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Owners' Return and Salary Growth in Swedish Banks

Master thesis in Industrial and Financial Management

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ABSTRACT

In recent times, the financial industry has gone through a major crisis which heavily affected the real economy. It is clear that investors holding bank shares have lost large amount of wealth, whereas it appears that the employees of these institutions have been little affected. This study focuses on the return made by owners of bank stocks and puts this return in relation to the level of employee compensation. Do the banks' owners profit from high salary levels, or is the employees' compensation interfering with the goal of maximising shareholders' wealth? The aim of this thesis is to study the equity flow in financial institutions, in order to recognise whether one should invest in financial institutions in a long term perspective.

Through an examination of Swedish banks present on the Stockholm Stock Exchange between the years 1983 and 2008, this study attempts to answer the above raised questions. The return for bank owners, both in the form of capital gains and dividends, as well as the salary per employee and total salary costs are variables scrutinised. If the actual and expected return is equal with regards to the systematic risk of bank stocks is also examined. A method to calculate the banks' internal rate of return inspired by the academics Fama and French along with statistical tests of the different variables are used to research the topic and make conclusions.

Among the major findings is the fact that long-term investments in Swedish bank shares were profitable over the period studied, whilst short-term investments had volatile yields. The level of salary for bank employees did not decrease during crises, however the amount of employees was affected by a downturn and a reduction in the size of the workforce could be observed two years after an economic plunge in the banking industry.

Key words: Swedish banks, shareholders' return, employee compensation

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1. INTRODUCTION

If Swedish banks have been profitable is an issue that has been raised with regards to recent events. Large salary payments have been a common topic in the media as well as implications of reckless behaviour of the banks' employees leading to large losses. It is of interest to study if investors in banks earn profit or make losses in the long run in order to conclude whether it is sound to invest in these types of institutions.

1.1. BACKGROUND

In the turn of the 1990s, the Swedish banking system experienced a then unprecedented crisis, which affected both the financial and the real economy. The origin of the crisis was the substantial deregulations that took place in the mid 1980s, when the government, among other reforms, removed the banks' existing lending caps. These reforms contributed to an increased risk taking resulting in more generous lending policies and higher profitability for the Swedish banks. A large part of the lending went to finance corporations, who in their turn lent capital to real estate concerns. When the latter failed to meet its obligations due to a reduction in real estate prices, a chain reaction was triggered that led to a vast amount of bank debt defaulting.[1] Between 1990 and 1993, banks in Sweden made massive credit losses and in the aftermath of the events, the aggregated amount was estimated at SEK175bn.[2]

The crisis forced the Swedish government to infuse a large amount of capital into the financial system, and by doing so saved the major banks. Among the rescuing actions, the government increased its stake in Nordbanken, guaranteed a loan of SEK3.8bn to Sparbanken and established an administrative authority to deal with the consequences of the financial crisis.[3] Notwithstanding these events, the banks continued to pay large amounts in remuneration to their top executives. Thus, at the same time as the owners of the banks experienced a vast decrease in the value of their investments, the responsible executives' pay was little affected.

The global recession of the late 2000s, was at its start primarily affecting US financial institutions, such as banks and insurance companies. With its origin in the subprime mortgage market, where large amounts of debt defaulted, the crisis drained financial markets of liquidity and severely impacted close to every country. One reason for the global nature of the crisis was the impact of structured financial products, e.g. CDOs, which were used to repackage and transfer credit risk from

[1] Larsson, B. (2001) p. 42-49.
[2] Larsson, B. (2001) p. 86-87.
[3] Larsson, B. (2001) p. 156-158.

the balance sheets of the banks to the markets. Beside the financial crisis, the markets are now further exposed to a lack of confidence and several actors are being questioned, among others banks.

The banks willingness to take on risk in order to boost returns, and by doing so increasing the managers' compensation, has had disastrous consequences and destroyed value for the shareholders. In a study from 2009, Fratianni and Marchionne found that a sample of 120 large banks lost a staggering amount of USD3,230bn in equity capital the 19 months following July 2007, a result of the large exposure to bad debt.[4] While a number of financial institutions collapse, e.g. Bear Sterns, Lehman Brothers and AIG, several banks have had the need to increase their capital through right issues or by being forced into government protection.[5] Despite the crisis and the plunge in equity value, remuneration to the top management appears to have been little affected; hence their risk taking came at a low cost.

The effects of the recent financial turmoil have been less severe for Swedish banks than its American counterparts, to an extent due to knowledge acquired n the 1990s. However, several Swedish banks have participated in excessive risk taking, by lending large amount of capital to the Baltic countries. As foreign lending to the Baltic states has subsided and trade flows decreased, both results of the global crisis, the countries now face difficulties with repaying its debt, thus leading to credit losses for the Swedish banks.[6] The banks' shares have plummeted and for some institutions an increase in capital has been necessary in order to keep their liquidity at an acceptable level. Regardless of these developments, large bonus payments are distributed to the employees of the banks.

The examples above illustrate a situation where the shareholders investments usually decrease in value, and in many circumstances their influence in the company is diluted as a result of equity issues and governmental capital injections. The situation for the employees is not the same and salaries as well as other forms of compensation remain high, even when banks face difficulties and losses. An important question arises; who is the ultimate profit maker of financial institutions? Has the goal of maximising shareholders' wealth been neglected, as the decision to increase risk exposure is more often driven by greed rather than the managers will to create firm value?

[4] Fratianni, M. & Marchionne, F. (2009) p. 2.
[5] Landskroner, Y. & Raviv, A. (2009) p. 4.
[6] Pettersson, O. (2009) p. 15.

1.2. Discussion of Problem

The Swedish banking industry has gone through an extensive consolidation phase, and since the end of the 20th century only four main banks exist. With the deregulations of the Swedish financial environment, banks were for the first time capable of creating their own strategies, for example regarding volume, price and positioning.[7] The banks were allowed to increase their appetite for risky operations with the ultimate goal to increase profitability. When the banks suffered the consequences of the excessive risk taking, both the government and the public were forced to infuse capital in the form of guarantees, "bail-outs" and through equity issues. Since large banks have become "too big to fail", as the social economic effect of a bankruptcy would be too harmful for the society, these government rescues are necessary but harmful for the owners, both in lost influence as well as wealth. However, many rescues are indispensable and the result of bad management and risk taking. It is apparent that shareholders' value is at stake in these circumstances, but is this risk taking beneficial for most banks' owners in the long run?

Banks have been known to pay excessive salaries to their employees; a matter that has been further highlighted during the recent financial crisis, in particular remuneration in the form of cash bonuses. Even though share prices of banks in the recent past have moved in a positive direction, certain financial shocks have reduced much of this increase. This is particularly noticeable in Sweden, where two crises have substantially impacted the financial sector over a reasonably short period of time. Whereas the owners of the banks evidently get affected by these events, it is unclear how employees' and in particular key staff's salaries are affected. If part of the compensation is used to motivate the banks' employees, and this compensation is driven by the banks' overall performance, should not the staff be affected similarly as the owners? Or could it be that the employees' compensation is less volatile than the fluctuations in owners' return, while at the same time shareholders wealth is maximised in the long run?

1.3. Purpose

The aim of this thesis is to study the equity flows in financial institutions, in order to distinguish who benefits from the banks' earnings. Have the owners of Swedish bank shares made long-term profits on their holdings? The distribution of wealth between owners and employees will be examined with the goal to see if a firm's primary objective; to maximise shareholders' wealth is reached. Whether investors profit from employees' high salaries or if excessive remuneration reduce the potential

[7] Frisell, L. & Noréus, M. (2002) p. 21-23.

return of investments is crucial to study, in order to recognise if one should invest in financial institutions in a long term perspective.

The enquiries in focus in the report are:

- *Do owners of bank shares earn long-term profits on their holdings?*
- *To what extent will a decrease in the share price of banks impact the remuneration levels?*

1.4. LIMITATIONS

The report focuses on Swedish banks present on the Stockholm Stock Exchange. The sample includes both commercial banks as well as savings banks, but excludes any other type of financial firms. Limitations regarding the time horizon depend on the deregulation that occurred in November 1985, when the Swedish central bank (Riksbanken) liberalised credit market regulations. With relaxed credit policies, banks could take on more risk, thus increase their profitability, something that paved the way for increasing wages. The study will include the full three years preceding the deregulation, thus concern the period between 1983 and 2008. This is due to the desire to include the effect of the deregulation for the owners and employees.

1.5. OUTLINE OF THE THESIS

The study is presented in a manner that allows the reader to comprehend the information in the authors' line of thoughts regarding the subject. The second chapter introduces a theoretical framework of recognised theories concerning bank equity investments as well as employee compensation. This facilitates the understanding of the topic and further develops the foundation on which the methods are built upon. The methods are presented and explained as well as scrutinised in chapter three. The following chapter presents the empirical results and analyses conducted in the study. A summary and conclusion chapter ends the study, with the aim to explain important discoveries and findings made in the research process. The last chapter further opens up for new studies and areas of interest on the topic.

2. THEORY

In this chapter the theories that create the foundation of this study, and which constitute guidance for the method chapter, are presented. An introduction to the rationale of investing in banks as well as the value and risk it creates will be presented. Furthermore, reasoning behind salary increases and the dilemma concerning the separation of ownership and management are introduced.

2.1. INVESTING IN BANK EQUITY

To address the issue regarding the value created for shareholder of banks, a number of theories and topics concerning equity investments are introduced. The following sections will assist in understanding the general nature of the focus area, as well as in a structured manner recognise the specific characteristics of a financial institution.

2.1.1. EQUITY

When a firm needs to finance its operations, two main categories of capital exist; debt and equity. For a financial institution, the capital structure differs from the general company, given the large amount of deposits in relation to its equity. As opposed to debt capital, investing in equity implies ownership and influence in the issuing company. Influence in the form of voting rights in major decisions, with the most important task being electing the board of directors. Whereas the issuer of debt are guaranteed payments of a predetermined rate, unless default, shareholders have the right to future profit and receive dividends payments of the firm's net income, as decided by the management. In the case of a bankruptcy, debt holders and other creditors are prioritised compared to the shareholders who will only have a residual claim on the firm's assets.[8] The incremental value for the holder of a company's shares is the present value of all future dividends.[9]

The decision to make any type of investment, including equity investments, has its origin in the choice between consuming now and saving for future consumption. All individuals have diverse preferences between the two options and will, depending on the expected utility, decide differently. For a participant in the financial markets, the belief that the invested capital will be worth more in the future is a key concept into understanding why people invest.[10]

The return of holding a company's stock can be divided into two parts; capital gains when divesting the security, under the condition that the share price has appreciated, and periodic payments in the

[8] Saunders, A. & Cornett, M. M. (2009) p. 222-224.
[9] Ross, S. A. *et al.* (2007) p. 216-217.
[10] Copeland, T. & Weston, J. (1988) p. 17-18.

form of dividends when holding the stock. The formula below describes the relationship between the stock price (P), dividends (D) and the rate of return (R).

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}} + \frac{D_t}{P_{t-1}}$$

One of the main reasons behind why some investors decide to invest in the stock market is the theory concerning undervalued stocks. Stock analysts constantly try to indentify mispriced shares, in order to profit when price is corrected. A mispricing occurs when the market value vary from the intrinsic value, which is calculated by discounting all future cash flows of the security. When the market value is below the intrinsic value of the share, investors are likely to profit from the expected appreciation when the price is adjusted.[11]

2.1.2. What Generates Bank Profit?

For commercial banks the main operational activity is functioning as an intermediary between lenders with excess supply of cash and borrowers with a demand for funds. Client categories of banks range from households to corporations and usually include both domestic and foreign customers.[12] The primary source of income for a commercial bank is the spread between the interest income and expense, i.e. the interest rate spread. The higher the margin between interest incomes and interest expenses, the better will the bank be able to meet its operating expenses and generate profit. While participating in the activity of lending and borrowing, financial institutions face several risks, among others due to credit, interest rate, regulatory, funding and liquidity exposure.[13]

Besides interest generating activities, there are other sources that create profit for banks. Transactions fees and service charges are major contributors to the non-interest income. Nowadays, a large portion of the global commercial banks operate extensive investment banking arms with activities such as the underwriting of securities, intermediating in the financial markets as well as advising corporations and governments on investment and capital structure issues.[14] It is common for banks to strive for economies of scope, i.e. lower costs by applying existing resources to several service areas.[15] For example, besides their core activities, many banks function as insurance suppliers.

[11] Pratt, S. P. *et al.* (2000) p. 31.
[12] Saunders, A. & Cornett, M. M. (2009) p. 319-323.
[13] Saunders, A. & Cornett, M. M. (2009) p. 540-541.
[14] Fabozzi, F. J. & Modigliani, F. (2003) p. 35-37.
[15] Mishkin, F. S. (2007) p. 198-199.

2.1.3. The Risk Exposure of Banks

The profitability further depends on the amount of risk a bank is willing to accept. Banks are exposed to several risk types where the main categories are: credit, liquidity, interest rate and capital risk.

Credit risk can be defined as the possibility of defaults on outstanding loans, e.g. a customer that is unable to repay its mortgage loan. Default can arise in both the case where a borrower fails to meet an interest or an amortisation payment, and when a client fails to repay the principal amount at maturity.[16] The level of risk is reflected in the interest rate charged, hence the bank earns a higher level of profit on low credit customers, while at the same time being exposed to the risk of having its earnings reduced due to loan write downs and loss provisions.

Given the difference in maturity between a financial institution's assets and liabilities, where short-term deposits finance long-term loans, liquidity risk arises. Since banks have off-balance-sheet loan obligations, e.g. credit lines and letters of credits, they have to be able to borrow within a short period of time. Banks are exposed to liquidity risk, as they have to be able to repay debt by an immediate asset sale or in reverse finance loan commitments by raising additional funds. Both events has the potential to harm the banks result, as the assets risk being sold at a low price as well as the funds being raised at a high interest, while facing an unpredicted liquidity imbalance.[17]

Another important risk factor that affects banks, due to the difference in characteristics between a bank's assets and liabilities, is the interest rate. Under normal circumstances, the interest rate on a commercial bank's assets is fixed and locked in long-term maturities, whereas the deposits on the liability side have variable rates and short-term duration.[18] This structure implies that banks are exposed to interest rate fluctuations and in particular increasing rates, as this will reduce the net interest income as well as reduce the value of net equity.

Banks are obligated to follow regulations concerning minimum capital requirements, e.g. the Basel II Accord, which function as a restrain on excessive asset expansion. Capital risk focus on the relationship between the creditors and the financial institution. The equity of a bank has the purpose to protect depositors and other creditors in the case where the asset side of the balance sheet is reduced due to situation of financial distress.[19] If the bank is not well capitalised, it risks suffering from customers and creditors lost confidence and in the extreme case face insolvency.

[16] Matthews, K. & Thompson, J. (2005) p. 183-185.
[17] Saunders, A. & Cornett, M. M. (2009) p. 544-545.
[18] Saunders, A. & Cornett, M. M. (2009) p. 545-548.
[19] Stolz, S. M. (2007) p. 1-2.

2.1.4. TOO BIG TO FAIL

A specific circumstance exists for a number of large banks, due to the fact that a potential bankruptcy could severely harm the society. Economic failure of a large financial institution risks spreading to other peers and hurt the whole financial system, a matter that could potentially interrupt the economic and social order.[20]

This problem is known as "too big to fail", and has its roots in the fact that uninsured creditors relies on governmental intervention in the case of financial distress. The knowledge that systemically important banks will not be allowed to fail, gives such financial institutions the incentive to take excessive risks.[21] This phenomenon can be seen as an example of moral hazard, where reckless behaviour is promoted by the existence of an insurance policy.

For the shareholders of a bank that is considered too big to fail, the described situation is profitable in good times, as the bank earns excessive returns due to high-risk behaviour. In worse scenarios, this risk taking can lead to write downs and losses for the bank, which in turn will reduce the firms profit and the bank capital. Governments may be forced to intervene, which risks diluting the influence of shareholders and in the worst case scenario take full control of the operations. The latter is potentially better for the owners than being exposed to a complete bankruptcy but will still cause huge capital losses.

The manner, in which financial institutions generate profit in combination with the different types of risk exposure as well as their social economic importance, raises questions regarding banks ability to maximise shareholders' wealth. Do banks generate long-term profits for their owners?

In a study by Neuberger, the returns of US bank holding companies between the years 1979 and 1990 were examined. The total variability of the returns increased, relative to industrial equities and bonds, over the years concerned, indicating that the riskiness of US banks had increased. This augmentation occurred at the same time as the average return decreased, relative to the other assets. Towards the end of the period examined, the investors in bank shares earned relatively lower returns while facing relatively higher risk.[22] The results of the study could imply that shareholders in Swedish banks also have earned relatively low long-term profits, in particular in relation to the banks' riskiness.

[20] Stern, G. H. & Feldman R. J. (2004) p. 1-2.
[21] Stern, G. H. & Feldman R. J. (2004) p. 11, 17.
[22] Neuberger, J. A. (1991).

2.2. EMPLOYEE COMPENSATION

Another important beneficiary of bank revenues is the staff, as the personnel is remunerated for their work and performance. Banks tend to have a large portion of highly qualified workers, which in turn demand high compensation, both in fixed as well as variable salaries. This section will focus on theories regarding this topic and how it can potentially conflict with the shareholders' interests.

2.2.1. REMUNERATION SYSTEMS

The main principle of any kind of employee compensation should be based upon the relationship between effort and reward. The variety of different jobs within an organisation will have different value for the firm's leaders and will thus be compensated accordingly. Both external and internal equity will have to exist; meaning that employee of a certain qualification will have to be rewarded comparably to other peers in the industry as well as within the firm.[23]

The fixed portion of an employee's compensation usually depends on the individual person. Factors such as age and seniority will merit a higher pay due to presumptions regarding a certain level of experience that will be valuable for the firm. For a specific position, the employees will have to have the qualifications, knowledge and competence required, and will in turn be paid for their expertise.[24] In banking, many positions are client facing, thus requiring soft skills such as certain behaviours and attitudes, attributes that will impact the compensation level.

The group and individual performance will further be remunerated on a variable basis. Different factors such as sales levels, net profits and team targets, create the foundation for how much the employees should receive.[25] The variable part functions as an incentive for the staff to perform on a high level, and is common in the banking industry.

2.2.2. THE PRINCIPAL-AGENT THEORY

The principal-agent theory concerns the separation of ownership and control within a corporation. The owners of the firm, i.e. the shareholders, elect the members of the board which in turn appoint the top management. The objective for the managers is to maximise the equity owners' level of wealth, something that is to be apparent on every level of the organisation. However, difficulties occur when the managers' self-interest conflicts with the interest of the shareholders.[26]

[23] Bach, S. (2005) p. 317-319.
[24] Bach, S. (2005) p. 320-322.
[25] Bach, S. (2005) p. 320-322.
[26] Berk, J. & DeMarzo, P. (2007) p. 10-11

"If both parties to the [agency] relationship are utility maximizers there is good reason to believe that the agent will not always act in the best interests of the principal."[27]

When the agent acts in its own interest, a phenomenon known as agency costs occurs. These costs include the actual value by which the principal's profit decrease, as well as the costs associated with monitoring the agent in order to ensure that it acts in the principal's interest. The principal-agent problem can for example be that managers take on riskier operations in order to increase firm profit and their own compensation, regardless of what would be the preferred options for the shareholders.[28] This is a conduct that has been observed during the financial crisis of 2008-2009.

According to Rapp and Thorstenson, two approaches to control the management of a corporation exist; through the presence of an information system and through result orientated agreements.[29] For banks, and any corporation for that matter, both approaches are in place; information systems in the form of regulatory financial reports as well as internal control systems, and result oriented agreements such as bonus incentives along with other variable compensation. Nonetheless, the practice of using bonus incentives may be to the shareholders disadvantage, since it encourages the managers to engage in excessive risk taking in order to augment their compensation.

The employees' compensation is a cost for the company, and reduces the amount of funds available to distribute to the shareholders. It is impossible for a corporation not to have these costs, but the excessive salaries that characterise the industry are sometimes unmotivated. A downturn in the economy heavily affects the shareholders, but to what extent does it impact remuneration levels?

A survey conducted on Swedish manufacturing firms showed that wage levels were little affected by the Swedish banking crisis in the beginning of the 1990s. Even though the level of unemployment was very high, salaries remained at the same level as before the crisis.[30] From this study one can assume that employers, in general, prefer to dismiss employees rather than lower compensation levels. However, variable salaries are common in the banking industry, a fact that could imply the lowering of salaries rather than the previously mentioned generality.

[27] Jensen, M. & Meckling, W. (1976) p. 308.
[28] Jensen, M. & Meckling, W. (1976) p. 308-310.
[29] Rapp, B. & Thorstenson, A. (1994) p. 37.
[30] Agell, J. & Lundborg, P. (2003).

3. METHODOLOGY

This chapter outlines the methods used to study the topic introduced above. The different definitions and procedures found in the chapter have been constructed with the aid of the book *Att utreda, forska och rapportera*.[31]

3.1. RESEARCH DESIGN

The theories above have been selected from literature regarding corporate finance, focusing on the characteristics of investments in bank equity as well as employee remuneration. These theories create the foundation for the study that will scrutinise the growth in compensation to the owners and employees, as well as the relationship between the two. The aim of the study is to draw conclusions regarding the topic examined that can later be applied in general. A comprehensive overview of patterns and the distribution of capital returns will enable further understanding of who is the most beneficial actor in banking operations.

In order to establish certain relationships regarding this topic, previously used research methods will be applied to the area of interests. The two main issues raised in the previous chapter will be examined using quantitative methods, in particular the value growth of equity and salaries. Equity return will be measured by an internal rate of return methodology developed by Fama and French, as well as annual rate technique. The development in salaries will have a straight forward approach using the annual growth rate. All quantitative methods will be further examined using common statistical techniques.

The research design is aimed at finding new discoveries regarding the distribution of capital in banking operations; this will be discussed extensively in the end of the study. An examination of the validity and reliability will be presented in the end of this chapter as well as in chapter four.

3.2. COLLECTION OF DATA

The main types of information for the study are data concerning the banks' share price and dividend data as well as the compensation to their employees. The study relies on secondary data from both primary and secondary sources. Data regarding employee compensations includes both salaries and alternative remuneration, which is obtained from the banks' annual reports. The number of employees used to obtain a per capita figure, is the annual average size of the staff. To obtain data comparable with the share price data, remuneration figures are at a group level, i.e. they do not solely incorporate the bank operations.

[31] Eriksson, L. (1997).

Data regarding the banks' historical share prices and dividend payments as well as share indices are collected using DataStream. The market value is adjusted for new equity issues and share repurchases. As the industry has gone through a considerable amount of mergers and acquisitions, the changes for shareholders will have to be taken into consideration. Initial and final quotes on the specific stocks will be verified using an industry magazine, *Affärsvärlden*/*Veckans Affärer*, in order to capture the full effect of a stock exchange delisting for shareholders.

Some companies have results published and shares or dividend quoted in other currencies than Swedish kronor (SEK). When this is the case the salary is converted into SEK using an annual average exchange rate, whereas the share price and dividend are transformed using the daily spot rate.

3.3. Research Method and Variables

In the light of the theoretical framework outlined in chapter two, several research methods have been considered in order to approach the topic of the thesis. The techniques used in the study are further outlined in this section.

3.3.1. Capital Distribution between Owners and Employees

The method used to find the return for the shareholders is an adoption of a research study conducted by Eugene Fama and Kenneth French.[32] The two academics examined the internal rate of return (IRR) generated by securities of American firms. The IRR can be defined as the discount rate (r_E) that makes the net present value of an investment zero.[33] By solely including the equity value of the firms as well as excluding interest payments, the modified formula used in this study is found below,

$$IV_{1983} = \sum_{t=1}^{T(2008)} \frac{Div_t - NE_t}{(1+r_E)^t} + \sum_{t=1}^{T(2008)} \frac{FS_t - FBV_t}{(1+r_E)^t} + \frac{TV_{2008}}{(1+r_E)^T}$$

where

IV_{1983} is the total initial market value of banks quoted on the Stockholm Stock Exchange at the beginning of 1983;

Div_t is the aggregate value of dividend payments of the banks in year t;

NE_t is the aggregate net new equity issued by the banks in year t;

FS_t is the market value of banks that are delisted from the Stockholm Stock Exchange in year t;

FBV_t is the market value of banks that are introduced on the Stockholm Stock Exchange in year t;

TV_{2008} is the terminal market value of banks that are listed on the Stockholm Stock Exchange at the end of 2008.

[32] Fama, E. F. & French, K. R. (1999).
[33] Ross, S. A. *et al.* (2007) p. 250-258.

The IRR denotes the compounded average annual return an investor of bank stocks would have received in the period between 1983 and 2008. The return necessitates buying and selling at market value, in the beginning and end of the period, respectively. The figure indicates whether investors in Swedish banks have been profitable during the above mentioned period.

To enable a comparison between the return for shareholders and the growth in salaries for employees, a year-on-year rate is calculated. The annual shareholders' return (r_e) is determined using the following formula:

$$r_t = \frac{Div_t - NE_t + FS_t - FBV_t + V_{t+1}}{V_t} - 1$$

which will be compared with the annual growth in salaries per employee (g_s), found through the formula below:

$$g_s = \frac{AS_{t+1}}{AS_t} - 1$$

where

AS_t is the total salary payments of the banks listed on the Stockholm Stock Exchange divided by the total average number of employees in year t.

Another mean for a firm to reduce its salary costs would be to reduce the workforce. It is therefore of further interest to study the effect on the change in total salary costs (g_{ts}), year-to-year. This change can be calculated using:

$$g_{ts} = \frac{TS_{t+1}}{TS_t} - 1$$

where

TS_t is the total salary cost of the banks listed on the Stockholm Stock Exchange in year t.

In order to find out if the return for shareholders is correlated with the salary elements, regression analyses are performed. The use of a correlation analysis explains the relationship between different variables, in this case whether a change in the shareholders' return is correlated with the growth in employees' compensation and/or the size of the staff. In this study, Pearson's correlation coefficient is in use in order to determine the relationship between the variables. The coefficient ranges between +1 and -1, where a highly positive result point towards a positive correlation and a vastly negative number signifies a negative relationship. A low correlation exists when the result is in the region of zero.[34]

[34] Balakrishnan *et al.* (2007) p. 556-567.

3.3.2. INDUSTRY PERFORMANCE

Another interesting assessment regarding the long-term profitability of Swedish banks is to compare the industry index with the market index. The annual return of each index ($r_{i,m}$) can be calculated using:

$$r_{i,m} = \frac{Index_{t+1}}{Index_t} - 1$$

where

$Index_t$ is the index value in the beginning of year t.

In corporate finance theory it is commonly accepted that riskier investments yield higher returns, thus the index with the highest volatility ought to have the highest return.[35] Markets do not reward carrying firm specific risk, hence it is only the systematic risk that is worth examining. This risk is measured by the beta value (β) and is calculated using the following formula,

$$\beta_i = \frac{COV(r_i, r_m)}{VAR(r_m)}$$

where

$COV(r_i, r_m)$ is the covariance between the return on the market and the specific index;
$VAR(r_m)$ is the variance of the market return.

In order to evaluate if bank stocks have performed in line with its risk class, the actual and expected return is compared. A frequently used method to calculate the expected return is the capital asset pricing model (CAPM).[36] The CAPM-formula is as follows:

$$E(r_i) = r_f + \beta_i\left[E(r_m) - r_f\right]$$

where

$E(r_i)$ is the expected return of the specific index;
$E(r_m)$ is the expected return of the market index;
r_f is the risk free rate.

If it turns out that bank stocks have a lower actual than expected return, investing in bank stocks would be irrational.

[35] Ross, S. A. *et al.* (2007) p. 347.
[36] Ross, S. A. *et al.* (2007) p. 397-398.

3.4. SAMPLE DESCRIPTION

The sample concerning shareholders' return and employee factors encompasses all banks listed on the Stockholm Stock Exchange between the years 1983 and 2008. Extensive consolidation occurred in the industry, where banks merged, was acquired and went bankrupt. Due to this fact, several banking firms have been listed and delisted during the concerned time frame, which is why each individual member of the sample is only included in the study while being listed.

For the industry performance comparison, DataStream's Swedish Bank and Market indices are used. As for the comparison above, the years ranging from 1983 to 2008 are scrutinized. Worth mentioning is that DataStream's Swedish Bank index solely encompasses the four banks[37] still listed on the Stockholm Stock Exchange at the end of 2008.

3.5. VALIDITY AND RELIABILITY

According to the authors, the methodology used should accurately reflect the particular issues of interest in the study. Part of the process is undertaken using academically renowned techniques whereas other parts is of a more basic and clear-cut character. There are no validity problems concerning the size of the sample, since all Swedish banks quoted on the stock exchange are included, i.e. the full population. A question that could arise is if the time frame of the study is extensive enough to fully capture the issue. However, as already mentioned, deregulations profoundly changed the Swedish banking industry, which is why the authors found it suitable to limit the study to that time period. Furthermore, it is unclear whether the results of this Swedish study can be applied in an international context, given that the banking industry in different countries has historically been of dissimilar character.

The greater part of the data used in the study is taken directly from the companies concerned, thus these sources should be considered highly reliable. The annual reports of all corporations need to be scrutinised by professional auditors, a fact that further augments the trustworthiness. Share price and dividend data is obtained using DataStream, which is considered as an extensively used and distinguished secondary source of information.

[37] *Handelsbanken, Nordea, SEB and Swedbank*

4. Empirical Results and Analysis

In the preceding chapters, areas of interests worth studying were introduced with regards to the main topic. The theoretical framework and methods considered appropriate for the purpose of the thesis created the foundation for the data that was worth scrutinising. This chapter begins with a presentation of the data collected and continues with analyses of the information. A more extensive collection of the statistics used can be found in the appendices.

4.1. Sample Statistics

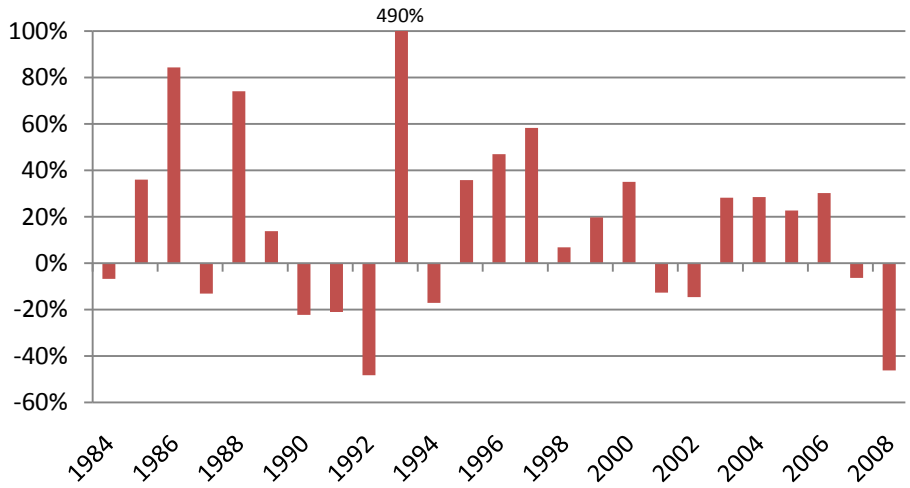
The study focuses on banks present on the Stockholm Stock Exchange between the years 1983 and 2008. As can be seen in Appendix A, the industry has seen a vast amount of merger and acquisition activity. The authors have identified 19 different bank shares over the period studied, whereas only four are currently traded.

	N	Mean	Median	SD	Min	Max
Shareholders' Return	25	32.08%	19.72%	99.26%	-48.28%	489.92%
Growth in Salary per Employee	25	5.88%	6.31%	5.34%	-8.41%	15.46%
Growth in Total Salary	25	14.27%	11.37%	21.08%	-34.09%	88.25%

Table 4.1: Descriptive Statistics – Capital Distribution

In Table 4.1, statistics regarding the annual return for a shareholder as well as the annual growth in salary over the period are shown. The latter, examined through both the compensation per employee and the total salary. Subsequently, graphs are presented in order to facilitate the understanding of each variable.

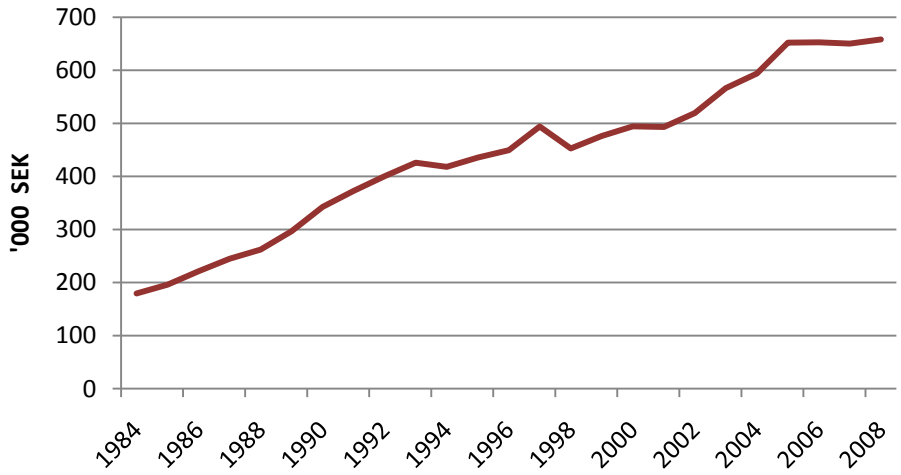
Figure 4.1: Shareholders' Return



The shareholders' annual return has fluctuated vastly over the period. Each annual return is a measurement of how much an investor would have earned if holding the market portfolio of banks

any given year. This return includes both the capital gains and the dividends, and it furthermore takes into consideration new share issues and repurchases as well as adjusts for banks both entering and exiting the market, see Appendix B. During the period in focus, the industry has gone through two major financial downturns, firstly the Swedish banking crisis of the 1990s and later the global financial crisis of the late 2000s. As can be seen in Figure 4.1, the observation of 1993 with a return of almost 500% is a clearly extreme value, and can be explained by the low market capitalisation in the end of 1992. This value has an impact on the study, in particular the mean of the return which would have been 13% if the extreme was excluded.

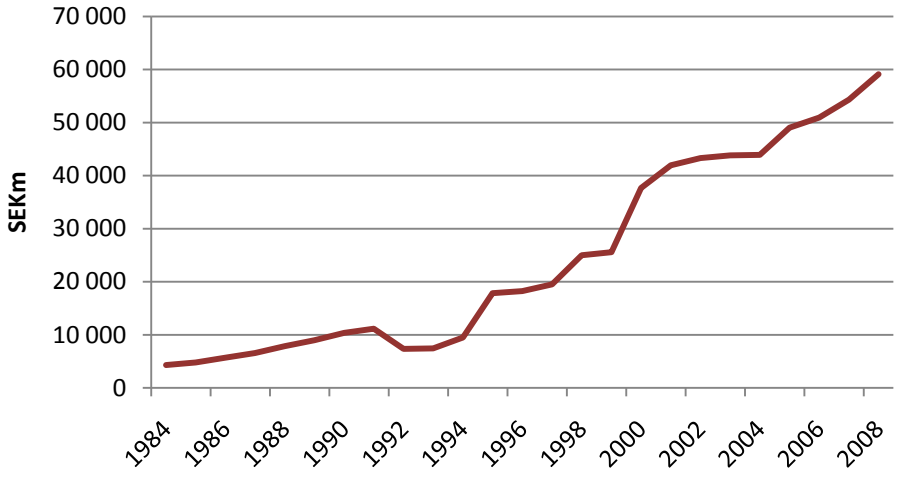
Figure 4.2: Salary per Employee



As opposed to the change in return for the owners, the annual growth in salary per employee has been fairly stable. The growth rate solely fluctuate between -8% and 15%, whereas the minimum and maximum value for the owners' return had a span of nearly 540%. Only two years have seen a reduction in compensation levels, although the salaries have stagnated in the recent years, as seen in Figure 4.2. Nonetheless, the mean annual return for shareholders have been significantly higher than the growth in salary per employee, 32% and 6%, respectively.

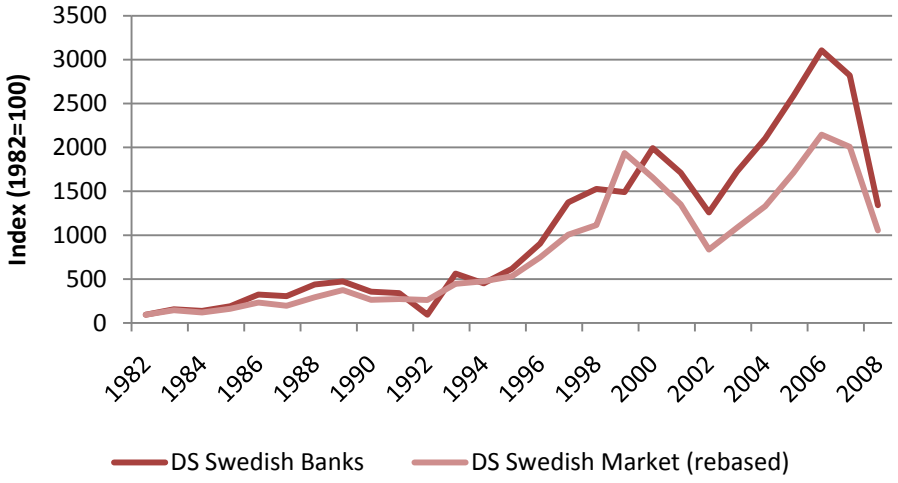
The total salary has varied more than the per capita figure, illustrated by standard deviations of 21% and 5% each. Reductions in total salary can be a result of both job cuts in the banks as well as banks leaving the sample for one or another reason. Salary per employee levels as well as the total salaries for each individual bank are further presented in Appendix C.

Figure 4.3: Total Salary



How the industry has been performing compared to the general Swedish market was further scrutinised, in order to see whether banks perform any different than other types of firms. In the figure below, both the bank and the market indices are presented. Once again, the image highlights the downturns during the previously mentioned crises, as well as the periods of strong growth. The market index has been rebased to enable a fair comparison. As one can see, the banks and the market followed each other closely but after 2000 the bank index value has been higher, culminating in 2006.

Figure 4.4: Industry Performance



According to the CAPM-formula, that was further explained in chapter three, an investor should be rewarded for making risky investments, which is why it is interesting to compare the actual and expected annual return for banks. In Table 4.2, one can see that the average return for the Swedish market was roughly 15% whereas the bank stock return was about the double, 29%. However if one excludes the extreme return in the year 1993, the average annual bank return is 11%.

	n	Mean	Median	SD	Min	Max
DS Swedish Market Index Return	26	14.54%	17.29%	31.74%	-47.46%	73.73%
DS Swedish Bank Index Return	26	29.21%	15.58%	99.14%	-72.26%	494.69%
DS Swedish Bank Beta	26	0.84	0.80	0.40	-0.05	1.85
3-Month Swedish T-Bill Yield	26	7.22%	6.64%	4.02%	1.71%	14.23%
DS Swedish Bank Index Expected Return	26	13.70%	12.79%	26.22%	-43.47%	66.86%

Table 4.2: Descriptive Statistics – Industry Performance

In Appendix D, the values needed to calculate the expected return can be found. The one-year betas are calculated using monthly values, and the risk free rate is based on the mean annual 3-month Swedish Treasury bill. The mean beta for Swedish banks is 0.84, thus the banking industry has slightly less systematic risk than the general market. The average risk free rate was 7.22% with a standard deviation of 1.71%. The expected return for Swedish banks, calculated using CAPM, was 13.7%.

4.2. Internal Rate of Return for Equity Investors

The method by Fama and French, described in section 3.3.1, was used to measure the internal rate of equity return of the Swedish banking industry. The geometrical average annual return over the 26 year period was 15.5%. The initial value of the banks' equity in the beginning of 1983 was SEK9,672m and the terminal market capitalisation in 2008 was SEK305,830m. The internal rate of return took into consideration a number of equity variables, which is fully illustrated in Appendix A4.

It is clear that an investor in bank stocks has made significant returns over the period of study. It is however further apparent that it is an industry that has seen both vast ups and downs. As was illustrated by Figure 4.1, by only holding the shares a limited number of years one could have either made large gains or huge losses. To conclude, the long-term overall return of bank shares was positive.

4.3. Correlation Tests

Correlation tests were conducted with the intention of studying specific relations that has been found of interest. These tests as well as the results are presented in this section.

4.3.1. Capital Distribution between Owners and Employees

It could be predicted that the growth in salary per employee would be correlated with the shareholders' return, thus the authors found an interest in comparing these variables. As changes in salary policies may take longer than the immediate effect on the equity of the banks, it is further interesting to correlate the return for the owners with the salary of a certain number of years after.

	0	+1 Year	+2 Years	+3 Years
Correlation Coefficient	**0.068**	**-0.285**	**-0.034**	**-0.084**
Sig. (2-tailed)	0.746	0.177	0.876	0.710
N	25	24	23	22

Table 4.3: Correlation Test – Shareholders' Return and Salary per Employee

As can be seen in Table 4.3, no significant correlation was to be found between the shareholders' return and the salary per employee. This indicates that a reduction in equity return does not automatically impact the level of a generic employee's salary. It is still worth noting that the growth in salary per employee is of a lesser size (5.9%) than what was noticed in the shareholders' return (32.1%), even without extreme values (13%).

	0	+1 Year	+2 Years	+3 Years
Correlation Coefficient	**-0.023**	**0.155**	**0.749**	**-0.176**
Sig. (2-tailed)	0.914	0.470	0.000	0.432
N	25	24	23	22

Table 4.4: Correlation Test – Shareholders' Return and Total Salary

Since other possible reductions of salaries than the per capita decrease existed, it was thought interesting to further study the total salary value of the Swedish banking industry. There was no correlation between the two variables while comparing the same years. However, by shifting the total salary two years forward, a statistically significant correlation was found. The correlation coefficient is 0.75 with a significant level of less than 0.00.

This observation is of interest since it, in combination with the stable levels of salary per employee, implies that the number of employees was reduced two years after a downturn in shareholders' return. As mentioned before this reduction in the number of employees can either be caused by job cuts or firms delisting from the Stockholm Stock Exchange.

4.3.2. Industry Performance

A statistical test between the actual and the expected return of bank stocks tells whether the investors in bank shares are earning returns in accordance with the level of risk they take on.

Correlation Coefficient	**0.613**
Sig. (2-tailed)	0.001
N	26

Table 4.5: Correlation Test – Actual and Expected Return

In Table 4.5, one can see that there is a positive correlation between the actual and the expected return calculated by using CAPM. With a 2-tailed significance of less than 0.00 and a correlation of 0.612, it is statistically confirmed.

The average expected level of return for banks over the examined period was 13.7% and the actual average return was 29.2%, hence banks had a higher return than predicted by its risk class. Still, without the extreme return in 1993 the average actual return would have been 10.6%, thus lower than the normal reward in relation to its risk.

Figure 4.5: Actual and Expected Bank Return

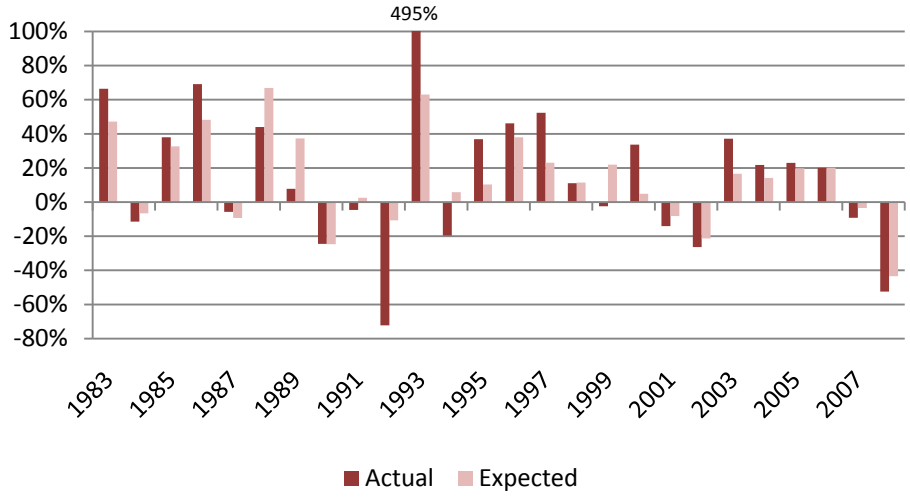


Figure 4.5 illustrate how closely the actual and expected return, given its systematic risk, corresponds. The actual return has a tendency to be slightly more extreme than expected, although it close to exactly follows the expected return in the last years.

It is ambiguous whether owners of bank shares are paid for their risk taking. The numbers both indicates higher as well as lower returns, depending on the inclusion or exclusion of extreme values. The level of systematic risk within banks is, maybe surprisingly, not higher than the market's. On the contrary, it is slightly lower with an average beta of 0.84, indicating that bank shares are less risky than the average company on the Stockholm Stock Exchange.

4.4. Discussion of Results

Even though the study has discovered important results regarding the owners' return and the employees' compensation, the presence of certain extreme values has affected the outcome and comparability. It is important to realise that during the period of study, the financial industry has gone through the most extensive changes in history, where the size and importance of financial institutions and markets have grown tremendously. Furthermore, the period encompasses two unprecedented financial crises caused by reckless risk taking within the banking industry. At the time of writing, regulators are introducing harsher rules and directives, a matter that can offset the significance of the results for future applications. It is further unclear whether the results are valid for foreign banks, as banking policies differs between countries.

5. CONCLUSION

The aim of the thesis was to study the equity flows in financial institutions in order to distinguish who benefits from the banks' earnings. Whether investing in banks was a sound practice as well as if excessive salaries reduced the return for shareholders was examined. Via a theoretical framework and methods, empirical results and analyses assisted in discovering new presumptions on this topic.

5.1. SUMMARY AND CONCLUSION

This study has shown that the general investor of bank shares did profit from its holdings in the long run. However, while preparing for this study, it became clear that both the government and tax payers, at times of crisis, have had the need to assist in keeping banks liquid, both through governmental guarantees as well as capital infusions. With this in mind, it is unsure whether banks would be able to generate the same profit levels if it was not for the fact that some banks are too big to fail, thus can rely on governmental intervention. Nonetheless, in certain years, the shareholders of the banks made huge losses, both in value decreases and by the absence of dividend payments. The governmental interventions are designed to protect the banks' debt holders, which can lead to losses for the shareholders.

Whether the employees were equally impacted by a financial downturn as the owners can be looked upon in two different manners. The salary per employee levels were little affected by a recession, however they grew at a slower pace than what the shareholders' return did over the full period. On the other hand, the industry saw a reduced total salary cost two years after a downturn. This correlation was statistically significant and indicates that a reduction in bank profitability reduces the size of the workforce and/or reduces the number of banks listed on the stock exchange. This is in line with the results of the survey of Swedish manufacturing salary levels conducted by Agell and Lundborg. While contemplating whether the banks' managements strive for profit maximisation, one can conclude two things: that they are protective of the banks' profitability, but that they at the same time are not willing to lower the salary levels for existing employees. For the latter, external factors, such as labour unions and regulations, may prevent lowering the salary per employee level and thereby forcing the bank's executives to reduce the size of the workforce.

When comparing the actual and expected return of the Swedish banking industry, a significant correlation was found. That is, the actual return was affected according to its risk category and the volatility of the Swedish market. Whether the owners of bank stock were rewarded for the systematic risk taken on was obscure, since the extreme upturn in 1993 considerably increased the mean annual return. When the extreme value was included, bank owners earned more than

expected, if not, the situation was the reverse, in line with the indications of Neuberger's study. The beta value for bank shares was lower than the market's, denoting that banks are less affected by events that impact the whole Swedish market than the general Swedish firm. It is also be worth mentioning that the total risk for banks, commonly measured by the standard deviation, was higher than for other firms. Bank shares had a standard deviation of 34.8%, and 99.1% when including the extreme, whereas the average firm on the market had a value of 31.7%. This indicates that banks are more affected by diversifiable risk than the general Swedish firm, thus if not holding a balanced portfolio investing in banks are irrational.

In conclusion, long-term investors in Swedish bank shares were profitable over the period studied, whilst short-term investments had fairly volatile results. The level of salary for bank employees did not decrease, but instead the size of the workforce was affected by a downturn. The reduction in staff size was delayed two years after an economic dip affecting the banking industry.

5.2. Further Research

Although the study discovered several interesting relationships regarding the Swedish banking industry, a more extensive study would be of interest. A larger research scheme could encompass a wider time span, and subsequently opening up for a more extensive data collection and statistical study. Whereas the authors' purpose was to study the Swedish banks, a similar study applied on a larger region, e.g. the Nordics, Europe or the US, could be of interest.

Since the industry is characterised by large variable compensation forms, it would have been interesting to separate these from other types of salary. Due to the lack of transparency and data in the early years of the study, the authors early discarded the idea of examining this topic in comparison with shareholders' return. Apart from variable salaries, some banks also have profit sharing trusts, such as Handelsbanken's Oktogonen, which is another compensation form that would have been interesting to study, in particular if examining institutions outside of Sweden.

Other stakeholders of the banks that would be worth studying in relation to bank volatility are tax payers and customers. Tax payers often suffer in financial crises when governments are forced to intervene in order to rescue banks facing financial distress. In such situations, customers risks being confronted with unfavourable interest rates, where they have to borrow at high rates and lend at low. How the interest margin has changed in comparison to salary levels would be interesting to study. Clearly, the topic concerning the banking industry and its stakeholders is an interesting area of study, leavening room for further research.

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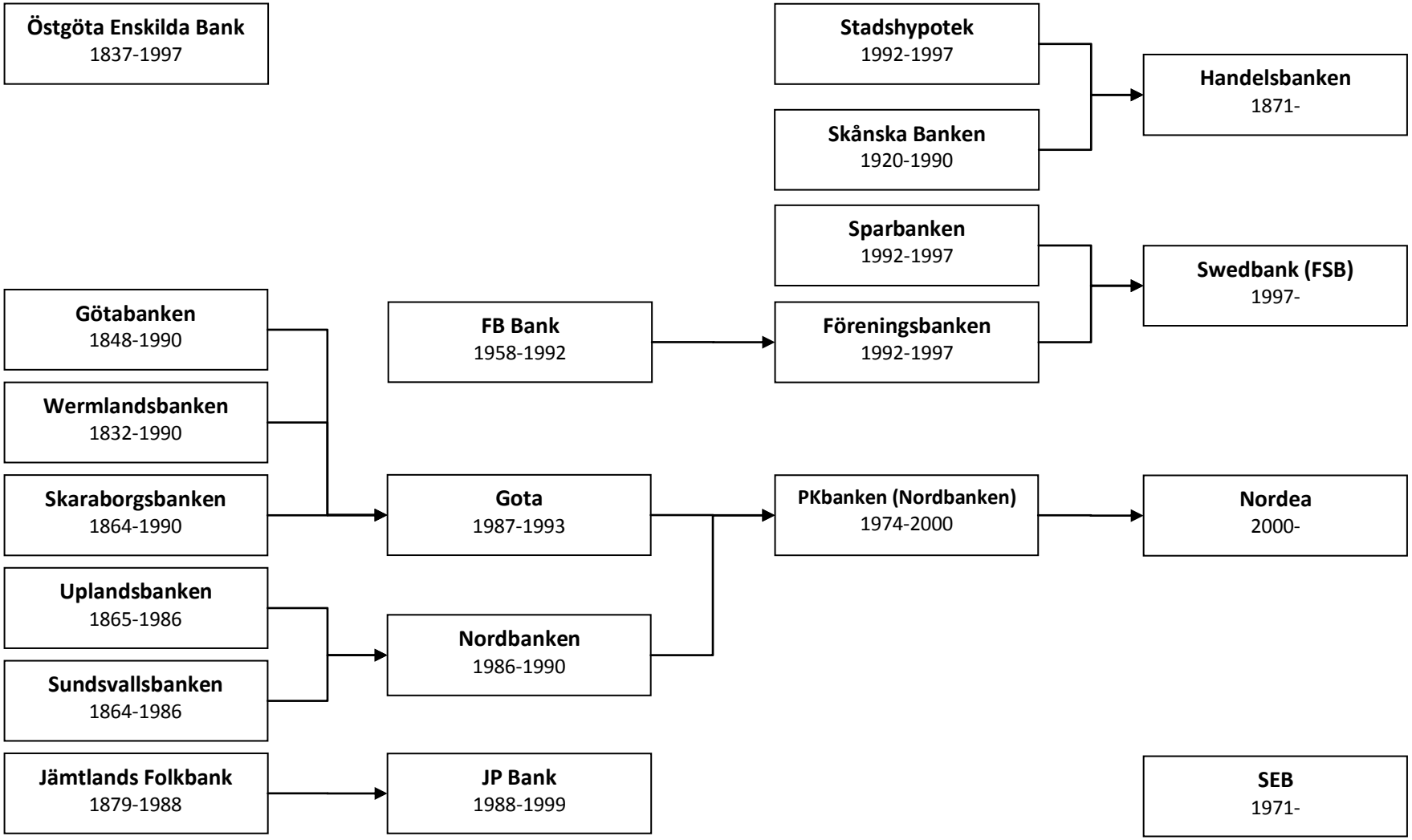
APPENDIX A: HISTORY OF THE SWEDISH BANKING INDUSTRY



Note: Only banks quoted on the Stockholm Stock Exchange are featured in this chart

APPENDIX B1: MARKET CAPITALISATION

(SEKm)	FB Bank	Förenings-banken	FS-banken / Swedbank	Gota	Götabanken	JFB / JP Bank	Nordbanken	PKbanken / Nordbanken	Nordea	SEB	Skaraborgs-banken
1982					989	48				4 174	186
1983					1 767	68		3 480[1]		6 634	288
1984					1 316	97		3 450		5 754	240
1985					1 738	83	1 223[1]	4 650		8 688	300
1986					3 841	108	2 103	7 350		14 987	630
1987	979[1]			3 827[1]	2 641	99	1 795	6 900		14 141	585
1988	979			4 600	4 513[2]	122	3 421	13 595		20 667	945
1989	1 104			5 597		190	5 440	16 503		21 519	1 530
1990	1 760			4 881		190	5 571[2]	7 736		13 852	1 665[2]
1991	1 600[2]			1 553		66		8 595		13 032	
1992				887[2]		68		9 025[2]		2 506	
1993		3 468[1]				590				28 570	
1994		2 555				393		22 253[1]		22 057	
1995		3 285				407		23 435		26 067	
1996		5 658	69 143[1]			413		34 629		30 077	
1997		8 213[2]	70 375			603		46 599	57 260[1]	52 599	
1998			74 421			557		46 599[2]	60 320	50 067	
1999			72 574			420[2]			104 555	59 293	
2000			75 213						202 794	70 410	
2001			64 920						154 215	62 662	
2002			55 684						119 760	52 218	
2003			70 990						143 748	69 063	
2004			83 854						181 867	86 244	
2005			107 455						207 529	104 423	
2006			130 389						274 197	144 203	
2007			93 540						274 787	111 716	
2008			36 411						149 766	37 791	

1 Introduction value in the following year, 2 Exit value during the year

APPENDIX B1: MARKET CAPITALISATION (CONT'D)

(SEKm)	Skånska Banken	Sparbanken	Stadshypotek	Sundsvalls-banken	Handels-banken	Uplands-banken	Wermlands-banken	Östgöta Enskilda
1982	271			455	2 891	287	206	165
1983	536			698	5 084	357	331	374
1984	500			872	4 800	378	328	293
1985	490			815	5 962	385	350	297
1986	928			815[2]	11 408	497[2]	711	755
1987	867				8 465		703	507
1988	1 346				15 485		1 055	727
1989	1 946				15 829		1 594	1 115
1990	1 958[2]				15 444		1 734[2]	777
1991					14 233			676
1992					5 148			541
1993			7 480[1]		25 875			1 577
1994		17 108[1]	8 503		23 034			1 352
1995		21 003	11 456		29 424			1 267
1996		30 044	16 692		42 885			1 194
1997		65 618[2]	16 916[2]		69 092			2 805[2]
1998					73 619			
1999					80 766			
2000					106 759			
2001					101 235			
2002					84 247			
2003					98 114			
2004					113 169			
2005					122 432			
2006					125 907			
2007					125 941			
2008					81 862			

1 Introduction value in the following year, 2 Exit value during the year

APPENDIX B2: DIVIDENDS

(SEKm)	FB Bank	Förenings-banken	FS-banken / Swedbank	Gota	Götabanken	JFB / JP Bank	Nordbanken	PKbanken / Nordbanken	Nordea	SEB	Skaraborgs-banken
1982					53	1				209	9
1983					60	1				293	10
1984					60	1		120		293	10
1985					77	1		210		361	13
1986					91	1	62	255		435	16
1987					182	0	75	278		514	19
1988	19			102	91	2	93	418		616	23
1989	0			165		4	0	516		709	0
1990	0			194		6		0		802	
1991				0		0		0		840	
1992						8				0	
1993						16				0	
1994		0				20				752	
1995		91				26		1 613		752	
1996		228				36		1 736		1 379	
1997			2 111			36		1 913		1 688	
1998			2 463			0			2 091	1 969	
1999			2 639						3 659	2 358	
2000			2 903						5 965	2 695	
2001			2 903						6 344	2 695	
2002			2 903						6 164	2 695	
2003			3 035						6 462	2 695	
2004			3 334						6 904	2 931	
2005			3 865						8 524	3 149	
2006			4 252						11 490	3 978	
2007			4 638						12 281	4 310	

All dividend payments are made the following year

APPENDIX B2: DIVIDENDS (CONT'D)

(SEKm)	Skånska Banken	Sparbanken	Stadshypotek	Sundsvalls-banken	Handels-banken	Uplands-banken	Wermlands-banken	Östgöta Enskilda
1982	11			21	161	11	12	7
1983	12			25	194	14	13	7
1984	12			31	194	14	13	7
1985	15			41	252	17	17	7
1986	19				310		20	10
1987	21				372		25	13
1988	24				465		28	19
1989	0				564		0	23
1990					681			27
1991					719			0
1992					0			0
1993					454			0
1994			179		684			0
1995		974	806		855			23
1996		1 530	0		1 191			42
1997					1 549			
1998					1 906			
1999					2 144			
2000					2 773			
2001					3 120			
2002					3 294			
2003					3 640			
2004					4 018			
2005					4 595			
2006					5 074			
2007					8 417			

All dividend payments are made the following year

APPENDIX B3: NET NEW EQUITY

(SEKm)	FB Bank	Förenings-banken	FS-banken / Swedbank	Gota	Götabanken	JFB / JP Bank	Nordbanken	PKbanken / Nordbanken	Nordea	SEB	Skaraborgs-banken
1982											
1983						6				642	
1984											
1985											
1986											45
1987										723	
1988						14		236			
1989				713		29		1 900			
1990	640			54						577	
1991						96		5 157		449	
1992											
1993										5 012	
1994										3	
1995											
1996								-5 000			
1997										5 594	
1998											
1999									12 088	3 893	
2000									40 676		
2001									2		
2002									14		
2003									-2 820		
2004			-2 218						-4 113		
2005			468						-8 122	-1 669	
2006									-8 018		
2007									1		
2008			9 360						4		

APPENDIX B3: NET NEW EQUITY (CONT'D)

(SEKm)	Skånska Banken	Sparbanken	Stadshypotek	Sundsvalls-banken	Handels-banken	Uplands-banken	Wermlands-banken	Östgöta Enskilda
1982								
1983								
1984				133				
1985								
1986								79
1987								
1988								
1989								
1990								
1991								507
1992								
1993					2 592			270
1994			414		79			
1995					2			
1996					737			
1997		8 522						
1998								
1999								
2000					-2 950			
2001					-46			
2002								
2003								
2004					-3 426			
2005					-2 468			
2006					-2 830			
2007					-1 000			
2008								

Appendix B4: Internal Rate of Return

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IV	9 672													
+ Div		494	629	756	1 011	1 221	1 498	1 900	1 981	1 711	1 559	8	470	1 635
- NE		-648	-133	0	-124	-723	-250	-2 642	-1 271	-6 209	0	-7 875	-496	-2
+ FS					1 312		4 513		10 928	1 600	9 912			
- FBV			-3 480		-1 223		-4 806						-10 948	-39 361
=		**-155**	**-2 984**	**756**	**976**	**498**	**955**	**-742**	**11 639**	**-2 898**	**11 471**	**-7 867**	**-10 974**	**-37 728**
Discount rate	**15.47%**													
Discount factor		0.87	0.75	0.65	0.56	0.49	0.42	0.37	0.32	0.27	0.24	0.21	0.18	0.15
DCF		-134	-2 238	491	549	243	403	-271	3 682	-794	2 722	-1 616	-1 953	-5 814
Sum	**9 672**													

Appendix B5: Shareholders' Annual Return

+ Div	494	629	756	1 011	1 221	1 498	1 900	1 981	1 711	1 559	8	470	1 635
- NE	-648	-133		-124	-723	-250	-2 642	-1 271	-6 209		-7 875	-496	-2
+ FS				1 312		4 513		10 928	1 600	9 912			
- FBV		-3 480		-1 223		-4 806						-10 948	-39 361
V_{t+1}	16 138	18 028	23 758	42 821	36 703	62 942	72 367	44 640	38 154	8 263	56 613	57 893	116 343
=	**15 983**	**15 044**	**24 514**	**43 797**	**37 201**	**63 898**	**71 625**	**56 278**	**35 257**	**19 734**	**48 746**	**46 919**	**78 616**
V_t	**9 672**	**16 138**	**18 028**	**23 758**	**42 821**	**36 703**	**62 942**	**72 367**	**44 640**	**38 154**	**8 263**	**56 613**	**57 893**
r_e	**65%**	**-7%**	**36%**	**84%**	**-13%**	**74%**	**14%**	**-22%**	**-21%**	**-48%**	**490%**	**-17%**	**36%**

APPENDIX B4: INTERNAL RATE OF RETURN (CONT'D)

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
													TV	305 830
+ Div		5 139	6 142	7 296	8 429	10 801	14 336	15 063	15 056	15 832	17 186	20 134	24 794	29 646
- NE		4 263	-14 116	0	-15 981	-37 726	44	-14	2 820	9 757	11 791	10 848	999	-9 364
+ FS			93 551	46 599	420									
- FBV			-69 143	-57 260										
=		**9 402**	**16 435**	**-3 364**	**-7 132**	**-26 925**	**14 379**	**15 049**	**17 875**	**25 589**	**28 977**	**30 982**	**25 793**	**326 112**
Discount rate	**15.47%**													
Discount factor		0.13	0.12	0.10	0.09	0.08	0.06	0.06	0.05	0.04	0.04	0.03	0.03	0.02
DCF		1 255	1 899	-337	-618	-2 021	935	847	871	1 080	1 059	981	707	7 743

APPENDIX B5: SHAREHOLDERS' ANNUAL RETURN (CONT'D)

	5 139	6 142	7 296	8 429	10 801	14 336	15 063	15 056	15 832	17 186	20 134	24 794	29 646
+ Div													
- NE	4 263	-14 116		-15 981	-37 726	44	-14	2 820	9 757	11 791	10 848	999	-9 364
+ FS		93 551	46 599	420									
- FBV		-69 143	-57 260										
V_{t+1}	161 591	239 268	258 985	317 188	455 176	383 032	311 908	381 916	465 135	541 839	674 697	605 984	305 830
=	**170 994**	**255 702**	**255 621**	**310 056**	**428 251**	**397 411**	**326 957**	**399 791**	**490 725**	**570 816**	**705 679**	**631 777**	**326 112**
V_t	**116 343**	**161 591**	**239 268**	**258 985**	**317 188**	**455 176**	**383 032**	**311 908**	**381 916**	**465 135**	**541 839**	**674 697**	**605 984**
r_e	**47%**	**58%**	**7%**	**20%**	**35%**	**-13%**	**-15%**	**28%**	**28%**	**23%**	**30%**	**-6%**	**-46%**

APPENDIX C1: SALARY PER EMPLOYEE

('000 SEK)	FB Bank	Förenings-banken	FS-banken / Swedbank	Gota	Götabanken	JFB / JP Bank	Nordbanken	PKbanken / Nordbanken	Nordea	SEB	Skaraborgs-banken
1983					159	148				168	151
1984					184	180		167		186	161
1985					195	226		193		204	173
1986					222	257	215	211		233	195
1987					245	247	255	243		249	229
1988	271			270		259	238	261		262	238
1989	284			300		377	255	297		304	261
1990	313			345		462		335		349	
1991				363		406		355		387	
1992						1 821				400	
1993						1 113				433	
1994		315				413				463	
1995		373				468		414		495	
1996		365				671		399		570	
1997			452			638		423		591	
1998			432			642			379	534	
1999			466						359	592	
2000			448						416	601	
2001			350						472	601	
2002			404						506	592	
2003			409						590	618	
2004			459						607	652	
2005			478						701	704	
2006			460						691	730	
2007			446						693	765	
2008			425						727	763	

APPENDIX C1: SALARY PER EMPLOYEE (CONT'D)

('000 SEK)	Skånska Banken	Sparbanken	Stadshypotek	Sundsvalls-banken	Handels-banken	Uplands-banken	Wermlands-banken	Östgöta Enskilda	Total	Growth
1983	179			171	159	150	147	176	**163**	**-**
1984	199			184	178	165	164	198	**179**	**10%**
1985	207			192	193	174	176	210	**196**	**9%**
1986	238				216		193	250	**221**	**13%**
1987	257				238		212	282	**245**	**11%**
1988	278				263		231	314	**262**	**7%**
1989	301				297		245	338	**297**	**13%**
1990					333			403	**343**	**15%**
1991					367			437	**373**	**9%**
1992					372			434	**401**	**7%**
1993					404			441	**426**	**6%**
1994			369		423			433	**418**	**-2%**
1995		404	395		462			469	**436**	**4%**
1996		398	354		470			499	**449**	**3%**
1997					507				**494**	**10%**
1998					536				**453**	**-8%**
1999					574				**476**	**5%**
2000					618				**494**	**4%**
2001					640				**493**	**0%**
2002					636				**520**	**5%**
2003					671				**566**	**9%**
2004					683				**594**	**5%**
2005					711				**652**	**10%**
2006					749				**653**	**0%**
2007					737				**650**	**0%**
2008					749				**658**	**1%**

APPENDIX C2: TOTAL SALARY

(SEKm)	FB Bank	Förenings-banken	FS-banken / Swedbank	Gota	Götabanken	JFB / JP Bank	Nordbanken	PKbanken / Nordbanken	Nordea	SEB	Skaraborgs-banken
1983					379	14				1 264	65
1984					452	16		659		1 465	74
1985					479	24		774		1 645	82
1986					571	30	335	951		1 969	101
1987					575	27	420	1 133		2 276	118
1988	87			1 229		29	371	1 301		2 459	135
1989	91			1 328		49	378	1 524		2 920	148
1990	113			1 341		69		2 282		3 750	
1991				1 331		55		2 432		4 202	
1992						255				4 152	
1993						125				4 308	
1994		1 276				53				4 535	
1995		1 475				69		2 947		4 800	
1996		1 412				77		2 846		5 457	
1997			6 411			68		2 937		5 930	
1998			5 760			82			7 768	6 816	
1999			5 792						6 938	7 969	
2000			6 734						13 390	12 234	
2001			6 528						17 721	11 796	
2002			6 952						18 870	11 297	
2003			6 937						19 525	11 157	
2004			7 632						18 447	11 579	
2005			8 191						20 829	13 342	
2006			8 560						20 826	14 363	
2007			9 792						22 089	14 921	
2008			10 092						24 664	16 241	

APPENDIX C2: TOTAL SALARY (CONT'D)

(SEKm)	Skånska Banken	Sparbanken	Stadshypotek	Sundsvalls-banken	Handels-banken	Uplands-banken	Wermlands-banken	Östgöta Enskilda	Total	Growth
1983	105			120	922	95	90	72	**3 126**	-
1984	119			135	1 080	109	105	82	**4 296**	**37%**
1985	125			148	1 180	120	115	92	**4 785**	**11%**
1986	149				1 331		131	121	**5 688**	**19%**
1987	170				1 536		155	161	**6 571**	**16%**
1988	189				1 734		171	173	**7 879**	**20%**
1989	209				1 993		179	175	**8 993**	**14%**
1990					2 591			224	**10 370**	**15%**
1991					2 863			257	**11 140**	**7%**
1992					2 740			195	**7 342**	**-34%**
1993					2 846			176	**7 454**	**2%**
1994			410		3 001			208	**9 483**	**27%**
1995		4 401	495		3 413			252	**17 852**	**88%**
1996		4 222	491		3 477			272	**18 253**	**2%**
1997					4 150				**19 496**	**7%**
1998					4 579				**25 005**	**28%**
1999					4 888				**25 587**	**2%**
2000					5 300				**37 658**	**47%**
2001					5 909				**41 954**	**11%**
2002					6 203				**43 322**	**3%**
2003					6 216				**43 835**	**1%**
2004					6 248				**43 906**	**0%**
2005					6 678				**49 040**	**12%**
2006					7 184				**50 933**	**4%**
2007					7 528				**54 330**	**7%**
2008					8 114				**59 111**	**9%**

APPENDIX D: ACTUAL AND EXPECTED RETURN

	DS Swedish Banks		DS Swedish Market		CAPM for Swedish Banks		
	Index Value[1]	Return	Index Value[1]	Return	3-Month T-Bill[2]	Beta	Expected Return
1982	94		134				
1983	156	66%	208	55%	11%	0.82	47%
1984	138	-11%	170	-18%	12%	0.62	-7%
1985	191	38%	230	35%	14%	0.89	33%
1986	323	69%	333	45%	10%	1.09	48%
1987	304	-6%	279	-16%	9%	0.73	-9%
1988	438	44%	419	50%	10%	1.42	67%
1989	472	8%	536	28%	12%	1.59	37%
1990	357	-24%	377	-30%	14%	0.89	-25%
1991	340	-5%	390	3%	12%	1.09	2%
1992	94	-72%	374	-4%	13%	1.38	-11%
1993	562	495%	636	70%	8%	0.88	63%
1994	451	-20%	678	7%	7%	1.85	6%
1995	618	37%	760	12%	9%	0.44	10%
1996	903	46%	1068	40%	6%	0.93	38%
1997	1375	52%	1437	35%	4%	0.62	23%
1998	1527	11%	1593	11%	4%	1.09	11%
1999	1490	-2%	2767	74%	3%	0.27	22%
2000	1992	34%	2367	-14%	4%	-0.05	5%
2001	1711	-14%	1929	-19%	4%	0.54	-8%
2002	1260	-26%	1195	-38%	4%	0.60	-21%
2003	1727	37%	1552	30%	3%	0.51	17%
2004	2103	22%	1900	22%	2%	0.59	14%
2005	2587	23%	2447	29%	2%	0.67	20%
2006	3107	20%	3065	25%	2%	0.78	20%
2007	2821	-9%	2869	-6%	4%	0.71	-3%
2008	1341	-52%	1507	-47%	4%	0.92	-43%

1 Index (1982=100), 2 Source: The Swedish Riksbank