, moral hazard could arise if banks expect a õbail-outö in any crisis. Therefore a certain degree of uncertainty must prevail as to which institutions will receive support.

1.4 The Swedish banking crisis in the early 1990s

1.4.1 Deregulation of the credit market in the late 1980s

The Swedish banking sector had been heavily regulated ever since the end of the Second World War until the mid-1980s when deregulation became necessary. The regulations were the basis for the fixed exchange rate policy which was generally prevailing in Europe within the Bretton Woods system which was in force until the early 1970s. Furthermore the Swedish house building market was heavily subsidized which made credit regulations necessary.

Åsbrink (included in Sandberg, 2005: p. 75) states that the regulations meant that credits were not directed to the most profitable investments, which was the major flaw of the regulations. The banks were in fact obliged to invest in bonds issued by the state and were therefore not used to make qualified evaluations of the credit risk. The lack of such competence would later lead to excessive bank lending when the regulations were cancelled.

During the years before the final deregulation decision in 1985 several steps were taken in order to soften the credit regulations. Liquidity ratios were lifted in 1983 and interest ceilings were lifted in the spring of 1985. Finally the lending ceilings and the placement requirements for insurance companies were abolished in November 1985, the so called November revolution. The Riksbank raised cash reserve requirements for banks from 1 to 3 percent but monetary and fiscal policies were not changed in any other way (Englund p. 83-84). A new era of free competition had now been established in the Swedish credit market.

After the deregulation was carried out criticism has been made on several points, the most important of which are: (1) The credit expansion was much bigger than could be expected, but in fact this did not take place until 1987 and (2) The tax reform of 1991, which basically made interest deductions less interesting, and the liberalization of the foreign exchange regulation were made in the wrong order. Åsbrink (Sandberg p. 81- 85) means that this is a theoretical *ex ante* idea, based on known facts. From a practical point of view there were few alternatives in which order to carry out the reforms.

Åsbrink (Sandberg p. 102 - 103) summarizes that the deregulation of the credit market led to an expansion which was far in excess of what had been anticipated. The credit expansion led to a surge in Swedish property prices in the late 1980s which subsequently was followed by a major crash in the finance and property markets. However, the credit regulations were anyhow totally outdated and could not be sustained in an international market.

1.4.2 Credit expansion in 1986 ó 1990

Over the five-year period 1986 ó 1990 total lending increased by 136 percent. Lending from banks increased by 174 percent and from mortgage institutions by 167 percent (Englund p. 84). Banks could now enter into markets which had previously not been allowed. This meant that finance companies were pushed into more risky markets. However, finance companies were directly and indirectly financed by the banks, so that the banks became indirectly exposed to extra credit risk (Englund 1999: p. 85).

Pettersson (1993: p. 28-29) states that the Swedish economy because of the credit expansion became overheated in the late 1980s, especially in the *construction market*, with building price index far exceeding the consumer price index, the *real property market*, with an increase of 140 percent for commercial properties and 100 percent for family houses during 1985-1990 and the *labour market* with unemployment reaching an all-time low of 1.4 percent in 1989.

Englund points out that deregulation, although being important, was not the only factor that led to the financial crisis. The possibility of generous lending combined with insufficient risk analysis gave way to a price boom (p. 89).

1.4.3 The financial crisis in the early 1990s

It is a well-known fact that the bankruptcy of Finans AB Nyckeln in September 1990 is regarded as the trigger of the financial crisis although it was only a sign of the unhealthy market conditions. The industrial production had culminated already in mid-1990 and property prices had started to fall (Larsson & Sjögren 1995: p. 133).

In 1991 it became fully evident that the banking sector was in for a major crisis when another finance company, Gamlestaden, went bankrupt with debts to Nordbanken of some 11.5 billion SEK (Larsson & Sjögren p. 137).

Total credit losses for the commercial banks increased from 1.1 percent of lending in 1990 to 7.6 percent of lending in 1992 until a gradual decline began in 1993 with credit losses of 6.5 percent of lending (Larsson & Sjögren p. 138). Of the major banks Nordbanken and Gota Bank suffered the most with credit losses in 1992 of 18.8 percent and 11.3 percent of lending, respectively. Svenska Handelsbanken and S-E-Banken were far better off with credit losses culminating in 1993 of 4.7 percent and 5.9 percent of lending, respectively (Larsson & Sjögren p. 141).

The Swedish state had to intervene in order to save the banking sector, which was in a deep crisis. In the autumn of 1992 the state issued a guarantee for all bank obligations, except equity. A Bank support board was created to manage applications for bank support, such as contingency loans, guarantees when issuing new capital and direct capital infusions. A major bank, Nordbanken, was divided into a õgood bankö and a õbad bankö called Securum. Both banks received capital from the state and became temporarily owned by the state. One of the minor banks, Gota, was also recapitalized, then taken over by the state for one krona and subsequently merged with Nordbanken (Östrup et al 2009: p. 205).

Nordbanken received a total of 60 billion SEK for assets booked at 67 billion SEK. At the end of 1993 this value had been written down to 33 billion SEK meaning that the excess valuation of assets transferred to Securum was some 30-35 billion SEK. Without the capital injection Nordbanken would not have survived (Östrup et al p. 208). Please refer to enclosure A for a detailed description of how Securum was established and worked.

Handelsbanken was the only bank which did not apply for support from the state. S-E-Banken applied but subsequently withdrew its application after market conditions improved when Sweden left the fixed rate regime and let the krona float freely in late 1992.

1.4.4 Credit losses in the banking sector

Wallander (1994) has made a thorough investigation of credit losses in the banking sector during 1990 ó 1993, as a public enquiry on behalf of the Finance department.

During the period 1981 ó 1989 credit losses in relation to lending were fairly constant at about 0.5 percent of lending. Then, as a result of the financial crisis, the losses rose to 7 percent of lending in 1992 before starting to slowly fall back. Wallander summarizes the losses during the four years 1990 ó 1993 to 175 billion SEK. The bulk of the losses originated from Nordbanken (including Securum), Sparbanken Sverige and GOTA, which together accounted for 65 percent of the total losses (Wallander p. 80).

In relation to lending the losses for the period 1990 - 1993 amounted to 37 percent for GOTA, 21 percent for Nordbanken and 18 percent for Sparbanken Sverige. The two õhealthyö banks Handelsbanken and S-E-Banken had considerably lower losses of 10 percent and 12 percent.

Total credit losses referring to companies amounted to 70 percent of all losses of which two thirds were õproperty relatedö (p. 140). It is striking that õproperty relatedö losses were far higher in GOTA and Nordbanken than in Handelsbanken and S-E-Banken (p. 90). It is also worth noting that credit expansion was far higher in Gota and Nordbanken during 1980 ó 1989 than in Handelsbanken and S-E-Banken (p. 141).

Wallander summarizes his investigation by stating what should be learnt from the crisis. *Bank management* as well as the board and auditors are responsible for credit valuation and assessment. The *government* is responsible for issuing proper regulations on the capital needed for banks. The *authorities* are responsible for strictly and continuously monitoring bank activities (p. 143 ó 145).

1.4.5 How serious was the crisis of the 1990s?

The final bill to the tax payers for saving the financial sector is calculated by Jennergren and Näslund to 35 billion SEK or 2 percent of GDP.

Hagberg and Jonung (2000) have made an extensive comparison of all the major crises which Sweden has suffered from 1870 to 2000, including the two world wars, the deflation crisis of the 1920s and the world crisis of the 1930s, the two oil crises in the 1970s and the 1990s crisis. The authors have estimated the costs of the crises as loss of real income, loss of industrial output and loss of employment (p. 35).

The 1990s crisis is a clear example of a boom-bust cycle, with a fairly high economic loss. Especially the loss of employment of 17 percentage points between 1990 and 1994 was devastating (p. 40) and led to a sharp fall for Sweden in the international comparison of GDP per capita. Also the loss in real income was exceptional which was only exceeded by the crisis of the 1930s (p. 43). Sweden lost its international top position as regards GDP per capita.

Hagberg and Jonung summarize that the crisis of the 1990s meant a change from negative real interest rates to positive real interest rates. This led to a decrease of the demand for credit.

1.5 The Swedish banking crisis in the late 2000s

The financial crisis of 2008 was a global financial crisis which affected most of the world from mid-2008, basically because of an overvalued and over-indebted real property market in the US. Also in Europe real property was heavily overvalued in many countries after a period of strong credit expansion. The financial crisis led to an extended recession both in the US and Europe.

The American real property bubble emanated from a series of decisions during the years 1997 - 2004 in order to stimulate the housing market. The state-owned institutions for housing financing were obliged to provide at least half of the housing credits to persons with income below the median, including true low income earners. These loans with insufficient collateral are called sub-prime loans.

When the interest level successively increased in the US during 2002 6 2007 housing became more expensive. The increased risk level in the financial sector caused a substantial increase of interest rates between the banks. The situation led to several mergers and acquisitions in the banking sector during 2008. The bankruptcy in September 2008 of the investment bank Lehman Brothers, which had invested heavily in sub-prime loans, triggered a general crisis in the American real property market. Many European banks had also invested in the American housing market via securitized assets like Mortgage Backed Securities and Collateralized Debt Obligations.

The bankruptcy of Lehman Brothers led to general lack of confidence between the financial institutions and the international interbank funding market more or less vanished. The authorities of all the major economies therefore had to enforce programs in order to stabilize the situation.

Bergström (2009) summarizes the decisions made by the Swedish government in October 2008 in order to stabilize the financial market: (1) a voluntary guarantee program in order to support financing of solvent financial institutions, (2) a program to support banks in crisis and (3) a stability fund aimed at solving future insolvencies in financial institutions. Furthermore a deposit insurance system up to originally 1 million SEK was guaranteed by the state.

The *guarantee program* was only used by Swedbank and some minor financial institutions. A solvent bank in distress could be entitled to a *capital support* of a maximum of SEK 50 billion in order to strengthen the capital base and improve the lending capacity. The state contributed 15 billion SEK to the *stability fund*. The major financial institutions are obliged to pay an annual fee to the stability fund (Bergström p. 15-16 and 27-28).

The major Swedish banks reacted quickly to the crisis and issued new equity capital in 2008 of which Swedbank 14 billion SEK, S-E-Banken 15 billion SEK and Nordea 30 billion SEK. Handelsbanken was the only major Swedish bank which did not issue new equity capital.

The Swedish state guaranteed a total of some 3,500 billion SEK, in fact more than the gross domestic product, the main items of which were deposit insurance of 1,000 billion SEK, the guarantee program of 1,500 billion SEK and export guarantees of 900 billion SEK.

1.5.1 Analysis of the financial market turmoil by Riksbank Govenors

Several of the Governors of the Swedish Riksbank have analyzed the causes and consequences of the financial crisis of the late 2000s as well as how to improve the authorities' management as well as monetary policy in a financial crisis.

Nyberg et al (2008: p. 38-46) discuss securitization of credits, that is issuing bonds backed by mortgages and credit cards. Originally this was a straight forward procedure, but eventually the bonds were repackaged in so called structured credit instruments like collateralized debt obligations. The credit risks were hidden and pricing became difficult. Financing was referred back to the bank, like with the finance companies in the Swedish financial crisis of the 1990s. When credit assessments deteriorated in the US, first hedge funds and then the US banks were affected. However, the Swedish banks had only very marginally invested in securitized assets.

Molin and Ingves (2009) discuss how authorities shall manage crises in the financial system. They point to repacking of subprime loans, which caused extremely complicated structures. It was impossible to know the extent of sub-prime loans and therefore the international interbank market dried up. The authors find many similarities to the international financial crisis of the late 2000s and the Swedish crisis of the early 1990s, with a õgreyö credit market (p. 10).

Molin and Ingves further stress that regulations must be enforced to give the state the right tools in a financial crisis. The internationalization of the Swedish banks, which have more than half of their assets abroad, requires cross-border cooperation (p. 18). The regulations should (1) ensure resolute actions when needed, (2) ensure quick and easy pay of the deposit guarantee and (3) give the state sufficient power towards bank shareholders (p. 20-21).

1.5.2 Credit losses suffered by S-E-Banken and Swedbank in the Baltic countries 2005 6 2009

Johansson et al (2010) have analyzed the economic development of the Baltic countries during the late 2000s, the local performance of S-E-Banken and Swedbank as well as the credit losses suffered by the banks during the financial crisis.

After the fall of the Soviet Union in 1991 the Baltic countries gained independence and established capitalist economies. In 2004 the three countries joined the European Union. The currencies were pegged to the euro. Both Estonia, Latvia and Lithuania enjoyed high economic growth during the 2000s up to the financial crisis. The economic growth was, however, based more on consumption financed by loans than on real investments. Property prices increased fivefold during 2001 ó 2006 (p. 39). The bubble erupted in 2007 and the prices continued to fall in 2008. In 2009 prices fell even more.

S-E-Banken and Swedbank were the major banks in the Baltic countries. The banks increased their lending heavily, S-E-Banken by more than 120 percent from 2005 to 2008 and Swedbank more than five-fold during the same period. Many loans were issued in euros.

When the financial crisis erupted credit losses became very large in the Baltic countries. S-E-Banken took credit losses of 1.3 percent of lending in 2008 and 5.4 percent in 2009 (p. 21).

The credit losses for Swedbank amounted to 0.9 percent of lending in 2008 and 6.6 percent in 2009 (p. 32).

Both banks had to issue new equity capital in order to improve their solvency.

S-E-Banken gave no dividend for 2008 and made an issue of new share capital in early 2009 of 15 billion SEK in order to reach a primary capital ratio of 14 percent at the end of 2009.

Swedbank had to issue new share capital both in 2008 and 2009 with a total of 28 billion SEK in order to reach a primary capital ratio of 14 percent at the end of 2009.

Johansson et al conclude that lending to the Baltic public was focused on new housing and general consumption. All the Baltic countries had major deficits in their current accounts, which indicates that borrowed foreign money was used for consumption which in the end created a financial bubble (p. 56).

1.5.3 A comparison between the crisis in Asia and the crisis in the Baltic countries

Bernhardtsson and Billborn (2010) have made a comparison of the financial crises in Asia in the late 1990s and in the Baltic countries in the late 2000s. The authors point out that there are obvious similarities between the regions insofar that both went from regulated economies to market economies. Both regions suffered economic crises after a period of high growth and dramatic increase in property prices fueled by strong credit expansion (p. 5).

Growth in the Baltics accelerated when the three countries joined the European Union in 2004 and tied their currencies to the euro. There was a rapid increase in the flow of foreign capital. Domestic consumption increased rapidly and new investment in housing soared (p. 7). The bonanza was financed by large deficits in the current account, which were the largest in Europe (p. 8). Lending to households and companies increased rapidly, with real interest rates being negative.

The banks began restricting their lending in 2007. When the global recession occurred in 2009 the Baltic countries were severely hit, with a GDP decrease of 14 \u00e9 18 percent. Property prices plummeted with a decrease over two years of between 50 and 70 percent. (p. 15).

Instead of devaluing their currencies the governments of all three Baltic countries chose an internal devaluation, that is a reduction of wages and public expenditures (p. 15).

The two Swedish banks S-E-Banken and Swedbank totally dominated the Baltic banking sector. Lending was financed by borrowing euros on the international capital market at low interest (p. 19). In the end the two banks suffered considerable credit losses and had to issue new equity capital as detailed by Johansson et al. Please refer to section 1.5.2 above.

The similarities between the Asian crisis in the late 1990s and the Baltic crisis ten years later is that foreign capital was invested in non-tradables. The fixed exchange rates generated unrealistic confidence in the currencies. The foreign banks probably contributed to the severe imbalances in the Baltic countries (p. 20).

1.6 Comparison of how the Swedish banking crises were solved in the 1990s and the 2000s

Both the crisis of the early 1990s and the late 2000s erupted suddenly and with great impact, although there had been signs well before of strong credit expansion and fast rising property prices. The 1990s crisis was an isolated Swedish/Scandinavian phenomenon whereas the 2000s crisis was truly international and quickly spread from America to Europe.

The Swedish authorities reacted quickly in both cases and supported the financial system in order to prevent bank runs and bank failures. The Bank support board of the 1990s strictly adhered to the idea of avoiding bail-out of bank shareholders. Only a minor part of the state support went to the private shareholders of Nordbanken, whereas the shareholders of GOTA received no compensation. The split-up of Nordbanken and GOTA in a õgood bankö and a õbad bankö was well carried out. The state provided support to Nordbanken of some 35 billion SEK or some 2 percent of GDP but in the end probably most of the support was covered in various ways. Please refer to enclosure A.

Handelsbanken and S-E-Banken both issued new capital in 1993 in order to strengthen their capital base after they had suffered heavy credit losses during 1990-1993 of 10 and 12 percent, respectively, of their lending.

Generally the winding-up of the banking crisis of the 1990s has been regarded as very successful and has been seen as an international example of how to handle a banking crisis. However, it has also been pointed out that the expensive defense of the fixed exchange rate during 1992 meant that the crisis was unnecessarily extended.

In the autumn of 2008 the American and European governments had to act quickly in order to stabilize the financial sector. The Swedish state provided considerable guarantees for the financial sector including a deposit insurance scheme, a guarantee program and export guarantees, in fact totaling more than the gross domestic product.

The Swedish domestic banking market was not affected in the 2000s by the international financial crisis as property values did not fall and the bank did not register any exceptional credit losses. However, the internationalization of the Swedish banks gave rise to considerable credit losses for S-E-Banken and Swedbank in the Baltic countries where the two Swedish banks totally dominated the market. The Baltics had experienced a classic financial bubble during the mid-2000s with property prices first increasing fivefold and then plummeting more than 50 percent over two years, which caused S-E-Banken and Swedbank major credit losses.

The major Swedish banks issued new equity capital in 2008 except for Handelsbanken. Swedbank had to issue equity capital also in 2009.

When comparing how the crises of the 1990s and the 2000s were solved it is striking that the state was much more heavily involved in the 1990s when the existence of both Nordbanken and Sparbanken were threatened. The state managed well without too costly bail-outs.

The crisis of the 2000s required wide-reaching guarantees from the state but no direct involvement as the banks were strong enough to handle the situation by themselves.

2. Problem

The Background section of this paper describes how the banking crises of the early 1990s and the late 2000s developed. Of the four major Swedish banks only Handelsbanken and S-E-Banken survived the crises without public support.

Nordbanken suffered heavy losses in the early 1990s and was temporarily taken over by the Swedish state. The bank was split into a õbad bankö called Securum, which was wound up in the mid-1990s, and a õgood bankö. After privatization Nordbanken subsequently developed into a major Scandinavian bank called Nordea after mergers with Merita Bank in Finland, Uni Bank in Denmark and several Norwegian banks.

Sparbanken also suffered heavily in the crisis of the 1990s and received guarantees from the state in order to carry on its business. After several mergers with other savings banks Swedbank was formed. The bank ventured into the Baltics and Ukraine in the early 2000s and suffered heavy losses when the local economies collapsed after a property bubble was pricked. Swedbank only survived because of several issues of equity capital.

S-E-Banken made severe losses in the early 1990s and applied for assistance from the state but withdrew its application after the economy improved when Sweden let the krona float freely in late 1992. In the 2000s the bank invested heavily abroad with acquisitions of subsidiaries in the Baltic countries, Germany and Ukraine. S-E-Banken also made heavy losses in the Baltics and had to issue equity capital in order to improve the capital base.

Handelsbanken made losses in the early 1990s but to a much lesser extent than the other banks. The bank is generally characterized by a low risk profile. Expansion is normally made gradually by setting up new branches in new markets outside Sweden. There have been relatively few acquisitions of other banks. Handelsbanken never ventured into Eastern Europe and was therefore not much affected by the banking crisis of the 2000s.

Based on the extensive background description and the problem outlined above I have established a hypothesis, namely that **low risk can pay in the long run in the Swedish banking sector**. In order to verify or nullify the hypothesis a comparison will be made between Handelsbanken, which has suffered least during the banking crisis of the 1990s and the 2000s, and S-E-Banken, which suffered badly but survived without assistance from the state. The two other major banks, Nordea and Swedbank, received direct and indirect support from the state and have also a quite different structure today as compared to the early 1990s.

3. Purpose

The purpose of this paper is to verify or nullify the hypothesis that low risk can pay in the long run in the Swedish banking sector.

4. Limitation of the problem

The study is limited to a comparison of Handelsbanken and S-E-Banken over the last thirty years 1982 ó 2012 for which official reports were easily available in the library.

5. Methodology and theory

The *methodology* of this paper is to describe the background to the problem by making a thorough *literature study* of banking in general, why financial crises happen and to separately describe the crises of the 1990s and the 2000s. Only sources which have been used for this paper are listed as references.

Primary data consist of selecting certain quantitative items from the annual reports of Handelsbanken and S-E-Banken for the thirty year period of 1982 ó 2012. The data has been scrutinized and is presented in diagrams supported by comments.

The period of thirty years is largely selected from a practical point of view as annual reports for a period of forty or fifty years are not available at the library. However, as the banks have not altered their policy since the 1970s a longer period would probably not have changed the outcome of the analysis.

A central theme of providing credit for a bank is how to grant credit facilities and how to measure probable loan losses. The description of this process is based on the latest annual reports of Handelsbanken and S-E-Banken.

Finally, *semi-structured interviews* have been conducted with Anders Nyrén, chairman of Handelsbanken and former Chief Financial Officer of Securum, as well as with Erik Röjvall, leading financial analyst at Industrivärden. The number of respondents is thus very limited but on the other hand the respondents are extremely well informed.

The interviews were based on a list of questions but the discussions evolved beyond the questions. Only short notes were taken during the interviews, which were then elaborated upon and presented to the respondents for their approval.

The *reliability and validity* of the literature study can be regarded as very high, especially regarding the crisis of the 1990s which has been thoroughly described by many authors, both when the crisis was acute and in hindsight some 15 ó 20 years later. The literature regarding the crisis of the 2000s is far less, mainly because of the relative minor importance of the crisis. Also too little time has passed for making analysis in hindsight. However, the description of the crisis of the 2000s can be regarded as fairly reliable.

The quantitative accounting data assembled from the annual reports from 1982 to 2012 of Handelsbanken and S-E-Banken must be regarded as reliable as they are based on official accounting rules and reviewed by auditors. The conclusions based on the data must therefore be regarded as valid.

Finally the interviews should be regarded as additional information from well informed people. As both the respondents are part of the õHandelsbanken sphereö the validity is not fully sufficient.

The *theoretical background* of bank financing, risk levels, capital requirement, risk profile and complex legislation is outlined in the interview with Erik Röjvall (p. 31-32).

6. The concept of financial risk

The risk concept of a bank consists of the following five major factors: (1) credit risk, (2) market risk, (3) liquidity risk, (4) operational risk and (5) business risk (almost identical definitions are stated in Handelsbanken and S-E-Banken annual reports 2012).

Based on the risk situation of a bank, the economic capital needed to cover all the risks can then be calculated.

6.1 Credit risk

Credit risk is defined as the risk that the bank will suffer an economic loss because the counterparties of the bank cannot fulfill their obligations (Handelsbanken 2012 p. 84). Credit risk in general is the most important risk that a bank is exposed to.

There are many aspects of credit risk exposure such as lending by country, lending by branch of business, lending by credit risk class, counter party risk and payment risk.

6.2 Market risk

The market risk emanates from price and volatility changes on the financial markets and is further divided into (1) interest risk, (2) share price risk, (3) currency risks and (4) commodity price risk. Each of these risks could be measured by a statistical Value at Risk (Handelsbanken 2012 p. 92).

6.3 Liquidity risk

Liquidity risk is the risk that the bank cannot fulfill its payment obligations on the due date without obtaining funding at an unacceptable cost (Handelsbanken 2012 p. 96).

In order for a bank to handle liquidity risk a thorough liquidity planning is necessary on a day by day basis, as well as a considerable liquidity reserve.

6.4 Operational risk

Operational risk is the risk for losses emanating from improper internal processes, human error, faulty systems and external events including legal risk (Handelsbanken 2012 p. 102).

Banks generally handle operational risks by continuous control and improvement of administrative systems. Also plans are made of how to act in a situation of severe crisis.

6.5 Business risk

Finally there is a business risk of unexpected change of profitability which cannot be referred to any of the risks described above.

6.6 Economic capital needed to cover the combined risks

The combined risks of a bank can be summarized as the economic capital which is needed in order to cover all risks that the bank is exposed to (Handelsbanken 2012 p. 105).

7 Brief history of Handelsbanken

Bartholdi (2010) has summarized the history of Handelsbanken (p. 164-166).

Stockholm's Handelsbank was established in 1871 after a conflict with Stockholm's Enskilda Bank. Some of the board members of Enskilda Banken resigned and formed a new bank which came to be known as õthe Divorced Bankö (Frånskilda Banken in Swedish). The first president of Stockholm's Handelsbank was Louis Fraenkel who led the new bank from its foundation until 1911. Fraenkel put great emphasis on bond and currency transactions and was very successful in obtaining good profitability for Stockholm's Handelsbank, which became the number two business bank in Sweden.

In 1914 the bank began its expansion outside Stockholm by acquiring Norra Sverige. Further expansion took place in 1917 by acquisition of Norrlandsbanken and Södra Sverige in 1919.

During the financial crisis of the 1920s and 1930s Handelsbanken took over majority shareholdings of several major industrial companies, like SCA, Fagersta, Bolinder-Munktell and LM Ericsson, which were subsequently transferred to the holding company Industrivärden when that company was established in 1944.

During the 1940s and 1950s a number of provincial banks were acquired. The last acquisition of a provincial bank was of Skånska Banken in 1990.

Handelsbanken suffered a financial crisis in the late 1960s and new management led by Jan Wallander took over, who implemented a decentralized organization with a number of independent regional banks. Ever since 1972 Handelsbanken has achieved its goal of being more profitable than the average of Sweden's (and subsequently Scandinavia's) other listed banks. A profit-sharing system, called Oktogonen, was introduced in order to encourage employee performance, with payment deferred until retirement. The Oktogonen foundation is today one of the two major shareholders of Handelsbanken. The other one is Industrivärden.

The Swedish banking crisis of the early 1990s (please refer to section 1.4 above for a detailed description) meant severe credit losses for all the major banks, several of which were given support from the state. Handelsbanken was the only bank which did not apply for support. In December 1993 Financial Times named Handelsbanken õClear winner of the crisisö. õHandelsbanken suffered much lower losses than its rivals and is the only leading bank í which neither received nor sought any form of state assistanceö (Handelsbanken 1993: 4).

Beginning in 1991 expansion abroad was built up by organic growth of subsidiaries in Norway, Finland, Denmark, Great Britain and the Netherlands, complemented by minor acquisitions. Handelsbanken is today doing business in more than 20 countries.

Handelsbanken also ventured into the mortgage market by acquiring Stadshypotek in 1997 and into life insurance by acquisitions of RKA in 1992 and SPP in the 2001. The latter company was sold in 2007 with a considerable capital gain.

Today Handelsbanken is a major universal bank with a complete range of financial services.

8 Credit policy of Handelsbanken

Handelsbanken's credit policy is described in detail in the 2012 Annual report p. 84-87.

The branch office who knows the customer and the market well has the best possibility to estimate the risk and can also act at an early stage if problems arise. Each branch office or department is responsible to solve any problem. This means that that there will be high risk awareness and also a generally careful way of acting in the business activity.

In addition to the responsibility of the local branch risk control is also carried out by the regional banks and within the business areas. This procedure certifies that there will not be too much risk in in the local business and that the risk policy of the bank is maintained.

The central credit and risk departments play an important role in the business model, by analyzing major credits before final decision by the board and by verifying that the total risk exposure is within the policy of low risk tolerance.

The bank has a policy of close contact between the customer and the local branch office. The office manager and his subordinates are responsible for customer relations and credit decisions. Without consent of the local branch manager a credit cannot be further processed in the bank. The basic document for a credit decision shall always be produced by the local branch office. The documents include financial information about the borrower, an estimate of the ability to reimburse the credit plus an evaluation of the collateral. The ability for the borrower to reimburse the credit is the very basis of the bank's decision to lend money.

On all levels in the bank credit decisions are scrutinized by a superior level. A basic rule is that borrowers shall have a high quality. Quality is more important than volume.

The fact that the branch office has close contact with the customer ensures that problems can be identified quickly and action will be taken if needed. This ensures a much faster reaction than if problem credits are handled on a central basis. The local branch office shall handle the problems arising if payments are not duly made and will also be charged if credit losses arise.

9 Risk profile of Handelsbanken

Handelsbanken has a historically low risk tolerance. This means that the bank avoids taking part in high risk business, even if the reward momentarily might be very high. The low risk tolerance is maintained by a strong risk culture which is prevailing over time and refers to all departments of the bank.

The business model is based on that all credit risks will be taken by the local branches. Other risks, like market risks, should therefore be minimized. A risk position will only be taken in customer related business and within strictly defined limits (Handelsbanken 2012: 13).

The strict risk profile means that the bank can be a stable business partner for the customers. Thereby a high service level can be maintained also when local markets are under stress. The same principles for risk exposure are used in all countries where the bank is doing business and are also guidelines in the continued expansion abroad (Handelsbanken 2012: 83).

10 Brief history of S-E-Banken

Karlsson and Nilsson (2006) have summarized the history of Skandinaviska Enskilda Banken (SEB 150 years 1856 - 2006).

S-E-Banken was established in 1972 by a merger of Stockholm's Enskilda Bank and the Gothenburg based Skandinaviska Banken.

Stockholm's Enskilda Bank, which was formed in 1856 by A O Wallenberg, was the first private bank in Stockholm. The bank began accepting deposits from the public and soon became a major local bank. The Wallenberg family has been in leading positions of the bank ever since with several well-known bankers in five generations.

Skandinaviska Kredit AB was established in Gothenburg in 1864, originally aimed at issuing bonds on the international market. It was the first Swedish bank with limited responsibility for the owners. The bank was originally led by the Mannheimer family.

During the 1870s Sweden had favorable business climate with a strong demand of iron ore and wood. Investments were made in new railways and industrial plants. The banks participated by financing the investments. When the business climate worsened in 1878 Stockholm's Enskilda Bank was badly hit and had to be saved by a loan from the Riksbank.

Skandinaviska Banken participated in several mergers during the early 20^{th} century and became a leading Swedish bank. The Wallenberg family, however, kept the local profile of Stockholm's Enskilda Bank and did not participate in any mergers.

The bankruptcy of the Kreuger Group in the early 1930s was a major blow to Skandinaviska Banken as it had been Kreuger's main financing facility. The bank was saved only by loans from the Riksbank. However, the bank recovered fast and continued its expansion by acquisitions of several minor banks during the 1940s and 1950s.

Stockholm's Enskilda Bank kept its local profile but had now run into problems of how to finance its associated companies in the Swedish industry. Through the redemption of pledged assets after the Kreuger bankruptcy the bank acquired significant shareholdings of several major companies like STAB, LME, SKF and Grängesberg, which were transferred to the holding company Investor.

After extremely secret negotiations during the early 1970s a merger between Stockholm's Enskilda Bank and Skandinaviska Banken was carried out as from 1972. In the beginning the two banks more or less kept their former organizations. Not until 1990 a common management for the S-E-Banken Group was established.

Expansion abroad was carried out in the late 1990s by acquisition of banks in the three Baltic countries. A German bank was acquired in 2000 and a bank in Ukraine in 2004. The banks in Germany and Ukraine have subsequently been divested, but lending to companies remains.

In 2001 a merger with Swedbank (formerly Föreningssparbanken) was announced but was stopped by the EU commission, which demanded major concessions.

11 Credit policy of S-E-Banken

S-E-Banken's credit policy is described in detail in the 2012 Annual report p. 42-44.

The credit portfolio is split into five segments: companies, households, commercial properties, banks and the public sector. Company credit comprises 41 percent of the total credit portfolio and is by far the largest segment. The companies are major Scandinavian and German ones. The most important branches are manufacturing industry and business related services.

The credit policy of S-E-Banken is built upon the principle that all granting of credits shall be based on analysis and be in proportion to the customer's cash flow and payment ability.

Credit granting shall be based on the credit worthiness of the customer and the type of credit contract. The current transaction as well as the total credit volume granted to the customer shall be considered. The process varies depending on the type of customer and the credit amount. The credit procedure for households and minor companies is made by a scoring system. Qualified credit analysis is made primarily for major companies.

A credit risk is assessed by measuring the probability of default, exposure at default, maturity and loss given default, which is in line with the Basel requirements (please see section 13).

S-E-Banken has an internal system of measuring the probability of default, which is graded into 16 risk classes, where class 1 is the lowest risk of default and class 16 represents default. The system is based on more than 15 years of internal statistics. The assessment of risk class is based on analysis of the risk of the customer's business and the financial position.

For each individual customer a limit is established for the risk which the bank is willing to accept. The total credit portfolio is continuously analyzed from various angles, such as branch of business, geography, risk class, product, size etc. Special stress tests are also performed, when market conditions indicate such a need.

12 Risk profile of S-E-Banken

The bank uses well tested methods for risk handling. Since many years there are independent functions for risk control, credit analysis and credit granting based on advanced internal models. The basis for the risk and capital handling system is a clear decision order, high awareness of risk by the employees, common definitions and principles, control of risk taking combined with a high level of transparency in the external reporting (S-E-Banken 2011: 39).

Based on general goals, strategy and risk appetite plus external factors such as macroeconomic conditions, demands by the authorities and market expectations a group business plan is compiled annually. The plan comprises an analysis of the risk profile combined with financing, liquidity and capital needs. An important part of the business plan is the risk strategy which describes how the risk profile changes as a result of the business plan which evaluates the risk profile in relation to the risk appetite of the board. The risk strategy is decided by the board (S-E-Banken 2011: 38).

13 Risk regulation according to õBaselö rules

The so called Basel regulations are based on a document published by the Basel Committee in 1987, with the purpose to unify measurement of capital adequacy for international banks. The first set of rules called Basel I covered only capital measurement into first tier and second tier capital, risk weights associated to various risk classes and a capital adequacy rule defined as a minimum of 8 percent of capital in relation to risk weighted assets (Danila 2012: p. 123).

Basel I was not adopted to the rapid development of the financial markets in the subsequent years and a new set of rules called Basel II were introduced in 2006. Basel II is based on three pillars of minimum capital requirement, prudential supervision process and market discipline. As compared to Basel I the novelties are (1) operational risk was treated separately and not included in the credit risk, (2) several methods were introduced to assess the capital requirements, of which the banks could choose the one best suited to their needs and (3) a strong connection between capital adequacy, supervision by the authorities and market discipline (Danila p. 124).

The *first* pillar divides the minimum of risk weighted assets into credit risk, market risk and operational risk, with optional methods proposed for the various risks. The *second* pillar deals with internal control and supervision of the risks and exposures. At the same time the authorities are obliged to scrutinize the control procedures. The *third* pillar deals with the information and transparency the bank regularly gives to the market (Cavalli-Abrahamsson et al 2009: p. 14-16).

Danila points out that Basel II has had a negative impact by significantly reducing capital requirements for banks which have used internal models not correlated to their ability to withstand a financial crisis (p. 130). This was revealed during the financial crisis of 2007 ó 2009 which revealed lax regulation for certain non-banking institutions and non-traditional banking activities (Delimatsis 2012: p. 1314). An improvement of the rules has therefore become necessary in order to improve financial stability (Danila p. 131).

Basel III regulations, which will not fully come into force until 2019, will increase the capital requirement of equity and other financial instruments from 4 percent to 6 percent. In addition to the minimum capital ratio of 8.0 percent of risk weighted assets, a capital conservation buffer of 2.5 percent as well as a countercyclical capital buffer of another 0 - 2.5 per cent will be introduced. The minimum loss absorption requirement is thus 10.5 to 13.0 percent of risk weighted assets.

The total primary capital demand will be a minimum of 7.0 percent, which can be increased by local authorities to 9.5 percent of risk weighed assets.

Admati and Helwig (2013) point out that even with Basel III rules banks can easily õgame the regulationö (p. 96). Also a too low level of equity is still permitted. The risk models and stress tests can easily be manipulated (p. 170). Furthermore the minimum equity level is still based on risk-weighted assets, not total assets. An equity ratio of 10-15 percent of risk-weighted assets might correspond to as low as 2-3 percent of total assets (p. 176).

14 Financial comparison of Handelsbanken and S-E-Banken during 1982 ó 2012

Based on the official Annual reports of Handelsbanken and S-E-Banken for the thirty-year period 1982 ó 2012 a financial comparison has been made in respect of (1) Loan loss ratio, (2) Return on shareholders equity, (3) Dividend in relation to equity, (4) Equity capital ratio and (5) Primary capital ratio according to Basel II rules for the five-year period 2008 ó 2012. An average has been calculated for the periods with equal weight to each year.

14.1 Loan loss ratio

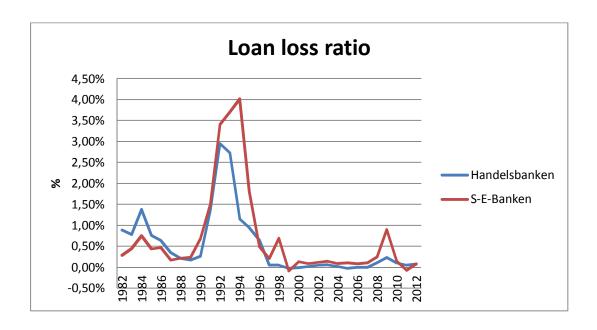
Loan loss ratio is the most essential key figure of a bank. A low ratio will mean that that the bank can carry on its business whereas a high ratio will endanger the survival of the bank.

During the first few years of the 1980s Handelsbanken had slightly higher loan loss ratio than S-E-Banken but as from 1989 S-E-Banken has more or less continuously had the highest loan loss ratio.

During the financial crisis of the early 1990s S-E-Banken had a marked higher loss ratio, as well as during the financial crisis of the 2000s which hit S-E-Banken fairly hard because of its involvement in the Baltic region but which did not affect Handelsbanken at all.

The average loan loss ratio for the period 1982 ó 2012 was:

Handelsbanken	0.48%
S-E-Banken	0.70%
Relative difference SHB to SEB	-31%



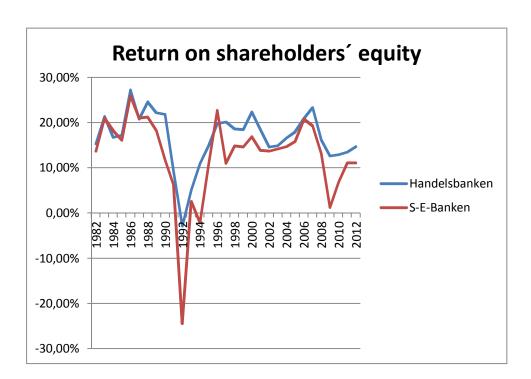
14.2 Return on shareholders 'equity

The profitability of the bank is reflected in the return on shareholders' equity which includes the net amount of all revenues and expenses of the bank in relation to its equity.

With very few exceptions Handelsbanken has had a higher return on shareholders' equity during the entire period 1982 ó 2012.

The average return on equity for the period 1982 ó 2012 was:

Handelsbanken	16.8%
S-E-Banken	12.8%
Relative difference SHB to SEB	+31%



14.3 Dividend in relation to equity

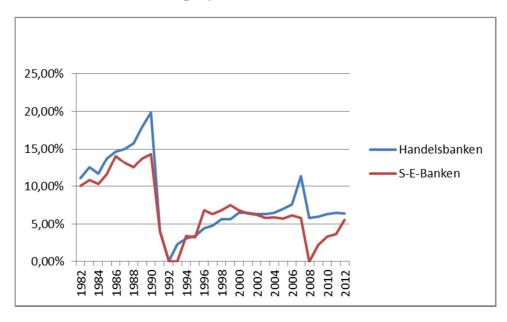
The dividend reflects how well the bank can compensate the shareholders for their risk.

With exception of the early 1990s Handelsbanken has had a higher dividend in relation to equity during the period 1982 ó 2012.

The average dividend related to equity for the period 1982 ó 2012 was:

Handelsbanken	8.2%
S-E-Banken	6.8%
Relative difference SHB to SEB	+21%

Dividend in relation to equity

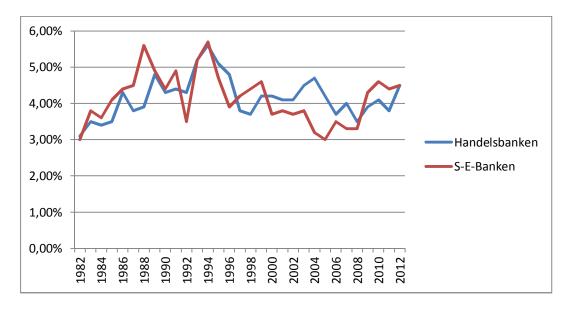


14.4 Equity ratio

The equity ratio indicates how well the bank has been able to maintain its risk profile.

The average equity ratio for the period 1982 ó 2012 was:

Handelsbanken	4.2%
S-E-Banken	4.1%
Relative difference SHB to SEB	+2%



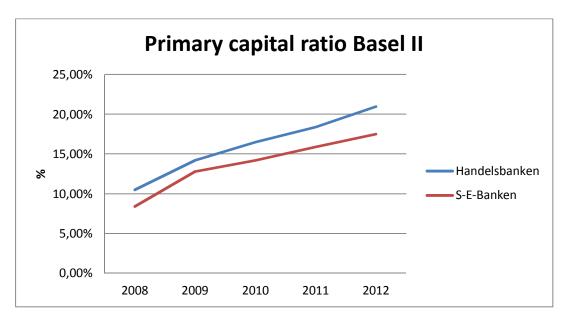
Handelsbanken only issued new capital in 1993 of 2.6 billion SEK whereas S-E-Banken has issued a total 24 billion SEK during 1982 ó 2012. Handelsbanken has furthermore redeemed 10 billion SEK during the period.

14.5 Primary capital ratio 2008 ó 2012 according to Basel II rules

The primary capital ratio indicates how well the bank has adjusted to the Basel regulations.

The average primary capital ratio for the period 2008 ó 2012 was:

Handelsbanken	16.1%
S-E-Banken	13.8%
Relative difference SHB to SEB	+17%



15 Analysis of organization, expansion, credit policy and risk profile

15. 1 **Handelsbanken** has ever since Jan Wallander became President of the bank in 1970 had a decentralized *organization* with the granting of credits primarily made by the local branch offices. The branch offices are organized into independent regional banks.

The bank has expanded its business primarily by organic growth. Relatively few major *acquisitions* of other banks have been made, the latest ones being Skånska Banken in 1990 and Stadshypotek in 1997.. Over the last twenty years Handelsbanken has broadened its business by including life insurance but the 2001 acquisition of SPP was divested in 2007 with a large capital gain.

The *expansion abroad* has primarily occurred organically into the other Nordic countries and subsequently into Great Britain and the Netherlands. Regional banks have been established in each country when the establishment has reached a certain size.

The *credit policy* of Handelsbanken is based on the local branch offices, which know the customers best. The individual branch offices are responsible to solve any problems arising, which means that business will be carried out with high risk awareness. Furthermore, additional risk control is carried out by the regional banks and the business areas.

The basic documents for a credit decision shall always be produced by the local branch office, which also goes for major credits. Borrowers shall generally have a high quality, which is far more important than an increase of the credit volume.

If problems arise with a credit the close contact between the customer and the local branch office ensures faster reaction than if all credits were handled centrally.

The *risk profile* of Handelsbanken means a historically low risk tolerance, which pertains to all departments of the bank. The general rule is that all credit risks will be taken by the local branch offices. All other risks should be minimized. Only in strictly defined customer related business the bank will accept a risk position within defined limits.

Because of its strict risk profile the bank can be a stable business partner for the customers, also when the financial markets are under stress.

15.2 **S-E-Banken** was created in 1972 by a merger of Stockholm's Enskilda Bank and Skandinaviska Banken. The two banks were different in many ways with Enskilda Banken having a local Stockholm profile and with several major industrial companies as major companies. Skandinaviska Banken was more of a general retail bank with its business concentrated to western Sweden. The two banks kept their profiles for a long time. A common management was not established until 1990.

Acquisitions in Sweden include Trygg-Hansa insurance company in 1997 which was subsequently divested. A merger with Swedbank was announced in 2001 but was stopped by the EU commission.

Expansion abroad has been made primarily by acquisitions. Local banks in the three Baltic countries were acquired in the late 1990s. In 2000 a German bank was acquired and a bank in Ukraine in 2004. The German and Ukrainian banks were subsequently divested.

The venture into the Baltic countries was based on a property bubble and ended with heavy credit losses for S-E-Banken when the financial crisis erupted in the late 2000s. Please refer to section 1.5.2 for further details. In order to reach a sufficient primary capital ratio the bank gave no dividend for 2008 and had to issue new share capital of 15 billion SEK in 2009.

The *credit policy* of S-E-Banken is built upon the principle that a proper analysis shall be made of the customer's cash flow and payment ability. The credit procedure for households and minor companies is made by a scoring system. Qualified credit analysis is made primarily for major companies. A credit limit is established for each individual customer. The total credit portfolio is analyzed in respect of branch of business, geography, risk class, product, size etc.

The *risk profile* of S-E-Banken is based on independent functions for risk control, credit analysis and credit granting. A group business plan is compiled annually, which comprises an analysis of the risk profile combined with financing, liquidity and capital needs. The risk strategy is decided by the board and evaluates the risk profile in relation to the risk appetite of the board.

15.3 Comparison of Handelsbanken and S-E-Banken 1982 - 2012

15.3.1 Organization

Handelsbanken is basically a decentralized organization with the local branch offices responsible for the contacts with customer.

S-E-Banken was created by a merger of Enskilda Banken and Skandinaviska Banken in 1972. Not until 1990 a common management was established, with a centralized organization.

15.3.2 Acquisitions and expansion abroad

Handelsbanken has made relatively few acquisitions, the latest domestic bank acquisitions being Skånska Banken in 1990 and Stadshypotek in 1997. The life insurance company SPP was acquired in 2001 and sold with a gain 2007. Expansion abroad has primarily been made organically with few acquisitions of local banks.

S-E-Banken has made acquisitions and divestments at home as well as abroad. The insurance company Trygg-Hansa and banks in Germany and Ukraine have been bought and divested. Local banks were acquired in the three Baltic countries which ran into a major financial crisis in the 2000s. S-E-Banken had to issue new capital to compensate for its losses.

15.3.3 Credit policy

Handelsbanken bases the credit policy on the local offices, which know the customer best. All documents for a credit decision shall be produced by the local branch office. High credit quality is far more important than credit volume.

S-E-Banken bases its credit decisions on cash flow and payment ability. Minor credits are decided by a scoring system. Qualified credit analysis is only made for major customers.

15.3.4 Risk profile

Handelsbanken has a historically low risk tolerance. All credit risk shall be taken by the local branch office. Only for strictly defined customer related business a risk position is accepted.

S-E-Banken has separate functions for risk control, credit analysis and credit granting. The risk strategy is decided by the board which evaluates risk profile in relation to its risk appetite.

15.3.5 Statistics of credit losses, profitability and capital ratios

The statistics for the period 1982 ó 2012 clearly shows the result of the policies of the two banks:

- The average credit loss ratio of SHB was 31 percent lower than SEB
- The return on shareholder's equity of SHB was 31 percent higher than SEB
- The dividend in relation to equity of SHB was 21 percent higher than SEB
- Average equity ratio of SHB was 2 percent higher than SEB
- Basel II primary capital ratio of SHB was 17 percent higher than SEB.

16 Interview with Anders Nyrén regarding Handelsbanken

Anders Nyrén has been a member of the Handelsbanken board since 2001 and was elected chairman of the board in 2013.

How would you describe the thorough change of the working procedures of Handelsbanken which were carried out by the new managing director Jan Wallander in the early 1970s?

Decentralization is the key word, meaning a consequent and well organized system in order to manage the business. The local branch managers have a lot of freedom. Competition between branches and regional banks will lead to a focus on profitability. The reporting system is most essential with quick and accurate reports of the performance of the business.

Handelsbanken has a special procedure with a big responsibility for the local branch office when granting credits and with the continued contacts with the customer- How do you think this has influenced the risk awareness of the organization?

The awareness of risk is most evident in the bank. Each branch office or regional bank measures its own performance. Therefore Handelsbanken aims to select customers being low-risk and profitable. The low risk profile will also benefit the customers.

Has the profit sharing system within Oktogonen meant that that the employees are more involved in Handelsbanken?

Oktogonen is a unique system for profit sharing as all employees receive the same amount which is not redeemable until retirement. This ensures loyalty and a long-run perspective.

Handelsbanken often underlines the low tolerance of risk in its business. Can you illustrate this with some occasions in which the low risk acceptance has benefitted the bank?

- The former management of Handelsbanken wanted to invest in Eastern Europe in the early 2000s but the board of directors did not accept the proposal.
- In the first quarter 2007 a profitable stock trading in the United States was wound up as Handelsbanken realized that a financial crisis was being built up.
- The sale of SPP in 2007 was made in the right time at a considerable gain.

You are also a member of the central credit committee. How does it work?

There are certain limits to lending which require a decision by the credit committee. The local branch office and the regional bank have always prepared the request very well. The discussion in the committee is useful for the branch manager as background information.

The expansion abroad of Handelsbanken has taken place in many small steps by minor acquisitions and establishment of new branch offices. Will this strategy be maintained?

The strategy which has been very successful will certainly be maintained. The regional banks which have been established during the last decade in Great Britain and the Netherlands fit very well into the structure as those countries are quite similar to the Nordic countries.

17 Interview with Erik Röjvall regarding financial risk

Erik Röjvall has worked as a financial analyst and investment manager of Industrivärden since 2000 with focus on the financial sector in general and follow-up of Handelsbanken in particular.

How would you describe how a bank is financed nowadays?

Lending is financed by deposits and by bond issues, which are either secured regarding for example housing loans or unsecured. International financing by bonds means that lending is not restricted by the domestic pool of deposits. However, this has created a dependence of the international capital markets and therefore a need of trust from the bond holders. The funding/financing of banks has become ever more international with an increased importance for the bond holders.

When a financial crisis arises the value of the assets of the banks will be questioned and thereby also the value of the bank's equity. The interbank market might lose confidence of the bank as well as the public by withdrawing their deposits which will put strain on the liquidity. The bond investors will be less interested in acquiring bonds which will give rise to a liquidity crisis. In other words if the solvency is questioned this will lead to a loss of confidence and thereby to a liquidity crisis. The banks might have to issue new equity capital in order to create confidence from the bond investors. Also the central bank may have to give liquidity support in order for the banks to redeem the bonds upon maturity.

Today most American banks have less than 10 percent equity of total assets and many European banks have less than 5 percent. Many academics argue that banks should have an equity ratio of 20 to 30 percent, which would considerably diminish the risk level in the banking sector and thereby demand a lower level of return on equity. What is your opinion?

An increased equity ratio certainly means lower risk. A large increase of equity would, however, demand capital injections in combination with lower assets which would limit the lending capacity. There would be negative effects on the real economy and its growth. The process to increase bank equity will therefore take long time and also demands that the owners are financially strong. A scenario analysis of future possible crises in combination with legal demands will decide how the process will evolve over time.

Basel II rules define risk capital and risk weighted assets. The capital shall be a minimum of 8 percent of assets. The banks are allowed to choose the method to measure credit risk, market risk and operational risk. Certain banks have adopted methods for risk measurement which were not sufficient during the financial crisis of 2007 ó 2009. Which are your comments?

Basel II rules meant a refinement of risk measurement. The models used by banks were based on many years of statistics and were thoroughly scrutinized by the authorities. However, the risk was not fully taken into consideration. The new Basel III rules also include e.g. demands on liquidity and special capital demands for trading among other things.

Basel III rules which will not be in operation until 2019 will require a minimum primary capital of 7 percent of risk weighted assets plus a buffer of 2.5 percent and a total of 13 percent of primary and secondary capital of risk weighted assets. Are these demands sufficient according to your opinion?

The requirements are well balanced. However, it must be pointed out that Sweden has even tighter requirements with a minimum of 10 percent in primary capital as from 2013 and 12 percent as from 2015. From a competition point of view it is important that the rules are neutral between countries.

Even with Basel III rules the equity ratio can be as low as 3 \(\delta \) percent. Do you think that further regulations are needed?

A capital demand that does not take into consideration the risk of the borrower might stimulate high-risk lending to a risky business before low-risk lending to the central bank.

Handelsbanken has been characterized by a low risk profile ever since the present model of lending and follow-up was introduced in the early 1970s. My comparison of Handelsbanken and S-E-banken for the period 1982 ó 2012 clearly shows lower loan loss ratio, higher return on shareholders' equity, higher dividend in relation to equity and lower equity issues in average for Handelsbanken. Which are your comments?

The low risk model was introduced by Jan Wallander in 1970 and has been in force ever since. Both the customers, bond holders, owners and employees have benefited from this.

Handelsbanken continuously compares its return on shareholders' equity and the performance of the Handelsbanken share with other Swedish and Scandinavian banks. The aim is to outperform the competitors on the home market. What do you think about this?

The goal is very clear and simple for the whole organization. It stimulates wise decisions, low risk, avoids adventurous risk taking and benefits all parties including the owners.

In which way have you experienced the low risk in your contacts with Handelsbanken?

The low risk profile embodies the whole organization. Handelsbanken only accepts a zero loan loss ratio, whereas most other banks accept a õnormalizedö loss ratio. The low risk model has meant that Handelsbanken has been able to avoid both state support and issue of new equity during a long period of time in order to withstand financial stress during crises.

Today the financial sector is very complex and globally integrated. Disruptions have a tendency to spread in several steps as in 2008. In the US complex legislations like Sarbane-Oxley and Dodd-Frank have been introduced lately but without any major effect. Comments?

The financial authorities have implemented more requirements and the inspection is tighter. If a crisis occurs the authorities are prepared to take over a bank at short notice. However, problems in the banking sector generally originate from the quality of the assets. The authorities can only regulate capital and liquidity requirements. Sound lending is the basis of healthy banking!

18 Conclusions

The purpose of this paper is to verify or nullify the hypothesis that low risk pays in the long run in the banking sector.

During the last few decades major losses have occurred in the banking sector, basically due to high or extremely high risk taking. Examples of this are frauds like the sole trader Nick Leeson who brought down *Barings Bank* in 1995 by speculating in a Japanese stock index and then hiding his losses by false accounting. The investment manager *Bernie Madoff* was sentenced to 150 years in jail in 2009 after having embezzled 18 billion dollars in a so called Ponzi scheme. Another example is the French trader Jerome Kerviel who was sentenced to five years in prison after having exceeded his mandate in trading with a German stock index which caused *Sociéte Generale* a loss of 5 billion euros. The Swedish *H Q Bank* lost its banking licence in 2010 after having hidden trading losses by faulty evaluation techniques.

The 2008 global financial crisis which began in the US and spread to Europe was basically caused by unacceptable risk taking as many banks had invested heavily in highly complex derivatives like collateralized debt obligations and other mortgage backed securities. There was generally limited knowledge of the risk profile of the new financial instruments. When the American investment bank *Lehman Brothers*, which was heavily exposed to the derivative market, went bankrupt in 2008 there was a global financial turmoil. In Sweden the investment bank *Carnegie* was taken over by the state. The three major Icelandic banks were also nationalized. The economy of most countries went into recession. The recession is still prevailing in several countries in the Eurozone, which are unable to devalue their currencies.

When comparing the performance of Handelsbanken and S-E-Banken from a risk point of view it is obvious that Handelsbanken has a much lower risk profile as can be seen in detail in section 15.

Handelsbanken has a decentralized organization, has made relatively few large acquisitions, is expanding organically abroad, has a credit policy based on responsibility by the local branch office and basically accepts a risk position only for customer related business. Support from the state has never been an issue.

S-E-Banken has a centralized organization, has made several aggressive acquisitions followed by divestments, has a credit policy based on a scoring system and even evaluates its risk position based on the õrisk appetiteö of the board. In 1993 the bank was very close to need support from the state in order to survive.

The statistics for the period 1982 ó 2012 as detailed in section 14 clearly speaks in favour of Handelsbanken both in regard of credit loss ratio, return on shareholders equity, dividend in relation to equity and Basel II primary capital ratio. Also, Handelsbanken has issued far less new equity capital than S-E-Banken over the last thirty years.

My conclusions are that banking generally is a risky business, as detailed in section 1, but also that low risk can pay in the long run in the Swedish banking sector. **The hypothesis of this paper is thus verified.**

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Anders Nyrén, Chairman of Handelsbanken, CEO of Industrivärden, former CFO of Securum

Erik Röjvall, senior financial analyst at Industrivärden

Enclosure A. The establishment and winding-up of Securum

In the autumn of 1991 it was obvious that Nordbanken needed new capital in order to reach the capital requirements. A winding-up company called Securum was separated from Nordbanken in order to handle possible losses referring to some 3,000 loans to 1,274 companies. Securum received a share capital of 24 billion SEK, credits from the state of 27 billion SEK and a guarantee of another 10 billion SEK (Bergström et al: Slutsatser och sammanfattning, p. 5).

There were strong reasons not to hurry up the winding-up of the credit portfolio, which would probably have resulted in major losses. It was therefore better to use a special vehicle to wind up the assets and give Securum an open mandate for the procedure.

Securum was given fairly free hands by the state. However, there was a risk of conflict of interest between the owner and the employees, as Securum was a temporary organization which would exist only for a few years (Bergström et al p. 6).

There was a considerable risk that key employees and customers would leave the companies with bad loans. Some 70 percent of the companies included in the credit portfolio of Securum were in bankruptcy or liquidation already in mid-1994. The companies were not profitable and had a 90 percent probability of failure.

When the credits had been wound up and the assetswere transferred to Securum, a new effective financial and operative structure was established. New management was often established. Restructuring took place by mergers and sale of assets. Most of the companies improved their earnings considerably only a few years after the reconstruction (Bergström et al p. 6).

The life-span of Securum was originally estimated to 10-15 years, but it was soon obvious that the winding-up procedure could be concluded much faster. Most of the real properties were sold as companies.

Securum made five public offerings, of which three were property companies, namely Norrporten, Castellum and Pandox. In hindsight the offerings of Norrporten and Castellum were made at too low prices, as the price level had risen only marginally from the bottom level in 1992 (Bergström et al p. 7).

There have been made several calculations of the cost borne by the Swedish state in order to stabilize the banking sector in the early 1990s. The total cost up to 1997 is estimated to some 30-35 billion SEK. However, a calculation made a few years later indicate that the losses were almost entirely absorbed.

Nordbanken transferred assets booked at 67 billion SEK to Securum. At the end of 1993 the assets had been written down to 33 billion SEK. Without the creation of Securum Nordbanken would not have survived (Östrup et al p. 208).

Interview with Anders Nyrén regarding Securum

Mr Nyrén was managing director of OM International when he was asked in 1992 by Lars Thunell, then executive vice president of Nordbanken, how the bad loans of Nordbanken should best be handled. The solution was to create a bad bank for the non-performing loans. Mr Nyrén became chief financial officer of Securum with Mr Thunell as managing director.

Do you think that Bergström et al have given good description of the creation and operation of Securum?

The authors do not seem to have fully grasped the procedure. Non-performing loans of 67 billion SEK in Nordbanken were transferred to assets in Securum by a procedure which we called the credit transformation (õkreditkrossenö). In a second phase the assets, normally companies or properties, were taken over by Securum, which essentially was an industrial holding company. In 1994 Securum was refinanced and Nordbanken was no longer a lender to Securum. There were no Nordbanken people on the board or management of Securum.

The original loans were valuated to the market value of the corresponding assets. Many of Securum's assets were in the exit phase sold in packages, in several cases via public offerings.

What was the background to the banking crisis in the early 1990s? Could the authorities have acted differently in order to calm down the economy?

The banking system was not ready when the regulations of interest and currency were abolished. The authorities could have raised the interest and the capital demands of banks. Also there was no regulation for the finance companies.

The winding-up procedure of the credits taken over by Securum was very quick and many companies became liquidated or put in bankruptcy? Was reconstruction not an alternative?

Reconstruction was not an option because that would have been a long and uncertain procedure. The idea was to act fast in order to regain as much of the underlying value as possible.

There were several public offerings of the assets õpackagedö by Securum. Comments?

The commercial properties were sold as Castellum and Kungsleden. The properties in northern Sweden were sold as Norrporten. A number of hotels were sold as Pandox. Also Securum became a major owner of Nobel Industrier, Fabege and Klövern, which were sold. As an average the result of the sales was good but some transactions were a bit premature.

There must have been too generous lending by Nordbanken to many investors. Comments?

Several well established people invested in õcheapö properties abroad but made heavy losses in the devaluation in 1992. Also there were signs of too generous lending from some branches and we even reported possible faults to the authorities. A special authority (õEkobrottsmyndighetenö) was later created in order to deal with criminal financial activities.