

Cash Flow Accounting in Banks

Cash flow accounting in banks – a study of practice

PhD thesis

Department of Business Administration
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—A study of practice

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UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

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Abbreviations

| | |
|------------------|--|
| AAA | American Accounting Association |
| ASOBAT | A Statement Of Basic Accounting Theory |
| AICPA | American Institute of Certified Public Accountants |
| BIS | Bank of International Settlements |
| Basel I, II, III | International regulatory framework for banks |
| BCBS | Basel Committee on Banking Supervision |
| BoE | Bank of England, the central bank of the UK |
| CAPM | Capital Asset Pricing Model |
| CDS | Credit Default Swap |
| CEO | Chief Executive Officer |
| CL | Comment Letter (on ED of proposed Accounting Standard) |
| DP | Discussion Paper (about potential change of Accounting Standard) |
| EBA | European Banking Authority (of EU) |
| ECB | European Central Bank for Europe's single currency, the euro |
| ED | Exposure Draft (of proposed Accounting Standard) |
| ELA | Emergency Liquidity Assistance (of ECB) |
| EMH | Efficient Market Hypothesis |
| EU | European Union |
| FAS | Financial Accounting Standard (US) |
| FAS 95 | Statement of FAS no. 95 Statement of Cash Flows |
| FASB | Financial Accounting Standards Board (US) |
| FCAG | Financial Crisis Advisor Group (of FASB & IASB) |
| Fed | Federal Reserve, the central bank of the US |
| FSA | Financial Supervision Authority (UK) |
| FSB | Financial Stability Board |
| G20 | Finance Ministers and Central Bank Governors in 20 major economies |
| G30 | Consultative Group on International Economic and Monetary Affairs |
| GAAP | Generally Accepted Accounting Principles |
| GDP | Gross Domestic Product |
| IAS | International Accounting Standard |
| IAS 7 | IAS no. 7 - Statement of Cash Flows |
| IASB | International Accounting Standards Board |
| IFRS | International Financial Reporting Standards |
| IMF | International Monetary Fund |
| INET | Institute for New Economic Thinking |
| IT | Information Technology |
| LCR | Liquidity Coverage Ratio |
| LTRO | Long-Term Refinancing Operations |
| LTV | Loan To Value |
| NPL | Non-Performing Loans |
| NSFR | Net Stable Funding Ratio |
| NYSE | New York Stock Exchange |
| QE | Quantitative Easing |
| SATATA | Statement on Accounting Theory And Theory Acceptances |
| SEC | Securities and Exchange Commission |
| SIFI | Systemically Important Financial Institutions |
| TARP | Troubled Asset Relief Program |
| TARGET 2 | Trans-European Automated Real-time Gross settlement Express Transfer |
| UN | United Nations |

Abstract

After the near collapse of the global financial system in 2008, much of the debate has focused on credit and asset valuation, as well as liquidity issues in the financial sector. Emphasis has been on debt and balance sheet quality, but little focus has been on the cash flow statements of banks. The statement of cash flows is designed to illustrate financial strength and liquidity with information about operations, investment and financing. Cash flow statements generally show operational stability and funding, outflow and inflow of cash, as important factors of firm's financial resilience. In this respect banks are different and their cash flow statements are simply not used.

The aim of this thesis is to study how cash flow statements of banks are different from non-financial firms to understand why they are not used. This includes research on how the accounting standard functions for banks and identify special issues of cash flows in banks.

Four studies are used to gather evidence and evaluations of the accounting framework and the financial statements in order to describe facts and interpret bankers' opinions. The big Scandinavian banks are selected as study objects and thirty bankers interviewed. Historical comment letters are analysed as well as fourteen years of financial statements.

The accounting rules for banks and cash flow are described in the first study. The second study concerns the accounting regulation process and confirms that prior to the standard setting, bankers warned that it would not function in banks. Long-term financial statement analysis in the third study illustrates the negative operative cash flow in the banks over a decade. The final study, interviewing bankers about the cash flow in banks, confirms that none of them uses the statement and they have never been asked about it.

The main findings indicate that standard cash flow statements do not work for banks because banks' operations are different from non-financial firms with respect to cash. The reason why bankers do not use the statements is that they do not consider the information provided to be relevant. The results furthermore indicate that the cash flow statements of banks are not used because the existing accounting standard does not consider the credit creation function in banks. This is exemplified in the negative operative cash flow during periods of lending growth. Banks are different from other firms and the reporting of banks' cash flows functions differently because cash is their product and they create deposits on their balance sheet when providing loans to their customers. The accounting transaction of lending does not involve any prior funding or cash inflow, but occurs in the accounting system, creating deposit as a liability and loan as an asset of the bank. These results contribute to the debate needed in accounting and banking about useful cash flow statements for banks and provide an overview to prepare new accounting regime.

Key words: *Accounting, Banking, Cash Flow, Financial Institutions, Money View*

Acknowledgements

This is a thesis in Business Administration within both the fields of Accounting and Bank-management. I thank the Department for accepting me as PhD student.

The focus is on Financial Accounting but aspects of Management Accounting are also included as bankers are both preparers and users of the financial statements of banks due to their mutual lending. Banking also has a strong connection to both Finance and Economics. This makes this thesis in some respects a borderline object, moving across the margins of Money and Banking to Finance and Accounting.

Socrates made it clear that in order to search for the truth, we have to realize that we do not know it. The doubt over current beliefs is the core of every scientific work. Academics that are perfectly certain about their beliefs run the danger of ending up at a dead end without being able to develop their thought further. I am in great debt to my previous teachers in Philosophy in Iceland and in Economics, Management and Accounting in Norway, Sweden and Denmark. This combination of different fields has made this thesis complex but also avoided the dead end of the certainty of a single belief.

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To my family I can only say: *Takk!* —*Now this is done—what's next?*

Prologue

It was a shock for most people when the banks started to fail and go bankrupt in 2008. Bear Stearns, Northern Rock, Washington Mutual and then Lehman Brothers, followed by Glitnir, Landsbanki and Kaupthing as well as many others. Something must have been seriously wrong and I wanted to find out what. In order to manage this inquiry, it was necessary to limit myself, but it was difficult. These are complex problems. For this thesis I have chosen a special section of the problems in the financial world. The field is financial accounting in banks. As a further demarcation, the cash flow part of the annual report is put at the centre of attention, and investigated from the banker's perspective. This simplification has made it necessary to limit the discussion of the effects of the recent financial crisis and the big bankruptcies of banks and narrow the focus to the largest banks in the Scandinavian financial system. Finally, the limitations of the study exclude users other than bankers, such as investors. Banks both prepare their own financial statements and use the financial statements of other banks when lending to each other. This view dismisses a lot of detail but makes potential results possible.

Every morning during the last five years, when reading the Financial Times there have been some exciting dealings on the financial markets. Many problems in the world of finance have become apparent, and this research focuses on a selected part of those—the financial accounting of financial firms. There have been many significant events: market meltdowns, financial crisis, economic collapses of countries, credit crunches and big banking bankruptcies. The Queen of England asked the economic profession how it could not see this coming. Regulations are being rewritten and many reports have been published. But little interest has been directed towards the cash flow in banks and the relevant accounting standards. Hopefully this can be changed. It is critical to investigate the problems in financial accounting of cash flow in banks. Even though scientific articles are necessary sources, old books can also be a good point of departure for understanding:

We live in an economy in which borrowing and lending, as well as changes in equity interests, determine investment. Financing arrangements enter into the investment process at a number of points: two of these are the determination of prices for both financial and capital assets, and the furnishing of cash for investment spending. A financial innovation which increases the funds available to finance asset holdings and current activity will have two effects that tend to increase investment. The first is that the market price of existing assets will rise. This raises the demand price for outputs that serve as assets

(investments). The second is that by lowering the cost of financing for production, financial innovations lower the supply price of investment output. If financing relations are examined within a framework which permits excess demand for financing at existing interest rates to lead to both higher interest rates and financial innovations, then theoretical constructions which determine important economic variables by ignoring monetary and financial relations are not tenable. For a theory to be useful for our economy, the accumulation process must be the primary concern, and money must be introduced into the argument at the beginning. (Minsky, 1982: 9)

Borrowing is a cash flow created with credit, and the promise of payback. In spite of the increased financialization of the economy during the last decades, money is still lacking in the argument of dominating theories in finance, economics, banking and accounting as Minsky called for. The *"inherent instability of the credit based financial system"*, however, has become a more accepted fact over the last few years, although *"thoroughgoing reform is necessary"* still. The theoretical constructions need to be rebuilt, making the *flow*, or the accumulation process, including its recording through accounting, and the *money* (or the cash) itself a major concern for the argument. This can be done by including more banking in financial accounting research and by bringing credit creation cash flows into the light in bank accounting.

Pixbo, April 2014

PART I.

The first half of this thesis presents the research problem, the theoretical context and the methodology of the research. Chapter 1 introduces the *research idea* and the *problem* of cash flow in banks, presenting the *research aim* and *question* as well as outlining the thesis structure. Chapter 2 gives the wider background *context* from the literature within banking, finance and economics. Chapter 3 is focused on *accounting theory* and the *theoretical framework* of the thesis. Chapter 4 presents the methodology for the research and the *multiple methods* used throughout the thesis. The first four chapters provide the setting and the toolkit for the research to investigate the evidences.

In the second part, the empirical material is presented and analysed and then conclusions are drawn. Chapter 5 discusses *accounting rules* and financial reporting regulations for banks and facts on how they differ from other firms. Chapter 6 focuses on the accounting standard for statements of cash flows and the *comment letters* behind it to illustrate how practicing bankers pointed out the differences prior to implementation of the standard. Chapter 7 presents facts from the *financial statement analysis* focusing on the cash flow reports in the big Scandinavian banks. Chapter 8 analyses the *interviews* of the bankers regarding cash flows in banks. Chapter 9 *concludes* the thesis by answering the research question and summarizing the contributions of the thesis.

Main content presented in every chapter follows the multiple methods approach, letting the problem evolve throughout the thesis. The problem dealt with in each chapter, is based on its content and leads to the key point that connects to the following chapter, as illustrated in Table 1:

| No. | Problem in Chapter | Main Content | Key Point |
|-----|----------------------------|--------------------------|--------------------------|
| 1 | Financial crisis | Banks & financialization | Cash flow & liquidity |
| 2 | Economics of banking | Background & Context | Previous literature |
| 3 | Cash flow in banks | Accounting Theory | Development & Framework |
| 4 | How to investigate it | Multiple Methods | Illustrate the study |
| 5 | Accounting rules for banks | Accounting Standards | Banks are different |
| 6 | Reporting bank's cash flow | Comment Letters | Practice is different |
| 7 | Financial operations | Cash Flow Statements | Numbers are negative |
| 8 | Banking is about cash flow | Interview Bankers | Find explanations |
| 9 | Connect it together | Conclusions | Answer research question |

Table 1: Overview of the problems in each chapter, main content and key points leading to next chapter

Chapter 1: Cash Problems

1.1 – Introduction

This thesis investigates cash flow and accounting in banks. This investigation both looks at how an accounting standard functions in the financial world and identifies problematic issues in the cash flow reporting of banks. Cash flow statements provide one measure of liquidity, which has been an issue in the banking sector during and after the recent global financial crisis. Minsky's survival constraint means that cash outflow, like expenses and investment, has to be less than cash inflow, such as income and financing. If financing equals investment, then operations have to be positive for the firm to survive. Negative cash flow is a warning signal, and inflow from operations is a positive sign.

In light of the liquidity issues and importance of cash flow, the research question considers *why the cash flow statements of banks are not used*. First the motivation and basic functions are laid out together with broader background information in next section. The research problem is defined and described in the third section of the chapter. Then the research aim is described in the fourth section. The separate studies in this thesis both look inside banks for the banker's viewpoints and at banks' external financial reports in light of the surrounding regulatory framework. The bankers' view is used, as they are both preparers and users of the accounting statements; the investors' view is excluded. The bankers prepare their own cash flow statements and use other banks' financial statements as their creditor. Banks do business with competitors in order for the payment system to work and are customers of each other for mutual funding and interbank lending.

The business of a bank can be defined as providing *credit*. A banker approves requests to lend, and by agreeing to lend to the customer the bank 'prints money' that did not exist. "*By standard accounting rules, the bank is solvent, meaning it has assets whose value matches or exceed the value of its liabilities*" (Sims, 2011: 6). A new loan is an asset that balances the liability created with a new deposit. Note that the bank does not need savings or external deposit to provide the loan. The product of the bank is *cash*—which it lends to borrowers and 'keeps' for depositors. Banks also operate the payment system for circulation of the money. According to banking theory, banks *create liquidity and transform risk* (Berger & Bouwman, 2009). But it "*requires recognising fully the fundamental monetary nature of our economies: the financial system does not just allocate, but also generates, purchasing power*" (Borio 2012: 2). This means it is important to abandon the idea that savings are needed prior to lending because: "*In fact, the link between saving and credit is very loose*" (*ibid.*: 12), and "*financial intermediaries*

do not just allocate real resources but generate purchasing power ex nihilo" (ibid.: 23). New deposit is created out of nothing with a loan. It needs to be funded when it is used in another bank, but banks can net out the flows between them and then banks can also lend to each other to cover remaining funding.

The operations of banks are, in essence, about these flows, and the *maturity transformation* in the mismatch of timing of payments in and out. This makes their statement of cash flows more complicated than those in other firms and also makes the measurement of *liquidity* difficult. The separation of the customers' flow through the bank and the bank's own flow is unclear. Cash flow generated from operations of another cash flow is problematic to define, as netting is an issue and the unit of measurement is the same as the object being measured.

This introductory chapter identifies the research issues regarding the cash flow accounting in banks. First, the motivation of the research is laid out and key concepts are presented, like credit creation and lending growth. Then the background of this thesis is described from wider perspectives. In the process of problematizing the goals of the study and isolating research problem, these different background perspectives are useful: financial accounting in financial institutions, capitalism in economic crisis, and cash flow payments and liquidity.

After the background overview, the research problem is defined and the plan of how it is to be studied is laid out. The lack of functioning financial language that Haldane et al. (2012) have pointed out, is the general problem this thesis deals with. The selected part of that problem is the cash flow statements in banks, which are not used. The aim of the research can then be identified together with a research question. At the end of the chapter an outline of the thesis structure is given. Before going through the background, the motivation for the thesis is briefly presented below and credit creation explained.

Motivation for the research

While the global financial crisis and big bankruptcies of banks (Moody's, 2009; Euromoney, 2009) have been a motivation for starting this research, the examples of Lehman Brothers and Kaupthing bank are not the study objects of this thesis. These two banks represent the biggest bankruptcies in the world and the biggest one in the Nordic region (see Appendix 2 for full list). Other historical examples are Enron and Kreuger & Toll. At the time, these firms also were the biggest bankruptcies in the world and initiated accounting regulatory change. These bankruptcies are different from each

other and partly involve fraud, which is not a focus in this thesis. The investment banking operations of Lehman, and the fast growth of Kaupthing (where half of the operations were investment banking), are not comparable to the traditional Scandinavian banks selected for this study, where investment banking accounts for much smaller part of operations. Accounting in banks in general and accounting rules for cash flow in particular are at the core of the research. The accounting reports from banks provide evidence for what took place in the institutions of the financial markets during the recent financial crisis—not only those of bankrupt firms, but also those in normal banks, and in particular the cash flow reports.

The reliance on free market capitalism, more specifically that financial markets ensure optimal allocation of resources if left unregulated, is derived from the efficient market hypothesis and the theory of rational expectations based on assumptions that have little relevance to the real world (Chang, 2010; Soros, 2012a). The disconnection between mainstream finance theory and the real world is another motivating factor for this research. Financial markets do not tend towards equilibrium; history shows instead that they generate financial crises (Minsky, 2008a, 2008b). As Mehrling points out: *“From a money view perspective, instability is the natural tendency of credit markets”* (2011: 8). Money as credit is a fundamental factor in financial markets, and *“Capitalism is essentially a financial system”* (Minsky, 1967: 33). Accounting standards are essential part of the regulation of the capitalistic financial system, and the instability of this system provides motivation for investigating the rules of the cash flow statements.

Bankruptcies have historically been initiators for systemic reforms and regulatory change. The biggest bankruptcy in American history up until the end of last century was the Swedish-based company Kreuger & Toll, in 1932. It started as a company making matches, but ended up being a kind of an investment bank, trading in New York, funding governmental lending in Europe against a monopoly on selling matches. Its bankruptcy contributed to the establishment of financial reporting regulation after the Great Depression and resulted in the legislation forming the Securities and Exchange Commission (SEC) as illustrated by Flesher & Flesher (1986). The company almost got financial support from the Swedish government shortly before its bankruptcy, which became the biggest one in the last century. According to his biography, Kreuger was obviously aware that he was inflating the asset values of his company (Partnoy, 2009). Kreuger claimed that some day people would realize that every balance sheet is wrong because it doesn't contain anything but numbers. Flesher & Flesher (1986) show how the Kreuger crash led the United States (US) congress to

pass laws to avoid similar occurrences in the future, and that the New York Stock Exchange (NYSE) issued rules for mandatory audits of listed companies. According to Flesher & Flesher (1986) the movement toward uniformity in accounting principles can partly be explained as a result of the Kreuger crash in 1932. The collapse of Kreuger's companies also influenced the Swedish legal framework and the special structure of shareholder ownership that determined further the development of the role of Swedish banks in its economy (Jönsson, 1995: 154).

The bankruptcy of Kreuger & Toll Inc. is not on the top-ten list of biggest bankruptcies anymore; instead all ten on the current list occurred in the last decade. Eight out of the ten bankruptcies are financial institutions. The fourth to fifth largest one is Kaupthing Bank from Iceland. It was the largest company of the country, the biggest taxpayer, performing best on the stock market, and the chairman of the board got a medal from the country's president. Kaupthing prepared annual statements according to International Financial Reporting Standards and got the best global credit rating.

Iceland is the smallest country—300,000 people—with its own currency. Between 2002 and 2007, prices of residential real estate doubled, which was not exceptional, while the prices of stocks increased by a factor of nine, which was exceptional. In 2002, the value of the assets owned by the three Icelandic banks was 150 percent of the country's GDP, while in 2007 the value of bank assets was eight times Iceland's GDP. Iceland's banks were the most rapidly growing in the world. (Kindleberger & Aliber, 2011: 36)

At the peak, the total assets of the big banks in Iceland were valued at ten times GDP, and in the autumn of 2008 all the banks collapsed, the currency lost half of its value and the stock market declined by 90%. Like several other islands which shortly followed, Iceland was thrown into a depression because of its banking problems.

Between 1998 and 2003, the country privatized state-owned banks and investment funds, while abolishing even the most basic regulations on their activities, such as reserve requirements for the banks. (Chang, 2010: 232)

Banking assets had reached an equivalent of ten times GDP a few years later, *"which was double that of the UK, a country with one of the most developed banking sectors in the world"* (Chang, 2010: 234). But in Chang's (2010) view Iceland epitomizes what is wrong with finance today; Washington Mutual and Northern Rock provide further examples. The rapid growth of the banks was only possible due to the globalized financial system that provided funding and the international accounting rules that allowed balance sheets to grow with increasing market value. These remarkable events during the financial crisis make up an additional motivating factor for the research, especially in light of similarities to other historical big bankruptcies.

The Enron crash in 2001 led to regulatory overhaul, necessitated a restructuring of the accounting market and resulted in the Sarbanes-Oxley Act of 2002, a legislation aimed at improved accountability and responsibility in the aftermath of the bursting of the IT bubble (Macintosh, 2002; Véron, Autret & Galichon, 2006). Nevertheless, these rules did not hinder much bigger bankruptcies of financial firms a few years later. But the crash of Enron has led to increased awareness of the importance of financial accounting. In 2005, the International Accounting Standards Board (IASB) presented regulatory framework for the European Union (EU), with the International Financial Reporting Standards (IFRS) becoming legislation in many countries.

The big bankruptcies of financial institutions from 2008 took place during a period when the harmonization process of global accounting standards was approaching a conclusion. The agreement between the London-based IASB and the US-based Financial Accounting Standards Board (FASB) was halted by the crisis. A joint project by IASB and FASB was started in 2008 regarding *Preliminary Views on Financial Statement Presentation* and a discussion paper was presented (DP 2008). It generated 229 comment letters, 25 of which came from the banking industry, many of them critical; the project is still ongoing but with an unclear timeline for results. Additionally, one of the four concluding recommendations of the Financial Crisis Advisor Group (FCAG) of FASB and IASB is that:

Because of the global nature of the financial markets, it is critically important to achieve a single set of high quality, globally converged financial reporting standards that provide consistent, unbiased, transparent and relevant information, regardless of the geographical location of the reporting entity. (FCAG, 2009: 11)

In line with experience from previous crisis periods, the US congress has passed a new law, the Dodd-Frank Act of 2010, for financial reform in order to prevent similar events in the future (see Acharya et al., 2010a, 2010b, 2011). This legislation was followed by two US reports chaired by Angelides (2011) for the national commission and Levin (2011) for the Senate subcommittee. The third set of the Basel rules for international banking regulation are also being developed and are expected to be under adaptation and implementation until 2019 (BIS, 2014; Goodhart, 2009; see also the previous history in Goodhart, 2011) as well as many other regulations and reforms on both a national and supranational level. See, for example, the following reports: Turner review on regulatory response to global banking crisis for the Financial Supervisory Authority (FSA) in the United Kingdom (UK) (2009), Larosiére report for EU on financial supervision (2009), Vickers report on banking in the UK (2011), and

Liikanen report on banking in EU (2012). On a global level further reports are for example: Stiglitz report for the United Nations (UN) (2009), Volcker report on financial stability for G30 (2009). The accounting part of the regulatory reforms, which can be derived from all these reports but is still under debate, is an additional motivating factor of this research.

In the run-up to big bankruptcies one might have expected some signals from financial reports. Accounting theory books agree on the purpose of cash flow reporting. The cash flow statement should show where money is generated (operations, financing or investment) and should also reveal potential liquidity problems (Kam, 1990: 71).

In the long run the income statement and cash flow statement are related to the same information, in the short run they represent different information and different concepts. (Hendriksen & van Breda, 2001: 297)

But general accounting books and theory ignore the cash flow in banks as such, and thereby provide one further motivation for the investigation in this thesis. Furthermore, the cash flow regulation has not been part of the reformation reports mentioned above.

Even though new liquidity regulations are underway in the third Basel rules, their formation has been debated during the last five years, and the implementation will take another five years. These liquidity measures (Net Stable Funding Ratio, NSFR, and Liquidity Coverage Ratio, LCR) are one regulatory reaction to the crisis but do not make any use of the cash flow statements of banks. There have also been updates made to the accounting standards after the crisis, and more are being prepared. But none of these has included the cash flow statement except the planned general review of financial statement presentation. It was expected to replace two accounting standards, including the one for cash flow statements. Part of the proposal was to demand that the direct method be used for preparing cash flow statements (DP 2008). The common feedback, though, was that it would be too costly and not useful (CL 2009). This initiative for new presentation and changing of the cash flow statement has been on hold since 2011.

The International Accounting Standard (IAS) for the Statement of Cash Flows, IAS 7, states that banks and financial institutions, like any other firms, need cash to conduct their operations. Banks are therefore required to prepare the statement of cash like any other firm (IAS 7, 2010: A340, paragraph 3). This still applies to banks even though no users of the statements have been found. According to the standard, banks are allowed to classify cash flow differently, but there is no mention of credit creation of cash or that negative cash flow from operations can be applicable to banks as opposed to non-banking firms. It has to be assumed that the cash needed

to conduct operations cannot in the long run be financed with borrowings but should be generated with positive flow from operations. Otherwise it is difficult to see how borrowings would be repaid. But little debate takes place in the academic literature about the special cash flow issues of banks, thereby motivating this study.

There is an ongoing debate on the role of accounting in the financial crisis. Capital destruction of banks and their possibility to misuse taxpayers' support by gaming the system is one. The profit in the finance sector is also claimed to be partly illusory (Kerr, 2011) and fair value accounting has been one central theme in the debate. Walton et al. (2009) set out to analyse the effects of the financial crisis on the international standard setter in 2008 and in particular the blame that was put on the accounting standard IAS 39 for valuation of financial instruments. The balance sheet of banks consists of financial instruments, and a thorough analysis of the IAS 39 and accounting in banks is badly needed. Laux & Leuz (2009) highlight important issues in the debate about fair value accounting in light of the financial crisis. They agree to legitimate concerns about marking to market in times of financial crisis but argue against historical cost accounting as a remedy. It is not a viable solution to current problems to return to old accounting regimes.

Valuation of financial instruments and accounting of market values are important in banking and for understanding the financial crisis. Kaletsky criticizes the mark-to-market (or fair value) accounting in relation to the risk-weighted capital requirements of banks, as it *"vastly exaggerated both booms and busts in finance, as seasoned bankers and old-fashioned, pragmatic regulators had predicted all along"* (Kaletsky, 2010: 183). He continues:

Some accountants and most economists still claim that mark-to-market accounting had nothing to do with the credit crisis. It is hard, however, to ignore the coincidence of timing. Mark-to-market accounting became mandatory for large US banks on July 1, 2007. The credit crunch began one month later, on August 8, 2007. Mark-to-market accounting was suspended on March 15, 2009. The recovery in bank stocks all over the world began the same week. (*ibid.*: 188)

Even though some of the banks' assets are not marked-to-market anymore, partly due to changes during the crisis, there are many financial instruments that are still calculated according to fair value.

Evidences provided from earlier financial crisis periods illustrate that new rules are not successful in avoiding the next crisis. Reinhart & Rogoff (2009) show how the number of banking crises increased from nine in the 1970s to around fifty in the 1980s and 1990s. Some of the problems relate to asset valuation while others regard profit measurement, but in general the presentation of the financial situation of the banks is inadequate. Cash flow

statements are a part of that presentation that is not used at all. The ten-fold increase in the size of the world's biggest bankruptcy in less than ten years from Enron to Lehman and the increase in numbers of banking crises indicates a need for change. The accounting rules influence these measures and provide a motivation for taking part in that change. The cash flow statement and the accounting framework regulating it has to be part of that change, with the prerequisite of finding out how it functions and why it is not used.

Credit creation and lending growth

Credit creation and lending growth are fundamental factors in the global financial crisis. The crisis that began in 2007 was preceded by great credit growth. It has been among the most difficult economic challenges in the world since the Great Depression in the 1930s and understanding the role of financial markets and institutions in the economy is therefore more important than ever (Bernanke, 2010). This thesis selects a part of that task by focusing on banks and a specific accounting standard, where credit creation and lending growth are critical concepts to understand.

The goal of many financial and regulatory reforms since 2008 has been to avoid deepening of the financial crisis and try to prevent similar events in the future. Even though it is impossible to avoid future crises, it is reasonable to demand that financial reports provide useful information about the financial conditions of financial firms. One requirement is that the reports provide signals in a timely manner before banks are on the brink of bankruptcy. If the financial statements do not give indications of failures building up or continued lacking performance, then the purpose of accounting is lost. This applies to both views on the purpose of accounting: to provide useful information to investors and to hold managers accountable. Accounting information that is not used, like the cash flow statements in banks turn out to be, should either be discontinued or made useful.

Market-based expectations of future pricing that are represented in fair value accounting of assets may result in unrealistic balance sheets according to Östman (2009). These changes in asset value lead to illusionary income statements that are not based on income from operations but instead generate profit from changes in value on the balance sheet. This tendency can facilitate more lending and drive up asset bubbles (Keen, 2011) where debt can be increased on the liability side due to rising market prices on the asset side. The increased lending then makes banks' balance sheets bigger, where new loans are the source of the asset growth of the bank. As a consequence, the equity share has been shrinking in the banking

sector during the last three decades, as Admati & Hellwig (2013) illustrate. New regulation, Basel III, from the Basel Committee on bank supervision is increasing the minimum demand for core equity from 2–3% up to 5–7% and with additional buffers countries can demand up to 8–12% equity with special rules. This is still a much lower equity share than in most other business segments. Admati & Hellwig (2013) emphasize the importance of clearly differentiating between minimum cash reserves and equity requirement, and call for 25% equity in banks.

The decade before the start of the crisis had signs of a debt boom, where the lending growth can facilitate an asset bubble. The Economist in a Special Report (2010: 1-14) shows how total debt as a share of GDP increased for traditional companies from 58% in 1985 to 76% in 2009, while in financial institutions the debt-to-GDP ratio rose from 26% to 108%—a more than fourfold increase. In many countries the household debt as a share of disposable income increased rapidly in the years before 2008. In 2000, the household debt in the US was 96% of disposable income and was 128% eight years later. The same numbers for the UK increased from 105% to 160%, and in Spain from 69% to 130% according to McKinsey (MGI, 2010; see also MGI, 2012). In Sweden the household debt as share of GDP increased from 50% in 2000 to 75% in 2008 (BKN, 2009). Borrowers in this debt boom are households, firms, financial institutions and governments. The lenders behind the increased debt are financial institutions, who created most of this credit (Keen, 2011). The cash flows for paying back this debt have been pushed into the future. If lending growth during the boom has inflated a bubble, it has to be deflated. When a debt bubble bursts, the balance sheets of many companies must be repaired all at the same time, and it can be logical for all actors to reduce their debt as a result. But when everyone reduces their debt at the same time, the risk of debt deflation follows (Fisher, 1933) along with a balance sheet recession (Koo, 2012). These severe economic consequences of lending growth and its decline emphasize the importance of improved accounting of the in-and-out cash flows in banks that have created the credit.

The recent crisis illustrates the close connection between economics and finance as well as the interaction of banking and accounting, with a lack of focus on liquidity. Irving Fisher “*founded modern finance on the principle that liquidity effects can be ignored for the purposes of constructing an equilibrium theory of finance*” (Mehrling, 2001: 57). Although this equilibrium was necessary for the system to work, by ignoring the money flow the voices of practical bankers were ignored (*ibid.*), even though Fisher said:

I am one of those who believe that when the usage of academic economics conflicts with the ordinary usage of business, the latter is generally the better guide. (Fisher, 1910: xiv)

Fisher connected the practice of accounting with the concepts of economics in the book *The Nature of Capital and Income* (1912). This connection has been lost and needs to be re-established. In practice, the interconnectedness of finance, accounting and banking in the economy becomes explicit at the level of central banking. It can, for example, be seen in the Swedish clearing- and interbank system owned by the central bank, Riksbank. This clearing- and interbank system for the banks in Sweden is called RIX and this payment system is an integrated part of the accounting system of the Riksbank (Andersson, 1995). The system was implemented in 1990, but before that the clearing was manually calculated based on exchange of handwritten notes. The modernization of the clearing system originated in the fact that the central bank was updating its accounting system (*ibid.*). This system is a central hub of the financial infrastructure.

The payment system can be viewed from a higher and lower level than the central bank. Between the individual banks, below the central bank, the banks operate the payment system for their customers. Above the central bank is the Bank of International Settlements (BIS) in Basel that operates the international system. Between individual central banks exists a system that can also include credit lines. The single biggest interbank payment system in the world is the Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET2) and through it flow around 355,000 payments of €2.5 trillion every day (ECB, 2013). The transactions on the interbank market where the banks lend and borrow from each other, in addition to the money market and capital market, also have to be transacted between the banks through these systems and the central banks. Cash flow is a key function in this respect but the statements of cash flow are still not used.

In the next part, the focus is moved from the transactions that go through the central banking systems to the level of the accounting in a single bank where the lending activity is in itself an accounting transaction. In the final chapter this example is developed further, including transactions between two banks.

Accounting model of bank lending

A lending transaction does not, when a new loan is made, involve cash flow into or out from a bank but only between accounts within the bank's accounting system. Just when the loan is used does it potentially need to

flow out of the bank. This can be illustrated in a simple model using an example of a basic bank, see Figure 1, described as follows.

A bank has an opening balance sheet of € 2000 where € 200 are cash and reserves at the central bank and € 1800 are assets in the form of loans to customers. It is conceptually important to see, from the bank's perspective, how basic items are mirrored. The customer's liability, the loan, is the bank's asset. Similarly, on the liability side of the bank's balance sheet are the deposits of the customers, in this case € 1000. Deposits put into the bank become its liabilities—in effect, these are a loan to the bank from the customer. Additional borrowing from other banks or funding through financial markets is € 800 and the shareholders' equity is € 200. This financial position of the bank at the beginning of the period is shown at the top of Figure 1.

The financial performance, as profit or loss, is presented in the income statement in the second section of Figure 1. Operations of the period consist only of revenues from interests on loans, and the cost involves financing and other operational expenses. In this simple case a 10% interest rate is paid by customers on all loans during the full year and in the interest of simplification, no repayments of loans take place during this specific year. The bank pays 5% financing cost (on deposits and bond, as an average). Thereby the net interest income is € 90, coming from the total interest of € 180, less the financing cost of € 90. Other operational expenses for the bank are € 60, giving a result of € 30 in profit. The only activity of the bank during this period is one new loan of € 100 taking place on the last day of the period. The loan is used by the borrower as payment for a house purchased from another customer in the same bank. The transaction influences the balance sheets of the seller and the buyer of the house, but here we are only looking at the balance sheet of the bank.

To illustrate the cash flow, a simple statement of inflow and outflow is presented in the third section of the model in Figure 1. It starts with the profit of the year, paid out as a dividend to owners (in cash, not to their accounts in this bank) and the inflow to the bank account of the seller of the house comes from the outflow of the new loan to the borrower. These in- and outflows are between accounts in the same bank and never leave the bank. It is important to notice in this example that the bank did not need any third customer bringing in new savings to pay for the new lending. The credit giving creates new deposits, as this simple example shows. There are only transactions in the accounting system, no cash flow, only new assets on the bank's own account and increased deposit when the loan is given to

the borrower. The payment from borrower to seller takes place in the bank account system, transferring deposits between accounts.

| Accounting Model: LENDING - Bank 1 | | | |
|---|----------------|--------------------|---------------------------------|
| <i>Customer gets a loan of 100 and keeps it or pays other customer at same bank</i> | | | |
| Balance Sheet 1/1 | Assets | Liabilities | <u>Start of a simple bank:</u> |
| Cash and reserves at central bank | 200 | | Cash from shareholders |
| Deposits from customers | | 1000 | First customer's money |
| Borrowing from others (banks/bonds) | | 800 | First interbank funding |
| Loans to customers | 1800 | | Loans fully funded above |
| Equity | | 200 | 10,0% Equity ratio |
| Total | 2000 | 2000 | |
| Income Statement | Cost | Income | <u>During the first period:</u> |
| Interest rate income | | 180 | 10% Interest on loans |
| Financing cost | 90 | | 5% Interest on deposits |
| Operational cost | 60 | | 33% Cost/Income ratio |
| Net operating income | 30 | | 17% Profit of turnover |
| Cash flows | Outflow | Inflow | <u>Cash flows:</u> |
| Profit from operations | | 30 | Paid out as dividend |
| Dividend paid | 30 | | 15% Return on equity |
| Change in deposits | | 100 | New deposit created |
| Change in financing from banks/bonds | | | from the new loan |
| Change in lending | 100 | | based on promise |
| Change in cash and reserves | 0 | 0 | No change in cash |
| Balance Sheet 31/12 | Assets | Liabilities | <u>After first period:</u> |
| Cash and reserves at central bank | 200 | | No change other than: |
| Deposits from customers | | 1100 | 100 New cash created fr loan |
| Borrowing from others (banks/bonds) | | 800 | No new funding |
| Loans to customers | 1900 | | 100 New loan creates asset |
| Equity | | 200 | 9,5% Lower equity ratio |
| Total | 2100 | 2100 | |

*Figure 1: Accounting model of lending in a bank
New loan creates deposits without external funding*

The balance sheet of the bank at the end of the period, shown in the fourth section, has increased by the amount of the new loan, from € 2000 to € 2100, because a new loan is an asset, and the money deposit is a new liability of the bank. Equity is the same, like the cash reserves at the central bank, but the equity ratio has gone down a little bit. Banks are regulated based on equity ratio and reserve requirements, but in this case the limits are not reached, for simplification. The picture gets more complicated when other banks are added, and transactions between the banks start. Then the newly created credit has to be funded when it flows between banks. But when cash is flowing in both directions, netting reduces the funding, and banks can also lend to each other.

More examples of different transaction scenarios are illustrated in the last chapter of this thesis, as well as in Appendix 9. The balance sheets of the two customers interact through the bank, and the banks' own balance sheets are connected to each other through the central bank. This has been previously described by Minsky:

A bank is not a money lender that first acquires and then places funds. Any particular day's asset acquisitions, particularly loans made, are the result of ongoing and continuing business relations; a bank first lends or invests and then 'finds' the cash to cover whatever cash drains arise. In some circumstances this cash can be found in excess cash on hand, in others it is found by selling or pledging owned assets for cash, and in still other circumstances the cash is acquired by issuing new liabilities. (Minsky, 1975: 154)

The model above can be extended to more banks, where two banks increase lending equally and customers are distributed evenly, doing equal business between the banks. This results in netting of payment transactions between the banks, so no funding is needed. In a more advanced model, with a lower dividend, the increased reserve requirements are covered with more income and retained earnings can theoretically hold the equity ratio constant. This indicates a theoretical possibility of constantly continuous growth of lending without financing, the question only being at what rate, and how to control it. In practice the funding of flows between the different banks becomes an issue of concern as well. The interbank market is one aspect of that, and the mutual lending and borrowing between banks solves a large portion of the funding of their lending to customers with new credit creation and thereby increases further the lending growth.

1.2 – Background

The purpose of this part of the chapter is to set the scene for a demarcation of the problem at hand, the aim of the study and research question of this thesis. It starts off with the surprise of the financial crisis. Its scale and scope as well as its complexity generate many ideas and problems that require new ways of thinking to be solved. The problems of the financial crisis have affected most of us during the last several years (Krugman, 2011). An unsustainable growth of debt is considered to be one of the main reasons for the crisis (Turner, 2013b, Keen, 2011; Koo, 2009) and the bankruptcies of big financial institutions are the most obvious results of it (Sorkin, 2009; Levin, 2011). Almost-free access to liquidity of a nearly unlimited amount of capital is another explanation for the build up of the crisis (Skidelsky, 2009; Reinhart & Rogoff, 2009). Accounting rules have also been blamed for part of the problems (Haldane, 2011b; Kerr, 2011; Valukas,

2010; Stiglitz, 2009; Hopwood, 2009b) while others say that is an act of 'shooting the messenger' (Walton et al., 2009, see also Véron, 2008).

The recent bankruptcies are only the tip of the iceberg, since many governments have bailed out banks or put up programs to help troubled banking institutions from September 2008 (Skidelsky, 2009). Critical problems in the banking sector have become apparent with the official \$800 billion support in the US in 2009 and the €1000 billion support in EU in 2011–12, but the total cost is unclear. This large amount of official funding to banks after their credit crunch provides arguments for rethinking financial accounting, both regarding its role prior to banks bankruptcies and for monitoring the use of the funding afterwards. Reconsidering the purpose and uses of accounting communication in this respect calls for adjusting or changing the current accounting regime, and even preparing a new one.

In this thesis the *accounting point of view* (Bedford & Baladouni, 1962; Ijiri, 1967) is extended with the *modern money view* (Mehrling, 2011) to investigate the financial statements of banks with a special focus on the cash flows. The study originates from the current financial crisis but does not investigate it specifically. Instead it takes a historical look at the accounting of cash flow, both the standard regulation dating back to the mid-1980s and the financial statements of banks fifteen years bank. The research is inspired by the *endogenous money view* (Keynes, 1936; Veblen, 1908) and the *inherent instability of credit* (Minsky, 2008a; Hawtrey, 1919) taking standing in *economics* and *finance* to support the *accounting in banking*. The special role of banks in the economy is brought into focus (Fisher, 1912; Veblen, 1905; Mehrling, 2001) with a strong relation to the traditional idea of accounting and double entry bookkeeping.

Generally it is assumed that the purpose of firms is to make money from their operations and activity (Smith, 1776; Coase, 1937; Penrose 1995). The role of accounting is to record, measure and communicate the financial results derived from these operations (Riahi-Belkaoui, 2004; Kinserdal, 1998; Ijiri, 1978, 1967). This thesis uses examples of Scandinavian banks' cash flow statements since the late 1990s to illustrate the outcome, their operations and the practical use of the accounting standard for cash flow statements in banks.

The difference of banks from other firms was not approved as a reason for the exemption from cash flow statements for banks in the current accounting standard. For over one hundred years it has been known that banks are different than other types of business. Forges-Davanzati & Pacella (2012) summarize Veblen's view on the capacity of the banking system to produce money and the idea that money supply is endogenous:

“Broadly speaking” – Veblen (1905: 470) emphasizes “banking is profitable chiefly because the banker lends more than that he has or borrows, and the banker [can] create a new volume of credit”. This occurs in cases where “in making a loan on collateral, which is not of the nature of a bill of sale, the banker, or any similar concern doing a credit business of this kind, creates a new volume of credit” (Veblen, 1905: 470 as cited in Forges-Davanzati & Pacella, 2012: 4)

This crystallizes how banks’ profitability is different from that of business firms, and raises the question of how the cash flow from the credit creation is accounted for. Business firms are profitable because their investment, partly financed by borrowing, generates more cash flow from operations than the cost. Firms cannot invest for more than they have or can borrow, as opposed to a bank. In the international accounting framework of cash flow standards, there seems to have been no place for a treatment of banks’ credit creation.

Further background on the research problem is presented in the following sections. First, we look at the broader context of banking and accounting. Then, the lack of liquidity and the operative cash flow in banks is examined. This background raises many more questions than this thesis can answer, but is used to identify the specific research problem that is isolated for the research aim and question in the remaining sections of the chapter.

Banking and accounting history

The equality of the accounting identity must be true; assets must equal the sum of liabilities and equity. Similarly, cash at the beginning of the period plus changes in cash during the period have to equal cash at the end of the period. But when cash is increased with new lending then it can be difficult to identify how much cash is generated from operations in a bank and how much from credit creation in lending growth.

Accounting is also based on evaluation and judgment, and therefore is subject to both regulation and principles. Banks as financial institutions are subject to more regulation than other firms because of their unique role in society and due to the backing from the central bank as a lender of last resort. Part of a bank’s bankruptcy risk is borne by taxpayers due to the depositor guaranties and bailouts of ‘too big to fail’ institutions. Accounting in banks therefore plays an important role in holding managers responsible for operations and to get information about the financial status of the institutions.

The institution of banking lies at the heart of capitalism. By providing new credit, the banks create cash for their customers (Borio, 2012; Keen, 2011; Minsky, 2008a; Fisher, 1912; Veblen, 1905). The system of double entry bookkeeping is a part of enabling banking and capitalism to change the world economy (Toms, 2010; also citing Sombart, 1916; see also Yamey,

1964). The origins of the double entry accounting system and the origins of contemporary banking can both be traced to Northern Italy during the 15th century, even though both existed in different formats before that time (Parks, 2005). Pacioli wrote down the *Rules of double-entry book-keeping* in 1494 for merchants and the first western banks were started by merchants like Datini (Parks, 2005) and Medici, that was established in 1397 and failed in 1494 (Kindleberger, 1984). The idea of modern capitalism has been traced back to Italian merchants and the development of both accounting and banking. This initial idea of capitalism is though not equal to the free-market capitalism that has been dominant in the last three decades (Chang, 2010).

According to Martin (2010), it is possible to divide the views on modern capitalism into three periods. The first era was *managerial capitalism* and started after the Great Depression with the writings of Berle & Means about *The Modern Corporation and Private Property* (1932), focusing on the idea that owners should employ professional management to run their firms. The second era, *shareholder value capitalism*, began in the mid-1970s with the popular Jensen & Meckling (1976) article on *Theory of the Firm: Managerial Behavior, Agency Cost and Ownership Structure*, where maximizing shareholder value became the goal of the company. Martin (2010) suggests, in the light of the current financial crisis and the failures of shareholder value, a shift to the third era of *customer driven capitalism*, focusing on the customer. In this new era the managers' prime objective is long-term gains from *operations-driven* customer value instead of temporary gains of the *expectations-driven* value maximization for shareholders (Martin, 2010). The operations-driven capitalism can be aligned with the traditional view of cash flow generated from past operations as the *economical* source of profit, while the expectation-driven capitalism can be related to the *financial* focus of expected future cash flow. Similarly, the second era of capitalism can be aligned with the market-based accounting and financial de-regulations from the 1980s until 2008, the so-called *free-market capitalism* (Chang, 2010). The new era of capitalism, demanded after 2008, is marked with financial re-regulation, criticism on the economics discipline (Skidelsky, 2009) and calls for a new accounting regime (Haldane, 2011b).

In a similar manner, financial regulation can be divided into periods on the same time scale. The first era is the market with the establishment of the SEC after the Great Depression. Then, the de-regulation of financial markets and privatization of financial firms from the 1980s of free-market capitalism towards the collapse of big banks marks the second era. Finally, the re-regulation and bail-out or even nationalization of too-big-to-fail banks since 2008 marks the current financial crisis era. General accounting

rules can be seen as one part of financial regulation and special banking rules can be considered another. Accounting rules have changed towards more market-based valuation since the 1980s, reaching a peak in 2005 with international standards of fair value accounting where asset value is marked-to-market prices. In the midst of the crisis in 2008 some of these rules were changed, for example, for banks holding bonds to maturity. Financial regulation was made stringent after the Great Depression but then eased in the 1990s and made increasingly more in line with free-market capitalism until 2008. Since 2008, regulation of financial firms has been made stricter again and that process is still ongoing.

Rescue operations for the banking system since 2008 have been aimed at getting the banks to restart lending, both to customers and each other. But banks have taken the provided funding and kept it (Skidelsky, 2009: 16) or, since 2010, repurchased governmental bonds with higher interest rates than what the central banks charge. The accounting of this money flow is still unclear. The coordinated 'recapitalization' of the banking industry has been ongoing since October 2008, parallel to the cleaning of toxic assets from the banks' balance sheets (global cost \$5 trillion in 2009 according to Skidelsky, could be updated to \$9–12 trillion in 2011) and no end is in sight.

What started as a liquidity crisis—an inability of banks to borrow in the wholesale market to meet their current liabilities—rapidly turned into a solvency crisis—an insufficiency of bank capital to cover liabilities. (Skidelsky, 2009: 16)

This illustrates how the key problems of the financial crisis are closely related to the accounting issues of banks even though the attention has been focused on matters of finance and economics rather than on accounting. The issues are interconnected and linked to the ideology of capitalism and its failures. In Skidelsky's words: "*A system in which owners are allowed to profit from good bets, while being insured against the losses incurred on bad ones, rightly brings capitalism into disrepute.*" (2009: 17). He continues by declaring the crisis being to a large extent "*the fruit of the intellectual failure of the economics profession*" (Skidelsky, 2009: 28). Mehrling citing Zandi refers to this as an "*inflection point in economic history*" and Mehrling calls for a historical perspective for understanding the transformation "*of banking and financial institutions and markets [... and ...] also the regulatory and supervisory apparatus*" (2011: 1).

Kaletsky (2010) considers the current state of the political economy after 15 September 2008 as the fourth era of capitalism. He extends the development of capitalism even further back than Martin (2010) above, and starts with the first era beginning in 1776, marked by the US Declaration of

Independence and the publication of *The Wealth of Nations* by Adam Smith, continuing in four sub-eras until 1932. The second version of capitalism, according to Kaletsky, lasted until 1980, from the New Deal through militarism and the Keynesian Golden Age and ending with the energy crisis, inflation and breakdown of the gold-backed currency system. The third period started with the Thatcher-Regan political revolution parallel to the monetarist revolution of economic theory, going through the Great Moderation and ending with the market fundamentalism from 2001–2008. (See chapter 3 in Kaletsky, 2010). Capitalism 4.0 will demand new financial systems according to him:

Allocating savings and investment is probably the single most important and productive task in any advanced economy. Banks and financial markets are imperfect mechanisms for carrying out this all-important task, but they are far better than any other system yet devised—or likely to be devised anytime soon. Regulation must therefore try to preserve financial flexibility and innovation, at the same time as improving economic stability. (Kaletsky, 2010: 433)

The change in principles of accounting can be aligned with the change in economic principles. Turner, chairman of the FSA in the UK, opens his book *Economics after the crisis—Objectives and means* with these words: “*The capitalist system has suffered a great crisis*” (2012: ix) and he implies that the failure was not just of the financial system and the way of regulating it, but of a set of economic theories. Chang concludes that

unless we now abandon the principles that have failed us and that are continuing to hold us back, we will meet similar disasters down the road. (Chang, 2010: 263)

According to Skidelsky (2009) we need to return to the insights of the past that were thrown out at the dawn of the last capitalism era, based on the doctrine that free markets were self-correcting. There are historical insights that can be helpful for the analysis, for example in old traditions in economics and accounting, from which the *money view* was originally developed (Mehrling, 2011; Hawtrey, 1919; Minsky, 2008a).

Liquidity and cash flows

The importance of liquidity became apparent during the year before the financial meltdown in September 2008. The liquidity of financial markets was taken for granted and treated as a free resource for thirty years, but since 2007 liquidity has been on the agenda. Central banks are currently providing it to banks, almost free of charge. Liquidity is still difficult to measure, even though it now has become both a cost issue and a risk item for the banks. New liquidity measures are currently being implemented in banks according to global demands from the Basel Committee. In the Basel

III rules new measures, like NSFR and LCR, are being implemented globally, but regional differences are already in place even though the final date is not until 2019. Minimum liquidity reserves and requirements for capital buffers are being increased by both national regulators at the financial authority and on a wider platform in Europe through European Banking Authority (EBA) and the European Central Bank (ECB). These changes have not led to any increased focus on cash flow statements in the banks. The bankers have a practical view on banks' liquidity and it is necessary to understand in this respect, and interviews with bankers were early on deemed to be a necessary part of this research. The definition of what counts as cash equivalents is also crucial; there the hierarchy of money is a helpful concept (Mehrling, 2011). But if the liquidity cannot be assessed from cash flow statements, like in business firms, alternative sources are needed.

It is worth noting that the US central bank, Federal Reserve (Fed) provided increased flow of capital in the aftermath of the September 11 terrorist attacks in 2001 to stem financial collapse. Similarly, the Fed and the US government put up a fund, the TARP (Troubled Asset Relief Program) that in 2008–09 acquired much of the bad or toxic assets from the banking sector. This was to be followed by two QE (Quantitative Easing) programs in the US in 2010–11, with a third one potentially underway, according to the Chairman's speech in Jackson Hole in the autumn of 2012 (Bernanke, 2012). The ECB's latest activities, so-called LTRO (Long-Term Refinancing Operations) in 2011–2012, are to provide liquidity to the European banking sector. Many other central banks in the world keep interest rates close to zero in order to encourage banks to lend and facilitate liquidity. All the governmentally funded programs have aimed at supporting the financial system, especially with regards to easing access to low cost funding and providing financial liquidity. The need for governmentally funded financing for the banking system is a contradictory response to the mainstream free-market capitalism of the last three decades. Then, the focus was only on eliminating the governmental interventions on the financial market.

In non-financial institutions the cash flow statement provides a measure of liquidity. Textbooks generally do not separate financial institutions when discussing cash flow. Banks and other financial-sector firms are considered the same as any other company. In current cash flow accounting regulations, special classification of certain items are allowed for financial institutions but they are expected to produce positive net cash flow.

The basic idea of the cash flow statement is to show how much cash is available in the firm at the beginning and the end of the year, and how this

cash has been generated. The cash flow statement consists of three parts, for classification of the cash flow from *operating* activities, *investing* activities and *financing* activities. The financing activities relate to the funding of long-term liabilities and equity. The investing activities show how much cash is spent on long-term assets. The operating activities are in general profit directed income, for the most part cash transactions and current assets and current liabilities showing the internal generation of cash as sources of financing (Kam, 1990: 74).

The investing and financing activity of a bank can be seen mirroring the business of non-financial firms, where the investment of a bank is a loan and the financing liability of a bank is partly composed of deposits that are the cash asset of a customer. Banks also lend to and borrow from each other, creating both assets and liabilities. The lending and deposit flows in and out of financial firms are mostly considered operative cash flow, while the cash flow to assets are considered investment activity and cash flowing from increased liabilities are considered financing activity in non-financial firms.

Kam (1990: 71) claims the cash flow statement's importance is best explained with the classical case of the W.T. Grant bankruptcy analysed by Largay III & Stickney (1980). The W.T. Grant firm was the biggest retailer in the US when it suddenly went bankrupt in 1975. During the decade before, the company had been using more cash in operations than they generated. The inability to provide cash from operations was not visible in the annual report, but Largay III & Stickney (1980) showed these serious problems when they analysed the cash flow during the decade running up to the bankruptcy. The traditional income statement and balance sheet, together with ratio analysis, did not provide warning signals about negative operations. A cash flow analysis made afterwards showed an early signal of the "*impending doom*" even ten years before the collapse (Largay III & Stickney, 1980).

Cash flow information on its own is not enough, but it must be analysed together with the other parts of the financial statements. It is necessary to look at the cash flow over both the short and the long term. Statements for many years are needed for the analysis.

A cash flow statement for a single period may have little significance in predicting future cash flows. A comparison of cash flows over several periods is necessary to begin to observe the behavior of recurring flows and to predict the likelihood and frequency of nonrecurring flows. (Hendriksen & van Breda, 2001: 97)

The historical example of the origins of cash flow statements indicates that the big bankruptcies during the first decade of the 21st century could have been signalled in the cash flow statement if these had been non-financial

firms. But it is not clear if recent examples of big bankruptcies in financial firms provide evidence for similarity or difference in the failing operations and its reflection in cash flow statements.

In a bank, the credit assessment for evaluating customers' credit worthiness always includes cash flow analysis as part of the process. But the evaluation when banks lend to each other is different and they do not look at each other's cash flow statements. This difference between financial and non-financial firms regarding the use of cash flow statements and their potential liquidity measure is at the core of this research. A special part of this issue is to find out why the cash flow from operations in Scandinavian banks was negative over many years and nevertheless did not become a liquidity issue. After this background, the next section defines the research problem and illustrates how to study it. Then the research aim is put forward, together with the research question.

1.3 – Problem

After introducing the motivation for the research at the beginning of this chapter and providing the background in the previous section, the research problem can now be defined. First we will relate the problem of cash flow accounting in banks to the financial crisis, and then show how it will be studied in this research.

Reflection on the beginning of the financial crisis and its process frames the research problem of this thesis. The global banking sector has suffered from problems since 2007. The financial system froze in September 2008 when cash stopped flowing between banks after the collapse of Lehman Brothers. The world was saved from an economic standstill by governmental intervention, but many economies in the world have had serious troubles during the years since that time. The financial flow was restored by substantial actions of the main central banks that provided support with their balance sheets. The total size of Fed assets and liabilities increased threefold (see Figure 2 below) and by doubling to tripling the balance sheets of the ECB and Bank of England (BoE) the financial system was rescued. Banking problems turned into sovereign debt issues that affected the global economy in 2010 and became seriously problematic in some countries in Europe. The risk of financial meltdown was again significant in the autumn of 2011, and by the end of that year and early in 2012 the ECB provided banks with liquidity support of €1 trillion. In the spring, the Eurozone was still considered as having such severe problems that the currency could collapse after the summer (Soros, 2012b). Confidence was restored in July when the governor of the ECB said the bank would “*do whatever it takes*” within its mandate to preserve the currency. He then focused much of his speech on the need to get interbank lending working again (Draghi, 2012). Interbank lending is an important part of the cash flow between banks. The accounting of the cash flows in banks has still been much ignored, but this thesis will investigate that aspect.

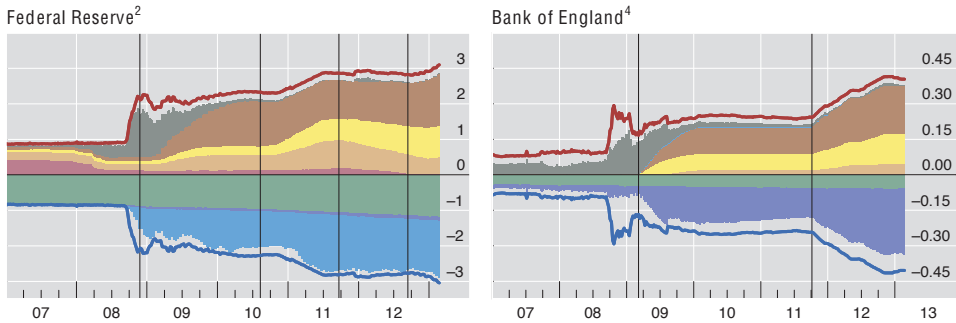


Figure 2: Central banks balance sheets
 Red line for assets & Blue line for liabilities (BIS, 2013: 25) See full Legend in Appendix 1

The graphs of the central bank's balance sheets in Figure 2 above illustrate the aspects of accounting in the crisis resolution. The banking sector had grown fast prior to the crisis; from 2001 the total assets of Lehman Brothers grew 15-fold and in Kaupthing 85-fold, while most Scandinavian banks had 2-fold increase of assets. These *stocks* of assets and their growth are an important feature of banking problems but this thesis focuses on the *flows*. The cash flows are investigated here at the level of banks, but these flows are connected through the central banks acting as the banker's bank and directly between the banks on the interbank market.

The capital stock and money flow are interconnected. If the total stock of assets is worth less than the liabilities, with no equity buffers left, then insolvency kills the firm. Its survival is also dependent on inflow of cash being more than outflow and lack of liquidity can turn quickly into a solvency problem in financial institutions like banks (Mehrling, 2011: 17). Whether it is for traditional bank financing, money market funding, capital market lending, or interbank market liquidity, a halt in the cash flowing in or out of a bank can become a serious problem. There can be traditional runs on the bank when depositors withdraw their funds, or there can be reversed runs when the wholesale funding or other financing of the bank stops. When the cash flows constantly, no one notices, but when the plumbing breaks, it immediately becomes problematic.

Cash flow statements in crisis

A natural reaction to a surprising problem of bankruptcy is to look at reported financial numbers, to see if signals of impending failure were there. Plotting out the numbers from the annual reports of Lehman Brothers in Figure 3a, one can see the profit growing steadily from 2002, and the total revenue rising very quickly from 2001. But looking at the cash

flow split in Figure 3b, operations have been negative for most of these years with a dramatic drop after 2003. This outflow is covered by inflow from financing in the green bars. But this negative cash flow from operations did not generate a similar warning signal for the bank operations, as it would have in a non-financial firm.

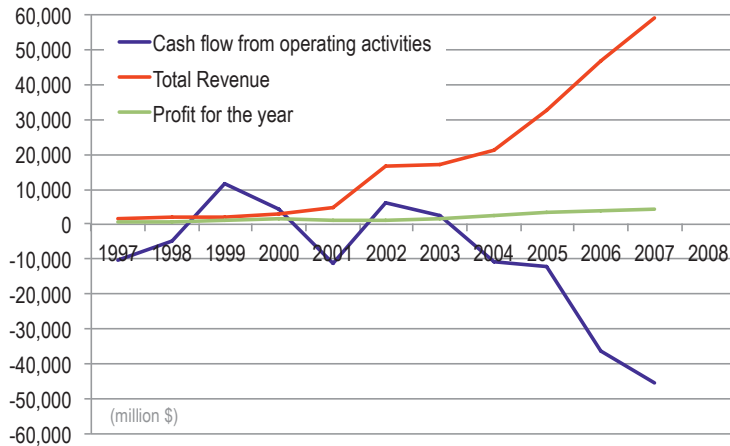


Figure 3a: Lehman Brothers Financials AR 1997-2007

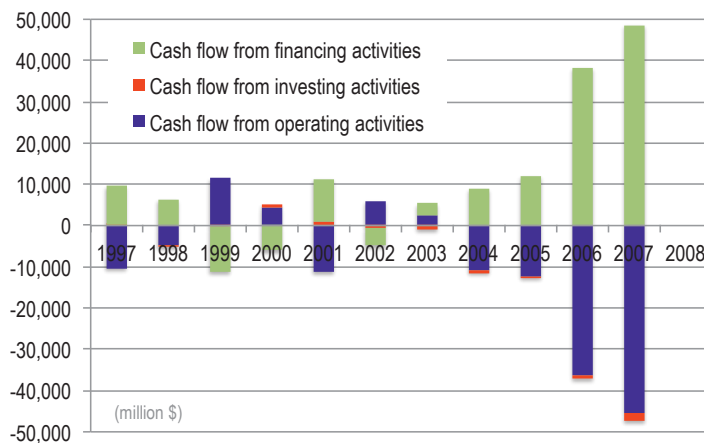


Figure 3b: Lehman Brothers Cash Flow AR 1997-2007

The next case of a big bank bankruptcy, which happened three weeks later in the autumn of 2008, did not occur in the City of London or on Wall Street in New York. Instead it took place in Iceland, where all three main banks collapsed during the period of a few days. A few months earlier, these banks had been upgraded to the highest investment grade, AAA, by global rating institutions. Below are the numbers from the biggest one, Kaupthing Bank, plotted in Figure 4a and 4b similarly as for Lehman Brothers above.

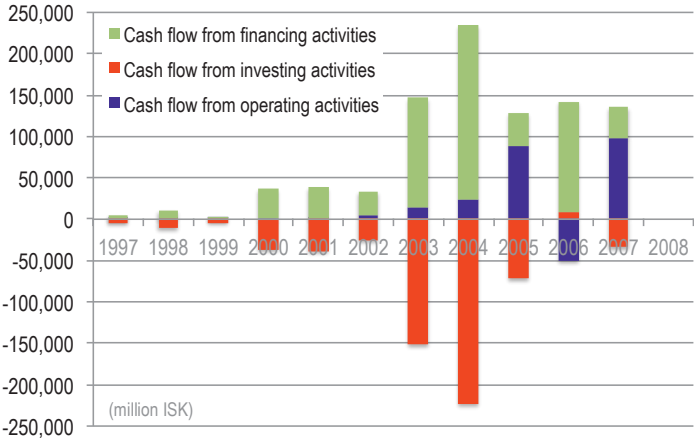


Figure 4a: Kaupthing Bank Financials AR 1997–2007

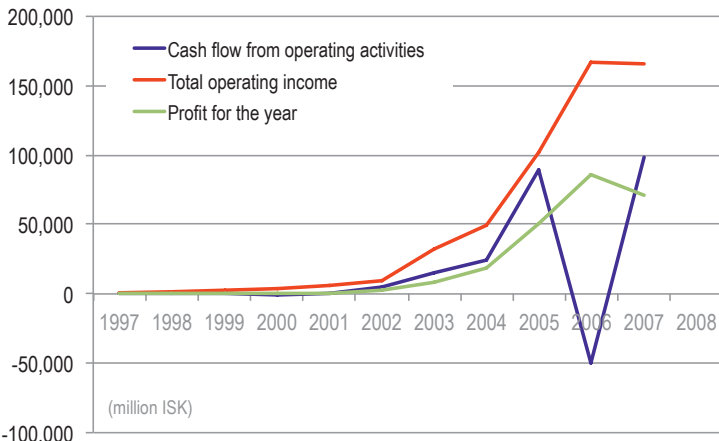


Figure 4b: Kaupthing Bank Cash Flow AR 1997–2007

Profit is the green line, total revenue or total operational income is illustrated with the red line and cash flow from operations is the blue line. The total cash flow is drawn in a bar chart with blue bars for cash from operations, financing flow in green bars and investment flow in red.

Opposite to Lehman Brothers, the cash flow from operations is positive in Kaupthing, except for one year. But the investment activity has a negative flow. This outflow is covered by positive inflow from financing activity. Similar to Lehman, Kaupthing has symmetric in- and outflow until 2004. Then the total cash flow in Kaupthing turns positive during the last three years, from 2005–2007. Bars above the zero-line are higher than those below, showing more cash flowing into the bank than out. In principle, such an inflow of cash would indicate a strong financial position for a non-financial firm, but banks are different, because the inflow can easily flow out again.

The response to a sudden bankruptcy by looking at the numbers afterwards can be a search for misleading explanations. Prior to the insolvency, the same numbers have been interpreted differently. The two examples of bankrupt banks above show very different cash flow statements and accounting numbers. The bankruptcy proceedings and legal processes are still ongoing, and this is not the place to search for explanations of these specific collapses. Lehman Brothers was an investment bank, while Kaupthing combined traditional banking operations with investment banking. The currency issues and different regulatory environments also make these examples incomparable.

The illustrations of these two banks relate to the wider problem of global finance, investment banking, bankruptcies and different classification in cash flow accounting. But this thesis selects only a part of the problem, by focusing on normal operating banks for investigation of why their cash flow statements are not used by practitioners. The ignorance in the research community of cash flow accounting in banks also makes it an important study object, in light of the wider problem. For this research, the big banks in a region were selected, due to variety and stability (bankrupt banks excluded), but also so that all follow the same accounting framework. The simplification and selection is to facilitate finding out what is going on in this ignored cash flow accounting of the banks.

Differences in the FASB and IASB accounting frameworks cause problems, as have been pointed out, for example by Wallace et al. (1997) and Admati & Hellwig (2013). Wallace et al. (1997) compare cash flow regulation in different countries and find problems in harmonisation, but do not consider banks specifically. Admati & Hellwig (2013) focus on banks, and valuation of balance sheet items but do not consider the cash flows at all. The

differences between the frameworks could explain some parts in the two cases above, as Lehman follows US rules from FASB but Kaupthing follows the IFRS. However, both frameworks have similar standards for Statements of Cash Flows, the FAS 95 and IAS 7. The standards will be covered in Chapter 5 and the resulting financial statements made according to IAS 7 will be analysed in Chapter 7.

The Nordic region is selected as field of study and the biggest banks there are chosen as study objects. The facts investigated are both the published annual financial statements and the international accounting standards framework regulating how the reports are prepared. These factual descriptive studies function as an opening to the interpretative part of the research regarding why the cash flow statements of banks are not used. The bankers are asked about the cash flow statements and for an explanation of the fluctuation in negative numbers during the last decade in the interview study in Chapter 8. The bankers' opinions are also first studied historically from their letters in Chapter 6.

The research problem is initiated by the collapse of financial institutions during the crisis but is demarcated from bankruptcy and investment banking by investigating the basic functions of traditional banks in their cash flow statements. The problem is that these *cash flow statements of the banks are not used* and that has not been researched previously.

Accounting of flow through payment systems

The implicit idea of accounting is to report what has economically taken place during a certain period. Put differently, accounting (as recording) is counting (or measuring) to make one accountable (communicating results). The management is made responsible for fulfilling its obligations by preparing and presenting their results in an annual report. The financial information about the economic status of the firm is the core message of that accounting communication.

This research deals with the problem of financial communication being presented in the published financial statements and not used. The accounting standards framework demands that the cash flow statement is prepared but it is not used. This is about connecting the theoretical system with empirical results as well as regulatory framework with practice. The problem regards both the sender and the receiver of the communication, although here it is limited to the bankers who are an example of users of other banks' statements and of preparers and users of their own statement.

The financial messaging system, of which accounting is a part, broke down during the financial crisis. It might have been broken already, but the

failures became explicitly apparent during and in the aftermath of the recent financial crisis. *“Finance today [...] has no common language for communicating financial information [and] the economic costs of this linguistic diversity were brutally exposed by the financial crisis”* (Haldane et al. 2012: 1). That is a serious problem, and the part of it this thesis deals with is the communication of the cash flow numbers that are not used.

The regulation of the accounting communication is one part of the research problem. Another centrepiece of the problem is the recording and measurement of the liquidity of the flow. Liquidity was increasingly considered certain in finance for the last 30 years—until it froze and the crisis made clear that it is not free. Since late 2007, liquidity has been a major focus in the world of banking. The specific part of that problem dealt with here is the cash flow statement and its liquidity measure in the financial accounting of banks.

The payment system is one of the mechanisms for the liquid flow of cash between actors through banks. Andersson (1995) showed how the system for payment between Swedish banks was built as an integrated part of a then-new accounting system at the Riksbank, the oldest central bank in the world, during the late 1980s. Mehrling illustrates further how the main central banks of the world manage the payments system in the banking world:

When one bank makes a payment to another, the mechanism involves changing entries on the balance sheet of the central bank; there is a debit to the account of the bank paying and a credit to the account of the bank being paid. Here, in the requirement to settle net payments every day on the books of the central bank, we find the location of the ultimate discipline for the entire system. Hyman Minsky called this requirement the ‘survival constraint’ – cash inflows must be sufficient to meet cash outflows – and we all face such a constraint. (Mehrling 2011: 13)

The outflow of cash from one bank by definition has to be an inflow to another bank. This interconnection of the banks’ balance sheets is cleared through the central bank where changes are netted out and settled in the accounting system. From the beginning of the implementation of the accounting standard for statements of cash flow, it has been pointed out by bankers, but ignored by regulators, that this statement will not function in banks. Since the bankers’ concerns were not heeded, the case seems to have been forgotten, and neither bankers nor regulators seem to have bothered about negative numbers published, nor have the investors reacted on the operative outflow. That indicates a practical ignorance of the cash flow in the accounting report.

The research problem regards the cash flow statements in banks that are required to be prepared but are not used. It is considered a problem when one part of the financial statements in a certain type of firm is just ignored.

This problem can be split into different parts, like the problem of regulation of cash flow accounting and the problem of liquidity measurement with cash flow numbers. One part regards the accounting framework and the other part regards the accounting statements. Then the problem can be viewed from the facts of the matter, in the standard accounting rules and the statements prepared, or from the opinions of it. In this thesis the perspectives and opinions of the banking persons are the defining factor, thereby limiting the scope, while investors or other users of the accounting information are excluded.

The separate parts of the research problem regard the accounting of the inflow and outflow of cash in banks, how it is presented in the annual report, the purpose of preparing the statement and the functions of the cash flow. These parts of the problem can all be drawn together in the quest to determine why the cash flow statement is not used.

Studying the research problem

The problems described above are complex and the task of studying them demands simplification in several steps. This thesis will seek to clarify the purpose of the cash flow in relation to the statements prepared in banks. The recently fluctuating and historically negative cash flows from operational activity over a decade in the banks calls for explanation. Finding how standard accounting for cash flow functions in the banking world is fundamental for understanding why the statements are not used.

The cash flow in bankrupt banks illustrated in the earlier section provided the starting point for how to study the problems in this thesis. To begin with, previous research is searched for explanations of the cash flow issues in banks and relevant literature is checked for solutions to the problems. In the next chapter, the context of cash flow accounting in banking and finance is surveyed in the existing literature. Then, narrowing down the focus to accounting theory and its development, Chapter 3 investigates the limited emphasis on banks in the accounting literature and searches for previous research on cash flow. Neither is successful in explaining the functions of cash flows in banks. This leads to an idea found in the field of economic history, the *money view*, to be used and modified as a theoretical framework. A variety of methods are set out in Chapter 4 for the four empirical studies. Here in this first chapter, the motivation of the study, its background and the problem have been presented.

The quest to find out why the cash flow statements in banks are not used goes through four studies of the evidences and evaluations of the accounting framework and the financial statements in order to give both a description of facts and interpretation of opinions from practice. The four studies in Chapters 5–8 cover the Accounting Standard for cash flow, Comment Letters from bankers, Cash Flow Statements of banks and Interviews with bankers.

The facts of the accounting framework are described in the Accounting Standard for the Statements of Cash Flow, and it will be described in the first study in Chapter 5. The International Accounting Standards have become part of the legislation in Europe and the rules for cash flow have been updated accordingly. The framework is harmonized and all companies shall prepare cash flow statements, but as a principle-based framework there is flexibility within it, with attention specially mentioned for financial firms. But even the example of banks in the standard is problematic in its application to a real bank.

Another way to find out about the cash flow statement for banks is to search for historical explanations. These could be found in the Comment Letters sent to the standard setters prior to its first implementation. In the standard setting process the users and preparers are asked about the proposed standard, and those who answer send in their opinion in so called comment letters. These letters from 1986, regarding the accounting standard for statements of cash flow, especially those sent from banks are investigated in Chapter 6. More recent letters from 2009 regarding the presentation of cash flow and the direct method for preparing the statements are also studied in that chapter.

A third way to find out about the uses of the cash flow statements in banks is to investigate the actual statements and analyse them. An analysis of the Scandinavian banks is aimed at describing their financial situation using the cash flow numbers. Investigating the purpose and function of cash flow demands that actual cash flow statements be analysed in order to find out their usefulness. This is the task in the second descriptive study, summarizing the facts of the financial statements of the selected banks in Chapter 7. The analysis of the big Scandinavian banks plots graphs with cash flow numbers from 1999 and describes the current state of each bank to illustrate size, ownership, similarities and differences between them.

The different analysis of the banks' financial statements, the comment letters and the accounting framework are all three useful studies as preparations for meeting the bankers. In the fourth study, interviews are used to find out about the uses of the cash flow statements in banks, by

asking the bankers. In Chapter 8, the opinions of bankers regarding the statements of cash flow are investigated and interpreted. Scandinavian bankers from different positions in the big banks were interviewed in 2011 and presented with their own banks' cash flow in order to find explanations and usability.

The lack of a functioning common financial language, as pointed out by Haldane et al. (2012) is an underlying problem for the research problem of this thesis regarding why the statements of cash flows are not used. This will be studied from the different angles of the four studies and by focusing on the identified key issues of cash flow and its accounting in banks.

Accounting is often called the language of business (Ijiri, 1967), the double entry bookkeeping being its rhetorical device. The accounting records or transactions preserve the memory of the firm (Yamey, 1994) and the financial statements communicate the measured economical status of it (Kinserdal, 1998). This accounting communication, like other communication, involves a *sender/preparer* and a *receiver/user* and is based on both *responsibility* and *obligation* (see also Toulmin's model of argument in Booth, Colomb & Williams, 2003). When this communication breaks down, as in the crisis earlier, it is important to study both preparer's and user's aspects on the statements.

If the communicator cannot stand by the statements made, trust vanishes and problems arise. That can be seen as one part of the breakdown of the financial language. Statements of communication like accounting reports have to be considered up front to be generally true, and only occasionally false, otherwise the system will collapse. Cash flow statements with more negative cash outflow from operations than inflow during many years are difficult to see as being sustainable. There are several possible options to explain the negative cash flow numbers in general. For example during a period of heavy investment, the outflow is usually covered by inflow from financing and operations. If operations are spending more cash than they generate, this has to be compensated for with either increased financing flow, or by selling assets to generate positive investment flow, alternatively through the use of cash reserves or retained earnings. A negative operative cash flow can be seen during growth periods of entrepreneurial firms or in new start-up firms, where operations run under a limited period with cost only, spending financing or invested funds, until operations start generating inflow. But the case with banks is different. This study shows how and seeks to understand why.

Generally for a firm to be a going concern there has to be real potential for more inflow than outflow. The negative operative cash flow therefore usually is a *warning signal*. More cash flowing out of the company than in indicates in the end that no money is left. This is what Minsky calls survival constraint; the need to generate more inflow than outflow of cash is essential for the firm to survive. Different ways of studying the research problem described above to investigate the cash flow in banks start from the viewpoint of this survival constraint. The research aim and the research question are set out in the next section.

In this thesis, simplifications are made in order to study the problems of cash flow accounting in banks. Even though investment banks and big bankruptcies are discussed in the background section and the motivation for the research has its origins in the financial crisis, these problems are too big to handle in a single thesis. Limited parts of the financial crisis with regard to traditional banking and accounting are selected out for this thesis. When talking about banks in general in the remaining parts of this thesis, a simplified concept of traditional (retail, commercial) banking is used, while investment and shadow banking is excluded.

1.4 – Research aim and question

The aim of this thesis is to study how cash flow statements of banks are different from non-financial firms and understand why they are not used. This includes research on how the accounting standard functions for banks and identifying special issues of cash flow reports in banks. It also involves investigating the purpose of preparing the statement in order to find out why bankers do not use banks' reports.

The example in the model in the first part of this chapter shows how the lending transaction creates a cash deposit that does not flow until later. Banks can even lend to each other to finance the flow of cash between banks when customers use their loans. The background from accounting history and liquidity presented in the second part, and the research problems in the previous part, set the frame for the aim of this study.

The difference between banks and non-financial firms, from an accounting perspective, concerns how the reporting of cash flow can fulfil its function based on the purpose of preparing the statement. The aim of the research builds on analysis of reported numbers in the cash flow statements of banks in order to find out how operations can be more negative than positive over a decade. The research investigates this cash flow in banks to find out why

bankers do not use the cash flow statements of banks. This results in the following research question:

Why are the cash flow statements of banks not used?

The research question is answered through four independent but interlinked studies of:

1. *Accounting standards, regarding the purpose of preparing cash flow statements*
2. *Comment letters, regarding the functioning of the cash flow statement in banks*
3. *Financial statements, regarding fluctuating cash flow from operations in banks*
4. *Bankers, regarding how they view the cash flow statement in banks*

The first study relates to the analysis of the *accounting framework* in general and the cash flow standard in particular. The second study turns to the practitioners' view on the standard prior to its implementation and review process in *comment letters* from bankers. The third study is a *financial statement* analysis of the reported cash flow numbers in the Nordic banks over the last fourteen years. The fourth and final study is based on *interviews* and focuses specifically on the bankers' opinions of the cash flow statements in banks. The concluding answer to the research question is presented in Chapter 9, but each preceding chapter provides building blocks for that answer.

1.5 – Outline of the thesis

This first chapter described the motivation behind this thesis and identified the problem to be dealt with. Initiated by the lack of warning signals of the bankruptcies of banks during the financial crisis, the accounting reports are a starting point of this thesis. Based on the assumption that accounting plays a role in providing information about the financial situation of firms, the cash flow statements in banks became the study object. Several problems were exposed in the collapsed financial communication in the recent crisis. This made the bankers the other study object, specifically their opinions and use of cash flow statements. The aim of the thesis and its research question is identified in this respect, and connect the four separate studies of the cash flow.

In Chapters 2 and 3, previous researches, accounting theories and literature are surveyed and the theoretical framework of the thesis is set up at the end of the third chapter. This thesis draws on theories in finance and economics to form the contextual framework in Chapter 2. There is limited previous research available and little literature on cash flow in banks, and therefore

this section extracts parts from money and banking theories as well. The lack of previous research on cash flow in banks led to the study of historical evidences in Chapters 5–6 and then the focus on investigating practice in Chapters 7–8.

Accounting theory, covered in Chapter 3, does not provide a sound, generally accepted theoretical base for the research. This thesis draws from a broad theory range, where concepts of banking and cash flow narrow the focus. Because of the complexity of the study objects, a flexible theoretical perspective and multiple viewpoints are necessary for constructing the theoretical framework used in this thesis. The theoretical goal is to build on a framework that can clarify how the accounting of cash flow in banks can be used. It is not possible to provide a complete solution, but steps towards developing a new accounting regime for banks are prepared by showing limitations of the current system. Chapter 4 deals with the methodology and describes how the problem is researched. A single method is not sufficient to grasp the cash flow issues in banking; therefore multiple methods are used in the four studies to approach the problem differently.

The first empirical study in the second part of the thesis investigates the accounting regulation for banks, focusing on the standard for statements of cash flows in Chapter 5. It briefly includes other regulations for banking, accounting standards in general and the purpose of cash flow analysis in particular. The second study, in Chapter 6, focuses on the debate about the cash flow statements for banks as presented in the comments letters, both those sent to the FASB prior to the implementation of the standard in 1987 and the more recent letters from banks in 2009 to IASB and FASB regarding the presentation of cash flow and the method for preparing it. The challenge in the first two studies regards the difference between banks and non-financial firms and deals with the purpose of preparing the cash flow statement and how the banks' cash flows function.

The third study, presented in Chapter 7, analyses the financial numbers as published in the cash flow statements of banks. The cash flow from operating activity was expected to be positive as in non-financial firms but turned out to be negative in the big Scandinavian banks for many years over the course of a decade. The study illustrates that banks' accounting of cash is different from non-financial firms and tries to understand how. The challenge is to see money as endogenous in order to get why the numbers are negative, and how negative operative flow can be sustained over a decade. The explanation relates to what makes the banks different from non-financial firms.

The fourth study, presented in Chapter 8, is based on interviews with the Nordic bankers to see if they can explain the negative numbers and the uses of the cash flow. That should shed light on the purpose and function of the cash flow statements to explain why they are not used in the banks. The first interview question was: *How do you analyse the cash flow statements of banks?* But based on the common answer that they *did not* at all, and the fact they *could not explain* the other question about the negative cash flow, a follow-up question became: *What do you look at instead of the cash flow statement in banks?* This interview question of the *substitutes* provided various feedbacks based on the profession of the bankers and the different functions of the cash flow statement. The general comments in the interviews regarding why the cash flow was not used were simple statements like it not being relevant. Therefore, the literature had to be revisited to complement the four studies in order to find theoretical backing for why the cash flow statements are not used in banks.

The final section of the thesis, in Chapter 9, concludes the research by summarizing and combining the results of the different studies to answer the research question. It illustrates how the cash flow in banks can become negative, why it is not used, and presents arguments for the need for a new accounting regime for banks. Finally, it points to further research needed for improving the financial communication of banks.

Roadmap for the reader

This last section of the first chapter provides a roadmap for the reader to orientate him or herself, and explains how the chapters of the thesis are organized. The problems of the financial crisis have a complex economic background and the money issues in banking are complicated, therefore the next chapter puts the research into wider context. Simplification is necessary to deal with the problems of the accounting in banks, here looking at the cash flow statements from the bankers' perspective. This directs the focus in third chapter to conceptual context and different theories as well as the theoretical framework for the thesis. Theories are consumed in the search for a flexible theoretical framework and this thesis uses multiple methods for the four separate empirical studies to deal with the research problem presented in this first chapter.

Accounting theory, banking theory and money, finance and economics theories all play an important part in understanding the world of banking today and its regulation. The reading of this thesis demands insight into all these fields. An interdisciplinary approach is necessary to understand the

complexities of *banking* and the problems it creates within *accounting*, especially regarding cash and its financial flow.

There are several ways for the reader to peruse this thesis. The approach and results depend on the discipline from which the reader arrives. Many academics read the beginning and the end first. Practitioners might jump to the conclusions for solutions. Accounting professionals need to digest the specialties of banking and monetary economics with an open mind, while banking professionals have to open up for the accounting point of view and new economic thinking. Some economists will have to rewire their thinking patterns to accept the endogenous view on money and embrace banking and accounting in an open-minded way. BoE has recently pointed out the common misconception of how banks created money (McLeay et al., 2014). Readers need to have both the worlds of economics and finance in mind, as it is impossible to grasp the world of banking from only a single business perspective. Understanding the concept of cash is a long journey, but the *money view* provides the intellectual lens for that quest.

The structure has been aimed at simplification of complexities with chronological structure. While each chapter should be possible to be read as a stand-alone, cross-references are unavoidable to both previous and coming chapters.

This thesis is practice-oriented and interpretative, based on a wide range of empirical material, while at the same time also being theoretical, trying to tie together theory perspectives of different disciplines around money and banking. It approaches the dominant conceptual framework of accounting standards critically with respect to banks' cash flow. The contribution is aimed at developing a better accounting for a functioning financial language by learning from the case of cash flows in Nordic banks.

An overview of how this thesis is split into its main parts is given in Figure 5. It shows the layers of the chapters, from background through theoretical chapters in Part I to the empirical studies of Part II that lead to the conclusion that answers the research question using the theoretical framework.

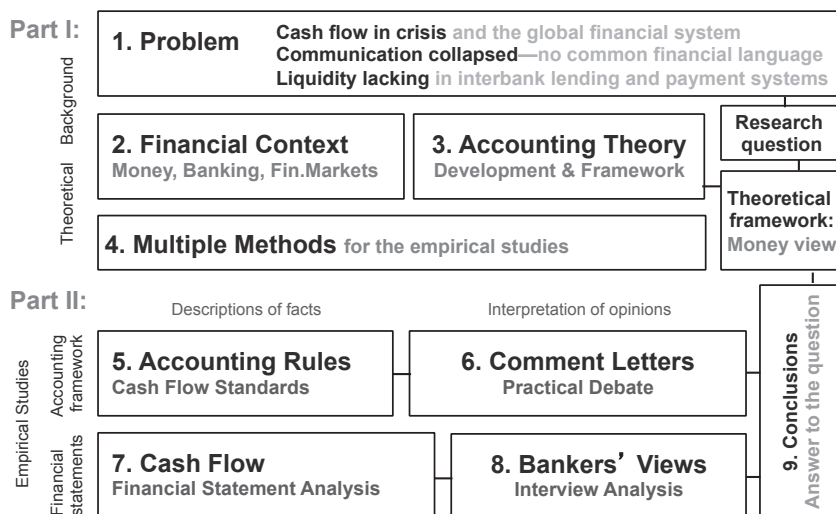


Figure 5: Overview of chapters and main parts of the thesis

The empirical studies in Part II of this thesis are in two layers, focusing first on the *accounting framework* and then on the *financial statements*. The former study in each layer is aimed at describing the facts, while the latter study in each layer is based on interpretations of the banker's viewpoints, both in writing (in 1986 and 2009) and verbally (in interviews 2011). The final section includes Appendices of extra material and background data that the research is built on.

Chapter 2: Financial Context

2.1 – Money and banking in the world of finance

This chapter presents the context of this thesis within the fields of money and banking in relation to the disciplines of finance and economics. It can be seen as the surroundings of this thesis and background for the accounting theory in the next chapter. This chapter is divided into two main parts, based on a review of literature and previous research about financial accounting in banks. The first part is based on a search for explanations of accounting issues in banking within economics theory and using an external view. The second part uses a more internal view of operations to analyse the problem of cash flow within banks in relation to the literature in finance and economics.

There are two main points made in this chapter. First, existing theories in banking, finance and economics do not provide solutions to the accounting problems with banks' cash flows presented in the previous chapter. Historical investigation of the accounting standard is therefore suggested. Furthermore, empirical investigation is needed to find out practice in banks regarding statements of cash flow. Secondly, this chapter shows that previous research of cash flow in banks is limited. This leads to the comment letters from bankers regarding the accounting standard being studied to find historical views on the cash flow of banks, in addition to asking the bankers about this issue.

A conclusion of this chapter is that practice has to be investigated empirically through multiple perspectives from both methodological and theoretical points of view. The context of accounting in banks illustrated in this and the previous chapter supports the multiple methods of the study. The accounting theory presented in the next chapter is strengthened by being viewed within the context of this current chapter, as it links the study of cash flow accounting in banks to the economics of money and finance.

2.2 – Banks acting in financial markets

In this section the changing role of banks in the market is explained and traditional banking theory is put in contrast to accounting of cash flow. This part takes an outside view on banks. Credit creation of money is a crucial concept in this respect and for a banking perspective on accounting research. It analyses the operations of banks, drawing on the origins of banking and money markets, the evolution of banking and accounting, and finally connects the inherent instability of finance to the lack of global regulations of finance.

Purpose of banks

The general purpose of banking is seen as being threefold: to accept *deposit*, give *credit* and provide system for *payments* through its network (see for example Turner, 2010, Admati & Hellwig, 2013, chapter 4; see also Kindleberger, 1984, chapter 3 and part II for a historical perspective). These traditional roles of banking have changed during the last three decades with the broad development of financial markets. Securities trading, financial services and investment banking are just few examples of additional services many universal banks currently offer. The cash deposits are now also kept in money market funds, companies borrow through the bond market as an alternative to bank loans and the payment system has in large part been transformed to credit cards and other electronic payments. Still, banking holds its traditional role parallel to these new developments. Investment banking and shadow banking have flourished during this period and the globalization of the finance industry has increased, to a large extent, parallel to technology development.

Banks have historically been the source of *credit* for most sectors in society, and this lending is partly funded by deposits. This intermediation of banks provides *liquidity* in the economy (Berger, Molyneux & Wilson 2012: 1). Traditionally, the *maturity transformation* (lending long while borrowing short or using deposit to fund loans) has been considered the core of banking activity. Financial markets now increasingly play part of the role banks have previously played. Corporate funding extensively takes place on the financial market instead of through banks. With securitization, commercial banks are no longer major holders of credit risk (Berger, Molyneux & Wilson, 2012: 2), but banks are still as the main keepers of deposits, backed by governments through deposit guarantee schemes to avoid the risk of a bank run.

Banking is about the handling of money and that makes banks' bookkeeping important. People put their money into bank accounts to

keep them safe. But these coins and paper money are not stored in locked rooms. The *deposits* provide vital funding for the banks and are its liability. Not all deposits can be paid out at the same time; that is why most governments provide deposit insurances (explicitly and/or implicitly). This makes the banking industry critical in every society. The state guarantee opens up the opportunity for both moral hazard and the possibility for big (systemically important) banks to take on more risk for less cost, even with further risk of bankruptcy (Akerlof & Romer, 1993).

The operations of banks are based on information derived from an accounting system that has to be both reliable and relevant. Before a bank lends money it checks the financial status of the customer through accounting information. Furthermore, banks handle payment transactions in the economy and thereby mitigate through their network the connections between the accounting systems of different entities. The payment system in the economy is operated to a great extent by the banks and therefore banks play a critical role in every economy (Berger, Molyneux & Wilson, 2012).

Even though the traditional *payment system* has evolved into different channels, like credit cards, Internet intermediaries and mobile phones, all these are still backed by the electronic payment system that banks provide through their network of bank accounts. International payments are similar, where banks use their connection between countries that used to go through the central banks and the BIS in Basel. Banks connect the balance sheets of their customers through their own balance sheet. Due to this interconnectedness of different balance sheets, it is crucial for the banking system to have good transaction channels, with available credit lines and stable financial contacts with other banks. The payment system is based on continuous flow between banks, but this flow also takes place through the financial market.

Bank accounts and accounting systems

The threefold role of banks, storing money in deposits, providing credit and operating the system for payments, demands accurate and reliable recording of all transactions and keeping account of assets and liabilities. Customers' assets are the banks' liabilities, and the banks' assets are the loans to the customers. The continuous flow of cash through all the lines is the key to friction-free functioning of the banking system. These constant cash flows in and out of the banks are to meet different contractual commitments of their customers and their own obligations. Cash receipts and cash payments are mainly done with electronic

transactions, as inflow and outflow of accounts, and bear strong resemblance to traditional accounting systems transactions. Not much previous research can be found on the inherent connection of bank accounts and accounting systems in banks.

Practically, banking is connected to accounting in a threefold way. On the one hand, a common accounting framework is beneficial for the functioning of the banking system in order to evaluate customers with standardized financial information. On the other hand, a common banking system is necessary for the accounting framework in use, as the transactions in and out of each accounting system take place through banks. Overall, the banks also need an accounting system to keep records of their own and their customers' flow of cash—both in, out, and unchanged.

Theoretically, banking is connected to accounting through double entry bookkeeping, as each transaction is booked in both credit and debit. Transaction into one account always has to come out of another account. Most monetary transactions in the economy take place through the banking system. Each company has its cash kept as deposit available in some bank account and part of its liabilities are often kept on the other side of their bank's balance sheet. The business transactions are made with the interaction between the accounting system and the banking system. This payment system that banks operate for customers and the interbank system used for transactions between the banks were both briefly described in Chapter 1.

For both systems to work smoothly, a governance structure or a backing of some higher authority is needed for the regulation of accounting and banking. General legislation for accounting reports makes it possible for banks to compare firms they lend to. Specific regulation of banks is put in place to make them a safe transaction channel for business and a secure place for customers storing deposits. Accounting reports are partly based on information derived from the same banking system. This holds for both the cash flow statements' financial activity, the balance sheets' liabilities and cash at year-end, as well as for most transactions behind the income statement during the year. The common denominator is cash or money as the unit of measurement in both the accounting systems and the banking systems. The connection between the banks takes place in the accounting system of the central banks that then act as the bankers' banks.

Maturity transformation

Banks are important practical actors in the financial markets, and the theoretical foundations of banking are based on basic functions of accounting. But the mainstream economic theory, backing modern banking and accounting, has excluded both credit and money from their models. The financial sector accounted for up to 40% of all corporate profits in the US in 2007 (Economist, 2010) and return on equity in UK banks rose during 18 years from 1% to 38% by 2007 (Haldane, 2012a).

In economic models the backing of money is often seen as coming from the state through central banks issuing money and lack the viewpoint of money being created in credit given by commercial banks. There are both theoretical and regulatory links between accounting, banking and money. As the government approves rules for and demands accounting reports from banks, the government also approves licenses for and regulation of banks, manages their supervision and issues the currency. The credit creation of money in the banking system is assumed, in many models, to be controlled through central bank actions and rules. But they miss the point that money becomes, both in accounting and banking, both a unit of wealth measure as *stock* and a unit of trade transactions as *flows* (Fisher, 1912). The credit creation involves maturity transformation based on both the stock and flow, which complicates things.

After Bretton Woods and the end of the gold standard for the backing of money, the amount of money in society is not created only in central banks, but also in commercial banks that provide credit (Coggan, 2011; see also Steil, 2013). With this change, a huge increase in the amount of electronic cash flowing through the economy has silently taken place. At the same time, debt and leverage have increased dramatically through the growing development of financial markets (Coggan, 2011).

Central banks can only partly control this credit creation with demands for minimum capital requirements for each bank or as cash reserves at the central bank. The global financial crisis made evident that banks had made too much money with credit creation and that the global financial system was built on too much debt (Turner, 2013a, 2013b). The inherent instability of the financial system became explicit in the global crisis. This event could have been expected to increase the importance of critical examination of accounting information from banks, as discussed in Chapter 1. When banks increase credit creation with more lending, their balance sheet grows bigger. After periods of excessive lending, financial crisis often occurs (Kindleberger & Aliber, 2011). When many actors in the economy all want to reduce their leverage at the same time and pay

down loans it can result in a debt deflation, and ultimately a balance sheet recession like Japan has experienced since the 1990s and the rest of the world is experiencing now (Koo, 2009, 2011, 2013). History shows how bubbles repeatedly inflate prior to banking crises (Reinhart & Rogoff, 2009) and that these can still happen in advanced countries:

Until very recently, studies of banking crises have focused either on episodes drawn from the history of advanced countries (mainly the banking panics before World War II) or on the experience of modern day emerging markets. This dichotomy has perhaps been shaped by the belief that for advanced economies, destabilizing, systemic, multi-country financial crises are a relic of the past. Of course, the Second Great Contraction, the global financial crisis that recently engulfed the United States and Europe, has dashed this misconception, albeit at great social cost. (Reinhart & Rogoff, 2009: 141)

Reinhart & Rogoff also illustrate how these banking crises are directly connected to an increase in capital flows and debt booms. During the three decades from the early 1980s toward the end of the first decade of current century, the efficiency of financial markets was interpreted so that risk was reduced and liquidity assumed secure. Another important forgotten factor of bank crises are bank runs. Reinhart & Rogoff continue:

[...] banks' role in effecting maturity transformation—transforming short-term deposit funding into long-term loans—makes them uniquely vulnerable to bank runs. Banks typically borrow short in the form of savings and demand deposits (which can, in principle, be withdrawn at short notice). At the same time, they lend at longer maturities, in the form of direct loans to businesses, as well as other longer-dated and higher-risk securities. (*ibid.*: 144)

This maturity transformation of borrowing short to lend long is the key factor in banking operations and is based on available liquidity. However, assets that are relatively liquid in normal times can suddenly become illiquid at the worst moment during difficult times when banks most badly need liquidity.

Thus, even if the bank would be completely solvent absent a run, its balance sheet may be destroyed by having to liquidate assets at fire sale prices. In such a case, the bank run is self-fulfilling. (*ibid.*: 144)

Maturity transformation always involves a risk of a run on the bank, even though depositor insurance guarantee schemes were considered to lower that risk. What came as a surprise in the crisis beginning in 2007 were two new facets of this risk. On the one side the globalization of the financial system had gone much further than the local depositor insurance guarantee could cover. This became apparent within the European Economical Area where collapsing banks had cross-border operations. On the other side, the development of the capital markets and the

banking system in the last thirty years made people, especially economists, unaware of the different types of credit that had been created. The crisis that started in August 2007, “was triggered by a bank run, just like those of 1837, 1857, 1893, 1907 and 1933” (Gorton, 2012: 182). What was different was that it was a “financial panic, a run on short-term money market instruments” (*ibid.*) and not people in queue outside a bank office. There was also a run on repos and asset-backed commercial paper, but:

Repo and commercial paper are money, forms of bank debt that grew to significant amounts and were vulnerable to being run on. They were largely provided outside the regulated commercial banking sector. (*ibid.*: 183)

The run was a demand for cash, as the bank creditors started to doubt if they had the money, but different from previous crisis periods:

those running on the banks were not households but institutional investors, other banks and nonfinancial firms. The ‘banks’ that were the subject of the runs were not the regulated commercial banks but dealer banks. (*ibid.*: 194)

The dealer banks were not only investment banks but also what has been called the shadow banking system, although traditional banks could suffer as well from this change. This shows how the regulation of banking, which will be discussed in Chapter 5, needs rethinking and has to include different types of banking. The reverse runs on banks, not from depositors but instead from the funding side—both other banks and institutional investors—shows how important the accounting of the financing and funding flows is. The accounting of the maturity and the liquidity of different types of money like financial instruments are also apparent from this recent experience.

Banking operations and credit creation

Traditionally, banks are considered to have the function of transferring money from bearers of excess capital to those seeking capital or from savers to borrowers. This idea assumes money being *exogenous*, issued by higher authority, like the state, and even with historical backing in a precious metal. It sounds logical that someone has to save first in order for a loan to be provided. But this ignores the accounting dimension of the credit creation. In their lending, banks create credit ‘*ex nihilo*’, and new money ‘*ab initio*’ with cash made ‘*out of thin air*’, because the loan amount is added onto the borrower’s account immediately after signing a loan contract. The accounting of this transaction is exemplified in the model in Chapter 1. The new deposit creates a liability for the bank simultaneously as the loan becomes a new asset on the bank’s balance

sheet, increasing the size of the balance sheet and keeping it in balance. The new loan is a liability on the customer's balance sheet, and the newly created cash on the bank account is the customer's asset. So both balance sheets are in balance and solvent. The increased size of the balance sheets is derived from *endogenous money*—that is, new cash created by bank credit giving. As discussed in a previous chapter, the funding only becomes an issue when the money is taken out of the bank, and banks can become insolvent if too many customers take out their cash. But the assumed order of things, that savings first have to enter the bank before the bank can lend money, is a misunderstanding. Nevertheless, the credit creation of cash out of nothing should not be understood as being any kind of magic—the funding flows have to be covered in order to make the loans usable outside of the bank. The model from Chapter 1 is extended with another bank to illustrate this concept in Chapter 9.

Banks' operations can be described as transacting the flow of money, inflow of deposits (and repayment of loans) and outflow to lending (and withdrawals of accounts). The fact that only a fraction of the credit amount is needed for reserves for the bank is the key element in the modern banking system, as a *fractional reserve banking system*. A key factor of the system is that the newly created credit, or the multiple lending of money, flows into other accounts and therefore the circulation or velocity of the flow becomes as important a factor of the system as the accounted stock of money. Minsky describes the business of banking based on the fundamental activity of

accepting, that is, guaranteeing that some party is creditworthy. A bank, by accepting a debt instrument, agrees to make specified payments if the debtor will not or cannot. (2008a: 256)

The balance sheet of bank is, according to Minsky, based on the one side on

three basic types of overt liabilities—demand deposits (checking deposits), dated debts, and owners' equity—along with contingent or covert liabilities such as acceptances, letters of credit, open lines of credit and responsibilities due to customer connection. (*ibid.*)

On the other side of the balance sheet

bank's overt assets are various forms of money, loans, and securities; covert assets are the liabilities of those who have lines of credit or whose debts have been endorsed as well as the bank's own lines of credit—including its connections with the central bank. (*ibid.*: 257)

Credit lines, loan promises or an overdraft account are other forms of cash being created by banks, but these covert assets and liabilities are not the focus of this thesis. For simplicity, the focus is explicitly on overt assets and liabilities in a normal commercial banking setting. As stated

earlier, this thesis excludes investment banking or shadow banking activity from the research at this stage for the sake of simplification.

Banks can increase inflow of money when they issue new bonds. The difference in the interest rates of borrowing and lending creates net interest income for the bank, so as long as the bank's finance cost is lower than what the bank can charge on the loans it provides to customers then it is profitable for the bank to increase lending.

Theoretically, the balancing of in- and outflow is not necessary for banks, and the cash balance at year-end can grow if more bonds are issued than loans provided (assuming deposits to be a constant). Similarly, the cash at year-end can be reduced if lending is growing more than deposits or other funding. In practice, temporary differences occur all day long, every operating day of the year in normal banking operations, but the treasury department of a bank works to match these in- and outflows all the time. At the end of the day and for each coming day, the treasury department plans for inflowing and outflowing money to be matched with contracts. However, this balancing of flows in and out is never stable but is in a *constant flux* (Mehrling, 1999).

In this constant flux of in- and outflow, aggregate measures over the period work out with netting and if all the banks are increasing lending at approximately similar rates, then it matches the flow between them and only part of the new credit has to be funded externally. One bank's external funding can then be borrowed from another bank, so it can also be created with endogenous money, making things even more complicated. This matching and netting ends in the reserves in the banks' own accounts at the central bank, as discussed in the previous chapter.

The core activity of banking, in its combined role of keeping deposits safely saved and also actively taking part in less secure lending, is by nature a risky business. This mismatch can be framed by focusing on the role of banks as providers of liquidity. Then the link between the lending and the liquidity creation leads to the inherent instability or the *fragile* financial system. This production of liquidity can be divided into two parts:

- *Funding liquidity* (unique to banks) based on deposits and loans
- *Market liquidity* (including other actors) based on securitization and syndication (including loan sales)

The creation of funding and market liquidity involves the risk that lies at the core of banking. Risk measurement and risk management have therefore become integral parts of banking, according to Allen & Saunders (2012). Risk refers to something that can be measured by

probabilities. Uncertainty refers to something that cannot be measured because there are no objective standards to express probabilities (Knight, 1921). One of the fundamental features of the financial crisis was to assume in most models of finance and economics that uncertainty could be given calculated probability (Haldane & Madouros, 2012).

The operations of banking take place through the bank's balance sheet, where the liquidity and maturity transformations flow through. This liquidity, as cash flow, runs through the balance sheet in banks and appears on the income statement as the difference of interest rates charged and paid, as net interest income. In non-financial firms, the liquidity is an operational measure that does not affect the balance sheet in a similar manner. This fundamental difference is not reflected in the accounting rules. Nevertheless, banks are under stricter regulations than most other firms. Krugman explains the need to regulate the operations of banks more than those of non-financial firms in one of his columns titled 'Why we regulate':

Why, exactly, are banks special? Because history tells us that banking is and always has been subject to occasional destructive 'panics' which can wreak havoc with the economy as a whole. (Krugman, 2012b: A23)

The raw material for banking operations, both economically and financially, comes from accounting information without much theoretical consideration. Mainstream accounting theory has developed under the influences of contemporary economics and the evolving finance theory, leading to certain circular reasoning. One example is the view that accounting should *only* provide information useful for investors on the financial market. By this focus on users, the function of accountability diminishes, with the belief that markets take care of the discipline. The lack of accountability in markets is problematic concerning banks, as Krugman explains above, because of their inherent financial fragility and the impact of their credit creation on the whole economy.

Origins of banks and development of money markets

Bagehot (1873) wrote the first description of the money market and called his book *Lombard Street – a description of the money market* in order to show his wish of dealing in “concrete realities”. The street derives its name from the Lombardy region in Italy where the origins of modern banks are to be found. Bagehot claims: “the Money Market is as concrete and real as anything else” but also added: “Money does not manage itself” (Bagehot, 1873: 1).

The Money Market on the Lombard Street is best described as: “by far the greatest combination of economical power and economical delicacy that the world has ever seen”. Everyone is aware that money is

economical power “But very few persons are aware how much greater the ready balance—the floating loan-fund which can be lent to anyone or for any purposes.” (Bagehot, 1873: 4)

This increased influence of banks in the economy can be traced to the origins of the banking system and its development from the early merchants and their merchant banking. Even though modern money and lending had its origins in Europe from 13th–14th century Italy, it can be tracked even further back in time, to the east (see for example: Graeber, 2011). The first modern banks are considered having been operational during the 15th century, like Medici (Parks, 2005) and other merchants. But Bagehot’s book, in the late 19th century, can be seen as the main fundamental text for the context of modern banking, in some way like Pacioli (1494) in his early writings on the system for accounts. Bagehot realized the economic power of banking as *“money ... deposited in a bank makes it far more obtainable. A million in the hands of a single banker is a great power; he can at once lend it where he will”* while money held at home *“is no power at all: no one knows where to find it or whom to ask for it”* (Bagehot, 1873: 5-6).

Paper money, or fiat money, with no backing in metal or other real value, was first invented in China by the Song dynasty in the 10th century. It is also claimed to have originated from the Yuan and Ming dynasties during the 11th century in China. The value of fiat money is derived from the government regulation or law backing it. In Europe, the first paper money was issued in Sweden in 1661 by Johan Palmstruch, a Latvian born Dutch merchant, at the private Bank of Stockholm, under royal charter from the Swedish Kingdom. Issuance of money was later taken over by the Parliament (Irwin, 2013, see also Kindleberger, 1984). Later in the 17th century, the Bank of Amsterdam issued fiat money, and eventually, London took on its role as the financial centre of Europe and playing a major role in the world’s banking system, as Bagehot has described:

Concentration of money in banks, though not the sole cause, is the principal cause which has made the Money Market of England so exceedingly rich, so much beyond that of other countries. The effect is seen constantly (Bagehot 1873: 6).

From its modern beginning, banking and money have practically been intertwined with financial crisis and the inherent instability of credit, as the centuries-long history of banking crisis shows (Reinhart & Rogoff, 2009; Grossman 2010; See also Parks, 2005, on Medici money and Kindleberger, 1996, on the Tulip bubble). The mainstream theories in finance and economics are based on a balanced model of general equilibrium that lacks the ability to absorb the constant flux of money in banking. That can

explain why the historically known booms and busts came as such a surprise in the most recent crisis. This inherent instability of banking should evoke an increased focus on accounting in economics and finance.

Evolution of banking and accounting

To bring Bagehot's world into today's context, the money market now is "*a huge and significant part of the nation's financial system in which banks and other participants trade more than a trillion dollars every working day*" in the US and it "*is a wholesale market for low risk, highly liquid, short-term IOUs. It is a market for various sorts of debt securities rather than equities*" (Stigum & Crescenzi, 2007: 1). *Stigum's Money Market* is considered a classical book by experts, used for students' training, and backed with research originating from extensive interviews of practitioners.

The evolution of the banking system can be traced back to the same origins as the accounting system, in Northern Italy. When the merchants could account for the status of their business, the accounting system also became a platform for systematically lending and borrowing. This development can be linked to the "*two worlds of money*" dating back to preindustrial capitalist economies (Braudel, 1982 cited in Mehrling, 1997):

there is the world of the local retail market, where the typical money is coin; and there is also the world of intermarket wholesale business, where the typical money is credit of some sort. (Mehrling, 1997: 4)

The merchants of Venice and bankers of Florence opened up the way for the *world of money as credit* instead of a *coin*, and their toolbox to do so was accounting. Each of the study objects in this thesis—banks, cash flow, credit and accounting—can be traced even further back in history. But traditional banking and accounting, as known today, are considered having a joint starting point in Italy in the 14th-15th century. Accounting had its origins many hundred years earlier in Mesopotamia (Hoskin & Macve, 1986) and similarly banking did exist in ancient Greece and even earlier in Asia (McCloskey, 2010) while money and debt has many thousand years history (Graeber, 2011).

From the establishment of the systematic double entry bookkeeping or accounting system it is, by definition, not possible to have negative cash flow or more money flowing out than in. But credit or debt solves this need for cash, temporarily, based on a promise that assumes it will be paid back later. Put differently, the loan is a *time transfer of money*. This puts very special demands on the accounting of credit providers like banks. The survival constraint of a firm is to have more cash inflow than committed cash outflows. The credit assumes more cash to be generated

in the future, to cover the cost for lending and the repayment. The logic does not allow for the assumption that a loan may not be paid. Some loan losses do occur in normal banking and reserves are made for those, but these are a small fraction of the total lending. But if all loans were repaid, there would be no need for banks. So the going concern of banks assumes continuous lending, but the business idea of credit giving logically assumes all loans will be repaid. This is derived from the separate stock and flow functions of the cash concept in banks' accounts.

When the logic of the financial system switches to constantly increasing leverage, and taking on new loans to pay down previous loans, it becomes what Minsky calls speculative finance that in the end can turn into a Ponzi finance (where more loans are needed to pay the interest of existing loans). If a firm runs out of cash they are soon out of business—liquidated. If a firm is not seen as able to pay back its debt they are unlikely to get more loans and soon to become insolvent. Banks, on the other hand, are able to keep negative cash accounts without liquidation or insolvency. This is because they create more cash by giving more credit to customers. When needed, the banks can also borrow from each other, increasing further the amount of both debt and cash.

Accounting theory, accounting regulation and accounting systems are in trouble when handling this feature of banking activity, as this thesis illustrates. On the balance sheet, cash is assumed to be stored at the bank as an available asset. Banks provide the underlying structure for most of the accounting transactions. But otherwise banks are not seen as important in the conceptual framework of accounting, and little attention has been paid to special cash flow issues in accounting in banks. The concept of credit creation of money is still missing in theoretical accounting literature, as Chapter 3 will show. This fundamental function of the basic banking activity is also missing in practical accounting regulatory frameworks, as Chapters 5–6 will show.

Inherent instability of finance

In banking theory and practice, accounting systems and rules provide the basic infrastructure for relevant and reliable information about bank activity and customers. But special attention is not paid to the accounting of banks in and of itself. Accounting is considered an obligation for banks, as in other firms. Special issues regarding banks' accounting are not raised in the existing theoretical accounting context even though practical accounting rules sometimes specially take on certain banking activity.

The uninterrupted flow between banks was taken for granted until it suddenly stopped. The wholesale interbank market froze on 9 August 2007 (Goodhart, 2009; Sorkin, 2009; Gorton, 2012) after money market funds ended in trouble due to assets backed with sub-prime loans. Since then, the previously ignored liquidity risk has received major attention. Troubles continued for over a year with several big banks failing, both investment banks like Bear Sterns and commercial banks like Northern Rock. Then a year later, after the Lehman Brothers bankruptcy, the whole financial system collapsed. It was subsequently saved by the central banks of the world, with threefold growth of their balance sheet, as Figure 2 illustrated in the previous chapter.

During a meeting one night in September 2008 with Treasury Secretary Henry Paulson, the Fed Chairman Ben Bernanke and leaders of both parties in the US Congress, Bernanke famously said: *“Unless you act in the next few days the financial system in the U.S. and the rest of the world will melt down”* (Kathleen McBride quoted in Gorton, 2012: 182). This was followed by a situation where, out of the 13 most important financial institutions in the US, *“12 were at risk of failure within a period of a week or two”* (Levin, 2011: 354). The support provided by the government amounted to \$700 billion for the TARP, plus \$1,100 billion in lending to financial firms from the Fed and the \$800 billion of the American Recovery and Reinvestment Act in 2009. These amounts show how reliant banking can be on receiving help from the state in times of crisis and how inefficient financial markets can become.

The current mainstream banking theory, as presented in Berger, Molyneux & Wilson (2012), does not incorporate this *inherent instability* of finance (Minsky, 2008a) but is more inclined to the economic theory of *general equilibrium* (Arrow & Debreu, 1954), with rational agents and efficiency in markets. The current and previous financial crisis periods have empirically shown how many of these assumptions must be false (Reinhart & Rogoff, 2009; Grossman, 2010; Kindleberger & Aliber, 2011). Recent financial crises in Russia and Asia as well as South America provide useful evidence to understand the current crisis by using the framework of Minsky:

Economic and social scientists continue to debate the nature, causes and lessons of the 1997–1998 crises. Yet if we want to inquire into the processes and mechanisms that drove the economies into crises, it is the framework that Hyman Minsky suggested some 30 years ago that proves to be most revealing. (Nesvetailova, 2007: 126)

The origins of this financial instability theory can be traced back to Schumpeter (1934; see also Broberg, 2006) but Minsky was Schumpeter’s

student, and formulated the theory in the book *Stabilizing an unstable economy* (2008a) under strong influence from *John Maynard Keynes* (of whom Minsky wrote a biography, 2008b, and which is relevant for this issue). Furthermore, Simons, another of Minsky's teachers, is a source to trace the origins back to Irving Fisher and his urge for controlling instability by the tools of central banks for stabilization through money supply and growth of private credit (Moe, 2012).

At the time of Schumpeter's writing it was commonly accepted that lending did not have to be based on existing savings. The credit creation of money was also included in Keynes' writings (1936), but this knowledge has since then become marginalized in the mainstream even though it has been discussed differently, like with Tobin (1963) as *fountain pen money*. One explanation could be that it is seen as contradicting the conventional idea of banking, based on the logical narrative that banks collect savings first to then be lent out later.

The outbreak of the *current crisis* has been called a '*Minsky moment*', (McCulley, 2009) and the events have practically provided a textbook example of Minsky's framework of the inherent instability of the financial system. Keynes has also regained his position after the crisis, as Skidelsky describes in *The Return of the Master* (2009). Eggertsson & Krugman (2012) have also pointed out the *liquidity trap* explaining the aftermath of the crisis, while Mehrling (2011) calls the current state of affairs a '*Bagehot moment*'. The central banks of the world saved the collapsing financial system, and took the problems onto their balance sheets. This increased size of the central banks' balance sheets, after the period of too much debt, suggests that banking and accounting research should be more intertwined. Even though our times are different from Bagehot's, the importance of the money and the market remains:

The money market is where promises made are measured against results achieved, and committed cash outflows are weighed against realized cash inflows. The survival constraint is the discipline that maintains the coherence of our decentralized market system, and management of that constraint is the most important duty of the central bank. (Mehrling, 2011: 139)

The different hierarchies of money become apparent under the survival constraint. What is considered a liquid asset, or cash equivalent, can cease to be so and it can happen quickly. That is what took place in 2008, and it makes the cash flow a critical issue in banks, and its accounting becomes equally important due to inherent financial instability.

Global financial regulation

The different liquidity of assets and the hierarchies of money have their roots back in the origins of the capitalistic system. Turner argues that not only the banks or the financial sector but the whole *“capitalist system has suffered a great crisis”* (2012: ix). This is a great crisis, even though since the intensifications in the autumn of 2008 we have not had a Great Depression in comparison to 1929–1933. Beginning to weaken in August 2007, the global money market collapsed in the autumn of 2008. This was due to a breakdown in the financial system and its regulation that still has not been solved. The crisis illustrates a failure of economic theories and the need to reject simplifications of neoliberal, neoclassical and overly mathematical economics in Turner’s view. His conclusion is that the crisis *“should prompt us to challenge fundamental assumptions and to raise issues that go beyond those directly raised by the impact of the crisis itself”* (Turner, 2012: x).

It is necessary to move beyond simplistic beliefs in order to build a more stable financial system for the future. The profession and study of economics heavily uses material supplied by the profession of accounting. The study of accounting often builds on material supplied by the study of financial markets. Most of the financial numbers used in economic analysis are derived and aggregated from accounting reports. Financial models operate according to mainstream economic theories. Through accounting, the financial information is summed up from all business transactions. There is a risk for circular logic in this structure. For the global financial system to be manageable, a good accounting of all its banks and their transactions is a fundamental prerequisite.

The rejection of dominant conventional wisdom in economics, as illustrated by Turner (2012), does not mean rejection of market economics or of liberal capitalism as such. But the implications of the crisis do call for the rejection of some parts of recent market-based accounting traditions, certain economic models and parts of finance theory, in order to build a better regulatory framework. The financial crisis expert committee of the UN, chaired by Stiglitz (2009), concluded regarding globalization as follows:

economic globalization has outpaced the development of adequate global institutions to help manage globalization. When national economies were formed, national institutions were gradually developed to help manage their economies. These include institutions and regulatory frameworks to ensure competition, to protect consumers and investors, to manage bankruptcies, to enforce contracts, and to ensure the stability of the economy. With the increase in cross-border economic activity, the functioning of the world economy will require the creation

of institutions and institutional arrangements fulfilling similar functions at the global level. (Stiglitz, 2009: 105)

In response to the financial crisis, Skidelsky has argued it is not enough to change policy; it is necessary to reconstruct economics itself (2009: 169). When much of economics is built from accounting information and data, this reconstruction of economics will have an impact on the discipline of accounting as well.

Until now, this chapter has focused on the outside context and the financial markets that banks operate in. This is where the cash flow between banks takes place. The second part of this chapter will focus on the internal parts of the cash flow in the setting of financial operations. This inner context is about the cash flow inside the banks.

2.3 – Cash flow from financial operations

The previous part of this chapter focused on banks in the economic context of financial markets. The remaining part of this chapter covers the financial aspects of the cash flow as well as the practical internal functions of cash flow accounting within financial firms. The discussion departs from a theoretical perspective, moving over to focus more on the practical or operational context of banking in finance.

Existing literature of banking theory includes little focus on accounting. For example, *The Oxford Handbook of Banking* (Berger, Molyneux & Wilson 2012) mentions accounting on only three occasions in over 994 pages. Accounting theory literature has similarly little focus on banks. The reporting of cash flow is non-existent in the banking literature surveyed for this thesis. As a result, almost no theoretical texts or previous research has been found focusing on cash flow accounting in banks, apart from the writings of Minsky (1967, 1975, 1982, 2008a).

Purpose of financial operations

Financial operations are about cash flow and banks operate as keepers and dealers of money, creating credit and facilitating liquid transaction flow.

The distinctive function of the banker, says Ricardo, begins as soon as he uses the money of others; as long as he uses his own money he is only a capitalist. (Bagehot, 1873: 21)

The distinctive function of banks is that cash constantly flows through their balance sheet without being used. Their operation is not only an intermediation but includes the credit creation of increased cash, lent to

customers to use. A positive cash flow from operational activity has been seen as the core objective of every business enterprise:

For, as we know, there are three things needed by any one who wishes to carry on business carefully. The most important of these is cash or any equivalent, according to that saying, *Unum aliquid necessarium est substantia*. Without this, business can hardly be carried on. (Pacioli, 1494, 2010: 123)

This practical truth has been long known even prior to being written down in 1494, and it is still self-evident to every businessman that he will need more cash inflow than committed cash outflow in order to survive. But cash can be borrowed, creating inflow now that requires outflow in the future. This basic function becomes its opposite in the context of banks and their accounting. The simple truth of cash flow in business is that it is theoretically easy to get, but it is more complicated for banks in the real financial world.

Few analytical terms are more widely used and, at the same time, more poorly understood than the term cash flow. (Bernstein, 1993: 427)

When the complexity of cash flow accounting in bank operation is combined with the poorly understood concept of cash flow the results are both theoretically challenging and practically difficult to deal with.

Additional factors contributing to the complexity are expectations about *future cash flow*. These expectations control banks' credit giving to customers in need of cash, but the future flows are necessary to repay the loans. This future cash flow is not yet a fact, and no transaction has taken place other than writing down the promise to pay back the cash in the future. The contract is an asset of the bank, and the customer in return gets cash in its current account. That transaction takes place and is part of the accounted cash flow of the period. The documented historical cash flow transactions create the assets of the bank where given loans have been documented. Overdrafts, credit lines or loan promises are on the borderline and are not considered in this thesis for the sake of simplicity.

Different viewpoints on the accounted cash flow evolve around the cash flow statement that is at the core of this thesis. The first regards how the statement is prepared in practice, according to the accounting standard—its purpose. The second examines how or if the statement is used for analysis, practically in banks and theoretically as the regulators assume. The third point is the flow itself, behind the statement that is made and regards the cash flow operations in the credit creation.

The operation of the everyday cash flow of a bank takes place in the treasury function. The treasury department is like a bank within the bank,

and its day-to-day focus is to make sure there is enough income of cash inflow to pay committed cost and cash outflow. The raw material in the operations of the treasury is cash, and they prepare lists of all known or contractual in- and outflows, repayments of loans from customers, and commitments to pay the expiring financing of the bank. These flows are known per day long into the future, but they constantly change when new loans and cash transactions of customers in and out of their bank accounts take place every day. This makes the current cash flow problematic to plan for, just like the expected future cash flow. The only reliable fact of documented cash flow transaction is the historical flow and contracts.

In light of the problems illustrated in the previous chapter and the previous sections of this chapter, a logical step would be to search through the existing research literature for explanations of the controversies of cash flow in banks. But when no explanations can be found in previous research, one way forward is to turn to practical publications, like the original standard for accounting of cash flow and related historical material. First, the purpose and history of the statement of cash flow is presented in the next part.

Statement of cash flows

Accounting regulations demand that all companies prepare statements of cash flow as part of their annual financial reporting. The purpose of the statement is defined in the accounting standards as following:

The primary purpose of a statement of cash flows is to provide relevant information about the cash receipts and cash payments of an enterprise during a period. (FAS 95, 1987: 5, paragraph 4)

Users of an entity's financial statements are interested in how the entity generates and uses cash and cash equivalents. This is the case regardless of the nature of the entity's activities and irrespective of whether cash can be viewed as the product of the entity, as may be the case with a financial institution. Entities need cash for essentially the same reasons however different their principal revenue-producing activities might be. They need cash to conduct their operations, to pay their obligations, and to provide returns to their investors. Accordingly, this Standard requires all entities to present a statement of cash flow. (IAS 7, 2010: A340, paragraph 3)

Cash, or money, are loose terms with many different definitions.

In strict legal sense, cash is legal tender which represents ready money in one's pocket or safe such as bank notes and coins acceptable as a medium of exchange in a country. (Wallace & Collier, 1991)

In accounting terms cash, cash equivalents and cash flows are defined as:

Cash comprises cash on hand and demand deposits. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of

changes in value. Cash flows are inflows and outflows of cash and cash equivalents. (IAS 7, 2010: A341, paragraph 6)

Economists traditionally define cash as anything that combines the attributes of a *medium of exchange*, a *store of value* and a *unit of account*. In this thesis, cash is used as the unit in cash flow statements. Cash in today's economy is mainly electronic money and the concept of money as physical currency, in paper notes and metal coins, is only a small portion of the total cash.

The cash flow statement in accounting reports is based on the idea of showing cash receipts and cash payments in a firm. These flows are split into three main groups of cash coming in from activities of operations, investment and financing. The main direction is operational inflow from revenue and outflow of cost, financial inflow from loans to cover outflow for investment, while investment assets sold change the direction to inflow and, similarly, the repayment of loans leads to outflow from borrower to lender.

In banking, cash flows through the bank due to its function in the payment system in facilitating transactions of customers. Part of the funding comes from deposits and most of the operation is some kind of investment in lending where loans are the assets. The activities are therefore not fit to classify in the same manner as in non-financial firms and the gross flows are in addition much bigger than net flow in and out.

For any firm, the cash flow statement can be seen as an overview of their cash account from the beginning of the period, until the end. Then transactions are classified after the activity, in order to see where money is generated from and in what activity it is spent. For a bank, its cash reserve on 'bank account' is kept at the central bank. Accounting classifications are turned around in bank so that a loan (to the customer) is an asset (of the bank), and the customer's cash in the bank is the bank's liability to the customer. Banks finance their liabilities both with deposits from customers and bonds and borrowing from other banks. Banks can also get funding from the central bank. The investment of a modern bank is additionally made in other types of financial instruments, but for simplicity in this thesis the focus is put on traditional banking and normal lending to customers. Similarly, other types of banks are excluded for simplification of the argumentation and clarity in the analysis.

The initial idea of the cash flow statement was based on a direct method, summing up all inflow and outflow, just like any businessman has done from the early days of balancing his check account. In the 1960s the cash flow analysis was first advocated and argued for (Olson, 2004) and an

overview of the development is provided by Lee, *Towards a theory and practice of cash flow accounting* (1986) and Lawson, *Studies in Cash Flow Accounting and Analysis* (1992). The cash flow statement was debated during the 1980 as an addition to the financial reporting (Lee, 1984; Egginton, 1984, 1985; Lee, 1985; Staubus, 1989; Lee 1990). After its implementation in practice with the standard (FAS 95) in 1987, the direct method was preferred by the standard setter but mostly abandoned by practitioners. For accounting purposes the indirect method of preparing the cash flow statement took over in most firms (94% according to Weygandt, Kieso & Kell, 1996: 738). A cash flow statement prepared with the indirect method starts with the net operating income and the numbers are then adjusted. The net operating income is corrected for non-cash items in order to construct an overview of how much cash has been generated in the firm from operating activity (more revenue assumed to be flowing in than cost flowing out), investment activity (usually mainly outflow) and financing activity (inflow from lending, or the opposite when it is paid back). Accounting standards still state that the direct method is preferred, while practitioners prefer the indirect. Only one bank in this study used the direct method, as shown in Chapter 7.

Common to all theoretical texts about cash flow surveyed, none has taken up the special issue about banks and their cash flow. Similarly, the credit creation of banks is non-existent in the accounting literature covered for this thesis. Searches for articles on cash flow in banks yield very limited results, and only a very few were found relevant; these are covered in Chapter 3.

Importance of cash flow from operations

The cash flow from operations during the previous year in the annual report of a company is assumed to be a concrete measurement of financial performance for the accounted period. Past cash flow is often even used as an indication of how much cash flow can be expected in the future. But the direct connection between the past and the future is still very unclear. Banks in this study acknowledge that their customer's past cash flow is used as part of the credit evaluation prior to providing them with a new loan.

Many examples can be given to show the traditional functions of cash flow in business practice. In order to understand the problems of cash flow in the world of finance, a description of how the cash flow functions in the world of business is a useful start. Below is one example, taken from the real estate industry.

Real estate firms have a cash flow generated by the rental activity of their real assets in the building. *"We love cash flows"*, says a CEO of a real estate company quoted in the daily financial newspaper (Dagens Industri, 2010). Another CEO, who has managed his company through the current and previous financial crisis in Sweden, confirms the same strong focus on cash flows in the letter to shareholders in the annual report, stating, *"The business idea is simple and clear: All business decisions shall be good in the long run for the cash flow of the company"* (Fastpartner, 2009: 6). A third example comes from Castellum, one of the biggest real estate firms in Sweden, and it too has a similar cash flow focus in their recent annual report. The second headline of the report describes the company and its business concept, *"Focus on cash flow"*, on the first page of their annual report (Castellum, 2009: 1) and it continues:

The objective is to focus on cash flow growth, which along with a stable capital structure provides the preconditions for good growth in the company. (Castellum, 2009: 2)

Castellum was selected as a comparable case for the banks in this study of financial statements in order to show a non-financial firm with cash flow numbers over the same period. The two graphs showing a summary of the cash flow in Castellum were used as part of the presentation material for the banks at the beginning of each interview, in setting the stage for asking how cash flow numbers can be interpreted in the bank's cash flow.

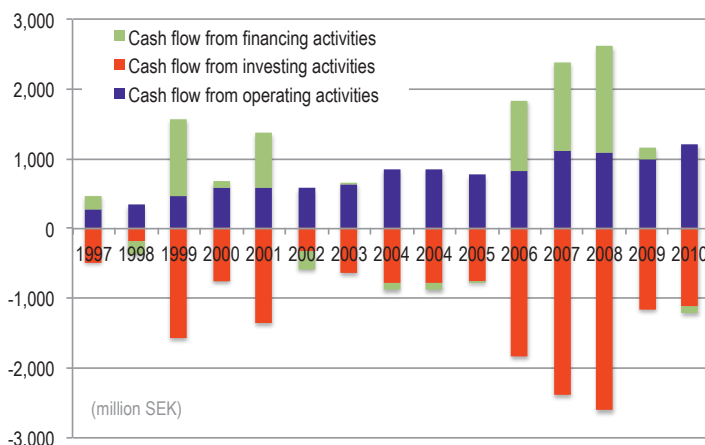


Figure 6: Castellum Cash Flow AR 1997–2010

The defining function of the operative cash flow becomes clear in the simple case of a real estate firm. The income is generated from the invested buildings as assets and it has to cover all the costs of owning and financing those assets. Rental income has to cover all interest,

maintenance and operational costs. Then the remainder of positive cash flow from operations can be used to pay out dividends to the owners and invest in new buildings. Additional costs of the investment can then be financed with borrowing and the total outflow for investment activity equals total inflow from financing and operations (assuming unchanged cash position at beginning and end of the year). The case of Castellum illustrates this well in Figure 6 above, with a cash flow overview in similar form as for the banks in Chapter 7. For an overview of the Swedish real estate and financial crisis in the 1990s with reference to cash flow accounting see Olson, Falkman & Pauli (1995, specially chapter 7).

An alternative case to the real estate firm on the importance of cash flow from operations is start-up firms. There, investors can accept a negative cash flow for certain periods, especially negative cash flow from operations, until the product has been developed. Many examples of lack of cash flow are in start-up firms that got funding during the IT bubble in 2000–2001. A famous case in Sweden is the company *Prosolvia*, where the initiation of their bankruptcy has been traced to an article in the business newspaper where it was pointed out the company was not generating any cash flow from operations (see further Mjölnevik, 2010).

The cash flow is not mentioned in the annual reports of banks, as opposed to the focus on it in non-financial firms as shown above. This ignorance of cash flow in the banks' reports is unchanged from before as well as after the financial crisis. Not even in the notes are cash flow issues discussed in banks' annual reports. The cash flow statement itself is in its place as one of the main statements of the financial accounts. But no discussion about the cash flow numbers can be found in the text of the reports. No cash flow numbers are summarized in the key ratios or the five-year overviews of the annual reports. Cash flow is not mentioned in the letters from the bank managers and it cannot generally be found discussed in the text in the annual report. The analysis of the documentation of banks is covered in Chapter 7, based on the financial statement analysis of the last fourteen years' worth of annual reports in the eight biggest banks in the Nordic countries.

Cash flow and banking

A common feature in the overview of accounting theories from 1977 in *Statement on Accounting Theory and Theory Acceptances* (SATATA) by American Accounting Association (AAA, 1991) and in accounting theory books (Kam, 1990; Hendriksen & van Breda, 2001; Riahi-Belkaoui, 2004; Henderson, Peirson & Brown 1992; Deegan & Unerman, 2006; Kinserdal,

1998), is that no special focus is put on banks. In the International Accounting Standard of cash flow statements (IAS 7), financial firms get special exceptions for treatment of loans and interests, but the credit creation in banks is not acknowledged and neither in the conceptual framework (IASB, 2010). The special example of financial institutions in the cash flow standard (IAS 7, 2012: B1058) does not illustrate a bank that provides loans as its main activity.

Accounting theory texts reviewed for this thesis (AAA, 1991; Kam, 1990; Hendriksen & van Breda, 2001; Riahi-Belkaoui, 2004; Henderson, Peirson & Brown 1992; Deegan & Unerman, 2006; Kinserdal, 1998) do not provide any theoretical insight derived from or contributing to the issues of cash flow in banks. This ignorance is a challenge for the study of accounting in banks and makes it difficult to find a theoretical framework for it. Banks are treated as other non-financial firms in accounting theory and accounting standards conceptual frameworks do not cover credit creation. The accounting regulatory frameworks will be reviewed in Chapter 5 and the accounting theories will be presented in more detail in Chapter 3.

The financial crisis illustrates the limits in existing theories of both economics and finance, and these have been debated for the last five years. In the case of mainstream economics and finance theories, banks are excluded from the models (Turner, 2012) and money and credit was downplayed in policy-making and bank-regulation (Haldane, 2012b). The failures most clearly expressed during the crisis were the practical implications of leaving out the function of banks in the theoretical fields of economics and finance.

Understanding the many roles that banks play in the financial system is one of the fundamental issues in theoretical economics and finance. The crisis that started in the summer of 2007 underlines just how important banks are to the economy. (Allen & Carletti, 2012: 37)

The first step to approach the problems described in the earlier chapter is to look for what has been written previously in the field of banking and accounting. But there is not much to be found about cash flow of banks in research publication databases. In those studies that were found some are statistical, like Henebry (1996) with mixed results while others were published by consulting firms, like Klumpes, Welch & Reibel (2009) or in practitioner's journals like Weiss & Yang (2007). These last two mentioned can provide input for the development of the new accounting regime for banks, and future research as discussed in Chapter 9. Those found relevant for the thesis are covered in Chapter 7, like Mulford & Comiskey (2009) and Maux & Morin (2011).

Many of the practitioners who were approached in the early phase of this research immediately claimed that the cash flow statement is not relevant for banks. That fits to Weiss & Yang (2007) claiming: “the figure for ‘cash provided by operations’ is meaningless” for financial institutions. The statement of cash flow is still obligatory according to international accounting standards and is made by all banks. The reason for continuing to investigate the issue was that no one could provide any convincing arguments for why the cash flow is not relevant for banks. Before turning to the relevance of cash flow in next section, the operations, origins and evolution of banking are first covered in the remainder of this section.

Accounting for financial markets

The *conceptual framework* (IASB, 2010) of the international accounting standards aligns the purpose of accounting statements to be useful for investors and the financial market.

The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity. Those decisions involve buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit. (IASB, 2010: 9)

The key concept in the quotation above is *usefulness*. The utility function of the users is implicitly assumed to be maximizing profits in financial models—not, for example, minimizing risk with a safe and secure lending activity. The conceptual framework of financial accounting discusses the concept of cash flow, both as reported and expected.

Information about a reporting entity’s cash flows during a period also helps users to assess the entity’s ability to generate future net cash inflows. It indicates how the reporting entity obtains and spends cash, including information about its borrowing and repayment of debt, cash dividends or other cash distributions to investors, and other factors that may affect the entity’s liquidity or solvency. Information about cash flows helps users understand a reporting entity’s operations, evaluate its financing and investing activities, assess its liquidity or solvency and interpret other information about financial performance. (IASB, 2010: 13)

There is a strong focus on the users and their ability to assess performance and evaluate liquidity and solvency. The user is seen as an investor, based on the common theoretical denominator of the models in finance theory that can be isolated as the idea of the representative agent. This agent, as investor and user of accounting information, is assumed to make rational decisions regarding transactions and investments based on perfect information in a market setting to maximize profit based on the expectation of future cash flows. This ideal profit-maximizing rational agent is multiplied to represent all agents in the economy and the financial

market, assuming transactions to be based on this rational decision-making and utility maximization. Financial reports are a crucial source of information material for these agents, and the reports are prepared and produced in accordance with this finance-based theoretical framework.

While the literature in finance and economics has for the most part ignored accounting, the accounting literature has not been free of influence from both finance and economics. The writings in accounting theory, which will be covered in Chapter 3, have drawn on economic and finance theories. In practice, accounting has viewed its role as providing useful financial information to the market agents. This implies a danger of circular logic, when the economic theory is built on the use of information from accounting while the accounting theory builds itself on ideas from economic theory with the goal of providing economically useful financial information.

The main point is that economics lives on accounting ideas. If research in accounting comes to imitate economics it had at least become aware that in the end it is eating its own tail. (Klamer & McCloskey, 1992: 159)

This connection of accounting and economics builds up to the revolutionary ideas of finance that are spreading through global financial markets and simultaneously increase the importance of international accounting.

International accounting and finance

International Accounting Standards are both the result of and an influential factor in the globalization of finance. Accounting issues become the core of analysing the global companies involved in the financial crisis. Was Lehman Brothers, for example, solvent? This question was asked by the *Financial Crisis Inquiry Commission* and in his testimony in front of the parliamentary commission Jamie Dimon, CEO of JP Morgan, replied: “*What does solvent mean? The answer is I don’t know. I still could not answer that question*” (Levin, 2011: 325). The risk officer of the same bank testified:

from a pure accounting standpoint, it was solvent [... but ...] it obviously was financing its assets on a very leveraged basis with a lot of short-term financing. (*ibid.*)

From its beginning in 2007, the financial crisis has had global effects, as discussed in Chapter 1. The world of finance had in the previous three decades become increasingly global, even though banking has always been international (Mehrling, 2011). The increased globalization of the finance industry can be traced back to the period of its deregulation in the 1980s. During the same time, the accounting standard for statements of

cash flow was implemented both in the US by FASB and a few years later in Europe by IASB.

Technology development over this time period has also facilitated an increased speed of international communication and made faster financial transactions easier. The technological development and the ideology behind deregulation of financial markets are outside the scope of this thesis. However, accounting regulation, especially its internationalization and standardization, is relevant and will be covered in Chapter 5.

For the facilitation of increased globalization of the financial operations in banking, two parallel developments were most critical. One is the internationalization of accounting standards and the other is the revolutionary development of finance. This financial development had its roots in the US and can in itself be seen as a critical prerequisite for the harmonization of accounting standards internationally.

Mehrling describes important episodes of this modern development of finance in Fischer Black's biography, *The Revolutionary Idea of Finance* (2005, 2012). By one description the idea is the Capital Asset Pricing Model (CAPM) according to the Treynor version (see also Treynor, 1987). More specifically it is the *equilibrium* in CAPM that was the idea that could change the world. In Black's CAPM world it "*does not eliminate uncertainty, but it does show how to live with it*", and the

equilibrium is only an instantaneous balancing of forces at a single moment in time, and a balance that is moreover constantly shifting from moment to moment. (Mehrling, 2005: 291)

This lens of equilibrium—through which Black wants to see the world of finance—shows how people can choose their risk exposure to match their own risk tolerance, but it is a constantly changing equilibrium (Mehrling, 2005: 292). Furthermore, for Black, it was clear that markets would not be efficient all the time (Mehrling, 2005: 236), but nevertheless it would be a good way to model markets assuming them to be efficient. It was an efficient market theory of money. Opposed to Friedman's quantity theory of money, both being alternatives to Keynesian orthodoxy.

Starting from CAPM, Fischer saw money as a form of credit arising from riskless borrowing and lending between individuals. (Mehrling, 2005: 161)

Another important fact is that Fischer Black, working from the treatise of Irving Fisher, based his entire approach to economics on the old book by Fisher, *The Nature of Capital and Income* (1912), which is essentially an economic theory of accounting. But most economists rejected this theory, while another book by Fisher, *The Rate of Interest* (1907), became the central

mathematical foundation for the post-war economics education of “*utility-maximizing individuals and profit maximizing firms*” (Mehrling, 2005: 204).

It was clear to Black that markets would not be efficient all of the time, and it was also clear that accounting rules would have to be changed due to the changing world of finance. As Mehrling puts it in the introduction to the second edition of the book (2012) in light of the crisis:

Financial globalization has transformed the modern world, but the mechanisms of regulation, both public and private, lag far behind, designed as they were for a world that no longer exists. (*ibid.*: xxi)

It is a key point here that the globalization of the international accounting rules with harmonization efforts between IASB and FASB were coming to an end just before the crisis that put those efforts into reconsideration and delayed the process. Accounting has increasingly been internationalized and harmonized in most of the countries of the world. This development has fostered faster flows of information and capital around the world and made it possible for the financial markets to become globally integrated.

By purporting to provide information to investors and creditors about the value of complex derivatives, financial accounting gave the appearance of normality and legitimacy to high-risk securitization and international financial speculation (Arnold, 2009a, 2009b). But “*in a world of derivative securities, the idea of measuring cash instruments or using accounting concepts is simply no longer adequate. There has been no serious updating of measurement systems in the last fifty years*” (Gorton, 2012: 210) and part of the problem is that risk and liquidity are not measured.

Global accounting standards and the international banking activity facilitated each other, in an era of financial liberalization and increased capital mobility; this most likely played a role in the global financial crisis. Reinhart & Rogoff show that:

Periods of highly international capital mobility have repeatedly produced international banking crises, not only famously, as they did in the 1990s, but historically. (2009: 155)

A common feature of the run-up to a banking crisis is what Reinhart and Reinhart call “*capital flow bonanza*” that is “*a sustained surge in capital inflows [...] involving several percent of GDP inflow on a multiyear basis*” (*ibid.*: 157).

While the capital flows between countries are documented but have been missed, in the run-up to recent banking crises the less documented capital flows between banks are another factor that is missing. Turner (2014) shows how the wrong capital flows can be dangerous, and the relation to the danger of too much debt (Turner, 2013a, 2013b). The changes needed for the accounting rules that Black assumed as part of the revolution of

finance, drawing from the old economics of accounting from Fisher, are still needed, and would necessarily include better documentation of the flows between the banks. Bezemer (2010) has argued for more 'accounting of economics' and using at 'flow of funds models' in order to revise the methods of assessing financial stability and reduce the international financial turmoil. The evidences of the problems are partly evident in the accounting statements. After regulation of banks was moved out of central banks and the downplay of money and credit in global monetary policy:

Whether by coincidence or causality, the world experienced the largest banking bubble in history. Between 1990 and 2007, global bank balance sheets rose by a factor four. On the eve of the crisis they had reached around \$75 trillion, or almost 1.5 times the annual output of the entire planet. (Haldane, 2012b: 9)

This financialization puts demands on the accounting, specially when the balance sheet growth in banks come more from them lending to each other rather than to customers as Haldane & May point out:

Perhaps as much as two-thirds of the spectacular growth in banks' balance sheet over recent decades reflected increasing claims within the financial system, rather than with non-financial agents. (2011: 351)

2.4 – Summary of the financial context

The widespread literature in finance, economics and banking in this chapter has shown that solutions to the accounting problems in Chapter 1 are not easily found in existing publications or previous research. Therefore, practice-oriented texts were included as well, for example from central banks publication. The next chapter will investigate accounting theory with regards to banking. The preliminary conclusion from the context of banking economics and finance here is that an empirical investigation should take a long-term perspective because some clues could be found in historical empirics and writings, with knowledge that did not make it to the current mainstream.

Another conclusion from the writings in the financial world within the context of banking and money is that practice needs to be investigated empirically because the accounting in banks is missing in available literature. Before turning to the practical and empirical investigations of the cash flows in the banks, the next two chapters will first cover the overview of accounting theory and the theoretical framework to be used for the thesis in Chapter 3. The methodology of the research is given in Chapter 4, describing how the studies require multiple methods to handle the complex financial context.

Chapter 3: Accounting Theory

3.1 – Theories and framework

This chapter examines accounting theory and its developmental approaches, both from a general perspective and with a narrower focus on the features of banking. First, financial accounting theory is discussed from several different viewpoints and as a conceptual framework. The middle part of the chapter surveys existing accounting theories, searching for parts that are relevant to banking. The historical approaches to accounting theory development are the classical approach, the decision usefulness approach, and the information economics approach, in addition to the positive accounting theory.

Review of the literature in the chapter indicates that banks are generally excluded in accounting theory. Theory is therefore broadly defined in this thesis and the theoretical framework draws on aspects of other theories from the context shown in the previous chapter. Explanations of the negative cash flows in banks have not been found in the accounting theory literature, and no discussion of how accounting differs for banks. Nor is there an agreement about practical definitions or classifications for the cash flow statements in the banks.

In the last part of the chapter, a theoretical framework for the thesis is presented. This framework is built on the modern money view put forward by Mehrling (2011), and modified here from economics to accounting, with a changed focus from central banking to the level of general commercial banking. It includes the viewpoints of accounting, finance and economics, and will then be used according to the practice turn in the empirical studies to investigate the banks' cash flow operations and why the statements are not used. The chapter ends with a short summary.

3.2 – Theory of financial accounting

This section of the chapter covers financial accounting theory in a broad sense, beginning with the general issues of accounting theory and then the theoretical implications for accounting research derived from financial practice. Finally, the theoretical developments in accounting research are discussed to open up the approaches in the coming sections.

Accounting problems

Accounting is a practice-oriented subject, so theoretical approaches and theory development in accounting involve problematic issues. The theoretical underpinnings of this chapter try to combine the facts that “*the accounting literature includes many different views of theory*” (Watts & Zimmerman, 1986: 1) and “*a single universally accepted basic accounting theory does not exist*” according to the SATATA report (Statement on Accounting Theory and Theory Acceptances) by AAA (American Accounting Association, AAA, 1991: 1).

When no single applicable accounting theory is sufficient, parts of theories of banking and monetary economics from the financial context in the previous chapter are added to deal with the problem of cash flow in banks. For the theoretical framework of this thesis, at the end of the chapter tools from economics are used to bridge the gap between banking and accounting. The theoretical framework for this thesis is a result of the accounting theories surveyed lacking coverage of banks and builds on the finance context from the previous chapter. This theoretical framework for the research is different from the existing theories in the field of accounting, because the problem of the thesis cannot be solved with existing theories. In the second part of the thesis this framework is used for analysis of empirical studies and to draw the conclusion of the research in Chapter 9.

A theory can be interpreted differently. Some say theory should provide explanation of a phenomenon or practice; alternatively, theory can be expected to model reality, even to predict outcomes. Finally, a theory can be seen as a conceptual framework. In the case of cash flow accounting in banks, available theories fail to do any of this. “*Complexity and change ensure that we will never have a complete theory of accounting*”, according to Watts & Zimmerman (1986: ix). These problems with accounting theory and the need to investigate practice demand a wider theoretical framework to approach the complexity of accounting in banks and their financial operations in relation to other firms.

Theoretical problems

Popper said that theory must be falsifiable; otherwise it cannot be called a theory (1979). Popper also wanted to eliminate the problem of induction and find an unambiguous role for observation in testing theories (Ryan, Scapens & Theobald, 2006: 20). One theoretical aspect of this thesis is that it provides falsification of the basic theoretical underpinnings of cash flow statements, showing it does not hold for banks. By investigating accounting reports in banks, the negative cash flow statements can be seen as an example of an unfit theory or bad model of reality. But this thesis does not claim the cash flow reports are useless, just lacking coherence and in need of a new accounting regime for banks.

Kuhn (see also Lakatos) rejected Popper's focus on falsification and the possibility for one observation to refute a theory. The multiple cases of banks' negative cash flow statements in this thesis are considered sufficiently many observations of a problem. But the logic of the theory behind cash flow statements fails when the common answer is that the statements are not used. The prevailing paradigm is never rejected until a scientific revolution, says Kuhn (1996). The financial crisis could be an event that calls for a re-evaluation within certain theoretical fields, but that remains to be seen.

Another lesson from Popper is *"that people's interpretations of reality never quite correspond to reality itself"* (cited from Soros, 2012c). The problems of accounting, partly described in this thesis, can be seen as an example of a failure of the interpretations of reality in financial reports, or the failure of the reports to correspond to the regulatory reality. One conclusion could therefore be a request for a new accounting regime for banks. How it shall be structured lies outside the scope of this thesis, but some indications are provided in the concluding chapter.

These problems are related to the financial crisis and in a wider context to the problems of economics as a science, which some claim is currently undergoing a paradigm shift. The change requested in the accounting regime of the banking business can become a part of the wider change that is ongoing in economics and finance. But these speculations of theoretical problems and development are outside the scope of this thesis.

Accounting theorizing

A general theory is usually not agreed upon, but the practical system of double entry bookkeeping for financial accounting has been used for over 500 years. The basic functions of financial accounting can be considered a well-established model for reporting, and a common practice

internationally. Even prior to Pacioli's documentation of the traditional system of accounting in 1494, it had existed in various forms for over 2000 years, for example with Babylonian clay tablets, Egyptian papyri and wooden sticks with markings for debt or credit (Hoskin & Macve, 1986; Porter, 1995; Graeber, 2011). Lending activity is interconnected with the origins of accounting. Banking in its modern form also has traces to same origins as accounting in its modern form. This would suggest interlinked theorizing in the fields of banking and accounting, but this is not found.

Following the formalization of accounting practice, an independent scientific field of accounting with academic writings did not start until the 1950s. Prior to the second half of the last century, most accounting professors had written their thesis within the field of economics (Canning, 1929). Doctoral theses in accounting have dispersed theoretical foundations, often built on economics, and lack generally accepted accounting theory.

Several attempts were made by practitioners' organizations within accounting to establish a common ground of accepted theory without much success, but the main resulting conclusion has been found in SATATA. What can be seen as the main development since then is the harmonization and implementation of generally accepted international accounting standards and their principles-based approach to accounting. This development started earlier—also in banking—but only really took off in early 2000, reaching its peak with the 2005 implementation of fair value accounting of assets marked to market prices. A few years later this process came to a halt after the meltdown of financial markets, but the harmonization between IASB and FASB is unsolved. The problems with theorizing within accounting call for a historical perspective. Littleton paraphrases the philosopher Dewey, saying:

the business of accounting theory is to examine beliefs and customs critically, to clarify and extend the best from experiences, and to direct attention to the genesis and outcome of accounting work. (Littleton, 1953: 132)

Theory should show what to look for in experienced practice and help recognize its relevance. Porter takes up accountability in the progressive tradition, and points at the importance of scientific quantification with accounting also paraphrasing Dewey that "*considered science an ally of democracy, and argued that scientific method means nothing more than the subjection of beliefs to skeptical inquiry*" (Porter, 1995: 73). Accounting theory for Littleton is "*thinking focused upon doing*", consisting of explanations and reasons (1953: 132). This action-focused thought illustrates the important connection between theory and practice in accounting research. Accounting is a practice constantly looking for

theory. That historical perspective helps to limit the theorizing in this thesis and supports the search for a theoretical framework outside of the field of accounting that can include banking and to study practice.

Practical theory

The theoretical framework of this thesis draws on the practice turn in accounting research, and the empirical studies are focused on practice in the second half of this thesis. But given the lack of theory in scientific fields, like accounting, it could be suggested that the writings of practitioners could be theoretically studied like practice is studied. Some practitioners have engaged in theory development, and some academics have engaged in practice; both of these groups could be considered interesting sources for alternative views when struggling with scientific theorizing.

Soros was, for example, a student of Popper, and has published over an extended period several books on financial markets (2003, 2008, 2010, 2012a) and developed in these writings a practical theory that is much ignored in academia, probably due to the fact that it is written by a practitioner and not an academic. This theory development is not published in academic journals, and therefore not considered relevant in the mainstream scientific fields. That might change, as Soros (2013) has recently published a peer-reviewed article about his conceptual framework of fallibility and reflexivity. So there is a possibility that practitioners can contribute to theory development. This could certainly be relevant when the scientific field has trouble with fitting its theory with reality.

The reflexivity between the current estimates and future expectation on financial markets has long been described by Soros (2003, 2012a) in what he calls the boom-bust model of *reflexivity and fallibility*. Ryan, Scapens & Theobald (2006: 33) describe Habermas's view on how "*social evolution emerges from the dialectical interplay between instrumental and communicative action*". In natural science, facts are independent of meanings while "*meanings are the facts of the social sciences*" (*ibid.*) and this brings on the idea related to Popper (1979) and Giddens (1984) as well as Soros's writings on the open society:

the achievements of the social sciences do not compare well with those of the natural sciences [...] the independence of the objective criterion—name, the facts—is impaired. [Social] Facts can be influenced by forming beliefs or propounding theories about them. [...] Reflexivity implies a short circuit between statements and facts, and that short circuit is available to scientists as well as participants. (Soros, 2000: 44, cited from Ryan, Scapens & Theobald, 2006: 34)

The reflexivity and fallibility theory of Soros (2008, 2012a, 2013) has been a relevant tool for understanding the current financial crisis. The development of the market has been in line with the boom/bust model during the several years before and after 2008, showing the fit of this theory with the practical world. At the same time, mainstream finance theory and economics models missed noticing that this crisis was coming, and are not adequate for explaining it.

In this thesis the model and framework in the writings of Soros have been used as practical evidences drawn into the theoretical field. Theory is a simplification and a tool to understand the way things work in reality. When mainstream theory that is used to explain how markets work becomes apparently disconnected from reality and it turns out that markets do not function according to that theory, then it is relevant to investigate real world cases to gain understanding of what is actually going on. The theoretical framework presented at the end of this chapter is based in that purpose.

Theory development

In spite of the SATATA overview of theories and lack of universal acceptance, some general ideas of accounting can still be found, such as: *"Accounting is a system for communicating the economic events of an entity"*, according to Ijiri (1967: 3). These events must be recorded and measured in order to be communicated (Kinserdal, 1998; ASOBAT, AAA, 1966). Riahi-Belkaoui (2004: 108) claims, just like the AAA committee, that no comprehensive accounting theory exists. Watts & Zimmerman (1979: 301) agree and state further that no generally accepted accounting theory justifies accounting standards and argue that no theory ever will.

On a general level, accounting researchers *"agree that the central purpose of financial accounting is the systematic provision of economic data about reporting entities"* (AAA, 1991: 1). But when this doctrine is applied for a resolution of *"actual accounting issues, divergent theories arise"* (AAA, 1991: 1). The different valuation systems of accounting make it impossible to find a general theory of accounting, and since it has not been developed the question has been raised regarding on what theoretical grounds the principles of accounting are based, and if they are possible to make consistent at all (Coetsee, 2010).

A committee cannot dictate a theory, but the SATATA report indicated that common generally accepted theory could be achieved or at least aimed for, while also realizing that this might be an unrealistic goal. IASB could be seen as a facilitator of such common positions, but more so by

accounting practitioners than theorizing scholars. The objectives of an accounting theory can be grouped in different ways. Firstly, the split between *deductive* and *inductive* approach to theory development was seen as a fundamental difference. Secondly, the split between economics and finance is reflected in the division of the *information economics* from the *decision usefulness* for financial investors. Thirdly, the demarcation between *descriptive* and *normative* theories is relevant for the development. Finally, theory objectives can be divided into two main schools of *principles-based* and *practice-based* foundations.

An alternative approach to the accounting mainstream described in the SATATA report is to analyse the difference between models (or theoretical illustrations) and the real world that is being investigated. Table 2 below can be seen as a theoretical analysis of the accounting field, linking development and different perspectives according to the following four standpoints, also summarized below.

First, according to normative methodology, accounting theory can be defined as a coherent set of logical principles providing a general framework to both understand and evaluate practice as well as guide the development of new procedures (Hendriksen & van Breda, 2001: 22). This links to the classical approach (Chapter 3.3) and uses the traditional perspective of the accounting point of view.

Secondly, based on practice, following a descriptive and inductive methodology, accounting theory can try to provide explanations of accounting behaviour and events (Riahi-Belkaoui, 2004: 109). This can be linked to the decision usefulness approach (Chapter 3.4) that is focused on investors under the influence of the finance perspective.

Thirdly, a predictive process can be identified as a positive methodology (Deegan & Unerman, 2006: 8) focused on explaining and predicting the phenomena of accounting. This view can be linked to the information economics approach (Chapter 3.5). In the words of Watts & Zimmerman "*The objective of accounting theory is to explain and predict accounting practice*" (1986: 2), following to the positive accounting theory development (Chapter 3.6) that can be seen as the fourth perspective.

Since the publication of the SATATA report in 1977 and again in 1991, the principles-based framework of accounting has gained dominance, and since 2004 the conceptual framework of the international accounting standards (IASB, 2010) has been largely implemented as legislation throughout the world. This fourth general view on accounting theory

development is drawing on the three previous perspectives; her jointly called the market-based perspective, see Table 2:

| | Theory: | Development Approach: | Perspectives: |
|---|-----------------------|---------------------------------------|----------------------|
| 1 | Normative, deductive | Classical, true income | Accounting view |
| 2 | Utility for investors | Decision usefulness, f. models/makers | Finance view |
| 3 | Economics | Information economics | Economic view |
| 4 | Positive accounting | Practice-based | Market view |
| 5 | Interpretative | Pragmatic | Money view |

Table 2: Theory, development approaches and perspectives

Current development could lead to the fifth alternative theoretical approach being developed after the financial crisis from an interpretative standpoint of theory development. This fifth approach would claim that it is necessary to turn back to investigating real cases in a pragmatic way in order to progress in the development of a theory that can help understand what is going on in the world, for example, regarding cash flow in banks. In this thesis the perspective of the money view is used for this purpose, as explained in the last part of this chapter, which presents the theoretical framework of this thesis.

But first, the coming four parts will summarize the main theoretical developments. The goal of the next four parts of this chapter is to provide an overview of the different theoretical underpinnings of accounting and search for issues relating to cash flows in banks. These sections follow the three approaches of AAA for theory development, and then, briefly, the fourth development approach after the publication of SATATA.

3.3 – Classical approach

As stated earlier, generally accepted accounting theory is not viable. Accounting is a practical subject and its theory has been evolving and changing without any single source rooted in the field. The first written rules of double entry bookkeeping date back to Pacioli in 1494, but as an academic or theoretical subject, accounting is premature. The three practical rules by Pacioli were:

1. be a good book-keeper and mathematician
2. have cash or its equivalent on hand, without it business can hardly be carried on
3. arrange transactions in a systematic way

These practical rules are all still highly relevant.

For the implicit connection to banking between merchants and accountants, he also states: *“It has happened that many without capital of their own but whose credit was good, carried on big transactions and by means of their credit, which they faithfully kept, became very wealthy”* (Pacioli 1494, 2010: 124). On this confidence rested the faith in the trustworthiness of every merchant. From these historical origins of systematic recording and faithful measurement, it is possible to trace the system of modern accounting through practice of many hundred years and into academia by the middle of last century. Since then there have been some attempts to make the field of accounting more scientific or theoretical.

According to the SATATA report the main classical approaches for the development of accounting theory are either inductive or deductive. The inductive rationalizes or even justifies existing accounting practice, while the deductive focuses on true income in a normative way and formulates general implicit models for accounting. Both these schools, within the classical approach, involve problems in several respects. Accounting information based on historical costs becomes irrelevant after some years. Evaluation of annual profit involves judgements regarding amortization, inventory, price changes and other valuation issues that make the true income approach problematic (AAA, 1991).

With the SATATA report, an executive committee of AAA classified the major writers of accounting theory within the classical approach of theory development (AAA, 1991). The classical authors do not seem to have been referring much to each other but *“Littleton, Paton-Littleton and Ijiri, contrariwise, undertake to develop coherent theories of extant practice”*, according to AAA (1991). The twofold division of the classical approach is, on the one hand, the inductive school related to accounting practice:

Littleton, upon observing the evolution of accounting practice over a considerable period of time, concluded that the accountant endeavors to help the readers of financial reports understand the business enterprise by confining his measures to objectively verifiable transactions to which the firm is a party. (AAA, 1991)

The other main school of the classical approach was the normative deductive school of true income, attempting to formulate implicit models for accounting with a global applicability. Littleton proposed principles evolving from practice in a normative deductive manner. His approach for accounting was focused on past transactions and thereby considered

Current prices and index numbers [...] either irrelevant to the transactional experience of the enterprise or [...] not susceptible to objective measurement; their inclusion in financial statements would disturb the homogeneity of the contents and might well reduce the integrity of the objectively determined historical results. (AAA, 1991)

Therefore, was Littleton's "[...] *resulting monograph (1940), probably the most influential work in American accounting literature, [...] a rationalization of the extant accounting practice, explicated at a level of theoretical abstraction that had known few precedents*" (AAA, 1991). Another important but less influential accounting theorist was Ijiri, who "[...] *undertakes to generalize the goals implicit in current accounting practice, and then defends historical cost against the criticisms of current-cost and current value advocates by reverse-inductive analysis*" (AAA, 1991). Since then, the development has continued towards current cost or market values in the accounting practice. But the avoidance of manipulation of the accounting numbers seems to have gotten less focus. Ijiri concludes that accounting practice may best be interpreted in terms of accountability, which he defines as an economic performance measurement that is not susceptible to manipulation by interested parties (AAA, 1991).

Both the deductive and inductive approaches to classical theory development were concerned with creating financial reports to communicate relevant information to its readers. This idea is still alive in the conceptual framework of existing accounting standards. The old debate between historical cost and current cost or values continues to be unresolved, just as it was at the time of the SATATA report. The claim in the report that "*they may have been influenced by the neoclassical economic theory of the firm, in which historical costs are ignored entirely*" (AAA, 1991: 6) is still valid, while the debate between current cost or market values in accounting is also unresolved.

The cash flow statement was implemented in the 1980s to cast a better light on the economic performance measurement, but at the same time the approved accounting standard allowed for a wider definition of cash

and gave an option for the indirect method of presenting cash flow. With respect to the accounting practice since then and the increased basis of market values, the manipulation possibilities from different judgements may have increased even further, if drawing on the thoughts of Ijiri.

The criticism in the SATATA report's third chapter (AAA, 1991) on the different theory approaches provides arguments for why each of them is not applicable. The most significant critique for the classical approach is the problem of relating theories to practice. The inductive theories and theorists focused on income provide examples of theory with "*such gaps [that] are bound to be perceived as inadequate for yielding the answers that practitioners seek*" (*ibid.*: 31).

There is an agreement on the broad role of financial accounting, but this "*agreement, however, overlooks the existence of basic differences in the way various theories view users*" and the environment of preparers and users (*ibid.*: 3). The purpose of the SATATA report was to seek for a general theory of accounting, but none is acceptable to all accountants and instead a collection of different theories has evolved where each takes on different aspects of accounting.

Inductive or deductive approaches to theory development

The SATATA report discusses the criticisms and problems with the classical deductive and inductive approaches for accounting theory. The conclusions of the report regarding the lack of an available theory of accounting supports the practice turn in accounting research. Single theory is not a sufficient foundation to investigate the problems in accounting in banks. Various viewpoints from different accounting theories help instead with a combination of the aspects from economic and banking theories.

The deductive approach was either focused on income statement analysis or comparative balance sheet analysis. Some of the deductive writers viewed accounting as a succession of balance sheets. But this approach involves unrealized holding gains. The logic of the deductive approach is difficult to compare as it reflects implicit judgments that are difficult to prove or disprove. The only united cause was the preference for current price information according to the committee (AAA, 1991).

The main assumption behind the deductive approach was that income should ideally be measured with a single valuation base, leading to this approach being called the true income theory. The neoclassical economic theory was the foundation for this approach towards replacing conservative historical cost with current values (*ibid.*: 6). The inductive

approach drew attention to “*illogic and inconsistency in practice and in the literature*” (*ibid.*: 9). Some inductivists called for generalized principles and even for accounting in continual evolutions, based on current practice. That was a rationalization for justification of extant practice in accounting.

Ijiri defends the historical cost accounting and “*concludes that accounting practice may best be interpreted in terms of accountability*” that is defined as “*economic performance measurement that is not susceptible to manipulation by interested parties*” (*ibid.*: 10). Ijiri explains his preference for inductive reasoning:

This type of inductive reasoning to derive goals implicit in the behavior of an existing system is not intended to be pro-establishment or to promote the maintenance of the status quo. The purpose of such an exercise is to highlight where changes are most needed and where they are feasible. Changes suggested as a result of such a study have a much better chance of being actually implemented. Goal assumptions in normative models or goals advocated in policy discussions are often stated purely on the basis of one’s conviction and preference, rather than on the basis of inductive study of the existing system. This may perhaps be the most crucial reason why so many normative models or policy proposals are not implemented in the real world. (*ibid.*: 28)

Many of these arguments are as applicable now as then, and can still be used. But Ijiri lost the fight for historical cost; what was then called current value—today called market value or fair value—became the mainstream. It is impossible to see the historical cost being implemented again in spite of the flaws of market values, but both aspects can still be of use when considering different values instead of a single one.

Even though Ijiri might have been right at the time, his solutions alone cannot solve the problems in bank accounting today. His call for more accountability through the use of accounting systems and accounting rules still stands. The lack of accountability of bank managers can be seen as one of the theoretical implications from the current crisis. How to solve it is another matter, but awareness of the problems is the first step.

3.4 – Decision usefulness

Mainstream finance theory treats investment decision as a rational activity based on perfect information, partly provided by accounting. The financial models assume all actors to be fully rational and having a perfect knowledge. The decision usefulness approach to theory development in accounting can be traced to its beginnings in the 1940s with Paton & Littleton's (1940) statement of the purpose of accounting to "meet the needs of management, investors, and the public". The idea of *usefulness* has been central in the definition of the objective of financial statements since the 1970s and still is the centrepiece in the conceptual framework for both FASB and IASB. Accounting information shall provide useful information to users.

The *decision usefulness* approach was more recent than the classical at the time of the SATATA report and the committee also divided this approach into two major branches: focusing on decision *models* and decision *makers*. In the early stages of this theory development in the mid-1950s it was clearly stated: "the basic function of accounting is the provision of information to be used in making rational decisions" (AAA, 1991: 11, cited from Chambers, 1955). Since then it has become empirically apparent that investors do not always make rational decisions, but the models in accounting, just like in economics, still rely on this assumption. The usability and the users are often defined as investors making profit-maximizing investments.

Deegan & Unerman (2006: 178) question whether historical cost (having been useful for assessing stewardship) is useful for making economic decisions. Decision usefulness was the starting point for fair value accounting and market-based valuations when incorporated in financial reporting. The usefulness of market values accounted for in previous years' reports is still a relevant discussion point, also in light of the current financial crisis. The decision usefulness approach was taken up by the standard setters and is not based on a research process, but instead it has emerged through a consultative process over time (Coetsee, 2010). According to Deegan & Unerman, "under historical cost accounting, management has a mechanism available to manage the reported profitability. Holding gains might not be recognized for income purposes until such time as the assets are sold" (2006: 156) and the fair value measurements have therefore been demanded and implemented.

Mainstream research in accounting, based on the paradigm of decision usefulness, has been focused on the value relevance concept. Value

relevance is defined as the association between accounting amounts and security market values in the extant literature according to Barth, Beaver & Landsman (2001). This literature originates from Miller and Modigliani (1958, 1966), but Barth et al. (2000) find the first study using the concept "value relevance" to describe the association between accounting amounts and security market values in Amir, Harris and Venuti's publication from 1993, and the research concept is further developed by Beaver (1998), Ohlson (1999) and Barth (2000). According to Barth et al.: "For example, Barth, Beaver, Hand, and Landsman (1999; 2000) and Barth, Cram, and Nelson (2001), among others, show that accruals have predictive ability in explaining future earnings and future cash flows. Equity market value can be represented as the present value of expected future cash flows or earnings" (2000: 10). Barth et al. refers to Barth et al. to illustrate that the past can predict the future. Put differently, accruals predict future cash flow and future cash flow defines the price of equity.

Theoretical usefulness

Macintosh et al. (2000) claim, referring to the experience of Enron, that accounting signs no longer reflect the real world but instead create a fictive world or *hyperreality*. This can be seen where financial expectations are not connected to real business objects. This departs from the original idea of accounting numbers as a sign or faithful representation of the financial status of the firm that is still the generally accepted understanding of the reports. The clash of representations from the *hyperreality* and real business objects is partly similar to his theory of *reflexivity and fallibility* in financial markets, by Soros (2003, 2013). Financial reality can drive up expectations without fundamental backing of real business. In this world of finance the idea of historical cost accounting for keeping track of resources of the firm and actual transitions used to be considered the true evidence in most accounting texts since Paton & Littleton's influential monograph from 1940, according to Macintosh (2002: 54).

The usefulness of accounting information for decision making by investors is generally related to the assumption that information about the past can help predict future results. But as Bernstein puts it, many hurdles stand in the way of conventional probability theory—"the raw material of the model is the data of the past" (1998: 334)—and he continues:

The past seldom obliges by revealing to us when wildness will break out in the future. Wars, depressions, stock-market booms and crashes, and ethnic massacres come and go, but they always seem to arrive as surprises. After the fact, however, when we study the history of what happened, the source of the wildness appears to be so obvious to us that

we have a hard time understanding how people on the scene were oblivious to what lay in wait for them. Surprise is endemic above all in the world of finance. (Bernstein, 1998: 334)

The forecasting ability of accountants or accounting information is overrated. When taking into consideration the usefulness of information for forecasting, a danger arises that the produced reports present only what is thought to be useful for the forecast. These reports then can miss the descriptions of the past that could help readers in their own forecasting.

The idea of accounting is to provide information about historical performance in order for the reader to make her evaluations of the future prospects of that entity. When the goal of accounting becomes to provide predefined useful information, the accounting framework starts to influence the possible evaluations, because what some see as useless information can be of use for others. Historical evidence can show this.

The decision usefulness approach to theory development assumes the relevance (and reliability) of accounting information for useful decision-making by investors and managers. The gap between the usefulness for decisions and the relevance of information from accounting statements increases due to the complexity of finance expectation and representation. During the early stages of the crisis, a sudden and dramatic change in valuation of assets illustrates the limitations of the theory and lack of applicability in reality. Accounting has to be defined separately from the expectations of a future that is always changing. The difference between periods, like during crisis times, can be so dramatic that the asset value can drop more than the amount of the whole equity, even without any changes in cash flow. This volatility can increase upswings and downturns. In addition to the relevance and reliability requirements of accounting information, other criteria of importance are timeliness and comparability.

The decision model approach to usefulness of accounting theory is summarized in the SATATA report (AAA, 1991) with eight main points as follows:

1. The primary objective of accounting is providing financial information about economic affairs for decision makers.
2. Useful decision-making requires financial information to have some normative qualities, like relevance to the decision, reliable measure, objectivity and verifiability, comparability, understandability and timeliness.
3. Relevance involves attributes of the object or event to be evaluated, and modeling can help.

4. Decisions of investors are the only field of fairly complete theories of external reporting.
5. Models for decision-making are based on present value and expected return and risk. The expected future cash flow includes risk but it has not been incorporated in accounting theory.
6. Cash flow orientation of decision usefulness theories derives from investors' desire to predict future cash flow from firms. These cash flow potentials of an asset should be used in its measurement.
7. Distributable operating cash flow is the portion of net operating flow that can be given to owners "*without reducing future physical operating levels*".
8. An alternative view of the impossibility of measuring a future event rules out the cash flow orientation and therefore present exit values are preferred.

Most of the points made by AAA can be seen as applicable in finance today; some might have been refined in theory development but the basic theoretical idea of decision usefulness builds on these assumptions. The main criticism of these assumptions is that they do not fit when it comes to accounting in banks as follows:

1. Investment decisions are not made based solely on accounting information.
2. Financial information from financial institutions is difficult to comparable with non-financial institutions and between banks.
3. The cash flow statements of banks are not used.
4. Investors' decisions do not provide a field for a complete theory of financial reporting.
5. Even though risk measurement is being incorporated more into finance theory and banking regulation after the financial crisis, its results are still questionable.
6. Investors' ability to predict the future, even expectations about cash flow, is as flawed now as it was before the financial crisis and therefore is not a useful parameter in developing a sustainable accounting regime for banks in order to avoid past problems.
7. When actual accounting reports from banks show that net operating cash flow is increasingly negative at the same time as dividends to owners are increasing, the underlying assumption needs reframing.
8. The alternative view of exit values instead of future cash flow is tempting, but if exit values are to be market-based, when banks most desperately need to realize the cash value of their assets, markets can be frozen. Recent crisis experience shows how financial assets were transformed into cash through a fire sale with lower values, which shows how exit value can be a problematic solution.

All these points taken together make the argument for using the decision usefulness approach not fit for the research of cash flow in this thesis. As will be shown in the empirical chapters in the second part of this thesis,

the assumptions of the theory do not hold for banks. The decision usefulness approach of accounting theory development is therefore not deemed applicable or useful in this thesis focusing on banks.

Parts of these problems were already envisioned by the committee members writing the SATATA report in 1977 even though they considered decision usefulness to be the way forward at that time for the development of accounting theory. Some parts of the decision usefulness approach to theory development are still useful; for example, Chambers "*rejected the idea of basing an accounting theory on the decision models of specific user groups*" (AAA, 1991: 12). Chambers emphasized instead the general usefulness of "*current cash equivalents*". Similarly, Staubus (cited in AAA) emphasized:

"that the major objective of accounting is to provide quantitative economic information that will be useful in making investment decisions" (p. viii) and then presented a "cash-flow-oriented measurement system keyed to the dominant theme of finance theory of the time – the discounting view of securities value." (ibid.: 13)

Some of the committee members or the accounting theorists recognized that forecasts are relevant for decisions and claimed, "*the very nature of the market makes it necessary for the risk-bearing decision maker, as opposed to the accountant, to prepare the forecasts*" (ibid.: 17). This view of separating the accounting and the forecast seems to have lost ground at some point in time after it was put forward in 1977.

Implementation of decision usefulness approaches to theory development recognized some further problems in the SATATA report. The division between models and makers already makes clear the distinct theoretical difference of market behaviour and individual behaviour. Already in 1977 researchers saw that "*aggregating individual users' responses may not provide an apt description of market-wide user behavior*" (AAA, 1991: 19). All theory of relations between accounting variables and market value is based on the theory of market efficiency. That is a problematic assumption, and experience in the financial crisis shows that it does not hold. The theory development approach of decision usefulness is therefore not applicable or useful for the banks in this thesis.

3.5 – Information economics

Economics theory lies behind the information economics approach to theory development in accounting as it is used by SATATA (AAA, 1991), as opposed to the finance theory behind decision usefulness in the previous section. The opposition to this approach is the failure of mainstream economics in assuming perfect information. Stiglitz presents this failure in his article *Information and Economic Analysis: A Perspective* (1985). That failure has been long ignored in the mainstream theory, but has become more apparent following the financial crisis.

Concerning all economic information, the *quality* of it is of utmost importance. In the first article on information economics written in 1961 by Stigler this was already pointed out: “*Quality has not yet been successfully specified by economics, and this elusiveness extends to all problems in which it enters*” (Stigler, 1961: 224). Information economics can be traced even further back to Hayek (1945), but neither Hayek nor Stigler are quoted in the SATATA report.

Instead, the report observes the environment where the users and preparers of accounting data are thought to behave (AAA, 1991: 3). The first environmental issue taken up is about other sources of financial information. The second issue is about multi-person settings for action. This interaction (exchanges on the market and externalities off the market) presents a relation between users and preparers of accounting information, and between different users, in a market setting. The third issue is about the accounting process and its controls, like auditing. Already when the report was published in 1977 questions had been raised about extent to which markets are efficient in reflecting available information and the nature of the market for information. Market failure could be considered such that intervention could be socially desirable (*ibid.*: 3). Externalities are another example showing that market systems fail to incorporate all effects and therefore efficiency cannot be assured. Therefore, the question of regulation is raised.

Even though externalities and regulation are on the agenda, the information economics approach to theory development in accounting falls similar to the decision usefulness approach. Both fall back on the widespread belief in the function of the efficient market. When the cost of establishing intervention is considered, the issue becomes even more complicated. The decision usefulness approach utilized economic theory to specify the kind of information needed for economic decisions (AAA, 1991: 21). Information was not incorporated into the economic theory

being applied, but instead treated as a free good. In the information economics approach to theory development in accounting, information is treated as “*conventional economic commodity*” (*ibid.*: 21). This approach makes information a problem of economic choice, where the cost and price of it is incorporated in the economic models.

The individual demand for information is analysed and then extended to the analysis of multiple individuals. Demand for information is viewed in terms of improved quality of the choice problems faced. In this sense, “*information is valued because it improves the quality of decisions*” (*ibid.*: 22). This shows the link to the decision usefulness approach. Expected utility is considered to be known and then a precise representation of choice is made with a probability. Here rational and representative agents with known utility are assumed to maximize their utility by choices where the outcome is calculated from probabilities. Accounting reporting systems are, based on this, selected if the expected utility measure is higher than the alternative. Again, the report presents the limitations for this approach, as the results from traditional economic assumption demand “*consistent, rational choice behavior*” (*ibid.*: 22).

The case with multiple individuals demanding information in public financial reports analysed in an economic manner begins to draw towards welfare economics, with regulation and reliability of market solutions. The assumptions of the regulation question are adopted from Pareto’s optimal normative criterion for social choice. Then, drawing from Arrow & Debreu (1954) the “*usual*” assumptions of individual, firm and markets conditions make the “*laissez faire solution*” “*in fact*” efficient, according the information economics approach. These assumptions have proven to be dramatically wrong, as the deregulation of financial markets since 1980 has shown in the near collapse of the financial system in 2008. This also contradicts the already established opposition made by some of the founding fathers of information economics, like Stiglitz in his article from 1985. There he gave a clear perspective on the failure of economics’ assumption of perfect information and he has since then provided more evidences in multiple publications.

The analysis of the information economics approach to theory development sees financial accounting information as incurring cost and thereby sharing several features for being considered an externality (*ibid.*: 24). Overproduction as well as underproduction of information is possible according to the information economics approach. The conclusion is, however, that “*externally reported financial information is a public good*” (*ibid.*: 25) but when put together “*it is not at all clear whether inefficiency results in a*

market setting. In theory, the answer is clearly affirmative. But in a real-world situation, we simply do not know” (ibid.: 25). The information economics approach offers help for accounting policy, but rationality is the major assumption, and the committee considers the approach as being too general to provide definitive answers to policy issues.

Economy of accounting theory

Prior to the implementation of information economics in the economics and accounting fields, information was often treated as a free good. This bears resemblance to the treatment of liquidity as a free good up and until the current crisis. But the contribution of the implementation of information economics is the focus on the moral hazard, which also has meant evolution within the field of accounting. After the crisis, the necessity of limiting the dangers of moral hazard derived from the structure of the prevailing accounting regime has become even clearer. The idea of using markets’ mechanism for information and liquidity as well as money and credit requires a special view on the market forces. It still remains to be seen if the inflow of governmental financial support to the financial markets in order to get them functioning again was efficient.

It has long been known in practice that markets are empirically not always efficient, and the crisis has shown how financial markets with too little regulation are inefficient. Theoretically, the efficient market hypothesis has also been under doubt, for example by Kirman (2010), Reinhart & Rogoff (2009), Akerlof & Shiller (2009), Shiller (2003), Soros (2003, 2008, 2010), Turner (2012).

3.6 – Theory development

Development of accounting theories is an ongoing process, expected within academia and possibly involving standard setters. The three previous sections have covered the main streams of accounting theory development since accounting became an independent scientific subject. Since this overview was drawn together in 1977 not much theory development has taken place, and the report was reprinted unchanged in 1991. The main theory development that can be seen approaching since then has been the positive accounting theory but it is closely related to the decision usefulness and information economics above. It is based on the economics of efficient markets hypothesis (EMH), and the finance model of capital asset pricing (CAPM), briefly covered below.

In the end, this section also draws together a summary of all the approaches and leads to the conclusion that each one is based on assumptions that do not fit in with practical banking. Therefore, the next step will need to focus on investigating practice. For this task, a theoretical framework is needed as well as methodology in the next chapter. It is possible to look at the development of theories from previous sections as historical, and investigate it with an interpretative toolbox, or see it as a progressive development. This chapter ends by setting up a simplified theoretical framework in the next section, building on the previous theory development approaches in this chapter and the context of banking and finance from the previous chapter.

Assumptions of positive accounting theory

When researchers aligned with positive theory “turned to explaining accounting practice [...] they did not abandon the EMH and the CAPM” but instead “EMH was generally accepted and assumed valid in attempts to explain practice” according to Watts & Zimmerman, (1986: 16). The financial aspects from EMH and CAPM were discussed in Chapter 2.

The positive accounting theory assumes accounting earnings being related to stock prices. This assumption is based on the CAPM that is derived from the perfect certainty in a model that assumes the following:

All present and future cash flows to individuals and firms can be perfectly foreseen by all. Capital markets are perfect, meaning that:

- No individual borrower or lender in the capital market is wealthy enough to affect market interest rates
- Each individual can borrow or lend up to the limit of his resources at market rate
- Information is free at no cost and available to all

- No transaction costs or taxes
- All assets are infinitely divisible

Investors are assumed to be rational and prefer more consumption and indifferent to cash flows that finance consumptions. Investors assume other investors to act rationally also. (Watts & Zimmerman, 1986: 21–22)

These assumptions do not align with practice and empirical studies. CAPM has repeatedly been shown not to hold true in reality, and has been revised several times without a successful version being developed. Capital market research in finance is important in positive accounting theory, because it creates a link between accounting data and share price. But positive accounting theory is based on the assumptions of EMH and CAPM and even though Watts & Zimmerman have reacted to the critiques of the positive accounting theory (1990), they still depend on the function of EMH and CAPM which have been empirically rejected.

Even though the models based on CAPM have provided helpful insights and are useful as tools for teaching, it is not enough for empirical research of accounting data that is not used. The near collapse of the financial system was based on a modelled assumption of efficient markets that provides weak theoretical foundations and further calls for a new accounting regime in banks. The result is that positive accounting theory cannot be any basis for theoretical development in accounting regarding the cash flow, due to the assumptions above.

Economical and financial aggregation of accounting information

Both theories from finance and economics use information from specific or aggregate accounting numbers, therefore accounting theory can be seen as the basis for providing raw material to the fields of economics and finance. The lack of general accounting theory is surprising in this respect. But the financial crisis and the crisis of the economics profession it exemplifies (Krugman, 2011, 2012a) could result in a paradigm change in the theoretical fields of economics and finance that will affect the future theory development in the field of accounting as well.

The implications of the committee statement in the SATATA report are twofold, for research and for policy. Theoretical agreement has almost been reached on a policy level of how to report financial information throughout the world with the FASB and IASB harmonization process. But for research in accounting, no theoretical acceptance has been agreed upon, even though mainstream research has been much focused on quantitative research based on the international conceptual framework.

The conceptual framework of the International Accounting Standards can be seen as a current common understanding in accounting. In spite of the lack of a generally accepted accounting theory illustrated in the SATATA report, there has not evolved since then any single accepted general accounting theory. The report has illustrated a collection of theories where none available is acceptable to all accountants (AAA, 1991: 3–4). So the gap between theory and practice has not narrowed. Here, a division of policy practice and accounting practice has to be made; otherwise accounting practitioners (in banks) fulfil the policy demands with statements (of cash flow) even though they are not used.

Summary of theory development

The AAA committee for SATATA classified accounting theories and summarized dominant approaches within each classification. The key theoretical approaches were classical, decision usefulness and information economics (AAA, 1991: 5). The conclusion of the committee was that the profession has been unable to achieve consensus for financial reporting. Since the publication of the SATATA report, the conceptual framework of international financial reporting standards (IASB, 2010) can be seen as the approach for further development of general consensus, but not a general theory. The accounting standards framework will be covered in Chapter 5.

Accounting as a theoretic field is a recent phenomenon, even though accounting as a practice and method is many hundreds of years old. This can be seen in that *“Relatively few universities awarded doctorates in business administration or commerce before the 1950s”* (AAA, 1991: 6), and *“many of the early doctorates awarded to accounting academics, ... were in economics”* (*ibid.*: 6). Many teachers in accounting have been practitioners and this struggle between practice and theory has therefore always been inherent in the study of accounting. This can partly explain the special structure of this theory chapter.

The classical approach to theory development can be seen as an historical overview of attempts to develop general accounting theory, either from deductive or inductive reasoning. Historically the accounting writers dealt with accounting practice rather than conceptual underpinning, and accounting academics or professors were much oriented towards practice during the first half of the last century.

From this background arises a descriptive academic field with a normative and deductive theoretical approach towards how accounting should be performed in a pragmatic way. Some of the academic writings

about accounting were advocating reform. Others were more analytical and tried to explain economic models to accountants. While some tried to rationalize the inconsistency between theory and practice, others developed coherent theories of existing practice. Commonly, the historical accounting theories can be said to have been seeking a design of financial reports that communicate relevant information to readers.

The SATATA report indicates that neoclassical economic theory of the firm has influenced many theorists to advocate current costs or values instead of historical cost. This is based on observations of investor's behaviour and other economic decision makers. Seen in relation to the parallel developments in financial theory and economics it can be understood that there was no special demand for creating a comprehensive general accounting theory. Instead the focus since the late 1970s has been to limit the burden of financial accounting regulation for firms in line with the liberalization of financial markets.

From this overview of the theory development within the field of accounting, it is apparent that problems of cash flow in banks are not covered within the available accounting theories. In the last section of this chapter, a theoretical framework is drawn for the research in this thesis. There was not much of relevance in the accounting theory foundations for the cash flow in banks, but the framework also draws on various sources from the banking and financial context given in Chapter 2 in combination with accounting.

3.7 – Theoretical framework

After having presented the accounting theory development previously in this chapter and not having found a theoretical explanation of the special cash flow in banks, it can be claimed that a revised theory is needed. But at the very least, a theoretical framework is needed for this research. The main focus of this thesis is on describing practice and showing that the existing accounting framework is insufficient to help solve problems of cash flow accounting in banks. The development of a revised theory and a new accounting regime for banks is a more extensive work than can be covered in this thesis. However, this thesis does provide a starting point, first by describing how the cash flow is reported and secondly by explaining the accounted operative cash flow in banks in order to understand why the statements are not used.

As no available accounting theory has been found to be applicable for supporting the research problem approached in this thesis, an alternative must be searched for. When doing empirical studies of the accounting framework and the financial statements in banks, a variety of sources have been surveyed. Parts of these sources are found in the second chapter where the wider context of this thesis was presented. Threads for the framework were found extending the theoretical spectrum from accounting to include finance and economics as well as money and banking. The remainder of this chapter is about the theoretical framework set up to analyse and draw conclusions from the practical research activity. This framework builds on the current and previous chapters regarding accounting and banking. The way forward has been by going back in history and to different fields of theory, after having found out in the studies that practitioners have trouble explaining what goes on in their own cash flow statements.

The conclusion of the current theory development in accounting, as stated previously in the chapter, is that available accounting theory does not provide a solution to the problem presented in the first chapter of this thesis. The mainstream economics and finance theories failed to predict the financial crisis and accounting theories lack an explanation of banks' cash flow accounting. This calls for new insights for the research and the theoretical framework for the analysis of the results. These insights are gleaned from multiple methods, presented in next chapter, and from the wide perspective of different fields of accounting, banking, economics and finance in the previous chapter. The theoretical framework presented here provides the tools to perform the research and to reach a conclusion from it, presented in the last chapter. The methodologies in the next

chapter and each study in the coming chapters will further develop these insights in order to fulfil the research aim and answer the research question towards the end of this thesis.

Overview

In order to investigate the accounting of cash flow in banks, different theories have been surveyed through the context in the previous chapter and earlier in this chapter. Here in this last section the relevant parts are selected to form a theoretical framework for the study. This thesis uses multiple theoretical viewpoints for the description of practice, cash flow numbers and money to approach one of the problems of accounting in banks.

The theoretical framework used for analysing the studies in this thesis draws on the sources of the money view perspective (Mehrling, 2011) but also builds on the *practice turn* (Whittington, 2006, 2011) in accounting research. The practice turn is used to frame the descriptive investigation of accounting in banks' operations. The main part of the theoretical framework pragmatically selects parts of the modern *money view* from Mehrling (2011), which was presented as a lens for understanding the financial crisis. The changed money view used as a framework here is moved to a lower level for viewing the cash flow accounting in banks.

There is an underlying need to turn to new theoretical backings in accounting research in light of the crisis and a description of *practice* provided in this study of banks' cash flow further strengthens that need. There is also a strong need for a different perspective on viewing banks in the economy, but the ignorance of banks and money in models has been named as one of the causes of the crisis. The historical perspective, drawing from old sources that have been ignored in the mainstream, can be of help regarding the cash flow issues in banks. The *money view perspective* is based on ideas from economic history that incorporate both banks and money into the models of finance and provides a fresh focus on accounting between banks. The theoretical framework for this thesis is based on these old ideas drawn together by Mehrling and forming a theoretical lens (2011) modified to be used throughout the analysis in the remainder of this thesis.

First, the *practice turn* in accounting research is used to change the view from traditional theories earlier in this chapter and focus on the accounting practice instead. According to Whittington (2006, 2011) and Skærbæk & Tryggestad (2010) the practice turn in accounting research has been growing as a research field in recent years. This thesis follows that research tradition by investigating accounting practice in banks, and

does so in a descriptive way and by pointing out failures found in the prevailing conceptual framework. This can be a beginning of falsification that would call for a rethinking of the accounting regime for banks. The research design is based on investigating practice, researching the negative financial numbers and pointing to a different view on money or cash flow in banks that helps to solve the research question and to understand where the cash comes from in bank operations.

This practical focus brings the empirical evidences from the banks' accounting reports into a new perspective. Due to the limitations in existing accounting theory and the lack of possible explanations found there, the main theoretical emphasis of the remaining parts of this thesis are directed towards the descriptive studies investigating practice from different viewpoints. This focus on practice calls not only for flexible theoretical perspective but also for multiple methods that will be presented in the next chapter.

The main source of the theoretical framework is the *modern money view* (Mehrling, 2011), which provides a new perspective on the cash transactions in banks' accounting in addition to the financial view of economics that has been dominant in the last three decades. The *money view* provides a framework for looking at the functioning of the banking system by using simple accounting tools (Mehrling, 2011). It is based on basic functions of Hicks' (1989) market theory of money, Hawtrey's (1919) inherent instability of credit, Copeland's (1952) money-flow economy and Minsky's (1954) survival constraint of direct cash flows. In his book *The New Lombard Street*, Mehrling (2011) presents the money view as a lens to understand the current financial crisis, primarily at the level of central banking. Here in this thesis the money view is limited to the banking level, excluding the shadow banking aspects, and focusing on simple cash flows. This results in Minsky being the main reference together with Mehrling as the foundations for the theoretical framework. Before setting out the theoretical framework of the modified money view, the practice turn is briefly discussed first.

Practice research

The *practice turn in accounting research* is an important theoretical framework for this thesis, and partly methodological as well. The focus is on the differences between the conceptual framework of the accounting standards (IASB, 2010) with assumed users and the actual practice in banks, preparing the cash flow statements according to these standards (IAS 7, 2010) without any existing users.

The practical object for investigation is a specific part of the current *financial accounting* framework, the standard regulating the *cash flow statement*, focused on a single type of firm, *banks*, with the scope of covering the biggest banks in Scandinavia. The selection of one section in the accounting statement requires a general view on accounting and the interconnectedness of the different parts in the financial report in both a practical and theoretical way. The choice of cash flow statements gives the opportunity to examine the phenomena from its origin and the beginning of its implementation—it was added as an obligatory part of the financial statement less than three decades ago. Banks' status as a special type of firm makes it necessary to take into consideration the theoretical aspects of their operations—in this case, banking theory. This framework builds on the approach of investigating both the theoretical foundations and historical background of the cash flow statement as phenomena, as well as the practical aspects and implications of the cash flow statement in the banking sector, prior to and after its implementation and then prior to and during the financial crisis.

The practice focus in accounting research has gained revitalization in recent years (Ahrens & Chapman, 2007; Skærbæk & Tryggestad, 2010). The *practice turn* in business studies was laid out by Whittington (2006) while in accounting research it has been advocated by Ahrens & Chapman (2007), but it was indicated even earlier by Hopwood & Miller (1994). Ahrens & Chapman state:

The contribution of practice theory [...] lies in providing a language for talking about skillful practical activity in context recognizing the constitution of context through action. (2007: 24)

The wider *practice turn* in contemporary social theory has gathered momentum since the 1980s. Examining the accounting practice of companies extends a tradition of research that closely examines managerial work (Mintzberg, 1973; Carlson, 1951), and as Whittington (2006) points out, the joint commitment is focused on understanding human activity and paying attention to what people actually do. According to Whittington (2006), even though the theorists differ in detail, they share an ambition to overcome the duality of individualism and societism, combining the individual human actor on a micro level and the social forces on a macro level. This interaction of the human activity within the micro-economy of the company and the macro-economical society is a fundamental feature of the theoretical framework for this thesis. By investigating accounting practice, the duality of aggregated results (macro) in the annual report and the individual economic events (micro) of the operations are overcome, and can be said to take place in

between the macro and micro. This bridge building between macro and micro involves increased complexity, but it is a way to come closer to understanding the financial reality, according to Kirman (2010).

Skærbæk & Tryggestad (2010), along with Whittington (2011), advocate a research focus on detailed practices of accounting. *“Accounting rules are disregarded not through ignorance or deceit, but through a mutual understanding of what it takes to get on with the job in hand”*, says Whittington (2011: 183), referring to Fauré and Rouleau. Accounting is a practical subject with limited theoretical background, while the practice of accounting has its roots many hundred years back. Practice theory is therefore generally useful for accounting research.

“This practice turn is not uncontroversial” (ibid.) according to Whittington but even though there are dangers, he highlights opportunities for accounting, *“On the model of economics, the prize is a transdisciplinary cohesion based on a self-conscious – ‘disciplined’ – application of theory”* (ibid.). Theory of practice is by definition in between in the centuries old dual concepts. *“Practice theory seeks out a middle-ground between structural determinism and deconstructive nihilism”* (Whittington 2011: 183-4, citing Ahrens & Chapman, 2006). This middle ground is also important when thinking of the connection between macro and micro at the economical level. *“Practice theory refuses the notion of accounting as ineluctable expression of capitalist domination”* (Whittington, 2011: 184).

Skærbæk & Tryggestad (2010) use a case-based field study *“to consider [their] proposition regarding the active role of accounting devices”* and they refer to MacKenzie, noting Callon’s notion of *“economic performativity”* that *“should be understood in its generic sense, including both humans and non-humans such as accounting devices”* (2010: 110). The cash flow statement is one such device. Callon makes the important point that *“economics, in the broad sense of the term, performs, shapes and formats the economy, rather than observing how it functions”* (as cited in Skærbæk & Tryggestad, 2010: 110).

The study of financial accounting is similarly occupied with models of how it should function, and observations of how it actually functions can be heavily biased. Accounting standards shape the format of the accounting rather than observe how it functions in practice. The case of cash flow statements in banks is an example of this. This thesis therefore investigates why these statements are not used.

Money view

The *accounting point of view* (Bedford & Baladouni, 1962; Ijiri, 1967) is a good starting point for a practice-oriented research of numbers in reliable financial reports. But in order to deal with the complexities of cash or money as well as the finance of banking, a resilient theoretical framework is needed to take a wide perspective. This can partly be found in the *finance view* and also partly in the *economics view*. But as the context in previous chapter has illustrated, and the crisis has exemplified in practice, these viewpoints are insufficient. In order to find a theoretical framework that includes the issues of banking, accounting and money or cash the search was broad, as the literature previously in this chapter as well as in previous chapters shows.

The reason for the need for a different additional viewpoint for this theoretical framework is the fact that the accounting view cannot explain why cash flow statements of banks are not used. Both the question of how to do research on banking practice and the question of the negative cash flow numbers are relevant. These underlying questions are part of why the statements of cash flow are not used. The limitations of each of the prevailing or mainstream *views* explains why they are not sufficient for the theoretical framework:

- *Accounting* looks at the reporting entity as a limiting factor, and thereby fails to grasp the interconnectedness of banks' balance sheets. This connection is a key point in the cash flows between the banks, netting before reporting and their credit creation.
- *Economics* has the aggregated view on all the balance sheets, but only in a general equilibrium of certain time in the past. This limits the view on flows and each bank.
- *Finance* focuses on the expected future cash flows. This diverts the view from the current flows and misses critical issues in accounted cash flow, negative in banks.

Part of the solution from Mehrling (2011) is connecting the economics and finance views with the money view. While the problematic aspects in the study of accounting of cash flow in banks are not a key feature in the analysis by Mehrling, his book illuminates the general issue this thesis deals with. The interconnectedness of the balance sheets of banks, in the money view, are in essence about cash flows between the banks. The money view provides the lens that was lacking and thus becomes a fundamental part of the theoretical framework of the thesis. The *money view*, in its modern form as put forward by Mehrling in his book *The New Lombard Street* (2011) is modified to be used as framework for the thesis.

With the *money view*, Mehrling draws on historical evidences going back to the establishment of the Fed in 1913 and all the way back to the origins of central banking provided by Bagehot and his book *Lombard Street* (1873). The modern money view is focused on the level of central banking in order to understand what happened in the current financial crisis. The old idea of the money view provides a useful tool to help make sense of financial flows in the modern world and the special function of credit in the economy. Mehrling (2011) describes this perspective as follows:

[The] money view provides the intellectual lens necessary to see clearly the central features of this multidimensional crisis. The reason is simple. It is in the daily operation of the money market that the coherence of the credit system, that vast web of promises to pay, is tested and resolved as cash flows meet cash commitments. (Mehrling, 2011: 2–3)

By changing the money view focus from the central banking level to the level of commercial banking, it provides a pragmatic lens for this thesis, to see the central features of credit creation and cash flows in bank accounting. This creates a simple but resilient theoretical framework, where the balance sheets of banks are connected to each other. Through this interconnection of balance sheets the plumbing is created for the flows of cash between them. It is in this web of balance sheet transactions where the problems of cash flow statements in banks can be better understood.

This is not only the payment system for transaction, but it includes the netting of flow in both directions as well. The money market funding and the capital market lending, which are the key elements of Mehrling's modern money view (2011) could be included, but in a simpler way this thesis focuses the perspective on simplified banking only.

The crisis sharpens the picture, but the problems were there, unnoticed, before the crisis. A clarifying and critical event in the crash was when banks stopped lending to each other. Banks' core operation is the flow of cash to meet different commitments. But when the liquidity in banks' cash flow surfaces as part of the problem during the crisis, the attention to the accounting of their cash flows becomes urgent and important.

The modern *money view* has historical roots. This way of thinking was quite common a century ago, according to Mehrling (2011), dating back to the founding of the Fed in 1913.

But today economic discussion is instead dominated by two rather different views. On the one hand, we have the view of economics, which resolutely looks through the veil of money to see how the prospects for the present generation depend on investments in real capital goods that were made by generations past. On the other hand, we have the view of finance, which focuses on the present valuation of capital assets, seeing

them as dependent entirely on imagined future cash flows projected back into the present. (Mehrling, 2011: 4)

Transforming these different views towards basic elements of accounting makes it possible to see the *economics* view to be linked to the *balance sheet*, while the *finance* view is linked to the *income statement*. The modified *money* view can be linked, in this thesis, to the *cash flow* statement of banks.

Similar to the lack of cash flow statements prior to the 1970s bankruptcy of W. T. Grant, the focus prior to the current crisis was on financial income and economics of investment but not at all on the liquidity of cash flows. It went unnoticed that W. T. Grant was not making money from the operations when the cash flow statement was missing. Similarly, it seems that no one looked at the banks from a cash flow perspective and the liquidity that was assumed to be constantly available.

Adding the time dimension to the different viewpoints helps clarify the complexity. The economic view focuses on the *past*, the finance view on the *future*, and the money view provides the *present* view on the current cash flow. Mehrling explains:

The economics view and the finance view meet in the present, where cash flows emerging from past real investments meet cash commitments entered into in anticipation of an imagined future. This present is the natural sphere of the money view. But both economics and finance abstract from money; for both of them, money is just the plumbing behind the walls, taken for granted. Both largely ignore the sophisticated mechanism that operates to channel cash flows wherever they are emerging to meet cash commitments wherever they are most pressing. (Mehrling, 2011: 5)

This resembles the lack of focus on liquidity in banks until the crisis, when everyone assumed they would have access to liquidity—the plumbing provided a constant flow. Until the plumbing broke—then it came as a surprise to almost all. This urges the need to keep the focus close to the cash flows. Mehrling continues: “*Abstracting from money, both the economics and finance views have in effect treated liquidity as a free good and, even more, offered up their theories of such an ideal world as the norm for monetary policy*” (*ibid.*: 5), where liquidity should not be scarce at all and the “*rate of interest should reflect the price of time, not the price of liquidity*”, but the lessons from the crisis show how this norm goes too far.

Our thinking about money has mistaken the properties of models that formalize the economics and finance views for properties of the real world. This is an intellectual error. (Mehrling, 2011: 6)

This intellectual error has widespread consequences. One is the lack of focus on the accounting of cash flows in banks. Abstracting from the accounting of cash in banks, when it is the core of the operations, is yet

another intellectual error. The focus on cash flow accounting in banks in this thesis sharpens through the lens of the *money view*, enhancing the importance of accounting for money flows in the daily operations of banks. The behaviour of the system is of importance here, because limitations of the system can bring about disastrous results, just like in the case of W. T. Grant, presenting good profit and growing fast until the sudden collapse. Based on the accounting system available, problems could build up over the course of many years, until it became too late to notice or stop. Similarly, the interconnectedness of the financial system was out of focus until interbank lending collapsed. The importance of cash flow in finance and its constraint comes from Minsky:

In the logic of finance, the most basic element of the economy is cash flow and the most basic constraint on the behavior of every economic agent is the 'survival constraint'. (Minsky, 1954: 157, as cited in Mehrling 1999)

The survival constraint requires that cash outflow does not exceed cash inflow. This relates back to Pacioli's definition quoted previously in the chapter. But since the exact coordination of payments is impossible, even this simple constraint typically involves finance in the form of cash balances or a line of credit. Credit line is a loan promise that has not yet materialized and thereby money has not been created, but it can be as soon as the line is drawn.

These lines of credit between banks dried up in the financial crisis. Many banks had been experiencing difficulties with funding since August 2007, some of them even as early as 2006, but only after September 2008 did the funding totally stop. Accounting numbers of banks had been showing good results during most of this time, but when this changed, no focus was put on the cash flow numbers. The elasticity in the flow of funding, both credit lines and interbank lending, is based on a simple contractual nature of finance, as derived from Minsky, and explained by Mehrling:

If, over time, the cash flowing in to a particular economic unit is expected to exceed the cash flowing out, then whoever owns that unit is said to own a capital asset. From a financial point of view, a capital asset is not a concrete thing but only a stream of future net cash flows. The most important capital assets are those which can be sold or at least hypothecated. The reason they are important is that possession of such assets gives the owner access to current purchasing power in excess of current cash flows, possibly far in excess. (Mehrling 1999: 139)

Banks play an important role in facilitating these flows. The banks take part in the trading of these financial assets. It can be said that banks' operations as such are about selling capital assets. The investment of a bank is lending, the loans are the bank's assets on the balance sheet. The securitization of loans makes them a tradable capital asset. The bank's

liability is the deposits, and bonds issued for funding. Capital requirements demand the bank to keep capital reserves, currently in the range of 5% and approaching up to over 10% with new regulations in the pipeline. But the other 90–95% of the financing in a bank's balance sheet must be funded through deposits and bonds. If the bank grows its lending and thereby increases the size of its balance sheet, this lending has to be funded when the cash flows out of the bank. The increase in debt, facilitated by the increased lending activity and simultaneous growth of the balance sheets of the banking sector is therefore far in excess of current cash flows.

The money view is not only applicable for central banks and for banks. The customers of banks can also be viewed through the money view perspective. Mehrling explains the circularity of the money and the real modern economy:

Production, consumption, and trade, are nothing more than flows of money in and out and between different economic units. The most real thing is money, but money is nothing more than a form of debt, which is to say a commitment to pay money at some time in the future. The whole system is therefore fundamentally circular and self-referential. There is nothing underneath, as it were, holding it up. The veil of money is the very fabric of the modern economy. (Mehrling, 1999: 138)

Bagehot (1873) called his book *The Lombard Street*, to make it clear that the money market was real in the economy. Mehrling (2011) calls his book *The New Lombard Street*, and it revitalizes the importance of the old ideas of the money view and the importance of seeing the new role of central banks. The theoretical framework of this thesis uses both books to understand accounting in banks in the modern economy.

The cash flow in banks is the '*very fabric*' of their operations, but still there are serious concerns in reporting this activity through financial accounting statements. The cash flow system in banks is '*circular and self-referential*' because in the banks it is hard to separate their own flows from their customer flows. The netting of flows in and out also makes it hard to grasp the real flow. In addition, the money market funding of capital market lending complicates things further.

The cash flow in banks is partly created through the credit giving process of lending and thereby it reinforces the circularity of the whole cash flow system. But this fact also helps explain how cash flows from operations can be negative in banks.

In this thesis, the money view is modified to the level of bank lending and used in the analysis of accounting in traditional banks. The treasury department functions as a bank within the bank in a similar way as the

central banks work as the banks' bank. This way of looking at the operations of the cash flow in the banks provides the *intellectual lens* to see the features of the banks' liquidity more clearly. The modified money view on the level of banks also clarifies the issues of credit creation and the multidimensional balance sheets' interconnectedness of banks and the resulting accounting of these cash flows.

In order to analyse the results of different studies and the multiple methods used, a robust but flexible theoretical framework was needed. The theoretical framework draws on different theories of banking, finance, economics and accounting. This resilience of a single but flexible framework provided the intellectual lens needed for understanding how to approach the problem of the cash flow accounting in the Scandinavian banks.

The empirical work of this thesis in studying the cash flow accounting in banks was *descriptive* of the accounting framework, and illustrative of the *accounting practice* where banks reported negative cash flow from operations for a decade. The study then became *explorative* in investigating the broken *language of finance* in banks' reporting and finally trying to *explain* the negative cash flow from facts and the interviews.

Throughout the different studies, the modified *money view* is used as an intellectual lens, both as a theoretical tool for analysis and a practical method to look at the banks' cash flow. The accounting reports investigated, and the standards behind them, as well as the bankers that work with the reports, were brought together using multiple methods as will be described in the next chapter. After the four empirical chapters, in the conclusion of this thesis the theoretical framework will also be used to answer the research question from the first chapter.

The different sections of theory earlier in this chapter and the wider context of it in the previous chapter provide an overview of banking theory, finance theory, cash flow theory and accounting theory within the field of banking during the period of economic development from the 1980s until 2012. Chapters 1 and 2 brought together fundamental elements of the problems in banks, the financial markets and their financial operations and illustrated the financial accounting problems of financial institutions. The methods used to study these theoretical issues empirically in banks' practice in the coming studies are explained in the next chapter.

This theoretical framework is built on the broad theoretical base illustrated previously in this chapter, as well as the context in previous chapter, and rests on the practice and numbers but using the money view provides the tools for analysing the empirical studies. The framework is

used on a different scale in the four empirical studies. But first, the methodological point of departure will be presented in the next chapter. The different viewpoints of the theoretical framework do relate to the multiple methods of the study. This theoretical framework provides the connecting point between the theory presented in this chapter and the methodology in the next chapter within the context described in the previous chapter.

3.8 – Summary of theory

This theory chapter consisted of two main parts, the theoretical framework for this thesis in the previous section, and accounting theory in the five sections before that. First with a general overview, followed by historical accounting theory development in three main parts: the classical approach to accounting theory, the decision usefulness and the information economics. Then the positive accounting theory and current development of accounting were briefly covered. The conceptual framework of current accounting standards is taken up in Chapter 5. But the theoretical framework for this thesis, in the previous section, also draws on Chapter 2 regarding banking, and ties together the accounting, finance and economics of banking and cash flow. This combination of theories is challenging and it even is possible to question the scientific aspects of it. But, as Flyvbjerg (2001: 25) asks: *“Is theory possible in social science?”* He comes to the conclusion, using the critical and deconstructive perspective of Dreyfus’ model, that *“the study of social phenomena is not, never has been, and probably never can be, scientific in the conventional meaning of the word ‘science’; that is, in its epistemic meaning”*. The theory part of this thesis similarly has to be considered as less scientific than the conventional meaning would suggest.

The theoretical framework for the thesis, presented in the previous section, takes a practical approach, starting off with the practice turn in accounting research. There the numbers and the historical foundations of accounting, monetary economics and financial concepts play a role as well. The main part of the theoretical framework is then based on the *money view* perspective that is used to change the view on cash flow in banks.

Chapter 4: Multiple Methods

4.1 – Methodology

This chapter discusses the research methodology of this thesis. It illustrates a system of different methods which are used for the empirical studies in the four following chapters, and describes the process, data collection and analysis. As stated in Chapter 1, the overall research problem regards the obligatory cash flow statement in banks that is not used.

Cash operations of banks are different than those of non-financial firms from an accounting perspective. The operational activity in a bank involves lending, which leads to outflow of cash from the bank, and inflow when loans are paid back. Other key functions of banking are operations of the payment system and keeping deposits, which are assumed to flow into the bank, and can flow out when demanded. Interest on loans and deposits add to the cash flows. The accounting 'measurement' of the in- and outflows is problematic because the 'product' is cash. This chapter describes how empirical evidences of the problematic material have been gathered and the sequence of multiple methods used for the research.

The chapter includes the following sections: First, different methods and studies are described. Second, an overview of the development of the research process is presented. Third, the data collection is explained and the sites are selected. Fourth, the analysis methods for each study are introduced, but they are taken up in more detail in each of the following empirical chapters. Finally, the reliability is discussed and a short summary provided.

4.2 – System of methods

Methodology is a system of methods. In this section, the different methods of the separate studies in this thesis are linked to show the way to reach a solution to the research problem and to show how the answer to the research question was searched for.

The methods used can be linked to the different theories of accounting, finance and economics as well as the theoretical framework of the money view, presented in previous chapters. The investigation of different issues of accounting of cash flow in banks related to these different theoretical fields calls for more than a single approach for data gathering and multiple methods for analysis. The methodology derives from the different theoretical perspectives of the accounting point of view, the finance view, the economics view and the money view. The four separate studies of this thesis are interlinked through the different methodological perspectives. These, for example, draw on the opinions of bankers expressed in recent interviews as well as in historical letters, and, for another example, draw on the facts in the accounting standard and financial statements.

The study of accounting standards and the comment letters study use document analysis—*descriptive* for the standard and *interpretative* for the letters. The cash flow study is a financial statement analysis *describing* the banks with a focus on the numbers, while the interview study is based on *interpretation* of the bankers' opinions (see Chapter 8 in Ryan, Scapens & Theobald, 2006).

These methodological perspectives overlap, so the interviews are partly descriptive and some interpretation of the financial statements is made. The text of the accounting standard has to be interpreted, but the goal is to describe the standard as clearly as possible with respect to banks. Interpretation of the comment letters can be partly descriptive, for example when the arguments are limited. The interviews were all started by asking for an *explanation* of the negative operative cash flow, derived from the financial statement analysis, but became mainly interpretative when an explanation of the negative numbers could not be provided, with the exception of one case.

When researching a complex phenomenon that has not been studied much before, like accounting of cash flow in banks, simplification is

needed and the exploration can even involve theory development. Watts & Zimmerman outlined a methodology for this type of theory development that consists of assumptions and hypotheses:

The assumptions, definitions, and logic are used to organize, analyze, and understand the empirical phenomena of interest, while the hypotheses are the predictions generated from the analysis. (1986: 9)

The methods used in this thesis approach the cash flow from different angles, testing different hypotheses of the researcher on the way. The regulatory text was both taken for granted and questioned. The letters from banks about the proposed rules were all read and categorized, but then only those comments written by negative bankers were revisited as relevant, as will be explained later on. The reported operative cash flow numbers were not understandable, considered useless and then changed finally to potentially have a signalling effect. What bankers said to explain the standard and the negative numbers was first the key, then looked like it could not be used, and finally became part of a possible explanation.

This use of different viewpoints, revisiting the interlinked material and switching between methods generated new assumptions for each study based on the hypotheses in previous studies. The method linking the studies together through the assumptions and preliminary answers leading to the next study can be labelled as the case study. This case study of cash flow in banks uses the empirical accounting material as facts and seeks opinions from different bankers for interpretation. Definitions and classifications of the cash flow activity as such were first assumed to be the same in banks and other firms but that turned out to be wrong. The logic of cash flow statements, as stated in the accounting standard, was also assumed to function in the same way, but the empirical evidence indicated differently. Historical evidences from the bankers' letters commenting on the initial standard provided further evidence of the errors in the assumptions. It therefore became critical to approach the cash flow in banks from different angles in the interview study in order to gain understanding and find solutions. The interviews were prepared based on the various material gathered in the other three studies, mainly through insights from the letters and facts from the statements. The conclusion of this thesis and the answer to the research question was reached gradually, through the sequence of the studies, by revisiting selected parts and going back to the different theories to establish a sound theoretical framework.

After a general analysis of the regulatory framework, it seems the banks are getting special treatment, but the logic of cash flow operations in

banks is still the same. Drawing on the analysis of the comment letters from banks regarding the cash flow prior to the implementation of the accounting standard, arguments were put forward against it. The results of the analysis give guidance on the problems to look for in the financial statements and provide leads on what to ask for in the interviews. The definitions of the different parts of the cash flow statements also turn out to be inconsistent in the financial statement analysis of the different banks in different Nordic countries. Neither the accounting standard nor the comment letters provide special explanation of the negative operative cash flow numbers found in the banks' reports. The results of the financial statement analysis are plotted in graphs to open up the discussion at the beginning of each talk with a banker in the interview study. Finally, the analysis of the interview study provides hypotheses for what the bankers use instead of the cash flow statements. But this does not explain why the statements are not used; it only confirms that they are not used. The results of the interview analysis show that because the cash flow is not used in banks, a new accounting regime is needed. Following Ahrens & Chapman an understanding of the field study is reached by making sense of observation by moving back and forth between data and theory:

Problem, theory, and data influence each other throughout the research process. The process is one of iteratively seeking to generate a plausible fit between problem, theory, and data. (Ahrens & Chapman, 2006: 836)

It is methodologically difficult to separate the cash flow concept from the liquidity constraints in the banking sector during the crisis and the question of why these are not reflected in the accounting statement. For simplification the focus is on a selected part of the banking system that is considered healthy and on the part of the accounting statements that is generally expected to provide information about liquidity. The empirical evidences called for a return to theory and extend its scope to find explanations of the observations. Theoretical explanations, found outside of accounting theory, for the credit creation process enhanced the results found in the studies. Moving back and forth between the empirical observations and the theoretical framework complemented the analysis of the empirical data.

Different levels of analysis

The research on accounting in banks in this thesis is limited to the bankers, who are both *preparers* and *users* of banks' financial statements. It combines the outside view on accounted cash flow as users of external reports from other banks and the inside view in their own bank of both using information and preparing reports. This is in line with Ijiri's belief that: "*cash-flow accounting offers a useful framework for financial and managerial accounting*" (1978: 347). The analysis is done from three different viewpoints as illustrated in Figure 7. The main empirical focus is on the level of financial accounting but the inside view of the management accounting has helped with finding out how the accounted cash flow numbers could be negative by using the theoretical framework and applying the insight from the credit creation of cash on accounting in line with the model in Chapter 1 where the internal generation of cash was illustrated.

| | Other Banks | Own Bank |
|-----------------------|----------------------------------|---|
| Management Accounting | | Actual flow Inside view |
| Financial Accounting | User perspective Outside view | Preparer perspective External publishing |

Figure 7: *Two perspectives of accounting and banks*

The cash flow in banks can also be investigated from other levels, as illustrated in Figure 8, where first the regulatory framework of the accounting standard is used for analysis (upper part) and then the reporting it leads to in the financial statements is used for the second level of analysis (lower part). The approach in this thesis is to both describe the facts of the framework and the statements (left column), as well as interpreting the bankers' opinions of the regulation and the reports (right column), as illustrated in the columns of Figure 8 below.

| | Facts | Opinions |
|----------------------|---|---|
| Accounting Framework | 1. Accounting Rules standard cash flow | 2. Comment Letters sent by bankers |
| Financial Statements | 3. Cash Flow reports with negative numbers | 4. Interview Bankers about the cash flow |

Figure 8: *Four studies of the thesis*

The statement of cash flow in the banker's own bank is viewed from the *preparer* perspective and the other banks' reports from *user* perspective. The inside view is then used for finding out the explanation of why the accounted flow is negative. The preparer's perspective demands a description of the accounting rules, and the rules background from the banker's perspective is provided in the letters.

The initial objective of the research was to find out the difference between banks and non-financial firms with relation to their cash flow accounting framework. This involved an analysis of the reported numbers of the operative cash flow of banks, which could be negative for a decade and then suddenly turn very positive. The final step was to let the bankers explain their cash flow in order to find out why the statements are not used.

The research question developed through the design of the research and was first split into four preliminary questions used in the working process:

1. *What is the purpose of preparing the cash flow statement in banks?*
2. *Can the cash flow statement in banks fulfil its function?*
3. *Why is the cash flow from operations in the banks negative?*
4. *What is used instead of the cash flow statement in banks?*

The questions were first considered as research questions for each of the four studies, but they overlapped and ended in giving guidance during the whole research process. This thesis resulted in answering, with all four studies, the single research question:

Why are the cash flow statements of banks not used?

The overall aim was to understand why the cash flow statements are not used in banks, by studying if and then how the cash flow in banks is different from other firms. The separate studies show how the bankers said in letters from 1987 and 2009, as well as in interviews in 2011, that cash flow statements do not function for banks and it can therefore be assumed that is why they are not used. But the question of why the statements do not function for banks, or how they function differently still remains. The studies of the accounting standard and the cash flow statements show how the rules demand that banks present similar reports as other firms while the numbers in their reports illustrate clear differences. This resulted in revisiting old theory explaining *credit creation* and using the theoretical framework to understand the cash flow accounting in banks in a new way.

Perspectives on theories and methods

First the study was considered to be an exploratory case study where different aspects of the cash flow were investigated from a diverse range of sources. The idea in the pilot study was to start with a financial analysis of the accounting numbers in the cash flow statements in annual reports of the bankrupt banks and comparative companies. But this method was not sufficient for the problems found. The reported financial numbers called for further explanation. It was decided to analyse the accounting standard for cash flow to begin with and then its historical background was added. The opinions came both from the board's basis for conclusion and from the bankers' comments on the rules during the standard setting process of cash flow statements in 1987. Additional analysis of more recent comments on proposed changes of the standard in 2009 provided more recent opinions from the bankers later in the process. This called for both descriptive and interpretative document analysis. The financial statement analysis that was started in the pre-study could then be revisited and extended by covering more banks during a longer period. The eight banks selected in Scandinavia to be studied further and approached for the interview study were analysed through annual reports since 1999. One of the eight banks then declined to participate in the interview study. However, this bank was not deleted from the financial statement analysis in order to provide a complete overview of Sweden's biggest banks. Both the textual analysis of the rules and the financial analysis of the reports were prepared for the final study using interviews in the banks. This step involved interpretative methods to study the bankers' view on the cash flow even though this was fundamentally a case study. One of the interviews then also provided the source to the solution of the negative cash flow numbers and that part became *explanatory* (Ryan, Scapens & Theobald 2006; Scapens, 2004, 1992).

The different studies of this thesis can be linked to different theory backgrounds and different methodological approaches that are used. The different views or perspectives drawn from the theoretical framework can also be aligned with theory and method. An overview of this matching is given in Table 3 below, but it has to be viewed as a rough grid and not as an exactly clear-cut match. The four studies are in the first column:

The methodological issues are covered in more detail in the remaining parts of this chapter. The issues follow the choices that had to be made in the planning and execution of this research as briefly described above. The definition of the research problem was covered in more detail in

Chapter 1, and the context was laid out in Chapter 2 for widening the perspective from accounting to finance and economics.

| Empirical studies (Chapters 5–8): | Theory matching (Chapter 3): | Method used (Chapter 4): | Perspective (Chapter 3): |
|--|--|--|------------------------------------|
| 1. Accounting standards - <i>purpose of cash flow</i> | Classical approach, normative - <i>rules-based vs. principles</i> | <i>Descriptive:</i> Document Analysis | Accounting view |
| 2. Comment letters - <i>function of statements</i> | Information economics - <i>historical investigation</i> | <i>Interpretative:</i> Document Analysis | Economic view |
| 3. Cash flow reports - <i>negative operations</i> | Decision usefulness - <i>information for users</i> | <i>Descriptive:</i> Fin. Statement Analysis | Finance view |
| 4. Interview bankers - <i>why is cash flow not used</i> | Practice: <i>preparing statements</i> - <i>that are not used</i> | <i>Interpretative:</i> Interview Analysis | Money view |

Table 3: Methods matched with theory and perspectives of each study

The theory and its development were covered in Chapter 3 as well as the theoretical framework for the thesis using the money view. The four empirical studies are then covered in the coming chapters.

Different methods and studies

The actual cash transactions become the focus of attention in times of financial problems. In this thesis the cash flow transactions, and not the implied value changes in the business, are studied from the accounting perspective. Here the banks' accounting and bankers' views on it are studied, but not those of the investors. The four studies are seen as different *cases*, studied with different methods.

The design of the methodology was not fixed before the research started but was instead adjusted during the research process. The suspicious nature of the cash flow statement in banks was explored throughout the research. Semi-structured interviews turned out to provide both unstructured data about banking and a clear and structured count of homogeneous answers from all interviewees saying they '*do not use the cash flow statement*'. The eight different Scandinavian banks can be seen as separate cases. In the interviews, an illustration of the cash flow was shown to the bankers and then they were asked for an explanation.

There are *multiple* methods used for this research (Hendriksen & van Breda 2001; Bryman & Bell, 2003; Ryan, Scapens & Theobald, 2006; Poteete, Janssen & Ostrom, 2010). But the methods are used in various forms throughout this thesis developed during the research process, and can also be seen as helpful for *triangulation* of the results (Silverman, 2006, 2005). The accounting standard for cash flow is checked against its

background in comment letters, the actual outcome in financial statements, and understanding in the interviews. The cash flow numbers in the financial statements are used to try to get explanations in the interviews, and are used as evidence for the problems stated in the comment letters.

Poteete, Janssen & Ostrom (2010) advocate multiple methods and the requirement for different kinds and quantities of data (2010: 17). They stress the limits of relying on any single method but endorse using a *mixed method* that can make a valuable contribution if applied appropriately (2010: 27). The advantages of a *multi-method* become clear when the research moves through different stages. These advantages have been experienced in this thesis research process. The criticism towards single method dates back over three decades, to Clark as cited in Poteete, Janssen & Ostrom (2010: 4):

A first rule should be to beware of one researcher, one method or one instrument. The point is not to prove that the hypothesis is correct, but to find out something. To rely on a single approach is to be shackled. (Clark, 1977: 10)

The multiple methods preferred in this research are selected for the different studies as described earlier in this section. The single method can be applicable for certain types of research but in order to find out more about the cash flow in banks, the use of multiple methods and four studies was the key.

In the next section the research process is described and then the methodological issues of choosing a research site, gaining access and developing analysis methods are covered. An overview of the parallel and reversed timeline for the research described in this section links to the process described in next section and is illustrated in Figure 9:

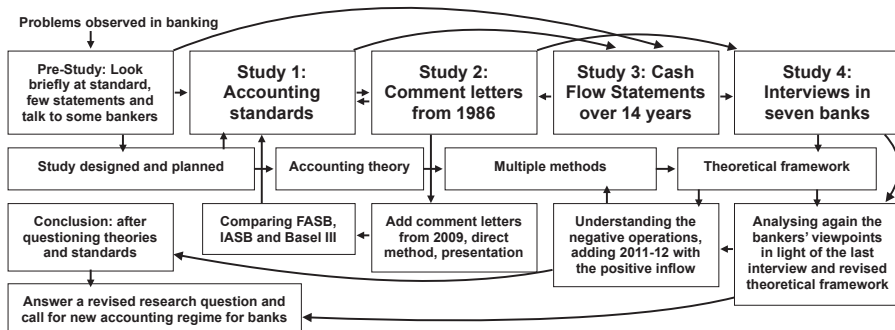


Figure 9: Overview of the research process

4.3 – Research process

The process of doing the research in this thesis can be described as a case study of cash flow accounting in banks. The study of the cash flow can be broken down differently; for example, each bank would be considered as a separate case, studied from the accounting numbers in Chapter 7. Another split in the accounting framework is studied in Chapter 5 and in Chapter 6 the development of the accounting standard for cash flow statements is investigated in the bankers' letters with comments. Finally, in the interview study in Chapter 8 the operational functions of the interviewed bankers provide different viewpoints for their professional perspectives on the cash flow. The viewpoints of accountants provide one perspective, the operators' view is another and the management view forms the third. Finally, a separate case can be identified as being the quest for finding out reasons for the negative numbers and what could explain them. The different cases studied are parallel processes that can even be partly intertwined.

Silverman (2005, 2006) and Flyvbjerg (2001, 2006) argue for the use of case studies to investigate complex phenomena and to understand social reality. Furthermore, Hopwood has called for more empirical studies of companies and their accounting practices (2009a). Case studies were chosen for this research because they give the combined flexibility to analyse both numerical financial statements and text documents as well as interview people. The concept of cash flow is simple and understandable by most business people, but cash flow in banks turns out to be a complex phenomenon, calling for wider investigation. The cash flow statements in banks are negative and the conceptions of it are different in regulation, in letters and when asking the bankers. The case study method allows the researcher to retain the broad characteristics of real events.

There are many types of case studies: on individuals, community studies, social group studies, studies of events, roles and relationships (Robson 2002). Then there are studies of organizations and institutions, where the researcher, for example, studies actual companies, like a bank. The focus can be different, e.g., on best practice, management, processes of change, organizational culture or accounting issues. In this study, the focus is both on bank management and accounting practice. The investigation focuses on the cash flow part of the financial accounting in banks. It is built not only on empirical data, documented material from historical accounting reports of the banks and the standard setting documentation, but also on interviews regarding the cash flow from the operations and management of the banks investigated. Due to the complexity of the

concept of cash flow in banks it was decided to focus on a few cases and thereby gain a deeper understanding. The lack of previous research regarding cash flow in banks made it necessary to include the contextual issues of the cash flow accounting standard and its historical background. The flexible design of case studies fitted for the different types of research needed to answer the questions asked in this thesis.

Case studies may use triangulated methods comprising, for example, observation, semi-structured interviews and document analysis to validate the findings (Silverman 2005). Data triangulation is used in order to increase the validity and strength of the study, to decrease investigator bias, and to provide multiple perspectives (Denzin, 1970). In this research, the combination of the different studies, including the standard, the letters, the numbers and the bankers, strengthened the validity. In order to investigate the practice behind preparing the published numbers, principles of the standard regulatory prescriptions and the perceptions of the bankers about these principles are crucial for the process.

The methodology is also inspired by *ethnographic* research (Atkinson and Hammersley 1994: 248, as cited in Silverman 2006: 78–9) that involves four features (fitting to this design):

1. The emphasis is on exploring the nature of social phenomena.
2. Work with unstructured data.
3. Investigate a small number of cases.
4. Analysis of data.

All four features involve explicit interpretations of the meanings and functions of human actions, and together fit to find out why the cash flow statements are not used.

Development of the research aim and question

Each of the four studies could be designed and completed as a stand-alone study. Then further details would have been gathered, and a deeper analysis of the material done. But each study on its own did not provide a full answer to the research problem of this thesis. Instead the combination of the studies solved the quest, explaining also why the operative cash flow was negative and how banks could report more outflow than inflow over a decade.

This thesis is born out of the problems stemming from the financial crisis. It describes certain parts of accounting in banks in order to understand specific problems with the accounting standards and seeks explanations from the bankers. The different levels of analysis were covered in the

previous section and the research question, but the four studies were not decided up front. Instead, the quest was developed through the research process. The background question that initially was used to define the problem in this thesis was: *As more and bigger banks have gone bankrupt during the last decade, can the explanation for this phenomenon be found in the accounting numbers?*

Originally the accounting statement of cash flow was implemented in the mid-1980s after the big bankruptcy of the W. T. Grant Company, which had seen good profits and continuous growth over a decade, but it had actually not been generating positive cash flow from operations during that same time. The purpose of accounting, reporting the financial status of a firm, has been based on certain assumptions to provide useful information. This led to another question in the process: *How do bankers use the cash flow statements of banks?*

From the beginning it was decided to interview the bankers about their accounting, both regarding their own cash flow and then also how they evaluate other banks' flow. But then it became evident that the bankers do not use the cash flow statements at all, neither their own nor those from other banks. This fact showed that banks are different from other financial firms, because the cash flow statement is a tool for evaluating borrowers in banks' credit assessments of both corporate and private customers. The quest turned towards the reason why banks' own statements are not usable or useful.

It was another unexpected fact to find out that in the big bankruptcies of banks during the financial crisis, the accounting numbers had not shown any warning signals in the annual reports during the years preceding the crisis. Even in the last quarterly report before the bankruptcy, profit was in many cases good. Credit ratings of the bankrupt banks had even been raised a few months before their collapse. The cash flow of the biggest Icelandic bank's bankruptcy was very positive, and it had only one year of negative operative cash flow during the decade before. The accounting numbers did not reveal any obvious problems.

The third unexpected fact found during the research process was that the big Nordic banks, by many judged as some of the most secure in Europe, had reported negative operative cash flow in their accounting reports during many years. This did not indicate their risk of bankruptcy, even though that would be the interpreted sign if a non-financial firm that is not in start-up phase reported negative cash flow from operations for such a long time period. One of the interesting facts from the interview study was that bankers in these Nordic banks had not even realized themselves

that the operative cash flow of their own bank was negative. This fact came as a surprise to many of them. When asked the first question, after having been presented with the numbers, *“Why are the numbers in the cash flow statements of banks negative?”* they could not give answer.

These were the key moments in the research process: the realization that the Nordic bankers, repeatedly, could not explain why the numbers were negative. Some of them said cash flow was not important in banks and the numbers were irrelevant. *“Banks are different”* was also a common argument. This fact had even been illustrated in the comment letters made by American banks in response to the FASB in 1986 before the implementation of the accounting standard for cash flow statements. The claims were repeated in comment letters from global and European banks in response to a discussion paper in 2009. The study design had been circling around the question: *How do the banks analyse their own and other banks’ cash flow?*

This question was also stated in the letter when requesting interviews with the bankers. All the persons answered during the beginning of each interview that they never used the cash flow statement. It came as a challenge to continue the discussion in some of the interviews. The central finding, that banks do not use the cash flow statement, came out up front. Even though bankers realize well the importance of cash flow as such in their daily operations, and the cash flow statements of their customers are critical factor in determining credit assessment, these statements are not used when banks are lending to each other. The main focus of the interview study then became directed to what was used instead. The key question discussed in the interview study became: *What is used instead of cash flow?*

The question of substitution has to be viewed in light of the previous questions throughout the different stages of the research process. In the beginning it was taken for granted that accounting reports made according to the same accounting standards would give similar information regarding banks and other firms. *This proved to be wrong.*

During the second study, it became apparent that bankers had already in 1986 indicated in comment letters to FASB that cash flow statements could not be applicable for banks. *Nevertheless, the same accounting standard was implemented for all.*

In the third study, the cash flow statements prepared according to the IAS 7 standard in Scandinavia were investigated over an extended period of fourteen years. In the decade prior to the interviews in Sweden the

total operative cash flow of the four biggest banks was negative. *However, these negative numbers were never mentioned in any of the reports.*

When the Nordic bankers were asked the questions in the fourth study, all of them made the same key point: 'We never look at the banks' cash flow statement'. Most of them added: 'Cash flow reports are not relevant information for banking'. Even counterparty banks, for interbank lending or borrowing, were never analysed from the perspective of their cash flow statements. This led to the research question: *Why are the cash flow statements of banks not used?*

The next section describes the data collection process for the material to answer that question.

4.4 – Data collection

Empirical data collected to address the problems of cash flow and liquidity in banking can be done in different ways. In identifying the problems and looking at the Kaupthing bank accounting statements, it showed nothing wrong, while Lehman Brothers had negative operative cash flow. This contradiction between the two collapsed banks was interesting in itself, but when looking at the accounting reports in the Swedish banks the necessity of more data collection became clear. Many of them had negative operative cash flow like Lehman Brothers. That was a more troublesome contradiction than between the two bankrupt banks. Other Scandinavian banks and a longer time period were added to the data collection.

Empirical evidences that seem to be contradictory or out of order can be helpful in identifying the research problem and narrowing it down to the key points. But complex problems also demand breadth in the analysis in order to reach a conclusion. Text documents regarding the accounting rules were therefore collected for background information before more detailed analysis of the numbers was performed. After collecting both the cash flow numbers and the accounting regulatory texts, including background material, the researcher was prepared and equipped to go out in the field to meet the bankers. A methodological tool used at the opening of each interview was then to show the numbers from the cash flow statements in a few graphs. The interviews started on the assumption, like the regulatory text states, that banks, like other firms, need to generate positive cash flow in order to be sustainable. To show the negative operative numbers in a graph was a way to begin the discussion in the

interview that provided rich and useful feedback from interviewees, even though they had trouble explaining the negative cash flow.

In order to collect useful research material both the design and methods have to be flexible. In the coming sections the collection of empirical material is described. First the choice of regulatory text documents is presented, then the selection of banks and financial reports, and finally how the bankers were approached for interviews.

Choice of accounting rules and comment letters

The research design was aimed at the accounting in Scandinavian banks, with a focus on the cash flow. But in order to select which accounting standards and regulations to study, the data had to be collected from the US-based Financial Accounting Standards Board (FASB). This is simply because it was there that the cash flow statement was first implemented as an accounting standard and was later taken up by the International Accounting Standards Board (IASB) in London. Through IASB's global reach and the EU, these directives came to be implemented in the Nordic countries. The comment letters from (CL 1986) on the exposure draft (ED 1986) from 1986 were available for purchase from the FASB archive in the US, while the comment letters from 2009 on the discussion paper (DP 2008) could be downloaded from their website. The accounting standards, both IAS 7 from IASB and FAS 95 from FASB could be downloaded from their respective web sites. The original version of FAS 95 from 1987 was used as well as the initial exposure draft from the comment letters public record volume. The 2010 version of IAS 7 was used in this thesis but updates in 2012 and additional updates to FAS 95 were not considered relevant for this research.

More data on banking regulation had to be collected for the wider perspective. Here the European banking industry was most relevant, as the rules in the Scandinavian countries are built on the EU regulations and the Basel rules, which are global. But due to the fact that the banking industry in Europe was in serious crisis during the period of this research, and the regulatory framework is being overhauled, this part of the thesis has been minimized and will have to be continued in future research activity.

Many working papers have been used as support material, and to learn about the ongoing development of Basel III and its liquidity measures for NSFR and LCR, but no regulatory papers could be found regarding cash flow statements as such, except the previously mentioned Discussion Paper from the joint committee of FASB and IASB in 2008 regarding *Preliminary Views on Financial Statements Presentation* (DP 2008), where the

direct method of cash flow and different presentation proposals for the cash flow were presented. The comment letters from banks in 2009 (CL 2009) on this paper were used, but the exposure draft for the future standard is not ready and the project is on hold. This meant that the comment letters were mainly from US banks, as well as the two accounting standards for cash flow statements as such, which were the main data sources for the text analysis in the first two studies.

This research is focused on Scandinavian banks but does not compare regulations between countries. The national regulations in the different Nordic countries are not compared, and the difference between IAS 7 and FAS 95 is not considered problematic, as FAS 95 is only investigated as the historical background to IAS 7. The goal is then to get the bankers' view on the cash flow regulations as a main emphasis.

The text analysis was first focused on 458 comment letters (CL 1986) on the proposed accounting standard for cash flow (ED 1986). The letters selected for analysis were limited to those from banks, in total 195. Further analysis was limited to the letters commenting from the preparer's perspective, limiting the letters first to 60 and then narrowed down to 47. The second group of comment letters from 2009 consisted of 229 letters (CL 2009) in answer to 23 questions regarding different issues of financial statement presentation (DP 2008). Here, the limitation was made first by focusing on the three questions regarding cash flow, and then only on letters from banks or bankers' associations, reducing the number to 25 letters, and mainly the ten sent from commercial banks.

Selection of banks and financial statements

The companies and their accounting reports are selected based on the aim of the research to investigate cash flow in banks. Initially, the intuitive goal was to see if the initial idea of cash flow statements as an indicator for bankruptcy would hold for the collapsed financial institutions. The *Accounting Theory* of Kam (1990) points to Largay III & Stickney's article (1980) about the W. T. Grant bankruptcy as the critical factor in implementing cash flow statements as an obligatory part of financial accounting reports.

The four big banks in Sweden were selected as well as the biggest banks operating in the other Nordic countries. Furthermore, the original W. T. Grant bankruptcy and an operative real estate company, Castellum in Sweden, were used for comparison with the banks to see the difference in the cash flow, as well as one bankrupt bank, Kaupthing.

The general financial statement analysis was first focused on the years 2007–2010 and later was extended to 1999 and 2012. The general criteria for selecting companies required the following basic points to be fulfilled:

- *Going concern* (15–25 years of operations, bankrupt companies are assumed to have had the goal of surviving, newly started firms or start-ups do not fit)
- *Accounting period* over at least ten years presented with numbers for each year (excluding quarterly reports) illustrating long-term goals
- *Financial numbers* of monetary values are used as a starting point for the analysis. The key headlines of the annual reports were read, and the text searched for comments on cash flow

The bankruptcy case of Kaupthing bank was selected because it is on the list of the ten biggest bankruptcies in the world, and was part of the Nordic bank market. Furthermore, Kaupthing had operations in Sweden and had a structure similar to the Scandinavian banks. The cases of Kaupthing and Lehman Brothers were mainly used in the introduction of the research in Chapter 1 and in the introduction to the interviews when presenting the different cash flow graphs of W. T. Grant, Castellum, Kaupthing and the relevant bank being visited.

The largest banks in Scandinavia were selected for the study. These included Nordea, Handelsbanken and SEB in Sweden, Danske Bank (Denmark), Ålandsbanken and OP in Finland and DNB (Norway); each represented the largest banks in their respective country. The plan was initially to include Swedbank (Sweden) as well, but they declined to participate in the interview study. Their financial numbers were still included in the third study to allow observation about the largest banks in Sweden. However, despite opening up for a single interview towards the end of the research process, there was not enough material to include them in the fourth study. The analysis from the interview study is not considered to have been weakened by the absence of Swedbank, as Sweden was already well represented in the remaining selected banks.

The selected banks are eight of the biggest banks in Scandinavia. Selection criteria are based on the biggest bank from each country, but with more Swedish banks included. That is because Sweden is double in size compared to Finland, Norway and Denmark, so the SEB and Handelsbanken can be considered as the two Swedish banks. While Nordea's legal home is in Sweden, it has operations throughout the Nordics; for example, it is the second largest bank in Denmark, and the largest one in Finland. This selection is therefore considered to be a good representation of the major Scandinavian banking sector.

| | Bank | Non-bank |
|---------------|------------------------------------|-------------------------------|
| Bankrupt | Kaupthing bank (IS) | W.T.Grant (US) retail |
| Going concern | Eight biggest banks in Scandinavia | Scandinavian real estate firm |

Figure 10: Overview of the firms selected for the pre-study, different types were selected to compare with the eight banks of the main-study

Selection of the cash flow numbers of banks from published financial statements had to be limited to available data. The main headline numbers of the statements were compiled; cash flow from operating activity, financing activity and investment activity.

The financial statement analysis of the banks is focused on illustrating a few key numbers in graphs over an extended period of 14 years. This illustrates the decade prior to the interviews and an additional two years prior to and after that. The composition of the total cash flow, split between key classifications of operational, finance and investment activity, gave a dispersed and incoherent picture of the banks. In order to supplement the cash flow numbers, both the profit for the year and the total income were plotted on the graphs. The additional numbers collected were summarized in a table for each bank (see example in Appendix 7) while the total assets and other key numbers are provided in the information about each bank in Chapter 7.

After the initial financial statement analysis of the selected banks the graphs were used as introduction material for each visit to the banks in the semi-structured interview study that was designed to ask the bankers about the cash flow numbers. But after the interview study, later in the research process two more years were added—2011–12 as well as 1999–2000—to include the IT bubble and keep the numbers updated. This resulted in additional analysis and reconsiderations because the cash flow had changed.

Approaching the bankers

Access to bankers for interviews was a critical issue for empirical data collection for this study. Several different and parallel approaches were used. First, in a pre-study, to test questioning bankers about cash flow, all relatives and acquaintances working in the banking industry, as well as some previous business partners working in the financial sector, were contacted and informed about this thesis project. Most of them were willing to participate in the pre-study to test the interview questions and

to check the reactions to the research idea. Furthermore, the main Nordic banking industry conference was attended in May 2011 in Stockholm to both establish contacts with bankers as well as to extend the pre-study. During the breaks at the conference the pre-study was continued in a similar manner as before, to test the research question and find out good ways of how to talk about cash flow accounting within banking. In total 19 persons were informally interviewed for the pre-study during the period from September 2010 to May 2011.

An additional eleven persons, not bankers, were formally interviewed parallel to the main interview study. These interviews of bank analysts, finance journalists and regulatory and supervisory persons were done prior to and during the same period as the interviews with the bankers. However, they were not included in the interview study; because of their different professions, recording was generally not allowed and the discussions were used as support material and a learning experience for the researcher. Neither the pre-study interviews nor the supporting interviews were included as part of the analysis in the interview study. Two additional banking conferences were attended in Stockholm in 2012, and two meetings with bankers after the interview study. These only supported the analysis further, but did not contribute to the content of the interview study as such.

The Bank Management Group (BMG) of fifteen researchers at Gothenburg Research Institute (GRI) had shared their experiences and stories from previous interviews with Swedish bankers. The researcher attended the weekly meetings of the BMG at GRI since the autumn of 2008 and during the whole research process from October 2010 until June 2013. This experience sharing influenced the researcher and provided both preparations for the interview study and advice on the interview questions. The researchers in the BMG helped by providing names of potential interviewees, as did some of the pre-study attendants. After the compilation of the first list of persons to interview the web sites and switchboards of the selected banks were used to make the list comprehensive and fill in relevant positions of bankers to approach for interview. At the end of each interview, the bankers were asked to provide names of additional interviewees, and while this resulted in a few new interviews to replace the names that dropped out, most of the names mentioned were already on the main list.

The interview guide (see Appendix 5) was tested twice in the BMG and revised after the pre-study. In May 2011 the main list of potential interviews was finished and letters sent to over sixty persons at the end of

May and early June (see Appendix 6). Follow-up phone-calls and e-mails resulted in some name changes and several additional names. Furthermore, the supporting interviews in surrounding institutions, like the Bankers Association, Bank analysts, Financial Surveillance Authority and Central Bank were used to gather outside views of the banks' accounting, increase the researcher's knowledge, train the interview skills of the researchers and gather further names. In late June 2011 a final list was made of 32 interviews with bankers and the additional 11 supporting interviews. These interviews were completed in four weeks of interviewing in Stockholm, Oslo, Mariehamn, Copenhagen and Helsinki during August and September 2011 (see Appendix 3).

Some of the bankers that were approached in the beginning were not eager to discuss the accounting of cash flow. But the pre-study experience was crucial for the research process, so the focus of the interview letter was widened from cash flow to liquidity. When the letter was followed up by phone, most of the bankers agreed to the interview, even though some initially said they could not say much about cash flow. Due to the hesitation to discuss cash flow, a standard presentation of the graphs from the financial statement analysis was prepared and all interviews started with this presentation. The graphs with ten years of cash flow numbers from each bank and the reference companies were illustrated in the beginning of every interview meeting (see examples in Appendix 7). In the next section the analysis methods for the collected data are described.

4.5 – Analysis methods

The sequence of different research methods in the four studies of this thesis requires multiple methods for the analysis as well. The analysis method in each study takes into account previous results and the interaction between the different studies is critical for the research process. Each analysis is described with the relevant study in each of the four coming chapters, but here in this section a brief overview of the analysis methods is provided.

The overall analysis methodology is inspired by Young & Oakes that “*are concerned with questioning the taken-for-granted, examining the silenced and offering possible alternatives*” (2009: 284). It draws from the four different approaches of description, exploration, illustration and relations (Young, 2006). The conceptual framework of the regulatory system for the banks is *described* based on the existing texts of accounting standards. The historical environment from which the cash flow statement rules are made is *explored* and analysed from the letters bankers have sent to standard setters. Then compilation of the cash flow numbers is used to *illustrate* how the cash flow reports have been negative. Finally, the disconnection or lack of *relation* between the accounting standard and the cash flow statements becomes apparent during the interviews.

The interconnected relations between the different banks are also crucial for the funding of cash flow and the interbank market. The complexity of the research problem is reduced by the approach of dividing it into different studies, while the multiple methods used result in a less simple methodology for the connection between the studies. Each study is covered in the coming sections and the relevant analysis method described.

Relevant accounting standards

In this thesis, one accounting standard is put in focus. It is available in two main versions, the *International Accounting Standard 7 - Statement of Cash Flows* (IAS 7) and the original version from the US, *Statement of Financial Accounting Standard No. 95 Statement of Cash Flows* (FAS 95). The research regards the cash flow in banks and this is the relevant accounting standard. In analysing this standard, the connection to the other studies is required. The second study, an examination of the comment letters, illustrates the bankers’ view on the standard, while the third study analyses the outcome or the product of the standard, the cash flow statement as such. In the interview study the bankers were asked about the standard but those who were familiar with it only took it as it is,

and stated *'we prepare the cash flow statement because the rules demand so'*—but, some added, *'nobody uses it'*.

When considering the relation between accounting standards and the financial crisis, many different standards could be reconsidered. Fair value accounting has been pointed out as one of the factors leading to the problems of the financial system (Kaletsky, 2010; Stiglitz, 2009), while others claim the opposite (Walton et al., 2009, Véron, 2008) but many see it's role as secondary (Laux & Leuz, 2009; Waymire & Basu, 2011). The IASB has been working on renovating many of its accounting standards since then, some specially regarding the banking sector. For example, IFRS 7 standard of Financial Instruments Disclosures has been amended, IFRS 17 standard of Leases and IFRS 9 standard of Financial Instruments are all currently being revised and the project is expected to last until 2015. Part of the revision regards operative and financial leases being combined as right of use leases, and the issues of classification and measurement of financial instruments and impairment of amortized cost of financial assets. Rules for Hedge Accounting are also under change. The IAS 32 standard of Presentation of Financial Instruments is to be amended and new standards of Fair Value Measurement in IFRS 13 as well as new standards of Consolidated Financial Statements IFRS 10 and Disclosures in IFRS 12 are to be or have been implemented. This is not a complete listing of potential accounting standards changes and relations to banks, but simply an illustration of the many ongoing projects.

The financial crisis has led to many other regulatory reforms than just accounting standards. Many reports on required or necessary reforms have also been prepared. In terms of concrete change, the Dodd-Frank regulation in the US is one big example. It regards customer protection and puts many demands on banks (Acharya et al., 2011). The Basel III rules are another example, a global framework focusing on capital and liquidity requirements for banks. But the initial plan for Basel III has been watered down during the period during which this research has taken place. Currently the implementation is planned during 2015–2019. The new Capital Requirement Directive of EU, CRD-IV, is the regulatory reform for European banks based on the Basel III. But more are under discussion, like a common depositor guarantee program as part of the bank union, as well as credit rating reforms. Some changes are already implemented, like the pan-European banking authority EBA and Dodd-Frank in the US. Many other regulations specifically aimed at banks are under way on both a European and a global scale. For example, FATCA (for global information to the US tax authority, the IRS), the AIFMD directive for alternative

investment fund management, MiFID2 and RRP for Recovery and Resolution Plan of banks, are already in place for global SIFI (Systemically Important Financial Institutions) and as part of it the Crisis Management Directive, as well as a new focus on concepts like Living Wills, Bail-in-Bonds, and Co-Co convertible collateral, just to mention a few. In summary, there are going to be a lot of changes in the banking regulations and it is impossible to cover them all at this point in time.

The scope of the thesis was limited to the cash flow of banks. There has been no focus put on the cash flow statement standards as a consequence of the financial crisis. The issues of cash flow have only been taken up as part of the discussion paper for financial presentation. But this general overhaul of the financial statement presentation, including the redesign of IAS 1 and IAS 7 together, was proposed in a discussion paper from 2008 (DP 2008). It was the result of a joint work by the IASB and FASB, which issued their staff a draft of the new standard in 2010. But this project has been put on hold since 2011 without a formal exposure draft being issued. From this overview the selection of the cash flow statement is strengthened, but the analysis of the accounting standard is done in Chapter 5.

Sorting out comment letters

The Financial Accounting Standard no. 95 for statement of cash flows was issued by FASB in the US in 1987 (FAS 95). This was used as the point of departure for the textual analysis of the regulation as covered in the previous section. But prior to issuing this accounting standard a suggestion had been made in an exposure draft that comments were asked on. Prior to that, discussion papers and committee work precede the process. But in the second study of this thesis the point of departure is the comment letters sent in 1986 on the exposure draft that was the basis for the standard issued. In total, 458 comment letters were submitted, comprising 1196 pages; these Public Records were purchased in a volume from FASB (CL 1986). The letters provide comments and concerns for many of the potential problems arising from the accounting standard. Not all the changes these letters led to are analysed here. But all the letters were read, and have been grouped in classes of negative, neutral and positive attitudes towards the standard. This grouping was completed by the researcher and a reference group of four other banking researchers in the BMG at GRI to check for inconsistency. The letters were also grouped by FASB in categories of occupation of senders: Industry, Public Accounting, Academy, Banking, Government, Securities and Others.

For this study, the letters from Banks and Securities being financial institutions were in focus. This gives a total of 195 (191+4) letters, and all these were specially investigated. Furthermore, the negative and neutral letters from Public Accountants (18+6 letters) that touched upon banking issues were also included in the detailed analysis and the few negative letters from industry (13 letters) were included for comparison.

The categorization process was done stepwise. After an initial grouping into 14 categories of problems, these were limited and combined in order to narrow it down to six main problem themes and an additional seventh group for others, which did not affect the issues of this study. A more detailed analysis of the problem themes that emerged when reading carefully through the selected letters is provided in Chapter 6.

Financial statement analysis of cash flow numbers in banks

The annual reports of all the big banks in Sweden were first collected for the 10 years from 2001–2010 and in later cases added from 1999, and then at the end of the research process, the two last years 2011–2012 were added. The annual reports were downloaded from the banks' websites. After compiling the key numbers from the balance sheet, income statement and cash flow statement into Excel, a table of first 10 and then 14 years with 20 key financial numbers for every year, was made in a separate sheet for each bank. The summary of the key items in the financial statements for each company were put in database to prepare the graphs, and the following numbers are presented with two graphs for each company in this study (see in Appendix 7):

- Cash flow from operating activities (blue bar, blue line)
- Cash flow from investing activities (red bar)
- Cash flow from financing activities (green bar)
- Total operating income (Turnover, total revenue, total core income)
- Profit for the year (Operating results, net income or net earnings)

The three cash flow numbers are presented in a bar chart of three colours, illustrating total cash flow of the year, showing positive cash flow above the line and negative flow below. In the line chart the cash flow from operations is illustrated with a blue line together with the profit (green line) and the total income (red line) illustrating the operations growth.

Two additional cases were selected for the financial statement analysis for comparison to the banks. The former reference company was a Scandinavian real estate firm, Castellum, in order to have one normal firm—neither a bank nor bankrupt. This traditional real estate company,

with headquarters in Gothenburg, was selected to illustrate normal cash flow numbers for comparison. The second reference company was Kaupthing bank from Iceland, which was used in Chapter 1, together with Lehman Brothers. The illustrative object of a bankrupt bank was expected to provide a contrast in the illustration of accounting numbers. Lehman Brothers was briefly studied at the initial stage but the case of Lehman was not used due to the fact that it was an investment bank.

The idea of the line chart is adapted from the famous case of W. T. Grant, a retail giant that suddenly went bankrupt and made the case for Largay III & Stickney (1980) to illustrate the information value of cash flow from operations. It led to the implementation of the standard for cash flow statements as a part of the financial statements of all firms. That graph was used in the interview presentation for historical perspective.

The bar chart of the three categories of the cash flow numbers was developed for this research from the financial statement analysis. It is purely based on the focus of the study on cash flow statements, and the total cash flow was considered best illustrated with a bar chart with inflow above the line and outflow below. The colour split in the standard categories of different activity provides a clear illustration of the operations in the real estate firm, but the picture became more complex when plotted for the banks.

Previously in the research process other big global banks had been investigated, like the big bankrupt banks in Iceland and Lehman Brothers, illustrated in Chapter 1. The financial statement analysis exercises date back to the initiating phase of the study, when the research problem was being identified from the surprise of big banks with seemingly good results going bankrupt in such an abrupt manner. During this process several versions of analysis were tested out and many graphs made on the way, but the two described above were selected for the cash flow of the commercial banks in this study.

All the financial statements of the selected banks were analysed by searching for the 'cash flow statement' concept in the electronic document of the annual report. The full analysis is provided in Chapter 7, with background material available in Appendix 7.

Analysis methods for interviews

In the pre-study during late 2010 and early 2011 the foundations for the interview study were developed. People from the banking industry were interviewed informally and the research project was presented to them in order to test the research design on banking practitioners. These preparations influenced the formation of the research and the questions but were not considered in the analysis of the main interview study. The same can be said of the support interviews with people in the supervisory and oversight areas.

In total, over 60 different people have participated in the interview part of the research. Out of the 39 persons in the main study who work in the finance industry, 32 worked directly in banks. In total, 30 interviews were taped and analysed, and the others were used as support material. On average the interviews took 1 hour—the shortest was 25 minutes and the longest was 2 hours 15 minutes—with a total of just over 30 hours recorded (see list in Appendix 3, questions in Appendix 4 and interview guide in Appendix 5). The analysis of the interviews was done by both transcribing and going through the notes taken, but mainly by listening to the interviews again, marking important parts and taking new notes while listening. The interviews providing most details were listened to three to five times. The shortest interviews were mainly used to gather repeated information, like *'we never use the cash flow statement'* or *'I cannot explain the negative numbers'*. The medium interviews often contributed, by providing further information about what the bankers looked at instead of the cash flow statement. The long interviews provided deep knowledge about banking in general, and trends towards better understanding of the cash flow nature of banks.

Due to the nature of the research, some interviews were more important than others, and these were listened to many times throughout the whole research process, providing new insight from different angles. Other interviews were only briefly used, as they did not contribute to the analysis of the cash flow issues more than with brief feedback on the issues covered in the table format. The reactions to the key interview questions about the cash flow were clear, due to the method of showing the negative numbers in graphs at the beginning of each interview. The feedback was, in general, *'I cannot explain this cash flow statement'*, so deep analysis of that part of the interview was not needed. This focus on why the cash flow does not function was possible due to the previous analysis of criticism from comment letters; many of the common replies from 1987, known by the interviewer before the interview, made the

replies in 2011 easy to identify. The analysis of replies was therefore straightforward with respect to identifying the themes from a transcript of the interviews and no complicated tools were needed. Instead, an analysis model was constructed based on groupings of the interviewed people and functions of the cash flow.

Nevertheless, the analysis model was not fully structured until after all the interviews had been listened to at least two times, and the comment letters analysis had been consulted again, to identify differences or whether some new items were brought up. Some of the interviews that provided a thorough understanding of banking, often from experienced bankers, extended the discussion and provided material outside of the scope of the analysis model. These interviews were grouped separately, and were listened to more often, to improve the researcher's understanding of the banking industry while at the same time looking for extra evidences that could be of use in solving the research problem.

The repeated listening to the selected important and influential interviews with respect to the intellectual sharing of experience from the veteran bankers formed the second phase in the interview analysis. This phase was useful for two aspects outside of the scope of the cash flow issues. First, it was useful for the researcher's understanding of the banking system as a whole, and the challenges the system was going through in Europe during the research period. This also helped with writing the thesis background, banking context and theoretical framework, providing a bridge between the different worlds of banking, finance, economics and accounting. Second, this phase of the interview analysis of the selected bankers was useful when reaching the conclusions of the thesis, in order to see potential contributions at the level of bank management. The interview study is further described and analysed in Chapter 8.

4.6 – Trustworthy methodology

Accounting is a technological subject. Most knowledge about accounting is practice oriented and a scientific view on the subject is both recent and limited. The theory development within accounting has been done with no generally accepted approach. Generally accepted accounting principles have for a long time been the foundation for accounting knowledge and these have been supplemented with the international financial reporting standards. The standards are generally accepted in legislation throughout the world and are designed to be principle-based but are partly rule-based. In the world of accounting research much has been done on the quantitative side, but no generally agreed-upon methodology for the qualitative side of research has been accepted.

The often forgotten third dimension to knowledge, in addition to the *scientific* and *technical* aspects previously discussed, is the *ethical* one. Justified, true belief is based on *prudence*. In this thesis the normative view on accounting is avoided, as well as the positivistic view. Instead, what looks like a technical problem is approached in a scientific way, assuming that *accountability* is one of the core features of accounting. Being accountable involves a dimension of doing right things and not wrong things within the third perspective on knowledge, the *ethical* or *prudent* one.

Social science has to be more *phronetic*, says Flyvbjerg (2001), drawing from the Aristotelian concept of *phronesis*. It is difficult to capture this concept with a single term, but it has been closest described as practical wisdom and *prudence*. The practical wisdom relates to both how to do the research and how to see the study object. Following McCloskey (1997) by reading Mills (1959) provides methodological guidance for the *intellectual craftsmanship* of doing research as social science:

Only by conversations in which experienced thinkers exchange information about their actual ways of working can a useful sense of method and theory be imparted to the beginning student. (Mills, 1959: 195)

It is therefore necessary to count as a source for the completion of this thesis all the conversations with professors and academics during the twenty years the researcher has been in and out of the university world. During the last few years, this has been most dense, but old experiences from philosophy classes in Iceland during the late 1990s and learning in Norway at the change of the millennium have also influenced the researcher's thoughts and how the research is done. Even the interviews in 2011 with experienced bankers evolved into a learning conversation about banking.

Useful *epistemological* standing can be found in Dworkin (2011). Epistemology, or the theory of knowledge, for this thesis regards methods, validity and scope. Decisions about methods have been described in this chapter; the scope has to do with aims and objectives of the research while the validity or acceptance is based on the strength of the arguments. The reliability of the research is therefore taken up in the last chapter after all the arguments have been presented.

This study starts from the general belief that accounting reports should provide information about the financial status of a firm. Coherence is a necessary condition for truth according to Dworkin (2011) and when reports present negative operative cash flow numbers for banks that are not losing money, this incoherence points to the problems in focus. The amount of negative operative cash flow in many big banks in Scandinavia during the decade observed in this thesis is not coherent with the basic understanding of banking in the accounting framework. It is debatable whether sufficiently many observations are provided to show errors in the current accounting regime, or if a period of ten years of negative flow is not problematic for the operations. It is an epistemic issue of how many observations are needed to show a failure of the current accounting standard or questioning how the existing conceptual framework functions with interaction of banking and accounting theories. This thesis describes the problems with cash flow statements in banks, partly related to negative operational flow but mainly due to the fact that the statements are not used.

It is an *ontological* challenge to accept the inconsistency between the arguments of the standard setters and the actual numbers in the real reports produced based on the standard. This can be a logical failure or misunderstanding that needs to be solved, for example with a new classification of concepts. This thesis comes to a twofold solution. One explains why the cash flow numbers were negative, based on lending growth and how the credit creation functions. The other concludes that a new accounting regime is needed for banks, based on the purpose of preparing the statement of cash flow, because this statement is not used by any of the intended users.

The research in this thesis is mainly focused on *describing accounting* in the *world of finance* and *banking*—using the *lens of the money view* in order to try to explain how the reports can be understood. While accounting is a practice-oriented subject, financial accounting is just one limited way to view the world. Some disciplines claim to be *'the'* way to look at the world. Here in this thesis it has been tried instead to bridge these

different ways of looking at financial accounting in financial institutions, in order to explain negative operative flow over a decade and better understand banks' cash flow in general so that this knowledge can be put to good use.

Recent events in 2013 in the European banking system, like the constraints on capital flows from banks in Cyprus, illustrate the continued importance of the issues in this thesis. Later in 2014 the asset quality review and the stress tests of the 200 big banks in Europe will be finished. Constitutional court cases are ongoing regarding the liquidity support to the banks and many more examples of the practical complexity are apparent. The empirical material gathered through the research, together with the theoretical investigation and use of methods, did provide an answer to the research question. More research is now needed to use that answer and reconsider the current accounting regime for banks.

4.7 – Summary of methods

The methods used in this thesis form a system based on a combination of the multiple ways of doing the different studies. First, after having defined the problem and searched the existing literature, the standard describing how the cash flow statements shall be done was studied. The second step was to look behind the regulation in historical documents for how the bankers viewed the rules prior to implementation. As a third step, the outcome in published financial statements was investigated. Finally, the cash flow numbers from the financial reports were presented to the bankers, who were asked about the negative cash flow as well as their preparation and use of the statements.

This interconnectedness of different studies is built on the sequence of methods used. It involves a historical view over the twenty-five year period of the accounting regulation and its background, followed by a fourteen-year overview of the financial statements of the banks, and interpreting both the comments in letters as well as interviewing the bankers. This methodology consists of the different methods and the way of using them together to solve the problem of why the cash flow statements in banks are not used. After the four empirical studies, enough material had been gathered to get the indication why cash flow statements are not fitting for banks. Then the theoretical field had to be revisited to find a backing in theory for the negative cash flow operations. Using the combined knowledge from different studies helped to form an understanding with the modified money view perspective from the theoretical framework that would have been difficult prior to the empirical insight.

By then constructing simple accounting model to illustrate the internal cash flow in a bank during *lending* activity, as shown in Chapter 1, an explanation was provided for the accounting of credit creation. This model will be revisited in the conclusions in Chapter 9, with an extension to another bank for further explanation of the *netting* of these flows as well as the external cash flow between the banks for *funding* negative operations of outflow during unequal lending growth. Through a combination of the final interview, which provided clarification on how the operative cash flow could be negative, and the explanation of the credit creation from revisiting theories, the problem could be solved. The perspective on the money market provided by the theoretical framework of the modified money view closed the gap.

PART II.

The second half of this thesis presents the empirical investigations of the research, its analysis and conclusions. Chapter 5 presents the *accounting rules* for financial reporting and regulations regarding banks. Chapter 6 analyses the banker's interpretation of the accounting standards for statement of cash flows in the *comment letters* from 1986 and 2009. The practical view of the bankers was different from the idea the standard setters had in their conceptual framework and as a basis for their conclusions. Chapter 7 presents the financial statement analysis of the *cash flow* statements in the big Scandinavian banks over fourteen years. Chapter 8 analyses the interviews from 2011 where the *bankers* are asked about the cash flows. Chapter 9 summarizes the results from the four studies and answers the research question using the theoretical framework and then concludes the thesis by pointing towards future research.

The crisis in finance and economical problems in managing money through banking operations called for an investigation of the banks' financial statements and the underlying international framework of standard accounting rules for cash flow. The four empirical studies of the thesis can be split into groups of two, according to Figure 11 below. First, a layer with two studies looks at the *accounting framework* of standards for reporting cash flow, focusing on banks. The second layer investigates the *financial statements* of cash flow that are prepared according to the regulatory framework, limited in scope to the biggest banks in Scandinavia. The former study in each layer is focused on introducing the *facts* while the latter studies are based on bankers' *opinions*. The factual studies are *descriptive* and used as a point of entry to the *interpretative* studies of the practical opinions of the bankers, both prior to the standard setting in their comment letters and in the current state after many years of experience, through recent letters and interviews done in seven of the biggest banks.

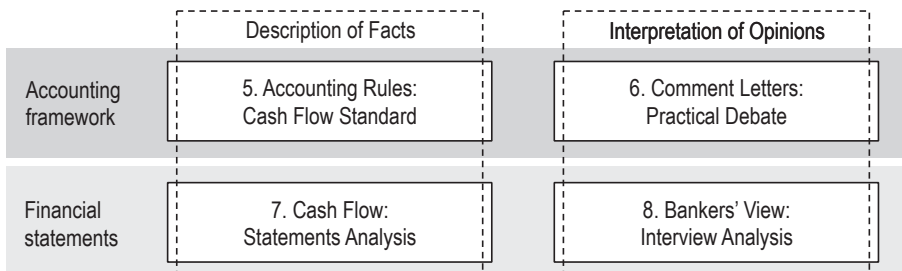


Figure 11: Overview of the studies grouped in a two by two model

The research question of the thesis considered why the cash flow statements in banks are not used. The quest for answer is split into four studies, illustrated in Figure 11 above, referring to the coming four chapters. The answer to the question is then provided in Chapter 9.

Chapter 5: Accounting Rules

5.1 – Accounting regulation and banking

Accounting regulation requires cash flow statements to be prepared and presented in the annual reports of banks, in a standard way like in all other firms. The obligation of preparing cash flow statements was standardized and implemented by FASB in the US in 1987 with the FAS 95 *Statement of Cash Flows*. Similarly, IASB issued IAS 7 *Statement of Cash Flows* in 1992, and its update from 2010 is used in this thesis. Both of these accounting standards request that companies prepare cash flow statements—banks and financial firms in the same manner as non-financial firms. Financial institutions are mentioned in the standard and are treated specially regarding the classification of loans and netting. But financial institutions are still required to prepare statements of cash flow activity like other firms with useful information for users. The first step of the study is to investigate the accounting standards, focusing on the cash flow, specifically regarding banks, and also briefly the general wider regulatory framework for banks and their cash.

The initial idea behind the cash flow statement is to see where the entity generates money and how it is spent, based on inflowing cash receipts being equal to or more than outflowing cash payments in total. The activity is classified into three groups: *investment*, *financing* and *operations*. The survival constraint of every company is clearly expressed by the simple fact that more money has to flow in than out. Periods of negative flow can be covered with asset drain or new financing, but outflow in the long run will not be sustainable in these cases. The cash flow statements are set up to present *ex-post* useful information in addition to the income statement and balance sheet about the operations and financial situation of the firm. The main controversy here is whether these statements provide this information for banks like they do for other firms.

This chapter first surveys the foundations of accounting standards and the background of the cash flow statements regulation. Then the wider implications for current cash flow derived from regulation and accounting rules are covered, followed by an overview of the changing rules for banks. Finally, the global financial regulation is covered, with a special focus on the capital flows and financial institutions. The chapter ends with a summary of the regulatory framework of relevance in this thesis.

5.2 – Foundations of accounting standards

Accounting policy has historically been set in different ways in different countries. In the US, the SEC (Securities and Exchanges Commission) and the FASB (Financial Accounting Standards Board) are the key regulators for accounting policy (Hendriksen & van Breda, 2001: 236), even though many other organizations influence the standard setting. Historically, the origins of formal standard setting for accounting go back to 1929 when the NYSE (New York Stock Exchanges) after the big crash, put in movement a committee to improve audits and accounting reporting. The committee work led to the report *Audits of Corporate Accounts* with suggestions for the improvement of financial reporting in public companies.

Most financial statements refer to the claim that they are being prepared according to '*generally accepted*' accounting principles or methods (Hendriksen & van Breda, 2001: 93). The definition of these '*principles*' has been hard to put into general regulations. The concept of Generally Accepted Accounting Principles (GAAP) was invented in the 1930s, but since the 1960s the *Accounting Standards* concept has taken over, being defined as a '*solution to financial accounting problems*' in the beginning. Accounting standards became the basis of the current regulation of accounting reports and are taken up in the legislation of many countries.

For banks, additional rules and separate legislation generally apply due to their special nature and their role in society. These special regulations for banks use accounting-based measures, for example equity ration or capital adequacy, aimed at increased financial stability. The banking regulations can thus be built on accounting information but do not cover the process of preparing the accounting reports. The special role of banks leading to the special banking regulations cannot be seen and is not considered relevant in the accounting rules. The connection between the different regulatory regimes can lead to unintended consequences, like opening up for adjustments, adaptations and even manipulation in the search for regulatory arbitrage. An example can be taken from the increased leverage in the banking sector when performance is measured by return on equity. This increases the pressure for lower equity and increased debt, which is much higher in the banking sector than in other industries.

The origins of accounting standards in the US since the Great Depression in the 1930s led to the establishment of the SEC for oversight of the stock exchange (Kam, 1990, Hendriksen & van Breda, 2001). The collapse of companies during the Depression called for an overhaul in the regulatory environment for firms listed on the stock exchange. The single most

important factor has been traced back to the 1920s when the stocks and bonds of a Swedish match company, Kruger & Toll, Inc., were the widest held securities in the US, while the bankruptcy of the company in 1932 was, at that time, the largest one on record (Flesher & Flesher, 1986).

The aftermath of the financial crisis of 2001 also initiated changes in the accounting regulation, and the collapse of Enron in December of that year led to the disappearance of Arthur Andersen, one of the world's biggest accounting firms (Véron et al., 2006). Following the financial crisis that started in 2007, both accounting rules and banking regulations were restructured (for example Dodd Frank Act, certain FASB and IASB standards, and Basel III rules), some new ones were implemented and some others are still being overhauled. The historical view demonstrates a link between changing rules for financial statements and financial crisis periods with sudden collapses of companies that influence regulation.

FASB is the organization for the private sector which controls the standard setting of financial accounting that governs financial reports. The SEC and the American Institute of Certified Public Accountants (AICPA) officially recognize the standards as authoritative (AICPA is the largest member association of the accounting profession in the world, founded by English and Scottish Chartered Accountants in US in 1887).

Such standards are important to the efficient functioning of the economy because decisions about the allocation of resources rely heavily on credible, concise, and understandable financial information. (FASB, 2013a)

FASB issues different types of documents to get input on its standard-setting activities in the US, such as *Exposure Drafts*, *Discussion Papers*, *Preliminary Views*, and *Invitations to Comment*. (FASB, 2013b)

IASB (International Accounting Standards Board) is the standard setting body of the IFRS Foundation, the independent private sector organization with the objectives of developing a single set of high quality, understandable, enforceable and globally accepted International Financial Reporting Standards (IFRS). The objectives of the foundation also include promoting the use and application of the standards with convergence of national accounting standards and the IFRSs (IFRS, 2014).

The process of international standard setting is open to the public, and engaged with stakeholders around the world, as well as with the publication of consultative documentation like Discussion Papers and Exposure Drafts. The process of issuing a financial standard usually starts with setting an agenda and planning the project, then developing and issuing a discussion paper. After this, an exposure draft is developed and presented to finally develop and publish the accounting standard. When

the standard is issued, the IFRS Foundation works on the interpretation of the standards through a separate committee. (IFRS, 2014)

In addition to the regulatory work and policy making related to crisis periods, the standard setting process in general takes place in a political environment (Kam, 1990). This is a complicated process because accounting is a practice-oriented subject and needs to be developed in cooperation between policy makers and practitioners. Hendriksen & van Breda (2001) draw on the origins of accounting standard setting in 1929 in the US and the many stakeholders included in the committee on the Audit of Corporate Accounts to illustrate this cooperation and practice. It complicates the issue that the accounting rules provide the measurement tools used in supervision and for oversight while at the same time being influenced by the practitioners they are meant to regulate.

Criticism on accounting standards

Most active recent debate on accounting standards indirectly relates to this thesis. The fair value accounting (and the mark-to-market method) brings market prices of assets into financial statements. This is similar to current prices discussed in Chapter 3 of the accounting theory, as opposed to historical cost derived from the actual transaction. In regard to banking, this connects to the lending growth discussed in Chapters 1 and 2, because increased asset prices facilitate more debt and thereby credit creation. It can become a self-reinforcing spiral of eased credit driving up asset prices, which lead to more leverage.

Power (2010) takes up the question of how and why the fair value concept in accounting acquired significance prior to 2007 in spite of widespread opposition. He identifies four conditions that together weakened the transaction-based and realization focused conception of accounting and its reliability. Just before the financial crisis, the fair value measurement had gained such a status position with extended significance that it became a motivating and “*quasi-philosophical principle at the center of an accounting reform process*” (*ibid.*) that was led by members of FASB and IASB.

According to Power (2010) the financial crisis has certainly influenced the fair value debate, and standard setters have compromised asset classifications and some other matters. “*The future direction of FASB and IASB on fair value is uncertain. Banks have undoubtedly used the crisis to strengthen their opposition to aspects of the use of fair values in accounting*” (*ibid.*) and their arguments mingle with what Laux & Leuz (2009) call “*potentially well founded concerns with a general desire for flexibility*”.

Barth, Landsman & Wahlen (1995) show some potential for fair value accounting in banking, but more volatility. At that time the Saving & Loans crisis in the 1980s in US had evoked criticism of the historical cost accounting. *“Historical cost accounting did not cause financial institutions to fail”* according to Barth, Landsman & Wahlen (1995: 578). Similarly Laux & Leuz refer to the SEC study arguing that fair value accounting *“did not cause bank failures”* (2009: 832) but they find legitimate concerns about fair value in time of crisis. But returning to historical cost accounting is unlikely remedy, they conclude.

Other have though claimed that by bringing market prices with fair value accounting (mark-to-market) into financial statements through accounting standards, it creates power to reinforce changes in value both for the boom and the bust (see for example Admati & Hellwig, 2013 and Haldane, 2011b). This exaggerates the increase in prices as well as the fall, thereby adding to the volatility.

Mark-to-market accounting was introduced to increase transparency. But some have argued that its inappropriate application to all assets contributes to market volatility. The problem is not with mark-to-market accounting but with how the information provided is used by firms, markets, and regulators. The adverse effects of mark-to-market accounting could be offset by countercyclical capital adequacy requirements and provisioning [...] It would be a major retreat from transparency to move away from mark-to-market accounting. (Stiglitz, 2009: 56–57)

In some sections of banks' accounting statements the fair value accounting has not been implemented, for example with loans. In certain cases, the change to market value was reversed during the crisis, for example with bonds that are expected to be held to maturity. Deposits obviously cannot be marked-to-market but are in important funding source. The examples show parts of the problems with bringing the market valuation into the foundation of accounting, but this problem falls outside the scope of this thesis.

5.3 – Regulating cash flow statements

Financial statements made on a cash basis were common before accrual accounting took over as the basis for financial statements. The *'flow of funds'* statements were cash flow statements. Their origins can be traced back to the Dowlais Iron Company in South Wales that had in 1863 recovered from a business slump but needed cash to invest in a new furnace even though they had made a profit. To explain this lack of funds to invest, a new financial statement was made by the management, called *'comparison balance sheet'*, which showed too much inventory. This new statement in 1863 provided the origin of the cash flow statement of today (Watanabe, 2007).

The current version of the cash flow statement provides additional information to what can be found on the accrual-based income statements and balance sheet, regarding the financial strength and liquidity of firms. The cash flow statement shows in what activity cash is generated and spent, grouped into operations, financing and investment. Researchers generally agree, based on studies of cash flow data from many companies, that cash flow information cannot in and of itself predict bankruptcy, but it does provide valuable insight regarding the financial health of the firm. The cash flow information needs to be analysed together with other information. As will be shown in Chapter 7, the history of W. T. Grant illustrates that prior to the implementation of the statement the risk of negative operations could continue for many years without being noticed (Largay III & Stickney, 1980).

Analysts and bankers use the statements of cash flow to evaluate a firm's future prospects and creditworthiness, because the information is useful in combination with other statements and has a clear signalling effect. If the company is not providing positive cash flow from operations it is considered a clear signal that it will not be able to repay its debt. Lenders therefore are not willing to provide financing to companies with negative cash flow, and therefore start-up firms need different types of financiers who are willing to take more risks due to the uncertainty of the future cash flow prospects.

Accounting information is in essence historical, based on performance of previous years. The current state of the firm can always change in the future, but the cash flow numbers have been considered as providing a picture of the financial health or strength of a firm. The original goal of the cash flow statement was to show where firms generate money and what activities consume it (Largay III & Stickney, 1980). In the accounting

standard the statement is said to enable “users to evaluate the changes in net assets of an entity, its financial structure (including its liquidity and solvency)” (IAS 7, 2010: A340, paragraph 4).

When a company is analysed one of the important numbers to look at is the cash flow, according to many textbooks in financial statement analysis, such as Subramanyam & Wild (2009) and Petersen & Plenborg (2012). The foundation of sound judgment of a lending decision in banks is based on the expected future cash flow of the borrower, who has to report “sound net operating income and robust cash flow” (SHB, AR-P3 2010: 19). When companies go through economic crisis periods an increased focus is often put on cash and the concept of liquidity (Hopwood, 2009b).

The classical cash flow paper by Largay III & Stickney (1980) provided evidence, with the W. T. Grant retailer bankruptcy, that was important in persuading the industry of the need for implementing rules for the statement of cash flow. Even though the predictive power of the cash flow statement has since been partly dismissed by large studies of quantitative data, the signalling effect cannot be ignored and is still used. In the accounting standard it states: “Historical cash flow information is often used as an indicator of the amount, timing and certainty of future cash flows” (IAS 7, 2010: A341, paragraph 5).

In the US, the GAAP rules from FASB were redefined in 1971 and made it mandatory to report *sources* and *uses* of funds. The definition of funds was unclear and net working capital could be cash or the differences of current assets and current liabilities. This changed in 1987 with the cash flow standard FAS 95 after long debate and committee work within the accounting profession about cash flows during the 1970s and 1980s.

Discussion papers on cash flow were issued in 1980 and 1983, as will be discussed further in Chapter 6, but usually these discussion papers are the first step towards a new accounting standard, and are used to gather viewpoints. The exposure drafts are then a complete version of an accounting standard for receiving comments. This background shows that the issue of a standard for statements of cash flow had a long history with several attempts to establish a standard. Cash flow was a much-debated issue over many years before the implementation of the standard. The final exposure draft for the statement of cash flows in 1986 then became the issued standard FAS 95 in November 1987.

Five years after FAS 95 was implemented in the US, the IASB issued IAS 7 *Cash flow statements* in 1992, which became effective in 1994. The name was changed in 2007 to *Statement of Cash Flows* and the update from 2010

is used in this thesis. The standards are quite similar, but some differences were being approached in a proposed harmonization process. This process came to a halt in 2010. The key differences that remain are, first, IAS 7 demands cash and cash equivalents to be included in the statement while FAS 95 gives more flexibility, using only cash or cash and cash equivalents. Second, IAS 7 provides the option to classify interest payments as either financial or operational activity, while FAS 95 only sees interest as an operational cost. The wording is different when the statements are read side by side, but the content is very similar in general. Also when reading the FAS 95 standard and the exposure draft side by side some changes are clear, but none that regard the treatment of banks' cash flow. The FAS 95 is seen in this thesis as a historical forerunner to the IAS 7. Therefore, changes to the FAS 95 after its implementation have not been considered here, as all the banks investigated follow the IAS 7 standard.

Current state of debates on cash flow rules

The historical debate about the cash flow in banks has not been revoked in light of the bankruptcies of banks in the financial crisis. Neither has emphasis on specific demands on accounting in banks increased, even in light of the support banks have received. There are exceptions, like Haldane (2011b, see also Haldane & Madouros 2012), Mehrling (2012) and Goodhart (2009) but their suggestions for regulatory reforms of accounting in banks still ignore the cash flow aspect.

Even though the cash flow statement itself cannot directly predict bankruptcy (see Altman, 2000, 1977, 1968 for retail, industrial and manufacturing corporations) it is generally considered to provide relevant information about the financial strength of a firm in addition to what can be derived from the balance sheet and income statement. The original idea of the cash flow statement was developed as a consequence of the earlier-mentioned big bankruptcies and had by that time already been used by banks as a method to evaluate borrowers before it became an obligatory accounting report.

The accounting standards for cash flow statements from FASB and IASB are not compared here, as their differences do not involve critical items regarding banks. The historical investigation of the comment letters from bankers in the next chapter is derived from the FASB, as these were the available comment letters. While the IASB standard IAS 7 provides the regulatory environment of the cash flow accounting in the banks studied in Chapters 7 and 8, it did not include a basis for conclusion letters.

There have been recent attempts in a joint IASB and FASB effort to overhaul the cash flow accounting standards in general for all firms. These attempts considered banks the same as any other firms and have both been halted since 2011 without an exposure draft for new standard, although a discussion paper from 2008 generated comment letters in 2009. Part of these comment letters, regarding the discussion on cash flow, were sent by bankers, but none of the banks were Scandinavian and few were European, while most of them would be considered global banks. These letters are investigated together with the initial letters from 1986 in Chapter 6.

The IAS 7 cash flow standard was developed in 1992 and implemented in 1994 but was not accompanied by any basis for conclusions. The version from 2010 is used in this thesis, as that was the current version when the analysis and interviews took place. IAS 7 was adopted based on the FAS 95 cash flow standard from the US and its basis for conclusion and the comment letters regarding its exposure draft from 1986 are therefore considered relevant to this study as the historical backing for the current regulation.

There is a wider general discussion about the presentation of financial statements, but it has been on hold since 2011, stopping the review of the standards of IAS 1 and IAS 7. The special direction taken by FASB indicates that in the US, financial institutions might be exempted from parts of the cash flow accounting demand.

Financial Accounting Statement No. 102 (FAS 102), issued in 1989, grants certain enterprises exemption from preparing statements of cash flow and deals with the classification of certain securities acquired for resale, to amend FAS 95.

This Statement amends FASB Statement No. 95, Statement of Cash Flows, to exempt from the requirement to provide a statement of cash flows (a) defined benefit pension plans covered by FASB Statement No. 35, Accounting and Reporting by Defined Benefit Pension Plans, and certain other employee benefit plans and (b) highly liquid investment companies that meet specified conditions.

This Statement also requires that cash receipts and cash payments resulting from acquisitions and sales of (a) securities and other assets that are acquired specifically for resale and carried at market value in a trading account and (b) loans that are acquired specifically for resale and carried at market value or the lower of cost or market value be classified as operating cash flows in a statement of cash flows. (FAS 102, 1989: 4).

The FAS 104, also issued in 1989 as amendment to the FAS 95 allowing hedging and permits:

banks, savings institutions, and credit unions to report in a statement of cash flows certain net cash receipts and cash payments for (a) deposits placed with other financial institutions and withdrawals of deposits, (b)

time deposits accepted and repayments of deposits, and (c) loans made to customers and principal collections of loans. (FAS 104, 1989: 4)

Netting of certain cash flows is also allowed in IAS 7 (2010: A345–346, paragraphs 20–24).

This difference and similarity between FAS 95 with amendments and IAS 7 is not relevant for the purpose of this thesis, but nevertheless shows two things. First, it illustrates the possibility of exempting some firms from preparing the cash flow statement. Second, it strengthens the understanding that standard setters were determined to include banks under the general demand of preparing the statement of cash flow according to FAS 95 even two years after it had been issued and put into use.

5.4 – Changing rules for banking

Finance is always legally bounded (Pistor, 2012, 2013). So regulation matters and, this thesis claims, accounting regulation matters in particular. Financial markets are rule-based systems, and they cannot exist outside the rules; therefore the financial systems need to be backed by legal systems. Contracts are at the core of all financial transactions and all contracts are based on a legal framework (*ibid.*, 2012: 30). Pistor's *Legal Theory of Finance* (2012, 2013) draws from Mehrling's (2011) money view and Minsky's inherent instability of credit systems. In it, the financial systems are made up of a complex web of interdependent contractual obligations that link participants who owe each other (Pistor, 2012: 10).

In sum, describing finance as a system of private/private commitments subject to some (external) constraints that may enhance market efficiency or distort it as the case might be (Gilson and Kraakman, 1984) misses much of what is unique to contemporary finance: It is based on money as the legal tender, relies on the legal enforceability of private/private commitments and in the last instance depends on backstopping by a sovereign. Indeed, the scale of today's transnational financial markets would not be feasible without their legal backing. (Pistor, 2012: 28)

Financial markets are formed by regulation and finance is based on legal backing. Accounting is part of this legal backing, but there are time lags, national differences and circularity in the logic, increasing the complexity.

In the last two decades the regulation of banks has changed dramatically, partly due to international regulation such as Basel I and II and IFRS of IASB. This increasingly complicated set of regulations surrounding the operations of banks in the world may lead to difficulties and increased complexity when rules are being strengthened or improved in light of the current crisis. Financial globalization makes that even harder.

The importance of banks in society and the resilience of the financial system demands stability and sensible handling of risks. This makes supervision, oversight and regulation of banks a critical issue. The complexity in the regulation of banks has been under attack, for example by the governor of Bank of England at that time, Mervin King (2010), who has been advocating simpler regulatory framework together with Haldane (2013a, 2013b, see also Haldane & Nelson, 2012 and Haldane & Madouros, 2012). There is also a call for more focus on the concept of judgment, for more sensible finance (Bhidé, 2010).

Changes in bank regulation since the crisis have been focused on capital requirement, and how to value assets and liabilities. Examples of events that can cause problems in a bank are recession, credit losses, fluctuating currencies, mismanagement and even acts of deception. If a bank does not have a buffer for unplanned expenses or a cushion for uncertainties, the funding problems can quickly kill it. Some critiques on current regulatory reforms have therefore advocated increased equity in banks, like Admati & Hellwig (2013).

The global banking regulation, primarily through the Basel rules, has been aimed at minimizing the problems of equity reductions in banks. Equity has been on a reduction path in banks for the last few decades, and the lower the equity is, the higher the possible returns on equity. The more leverage a bank has, the more it can pay in dividends as higher returns to shareholders. But buffers to absorb problems have been diminished. This logic is something many banks have worked actively towards since the 1980s, at the same time as the international risks have increased due to the globalization of their activities and interconnectedness in the system. Banks have had incentives to keep their equity at low levels with the goal of delivering high returns on equity, but with the risk of not having a capital base large enough should unexpected problems occur. Low equity means that the banks' sensitivity to financial crisis increases. The problem with the Basel Committee, however, is that it even though its regulations are widely implemented it lacks the means for monitoring and control (Goodhart, 2011). The increasing integration of banks and markets has implications for regulation as Boot & Thakor (2012) point out.

The implementation of the financial accounting standards for statements of cash flows and the deregulation and privatization of the banking sector in most of the world both originate back to the mid-1980s. Recent reports (Liikanen, 2012; Angelides, 2011; Levin, 2011; Vickers 2011; Stiglitz 2009; Larosiére, 2009; Turner, 2009; Volcker, 2009) on the causes of the current

financial crisis refer many back over the same time period of relaxed financial regulation. The privatization of banks together with the easing of rules and deregulation of financial markets are also seen as initiators of the financial crisis (Turner, 2012; Soros, 2012a; Lewis, 2011; Johnson & Kwak, 2010; Black, 2005).

Regulations for banks have been and are still increasing due to the crisis—both legislation and special rules from governmental authorities, stock exchanges or international bodies like the Basel Committee. Many of these new rules and regulations use as a basis for their effects the same numbers from the accounting reports of the banks derived from unchanged standards. This raises the question of whether the accounting standards and regulation can keep up with the innovations in financial developments. The effect of the regulatory changes are being questioned, for example, by Partnoy who describes how changes in banking and finance lead to regulatory arbitrage:

Banks are supposed to play only a limited function in the economy. Historically they just match lenders and borrowers. Most banking activity—lending, underwriting, mergers, sales, trading and wealth management—revolves around the allocation of capital. But over time, banks have expanded into riskier and more complex activities, including structured finance, derivatives trading and regulatory arbitrage, which can allocate capital in distorted ways. (Partnoy, 2011)

The first Basel rules were implemented with 60 pages of regulatory text. When Basel II was implemented the focus had shifted, in light of the then-current crisis period in Asia during 1997–1998 and the total pages were increased more than threefold. Currently Basel III is being prepared for implementation, including definitions of liquidity measures, funding ratios, and risk weight on bank assets in the light of current crisis. Haldane & Madouros (2012, see also Haldane 2013b) illustrate that when regulatory documentation has twice been increased threefold, first from 60 pages in Basel I to 200 pages in Basel II, and now currently at 600 pages for Basel III (excluding all additional documentation) this regulatory response is too complex to become useful and increases uncertainty. The implementation of Basel III is estimated to take over 70,000 full-time jobs in the private sector per year only for European banks (Harle et al., 2010, cited in Haldane 2013a).

Simple rules, even rules of thumb or heuristics that are easily understandable are considered better solution (Haldane & Madouros 2012), and can even be more effective according to Gigerenzer (cited in Haldane 2013a). The national banking legal framework has increased in a similar manner as the international rules for banks. For example, Haldane

(2013b) points out how the UK banking act, which was 75 pages in 1979, has increased almost tenfold to 695 pages by 2012.

There is an increase in regulation, and more regulation usually means more complex regulation. After the Great Depression the Glass-Steagall Act was implemented in 1933 and was 37 pages. The financial crisis of 2007 has led to the Dodd-Frank Act of 2010 that is 848 pages, and with an estimate of over 30,000 pages of rulemaking (Haldane, 2013b).

One of the responses to the crisis are reforms through counter cyclical capital adequacy and provisioning standards. The Financial Stability Board (FSB) was established in April 2009 by the G20 Summit and was based on the Financial Stability Forum created in the aftermath of the 1997–98 financial crisis. But the expert committee of UN states that the FSB

should only be an initial step toward establishing much more representative, appropriate, and effective financial regulation at both national and international levels. (Stiglitz, 2009: 96)

The FSB and the Basel Committee set important global economic standards in areas such as bank supervision and financial regulation.

While the original intention of the Basel Committee was to provide regulations for large internationally active banks, the Committee's regulatory proposals have been generally adopted by most countries. (Stiglitz, 2009: 96)

There is an increased focus on the global financial regulation and systems to co-ordinate.

Global finance and regulation

Banking is a global business supporting international trade and its product—the money—can be sent around the world electronically. Nevertheless, relational banking is local and regulation and supervision is national. While this is under change in Europe, there is little sign of a real approach for global financial regulation. Financial funding internationally has affected most local banking markets, and is part of the issue in European banking problems.

In light of the fact that the global financial crisis has been strongly affecting liquidity problems in banks, the support has been very strong from central banks worldwide, and currently the focus is turning to asset quality and solvency. The proposed new Basel III regulations implement new concepts, like LCR and NSFR for measurement of liquidity. LCR is a ratio for the liquidity coverage for a 30-day period and NSFR is a ratio for the longer-term risk-weighted net stable funding. The stress tests on

banks are being developed and the asset quality review of the major banks in Europe is underway.

The financial authority, for example in Sweden, has demanded more liquidity reporting from the banks, requiring it every month now instead of every quarter, since prior to the financial crisis. At the end of each day, the central bank of Sweden receives information from all banks in the country about the closing of their positions in the RIX payment system. During the midst of the crisis, hourly reports were demanded by authorities in Europe on the flow of cash out of ATMs. The internet service of the collapsing banks halted when customers rushed to their computers to transfer their deposits to local banks. Similarly, on the inflow side, many of the big banks in trouble had issues with funding. The frozen interbank market in Europe has also been a sign of the global financing issues.

Humphrey & Loft (2009a) draw from Hopwood (1994), emphasizing the need to research the complex and shifting interrelationship between those who make up the international accounting institutional arena with a focus on the political dynamics. The period since then is approximately the same as since the cash flow accounting standard was implemented internationally. Much has happened during this period, according to Humphrey & Loft (2009b: 206): IFRS produced by the IASB “*are rapidly becoming world standards*”, while the EU requires listed companies to prepare accounting in accordance with IFRS since 2005 and in total 114 countries are accepting or requiring IFRS in 2009.

When there is a need for more international regulation due to global financial crisis, there is also a risk of the blame game and finger pointing making it hard to achieve cooperation between different regimes. One example is found in Barth & Landsman, who conclude that:

Accounting standard setters and bank regulators should find some common ground. However, it is the responsibility of bank regulators, not accounting standard setters, to ensure the stability of the financial system. (2010: 399)

This thesis tries to take a broader perspective, but describes the current standard and parts of the standard setting process and its history as well as the global framework in which this takes place. Within the field of accounting standards the problems of cash flow in banks are only a part of the issues that need to be taken to a global level. Shortly after the outbreak of the crisis, in 2008 the G20 called on key global accounting standard bodies to work intensively to create a single high quality global standard. Global capital flows are an even wider problematic issue (Turner, 2014).

Markets are shaped by rules and regulation (Stiglitz, 2010) and financial markets are more regulated than most other markets. Banks are more regulated than most other companies. While banks have become more global with the internationalization of finance, the rules and regulations have not been able to keep up with the changing environment. The expansion of financial capitalism throughout the world and the liberalization and deregulation of financial markets went hand in hand during this same period. To handle these issues, both principle-based and rule-based regulation are needed:

Before the crisis there was a heated debate between those who favored regulation based on “principle” and based on “rules”. The former were concerned that banks would use rules as goalposts that would allow them to circumvent basic banking principles, while the latter were concerned about the possibility of regulatory capture. But the crisis overwhelmed both rule-based and principle-based regulatory systems, suggesting that this dichotomy was not as important as it may have appeared. Both principles that set out the objectives of regulation and rules that try to apply these principles appear to be required. (Stiglitz, 2009: 51)

Globalization makes it even more complicated. Mehrling states in the introduction to the second edition of his biography of *Fischer Black, The Revolutionary Idea of Finance*:

Financial globalization has transformed the modern world, but the mechanisms of regulation, both public and private, lag far behind, designed as they were for a world that no longer exists. (Mehrling, 2012: xxi)

Difference in interpretation of banks’ activity and the concept of cash in relation to liquidity issues are an example of this transformation and make it urgent. It needs to be done both based on historical facts and with relation to the current banking environment. There are two perspectives which are helpful for the interpretation of the facts in banking: on the one hand, using the spotlight of the financial crisis in banks and their financial reports, and on the other, highlighting the difference between financial institutions from other firms and putting it in a historical perspective.

The platform for the development of these mechanisms of regulation is partly built on financial accounting standards. Coming chapters will illustrate problems in current regulatory standards for cash flows. This is only a part of the accounting regime, which in itself is only part of the regulatory framework for finance. The fundamental functions of banking and finance are built on the basic foundations of accounting, as the example of lending in Chapter 1 showed. That makes it important to have the current state of the system described, in order to prepare for the changes that will have to be made to make it fit the modern globalized world.

The formation of financial markets by regulation and the legally bound finance operations are built on fundamentals of standardized accounting rules. Special regulation of banking operation is not well reflected in the rules for cash flow statements. This is an example of how the standards of financial accounting lag behind the current state of the globalized financial world of banking. In order to understand this current state and prepare for future changes, the historical background provides important knowledge from the bankers regarding the purpose of preparing the cash flow statements for banks and its function. This will be investigated through the comment letters in the next chapter.

5.5 – Summary of the regulation

In this chapter, the accounting rules for cash flow statements were investigated, along with their historical background and the context of a global financial system. The framework of accounting standards for cash flow was covered and focus was specially put on banks. The implementation of the financial accounting standards for statements of cash flows and the deregulation of the banking sector in most of the world both originate back to the mid-1980s. The causes of the current financial crisis have been traced back to the same time period of relaxed financial regulation for banks, and it is undergoing continued rule changes.

At the level of accounting, some sources of the lacking effects of regulation which led to the crisis can be traced to wider definitions of cash and cash equivalents. These issues are among the results of standardization in principles-based accounting, which has abandoned conservatism and prudence in the handling of financial numbers. This, combined with financialization of the global economy and speculative finance, has played a role as well.

Accounting regulation is traditionally overhauled after periods of serious financial crisis. This happened after the Kreuger crash and the Great Depression in the 1930s, after the W. T. Grant bankruptcy in the 1970s, after the collapse of Enron in 2001 and after the fall of Lehman Brothers in 2008 in the current financial crisis. The accounting rules were conceptually designed for traditional companies of the manufacturing economy. While over the period of harmonization and globalization, the development towards increased financialization has simultaneously taken place. The problems of adapting the accounting rules for financial firms are apparently becoming increasingly important while at the same time complicated in light of the crisis.

Even though the cash flow as such cannot predict bankruptcy, it is considered to provide signals about the financial strength of a firm in addition to what can be derived from the balance sheet and income statement. The original idea of the cash flow statement was developed into an accounting standard as a consequence of a big bankruptcy. This cash flow analysis was aimed at non-financial firms, and banks tried to opt out, without success.

Globalization is in itself a challenge for the functioning of the regulatory frameworks. International accounting standards are a strong case in that field and some flaws have appeared during the global financial crisis. Harmonization of rules for financial accounting is one of the foundations for the globalization of finance, and that is not to be reversed. But the development of the accounting standards framework is an important factor in the evolution of globalized financial regulation, and the cash flow is a special case.

The consequences of the current financial crisis and lack of effects from previous changes in financial regulation initiated the investigation of accounting standards for banks in this chapter. In the next chapter, the background materials from the standard setting process for the cash flow with the bankers' comments are examined.

Chapter 6: Comment Letters

6.1 – Comments on a standard

In this chapter the documented debate regarding the standard for statement of cash flows is used to identify the arguments against using cash flow accounting in banks. The analysis of the comment letters from bankers to standard setters provides relevant information about the problems of reporting banks' cash flows. This discussion on the cash flow in banks has been ignored in existing literature, but was found in letters from 1986 regarding the exposure draft during the standard setting process. These comments show an opposition to preparing standard statements of cash flow for banks. The claims of the bankers are that the cash flow statement does not fit well for banks and the reporting will be neither useful nor necessary. Another source of comments followed a discussion paper on financial statement presentation issued in 2008. In these comment letters, bankers responded negatively as they had 23 years earlier, adding confirmations of the limited usability of the statements of cash flow in banks.

The difference in banks as compared other companies with regards to cash flow is not fully accepted in the relevant accounting standards, even though that adjustments of classifications of loans and netting of certain flows are allowed for banks. The FASB (Financial Accounting Standards Board) decided in 1987 with four votes against three that banks should prepare a cash flow report like all other firms. The IASB (International Accounting Standards Board) did the same with the new standard in 1992. Historical explanations found in the comment letters of how the cash flow does not function in banks help solve parts of the research problems of this thesis regarding why the statement is not used. The standard setters claim that banks, like any other firm, need to generate positive cash flow, irrespective of whether cash is their product or not, and banks therefore have to prepare the reports. This chapter investigates the arguments of bankers and the standard setting board minority against the requirements in the implemented standard for banks to make cash flow statements.

About the comment letters

The comment letters (CL 1986) are issued as a response to the exposure draft of the standards (ED 1986) and as a result of that process the final Statement of Financial Accounting Standard no. 95 for Statements of Cash Flow (FAS 95, 1987) was issued and has been used since that time. Additionally, the FAS 102 and FAS 104 were issued in 1989 with certain amendments to the FAS 95. Prior to the comment letters and the exposure draft in 1986, FASB received a total of 420 comment letters during the few preceding years on earlier proposals for cash flow accounting standards. These letters are not considered in the empirical part of this thesis, as the board (FASB) had already used these letters in the process of forming the exposure draft for the standard studied. Most of the respondents to the previous proposal had said that:

a funds flow statement should help investors, creditors, and others assess future cash flows, identify the relationship between income and net cash flow, provide feedback about actual cash flows, and evaluate the availability of cash for dividends and investment and the entity's ability to finance growth from internal sources (ED 1986: 11, paragraph 30).

The total of 458 comment letters sent in 1986 regarding the exposure draft of the accounting standard were all read in the first stage of the study. Then the selected letters were analysed in detail in the second stage to find the common themes. In the selection process, the sender's occupation was the first categorization and the attitude towards the proposed standard was the second. Most of them, or 82%, were more positive towards the exposure draft of the standard, while only 8% were more negative and 10% were considered neutral or equally positive and negative. After this selection the focus was narrowed down to the 195 letters from banks and financial firms. But the sample also included those letters from public accountants, academic and government institutions that discussed the statements of cash flows negatively or in a neutral manner, specifically regarding banks. The vast majority of the letters from banks were positive and they were analysed specially, as they considered users but not preparer's perspective of the banks regarding the statements.

A comparable international standard to the FAS 95 was issued as IAS 7 in 1992 and was implemented until 1994, affecting reporting in many countries. In the second group of comment letters, sent in 2009 (CL 2009) regarding the joint IASB/FASB discussion paper from 2008 (DP 2008) regarding IAS 1 and IAS 7, only 10 out of 229 letters came from banks, or 4.4%, as compared to 43% of the letters in 1986. One out of these 10 letters was positive, as compared to 90% earlier, while the number of negative letters from banks was 9 in 2009 and 18 letters in 1986. By including

international institutions and country-based banking organizations the number of letters from the banking industry in 2009 investigated in detail was increased from 10 to 25 letters. Public accountants making comments regarding bank's cash flow were also studied.

6.2 – Finding arguments

In the previous chapter the purpose of preparing the statement of cash flow was considered based on the accounting rules. In this chapter, comments on the function of banks' cash flow are the focus in order to investigate the reasons why cash flow statements do not function for banks according to the bankers. In the next chapter the financial reports of banks, prepared by the bankers according to the standard, are examined to see the outcome. All three studies, in the previous chapter, this chapter and the next chapter, also prepare for the interviews of bankers in the last study.

The comment letters selected for analysis in this chapter were those issued on the exposure draft of the accounting standard in 1986, and then comment letters regarding the discussion paper about the financial statement presentation from 2009 were added. There is a twofold reason for looking at the discussion 25 years ago in the US, when the actual banks studied in the two coming chapters are Scandinavian and use another standard. First, the debate in the old letters can be seen as the original debate on the requirement for cash flow statements in banks' accounting reports. The international standard was implemented five years later, covering the Scandinavian banks. Second, no other debate has been found discussing this issue since then, except in the comments on the discussion paper in 2009. In these letters the arguments from bankers against the cash flow reporting in banks are similar, and the point is added about reports not being used.

The purpose of the analysis of the content in the comment letters is to find arguments that can explain why the statements of cash flow in banks are not used. It is done by focusing on the bankers' arguments *against* the standard of cash flow statements. No banker argued *for* cash flow statements for banks, only for those of other firms. Initially, the letters were grouped according to sender and according to whether they were positive or negative towards the proposed framework, but then a more useful categorization was developed based on themes.

The number of letters in each group is listed in Table 4. The least relevant letters were *positive* and from *industry* workers, on the top left hand

corner of the table. The most relevant letters were the *negative* letters from *banks*, on the lower right hand corner.

The biggest group of letters, in the lower left corner, is positive bankers, but it became clear early in the first step of the analysis that these considered the proposed accounting standard from a *user's* perspective. The banks felt positive about the proposed standard because it would provide them with standard accounting information about their customers, which they could use for credit evaluation. The negative bankers, on the other hand, considered the cash flow standard from a *preparer's* perspective, and felt negative towards preparing statement for banks, mostly their own. Some negative bankers were positive to the obligatory cash flow statement for their customers, and therefore were classified as *neutral*.

The borderline was from northeast to southwest in the table, and the southeast part was sorted out for the second step in the analysis. These are shown in the different shades of grey in the table, with *negative* and *neutral* letters from *banks* and *public* organizations. Half of these grey shaded responses, or 23 letters, were *negative* or critical to the proposed standard for cash flow statements with respect to banks. All of these 47 letters were carefully read and analysed to identify common themes of problems. Furthermore, all the remaining negative letters from the *industry* were read but did not mention banks' cash flow.

The senders were grouped according to the FASB labelling of the comment letters based on the sender's occupation. The letters were labelled with seven different professions: Industry, Public Accountants, Academia, Banks, Securities firms, Government and Others. The group of banks was the biggest while many others were small, but for the selection model of this thesis three main groups were formed: *Banks* (including the four securities firms), which sent 195 letters; *Industry* with 176 comments; and *Public* (including accountants, academia, government and others), adding up to a sum of 87 letters, out of the total 458 comment letters.

| Groups: | Positive | Neutral | Negative | Total |
|----------------|----------|---------|----------|--------------|
| Industry | 133 | 30 | 13 | 176 |
| Public | 64 | 18 | 5 | 87 |
| Banks | 171 | 6 | 18 | 195 |
| Total | 368 | 54 | 36 | 458 |

Table 4: Summary of the selected comment letters from 1986

By using this three times three matrix model for the selection, a large portion of the letters were eliminated early in the process (white cells of the table) and then focus was put on the remaining 47 letters (18+5+6+18)

in the grey cells of Table 4 above. The remaining 13 negative letters (bold number in white cell) were also checked but did not consider banks. By narrowing the selection down to one tenth of all the letters, the arguments against the cash flow statements for banks could be found and themes identified in the second step of the analysis. The investigation of the other 171 positive letters from banks (bold number in white cell) did not provide much input for finding out the function of the cash flow in banks. These letters only considered using customers' cash flow statements and did not take into account the preparer's perspective regarding the banks' own cash flow statements.

The comment letters were read by a group of four other researchers as well. Several letters were reclassified during the research process, mainly from positive to neutral or negative, when critique was found in them in the second reading, in spite of a positive tone in general. It is not the purpose of this analysis to quantify exactly how many of the banks were positive or negative towards the standard. The goal was to find the critiques and the arguments brought forward during the debate, and therefore the negative letters are the most relevant. This debate since that time was silent until the comments in 2009.

The selected letters contributed to the purpose of the study by finding the arguments regarding the functioning of the cash flow statement; the other letters did not. The critical comments on the accounting standard provide the arguments that are useful for discussing the problem of cash flows in banks, and why it does not function and is not used.

After this selection process, a search for themes was used to narrow down the main arguments against preparing the statement of cash flow in banks. This is described in the next part of the chapter. The most important comment letters were read again to select representative quotations to use in this thesis for illustrating main points and the strongest arguments. Each of the themes is given a separate sub-chapter in the next part. The themes of problems identified and the arguments against cash flow were sometimes identical between letters, as though originating from a common source. Many of the letters touched only on some of the five themes, and a few took up all of them.

Based on the experience from the study of the comment letters from 1986 on the exposure draft, the second group of comment letters were easier to analyse. The later group of comment letters from 2009 on the discussion paper provided less information, as they regarded the discussion of presentation of financial statements in general. The cash flow part that was useful for the purpose of this study involved only three out of 27 questions

discussed, so a simpler way of sorting the letters was used. In the latter case, only letters from banks and banking organizations were considered from the beginning. The international banking and finance organizations were the World Bank, IMF and similar, while the banking industry organizations were the European Banking Association and similar (a full list is available on the web through the link in reference list for CL 2009, but a breakdown of the letters is provided in Appendix 8). Additionally, the letters from the big global accounting firms were read for comparison and those discussing banks in particular were included in the analysis.

The other letters were read for this thesis, and the grouping into positive and negative was only based on one of the 27 questions asked in the discussion paper, which regarded the direct method of cash flow. The neutral group consisted only of those who did not answer the cash flow question. Those selected letters were read in whole and all the questions considered, but the focus of the analysis was on the reaction to the three questions regarding cash flow statements. Negative attitude towards the direct method was based on no option to have the cash flow being excluded, and then an unchanged method was considered better than the proposal of demanding a direct one. The arguments used against the cash flow in general in 2009 are similar to those from 1986. New arguments also came up, due to the different nature of the discussion paper compared to the exposure draft, like using the cost of changing the accounting system as a cause to keep the indirect method rather than change it, and also bringing up usability as an argument.

| Groups: | Positive | N/A | Negative | Total: |
|-------------------------------|----------|----------|-----------|---------------|
| Banking industry associations | 0 | 1 | 9 | 10 |
| International banking org. | 0 | 1 | 4 | 5 |
| Banks | 1 | 2 | 7 | 10 |
| Total: | 1 | 4 | 20 | 25 |

Table 5: Summary of the banking industry comment letters from 2009

The total number of comment letters (CL 2009) in response to the discussion paper (DP 2008) was 229. In Table 5 above the 25 banking related letters were sorted out and analysed. Positive or negative answers refer only to question 19 in the discussion paper regarding direct method, and N/A means no answer and is considered similar to the neutral category of the letters in 1986. Another difference from the earlier study in the US is the number of banking industry associations and the international ones; therefore each gets its own category line.

Common critical comments

A vast majority of the comment letters were positive towards the exposure draft of the cash flow standard in 1986. Even most of the banks were positive, but still the main part of the critique also came from banks, comprising half of all the negative comment letters. The comment letters on the discussion paper in 2009 echoed partly the criticism (see Table 4 and 5 above and further breakdown in Appendix 8). As stated earlier, the positive banks initially considered the standard from a user's perspective and welcomed the cash flow statement in order to evaluate their customers. The arguments of the positive letters never considered cash flow in banks, but only cash flow statements for their customers, as lenders in non-financial firms. But the negative banks considered the standard cash flow from a preparer's perspective and critically opposed this statement being demanded from banks. This was not obvious from the beginning, but made the process of isolating the critical comments in the letters easier. The latter group of letters was not as critical in opposing the statement as such, but those mentioning usefulness, confirmed that the cash flow statements of bank are not used.

The strongest common claim put forward in these critical letters of banks from 1986 is that cash flow in banks is fundamentally different than in other firms because money is their product. Several specific problem areas have emerged during the analysis of these critical comments. These problems provide a basis for finding out how the bankers view the function and use of cash flow in the banking operation.

Another common critical comment is that in the cash flow statements of banks it is problematic to present a traditional threefold split of cash flowing from *operations*, *financing* and *investment* activity. The reason for this is that core operations of a bank are financing and lending activities, and the operative product is cash. Lending creates the new loan as an asset of the bank, and would by some be considered an investment. Cash flows constantly through the bank in its operations of the payment system, and these flows are netted out each day. This netting between banks and through the central bank is therefore not an operative cash transaction but more like an internal and external control over the flow of their product.

In order to understand how the problem areas or themes are derived from the critical comments in the negative letters in the next part of the chapter, first the common comments are discussed here in this part, and an overview is given in the next section. It is also important to draw on the first part of the thesis and take into account that the main activity in banking operations is the in- and outflow of cash, both for the payment

system and the credit creation with lending growth. The cash flow statement in the financial accounting reports fails to capture this activity, and the cash generation from operations is difficult to isolate. Later group of comment letters, from 2009, did not spell this out, out focused on the non-existing usability of the statements.

Other numbers are put in focus both for liquidity overview and when the income generation of a bank is investigated in order to see the profitability of the operations. Still, the banks are required to provide statements of cash flow in their annual reports in the same manner as other firms for harmonization purposes. The criticism from bankers before the implementation of the cash flow standard provides arguments in this respect that lost against the majority of the board, which have since been forgotten as the debate has become silent. The minority considered the non-usability in 1986 that is again confirmed in 2009 letters.

After selecting the critical letters and reading them again, it was easier to identify the common areas of problems and themes with relevance for banking. Then selection of relevant quotes was marked, and out of these a narrower selection was then written. Finally, the most common or representative critical comments were identified. The basis for the conclusion in the final version of the accounting standards also provided an overview of the criticisms and the standard setters' arguments against considering them. The opposition of three of the board members provided insight for the analysis as well.

The bankers themselves described the problems of cash flow reports in banks. Many of their comments referred to the AICPA Committee on Banking (the banking committee does not exist longer) that stated, '*banks are financial intermediaries*' and as such they

gather the accumulated cash savings of individuals, corporations, governmental bodies, and other entities and redeploy those savings in the form of loans and investments. (CL 1986 no. 153A: 455)

The letter from First Interstate Bank of California is used here as a general reference to the repeated AICPA referrals. It continues with AICPA's definition of banking:

In this process, banks must maintain sufficient liquidity to meet withdrawals by depositors, liability maturities, and loan demands of customers. Funds to meet these requirements come from a combination of sources including depositors, money market operations, issuance of long-term debt and equity securities, loan repayments, investment sales and maturities, and operations. (AICPA Committee on Banking, cited in CL 1986 no. 153A: 455)

Since the accounting standard FAS 95 was issued in 1987, little debate has taken place in the academic literature about cash flow statements in banks. The additional standards FAS 102 and FAS 104 were issued in 1989 following demands for changes in holding securities, net reporting of certain cash flows and classification of hedging. But changes were not allowed for banks to be exempted from preparing the statement of cash flow in every annual report. Similarly, IASB has a separate standard for financial instruments and their valuation, but these rules do not regard the cash flow statements of banks. The update of IASB on the cash flow standard IAS 7 in 2010 still states that banks, like all other firms, needed to generate cash flow for their operations and therefore banks should be required to prepare cash flow statements, just like any other firm. It builds on the mainstream view of banking intermediation, and ignores their credit creation.

The difference between the function of cash flow in banks and other non-financial firms is an underlying problem behind the themes identified in the comment letters. The main argument of the critical banks seeing the cash flow from a preparer's perspective was that cash is a commodity in the banks and therefore cash flow has to be looked at differently when accounted for in banks as compared to the other firms.

6.3 – Comments themes overview

The fact that banks are different than non-financial firms is a key critical comment in the majority of the letters from bankers that were negative towards the cash flow statements for banks, like for example in this representative statement:

By their very nature financial institutions differ from other types of business. Banks do not sell a product; they sell cash. To require a bank to provide a statement of cash flows is analogous to requiring a manufacturing company to provide a statement of inventory flows. (CL 1986 no. 349: 1035)

When searching for the themes, a special focus was put on finding the arguments regarding the functioning of the cash flow statements in banks and how it functions or why it does not function for banks. From these comments the main problem themes have been identified with respect to cash flows in banks, as presented in Table 6 below.

| No | Problem themes: | Description: | Arguments against: |
|----|----------------------------------|--|---|
| 1 | Inconsistency | in logic, definitions and classifications (connects to no. 2). | Cash flow can not be used to compare banks with other firms, to each other or over time |
| 2 | Classifications | of operations, financing and investment activity. | Different banks can classify the same activity differently |
| 3 | Definitions of cash | non-cash items, liquidity and what counts as cash equivalent. | Connects to the netting and the indirect method for preparing the statement and changes over time. |
| 4 | Net or Gross cash flow | netting between banks, in both directions, direct cash transactions and CB. | Banks are different, customer flow increases amount and speed, allows net though gross is better |
| 5 | Direct or Indirect method | for preparation of statements. Based on cash receipts and payments or adjustments of net operating profit. | Suggested to use direct method, preferred by standard setters but not required. Two board members point out logical failure. Majority allows indirect method. |

Table 6: Problem themes found in the critical comment letters

The special issues regarding accounting in banks can be observed through these different problem themes. In the letters the bankers used the opportunity to comment on the proposed rules and from these comments five problem areas or themes, listed in Table 6, emerged when comparing the similarity of the critical letters. This emphasizes their concerns and indicates what is important regarding the function of the cash flow in banks.

The overarching problem behind all five themes illustrated above is related to the issue of cash being a commodity in banks and banks being different from non-financial firms. The cash flow statements are difficult to compare over time within a bank and between banks. Even the interest payments are inconsistently classified, because some banks see interest as operative and others as financing. Almost every bank uses the indirect method (or indirect-direct method), making the connection to actual cash transactions more difficult. The definitions of cash and cash equivalent are even flexible. Banks disclose differently the cash ready at hand. Some banks define demand deposits at other credit institutions as cash while others only have cash at the central bank. It is worth remembering that the FASB decided to widen the definition of cash as a response to the criticisms in the comment letters in order to foster harmonization. Finally, the gross and net cash flow issue involves greater difference in banks than most other firms because of the high turnover of cash through the banks' accounts.

6.4 – Arguments against cash flow statements in banks

The positive letters from bankers, supporting the cash flow, did not consider the draft of the standard from a preparer's perspective for the banks' own accounting, and therefore were not relevant for the research in finding out the function of cash flow in banks. The negative letters provided comments with arguments against the proposal of the standard and repeated claims that the statement would not function for banks.

The objective of reporting cash flow is to provide information to investors and creditors (present and potential) to help them assess the prospects of the cash generation of the entity. In the accounting standards, reporting past cash flows is assumed to provide (indicative) information about the expected future cash flow. The discussion in this study does not regard if or how much the historical cash flow can indicate future cash flow. The arguments instead help explain that presenting a statement of cash flow for a bank is not useful for illustrating how cash was generated in the past period.

The criticism towards the standards exposure draft is still relevant regarding banking, as it was not taken into consideration, and the banks were made obey to the same standard as all other firms. The most important amendments from the exposure draft (ED 1986) to the standard (FAS 95, 1987) regarding banks were the widening of the definition of cash and allowing the gross cash flow to be replaced by net cash flow in the instances of deposits and similar accounts. Classification of loans was also allowed to be different in banks compared to non-

financial institutions. But even though these aspects were amended, the critical comments nevertheless provide arguments that cash flow in banks would not function in general.

The main problem themes that emerged in the comment letters are covered in the coming five sections. These are: *Inconsistency* in statements, *Classification* of activity, *Definitions* of cash and the *Netting* of flows, and finally the *Method* of preparing being direct or indirect.

Inconsistency in statements

The accounting standard for statements of cash flows was adopted by the narrow vote of four out of seven members of the board (FASB), while three board members dissented (FAS 95, 1987: 12). The main reasons for their dissents were inconsistency and departure from the cash receipts and payments, as well as the permitted use of the indirect method. Two board members, Messrs. Lauer and Professor Swieringa specifically state that the direct method

provides a description of the operating activities of an entity during a period that is both more informative and more consistent with the primary purpose of a statement of cash flows. (FAS 95, 1987: 13)

As described in paragraph 4 of the Statement, the purposed of the statement of cash flow is *"to provide relevant information about the cash receipts and cash payments of an enterprise during a period"* (FAS 95, 1987: 5), which the indirect method fails to do. This example of inconstancy also relates to the fifth theme. Another inconsistency arises with paragraph 11 of the statement, where the indirect method makes the statement internally inconsistent, specifically regarding the classifications of cash flows.

Lauer, the standard setting board member, believed that the internal inconsistencies in the cash flow standard resulted in a risk of them being misunderstood. He also observed that *"statement of cash flow involves no issue of recognition, measurement, or estimation"* and should by definition *"only include the effects of identifiable, unquestioned transactions"*. In that case the financial reporting involves only the tasks of *"aggregate similar cash receipts and payments"* for consistent communication and to *"accurately characterize the various aggregations"* to avoid misunderstanding but, Lauer states, the *"Statement fails to do either"* (FAS 95, 1987: 13).

Because cash is a commodity in banks, the way cash is treated in their accounting statements is not strictly consistent, especially regarding the operating income. The balance sheet is where the banks make money, because of the nature of bank business by lending long and borrowing short while gaining from the interest difference. The assets are in balance

against liabilities, and similarly the inflowing cash (liability) has to be invested by lending it out (assets of outflow of cash) if financing should equal investment in the model (Ijiri & Noel, 1984; Minsky, 1982, 1975). But as new loans are created in the bank, a further inconsistency between the cash flow activities becomes apparent.

Over time, and because of different time frames or the maturity transformation, the cash that flows through a bank during each accounting period can vary substantially. One big transaction of a customer taking place on the last day of the last period or on the first day of the next period can dramatically change the statement of cash flows. This makes comparison over time difficult. For the same reason, comparison between banks also can become difficult. This is different from comparisons to non-financial firms, where the accruals function and cash flow of income for paid goods can be seen to grow over time or decline with a connection between the income statement and the cash flow.

As further examples of the criticism, Price Waterhouse considers it “*inconsistent to include interest expense as an operating activity and dividends as a financing activity*” (CL 1986 no. 431: 1272). Because it represents the return to providers of capital and since both debt and equity capital cash flows are financing activities, the return to the providers should not be divided among different activities. For the banks the inconsistency is also in separating between the customer’s cash flow and the bank’s own cash flow. This example shows the overlap in the inconsistency and classification problems.

Classification of activities

The traditional split of the cash flow statement into activities of *operations*, *financing* and *investment* does not apply equally well to banks as to non-financial firms. This is because the core operations of a bank are financing and investing activities, and the operative product is cash. Other numbers and other concepts are therefore in focus both for liquidity overview, maturity of loans, and income generation. The standard allows lending activity to be classified as operational in banks but as financing in non-financial firms.

This inconsistency in classification of operating cash flow makes it hard to evaluate and judge the financial health or strength of banks from the cash flow statement. The financing activity of a bank, borrowing money from depositors or from other banks in order to lend it out to a customer, is seen as operation even though the use of financing activity normally is rather considered as investment. The loan as such is the bank’s asset, but

the investment activity becomes minimal when lending is operational. Alternatively, funding with bonds can be classified as financing activity while funding from deposits can be seen as operational. Demand deposits can always flow out of the banks, and are therefore current even though these deposits are the most stable form of long-term financing in many banks. Then when netting takes place for many transactions in and out for certain activities, it becomes difficult to distinguish the customer's flow from the bank's flow and also to decide how to split them. This connects the classification problems to the fourth theme.

The natural operations of the banks are lending long and borrowing short, but different maturity periods of the refinancing loans result in different amounts in the flow of cash during certain periods in otherwise similar banks. Therefore it also becomes difficult to see where the actual operational activity starts or ends and the borders between classifications become diffuse.

In their comment letter, the public accountants firm Price Waterhouse (CL 1986 no. 431: 1271–4), generally accepts the classification of cash receipts and payments into operating, investing and financing activities. But, Price Waterhouse *“disagree[s] with the Board’s conclusion that a statement of cash flows of a financial institution [...] provides useful information and [...] are concerned as to the effect [...] on leasing and real estate companies”* (CL 1986 no. 431: 1271). The letter continues:

Financial institutions are in the “cash” business and their operations are primarily the receipt and repayment of financing through deposits and other borrowings and the investing of those funds in loans and securities. We believe that further study of how best to classify these activities in statements of cash flows of financial institutions is required. (CL 1986 no. 431: 1271)

The cash flow numbers in a non-financial firm show where the company's activity is generating income, by showing if positive cash flow is provided from the operations, through investment (selling of assets generates positive flow), or by financial (taking on more loans) activities. In the situation of banks this is not the case.

Definitions of cash and non-cash items

Cash is like a commodity in banks and therefore their cash flow statements have to be looked upon differently. This commodity is not like traditional manufacturing goods because of the nature of cash flowing in and out of a bank to other banks being able to net out flows. The handling of non-cash items in the cash flow statement prepared according to the indirect method further complicates things. Furthermore, newly created

cash in the credit giving process of a bank cannot be easily separated from existing cash in the system of accounts. Current definitions of cash are not clear, and credit lines can, for example, in some accounting reports be considered equal to cash. The same goes for overdraft, which is differently treated as either a cash equivalent or not. Then to make reasonable accounting of this undefined cash and non-cash items on a partly gross and partly net basis opens itself up for many different reporting problems.

If the purpose of the cash flow statement is to show cash receipts and payments, as planned, the statement should start and end with the sum of cash and cash equivalents.

One Board member believes that a statement of cash flow should be prepared to best meet its primary objective—providing information about cash receipts and cash payments of an entity during a period—and that secondary objectives that detract from the primary objective should be avoided. (ED 1986: 26, paragraph 77)

The non-cash transactions should therefore be excluded from the statement according to this board member. The inclusion of interest expense in cash flow from operating activities, rather than financing activities, is in his view an attempt to mesh operating cash flow with net income. The performance indicator of net income should not be combined with the cash flow from operations; it should only be a residual of cash flow other than those from investing and financing (as paragraph 10c describes). This contradicts paragraphs 21 and 74–76, which state that the measure of cash flow should not be performance indicators. According to this board member, the objective of dividing the cash flow should be aimed at improving understanding of the cash flows and not be a performance indicator on cash basis (ED 1986: 26–27, paragraph 78).

William J. Odendahl, Jr., M.S. Certified Public Accountant in Connecticut, suggests four categories for the separation of cash flow: *“Operating Activities, Investing Activities, Financing Activities and Non-Cash Financing and Investing Activities”*. However, he states that the *“netting of the proceeds of the first three categories is deceiving.”* (CL no. 101, 1986: 340). He suggests a format that shows the sources and uses of cash in different activities. The initial purpose of a cash flow statement illustrating the cash receipts, cash payments, and the netting of proceeds could deceive readers when financing activities can be used to pay off liabilities. This points to the previously mentioned problem of separating the different uses and sources of cash, as they all combine with each other in the transactions through the accounts of the banks.

Price Waterhouse points out the need for better guidance in the definition of cash equivalents than “*short-term highly liquid investments such as Treasury bills, commercial paper and money market funds*”, as this would be best judged by preparers. (CL 1986 no. 431: 1274). But they support the requirement to reflect non-cash investment and financing activity separately in the statement.

While these activities do not represent cash flows and should not be allowed to detract from the statement’s primary focus on cash flows, such activities may be significant to an understanding of the enterprise’ investing and financing activities and its future cash flows. (CL 1986 no. 431: 1274)

Finally, Ernst & Whinney suggest that it should be required that “*noncash investing and financing transactions to be disclosed outside the statement of cash flows*”, rather than only permit it (CL 1986 no. 432: 1275).

The banks that were critical could still approve the proposal of the cash flow standard for their customers.

As a credit grantor we fully support the proposal [...] As a financial reporting mechanism for financial institutions, however, we believe that the Cash Flow Statement as described in the proposed statement is not appropriate [...] In our opinion, cash flow information is neither useful or meaningful to financial statement readers because a financial intermediary’s basic product is money. (CL 1986 no. 406: 1193)

The First National Bank of Chicago urges the board to rethink the relevancy of the statement for financial institutions and asks for an alternative reporting concept for more meaningful information for investors on the operations of financial institutions and their ability to meet liquidity and funding needs (CL 1986 no. 81: 303–12).

Net and gross cash flow

Generally the gross amount of cash flow is more relevant than the net cash flow. One of the clear differences between banks and other companies with regard to cash flow is that the amount of flow through banks is much larger due to the payment system handling of customers’ cash flow. The investing and financing activities were required in the exposure draft (ED 1986: paragraph 19) to be reported gross, but Price Waterhouse pointed out that:

Many enterprises use short-term debt for day-to-day cash management and thus information on gross changes in such debt may not be meaningful. (CL 1986 no. 431: 1272–3)

Ernst & Whinney also pointed out that the “*issue of gross vs. net presentations will be a significant issue for some companies, such as financial institutions*” (CL 1986 no. 432: 1277). As an example, they mention

the gross information would not seem to be relevant if a company uses a revolving line of credit arrangement with widely fluctuating outstanding balances throughout the period. On the other hand, gross information may be relevant to users if a company's short-term borrowings are seasonal. (*ibid.*)

This problem theme was the only one that resulted in a significant change in the final accounting standard, where presenting net cash flow is allowed:

For certain items, the turnover is quick, the amounts are large, and the maturities are short. For certain other items, such as demand deposits of a bank and customer accounts payable of a broker-dealer, the enterprise is substantively holding or disbursing cash on behalf of its customers. (FAS 95, 1987: 7, paragraph 12)

The discussion of net or gross cash flows boils down to what is the cash flow of the bank and what is the cash flow of the customer. Banks' assets are largely monetary in nature, which makes information of cash flow not particularly useful in managing the bank or in measuring liquidity or indicating potential insolvency problems. The common view in many of the critical comment letters was that a bank's liquidity and financial flexibility as well as profitability and risk can better be evaluated by other disclosures and analyses. Additionally, many stated that the spread between a bank's cost of funds and interest income on its loans and investments is a more important measure of its performance and solvency than cash flow.

Annual reports of banks disclose analyses, as required by the SEC, such as balance sheet maturity, interest rate sensitivity and asset quality which serve many of the purposes for banks that funds statements serve in other industries (see Allen H. Seed III, *The Funds Statement: Structure and Use*, Morristown, N.J. Financial Executives Research Foundations, 1984: 97-102). (CL 1986 no. 406: 1194)

One suggestion was that using '*earning assets*' as a definition of '*funds*' is more appropriate for banks than '*cash*'. The AICPA's proposed statement of changes in financial position emphasizes financial resources invested in earning assets (CL 1986 no. 406: 1195).

The indirect method calls for more use of net cash flow and this results in less information provided in the cash flow statement. In the case of banks, the flow between customers of different banks in both directions can be netted out at the central banking level. This also reduces the information that the cash flow statement provides.

Direct or indirect method

As previously pointed out by Lauver and Swieringa (in FAS 95, 1987: 13, paragraph 11), by allowing the indirect method the standard opens itself up for inconsistency in the information provided about cash receipts and

payments. Nevertheless, the basis for the conclusion of the standard setting board, in a narrow majority, states its belief

that both the direct and the indirect methods provide potentially important information. The more comprehensive and presumably more useful approach would be to use the direct method. (FAS 95, 1987: 35, paragraph 119)

The board encourages enterprises to follow the approach and use the direct method for preparing cash flow statements. However, they are also encouraged to provide a reconciliation of net income and net cash flow from operating activities in a separate schedule, in order to reap the benefits of both methods, focusing on cash receipts and payments. This did not prove to be the case.

Hawkeye Bancorporation strongly recommends the direct method to be used as illustrated in the exposure draft, because operational cash flows are then reported separately and not combined with non-cash transactions (relating to theme three). The direct method is preferred to show generation of cash and where it is used (in operating, investing, financing) as it is *"cash [that] pays back loans"* (CL 1986 no. 59: 264–5).

The Old National Bank in Seattle sent in two letters, one with an example of how the bank analyses their customers' companies and the other referring to common Robert Morris Associates comments. These comments require reporting of cash flow to be direct (not allowing the indirect method), non-cash transactions should be reported in a separate schedule, and finally the cash flows from operations, investing and financing activities should be shown in gross amounts (CL 1986 no. 98-98A: 335–7).

Some banks preferred the direct method to be used by their customers. The First Charter National Bank stresses the importance that the statement of cash flows be specific, concise and consistent and prefers the direct method because of gross amount of sources and uses of cash. But *"schedule reconciling earnings to net cash flow from operating activities"* should be added to the information in the final statement of cash flow. Even though earnings are important, *"only cash can repay a bank loan"*. This can be difficult to explain in fast-growing companies with good earnings; therefore, a pure cash basis is badly needed for the reporting of cash flow (CL 1986 no. 67: 283–5). This quote shows how important the gross cash flow according to the direct method is for evaluating firms in the credit assessment process, but still not for banks. This becomes even more questionable when the banks are lending and borrowing from each other, but treating it differently than when lending to non-financial firms.

While three board members opposed the cash flow statement being demanded from financial institutions, two out of the seven members of the board also opposed permitting the use of the indirect method of reporting net cash flow from operating activities for any type of firms. According to this minority, the board missed the opportunity to increase the quality of financial reporting and to enhance users' understanding of cash flows from operating activities, said Lauver and Swieringa (FAS 95, 1987: 13).

6.5 – Results of comment letters analysis

Even though the statement of cash flow in financial institutions was criticized in the comment letters process, the board members believed that the information conveyed should be the same for banks as for any other business entity, as paragraph 40 clearly states (FAS 95, 1987: 17). Therefore, the board decided, even though “*the scale of cash flows are larger, the turnover faster and the reliance on borrowed funds greater*” (*ibid.*), the substance of the cash flows had to be the same for banks and other firms.

The first step of the analysis of the comment letters was to sort them according to the writer's occupation and their view on the standard. The majority of the letters from banks that were positive (171 letters) turned out to be in favour of the accounting standard only from a user's perspective. These banks wanted the statement of cash flow to become obligatory in accounting standard regulation so the annual reports of their customers could be more comparable. These banks that were positive did not consider the implementation of the accounting standard from the perspective of banks' cash flow or as preparers. On the other hand, those banks that sent in comment letters and were negative towards the standard all looked at the cash flow statement from the preparer's perspective. These banks generally did not consider the cash flow statement to be applicable for banks. Some of them could be positive towards the standard for other firms, seeing it then from a user's perspective. This method of selecting the critical letters based on the grouping made clear arguments against the cash flow statement for banks easily available in few selected letters.

All the problematic issues and the problem themes show how cash flow in banks has to be looked upon differently than in other firms. The original intention of setting the financial standard of cash flow (FAS 95, 1987) for harmonization has increased with the international version five years later (IAS 7, 2010) and been further intensified in the joint workgroups of both boards resulting in a discussion paper (DP 2008). But

the specialty of banking has not received a necessary focus in accounting rules for cash. Banks and financial institutions are agreed to be different from other business entities because of their special nature in many aspects of the special regulation. But the fact remains that banks are not selling a product or service, but instead their sales object is cash, the same as the measurement and their profit, which made the problems difficult to solve. The overview of the old comment letters shows many concerns that the cash flow would not function for banks. The more recent comment letters in the next section show even stronger, that after years of using the standard, the bankers are still very clear that this statement of cash flow is not used, because it does not function for banks.

The reporting of cash flows in banks is still a relevant debate, as can be seen in the comment letters from 2009 covered in the next section of this chapter. Even though the same arguments are not used against the cash flow in banks according to the above themes, there is still a clear view of the bankers that it is not a useful statement. The situation around the later comment letters is such that the standard is in place and asked for comments regarding the indirect or direct method with regards to cash flow.

6.6 – Recent comments on cash flow in banks

As part of a discussion paper (DP 2008) on the presentation of financial statements jointly issued by FASB and IASB in 2008, the discussion of direct method for cash flow was revoked. This latter group of comment letters could not be analysed in exactly the same manner as the prior ones on the standard setting, because the discussion paper regarded changes in presentation and not an exposure draft of a standard. The changes to discuss regarded both IAS 1 and IAS 7 and the most important issue discussed regarding the cash flow was the direct versus indirect method. The many changes proposed in the paper are outside of the scope of this thesis, but regarding the statement of cash flows it states that

an entity should present separately the main categories of its cash receipts and payments for operating activities, such as cash collected from customers and cash paid to suppliers to acquire inventory (a direct method), rather than reconciling profit or loss or net income to net operating cash flows (an indirect method) as most entities do today. The Boards observed that a direct method is more consistent than an indirect method with the proposed objectives of financial statements presentation. (DP 2008: 18, paragraph S12)

Two out of the 27 discussion points specifically taken up in the paper regard the cash flow statement: no. 19–20. These are pointed towards

paragraphs 3.75–3.83 in the Discussion Paper (DP 2008: 74–78), and are put forward in questions summarized as follows:

19.a. Would a direct method of presenting operating cash flows provide information that is decision useful?

19.b. Is direct method more consistent with the proposed cohesiveness and disaggregation objectives than an indirect method?

19.c. Would the information currently provided using an indirect method to present operating cash flow be provided in the proposed reconciliation schedule (see paragraphs 4.19 and 4.45)?

20. What cost should the Boards consider related to using a direct method to present operating cash flows? (DP, 2008: 74–78, paragraph 3.75–3.83)

The discussion paper gathered 229 comment letters in 2009, and those from banks will be discussed briefly in the coming section. Since then, an Exposure Draft has not been issued, but there have been Staff Reports issued by the Joint International Group (JIG) and the Financial Institution Advisory Group (FIAG). The main changes regarding the cash flow statement in the Staff Draft of a potential exposure draft (FASB-IASB SD, 2010) resulted in the following:

The staff draft continues to propose a cash flow statement that presents cash receipts and payments, but these will be disaggregated only by nature. It also proposes that deposit-taking businesses, such as banks, should display the cash flows that occur between them and their depositors, as if these were settled in cash. In addition, the staff draft permits more aggregation of cash flow information, as well as requiring a reconciliation of operating income to operating cash flows. (IFRS, 2010)

In July 2010, the discussion was updated partly according to the comments made and issued as a staff draft but did not result in an exposure draft. The last Staff Paper on the cash flow issues was published in December 2010, and from this it is possible to see the feedback after visits to financial institutions and financial analysts. But no exposure draft was issued in 2011 even though it was planned. The key points of analysts who were visited by the staff of the standard setters are summarized below by the JIG and FIAG Staff Paper (FASB-IASB SP, 2010: 4-5):

Financial institution analysts stated that they generally do not use the indirect method SCF that is provided today. (Paragraph 15)

Many of the analysts ... believe both a reconciliation of operating income to operating cash flows as well as detailed information of some gross operating cash receipts and payments would be useful. [...] Most of the analysts [...] focus on operating cash flow as a significant metric. (Paragraph 17)

Some analysts voiced support for a presentation of the direct method SCF. They explained that they spend significant amounts of time

extracting information from financial statements in order to produce direct cash flow measures [...] to use in their models. (Paragraph 18)

The main points from the preparers that were visited by the staff of the joint groups of the boards can be summarized as (ibid.: 7-8):

Similar concerns about the direct method SCF as did the field tests. That is, the information would be costly to prepare and yield little benefit as it is not the way they look at their business. (Paragraph 27)

We met with two preparers who present a direct-method SCF disaggregated in accordance with current guidance. One company derives operating cash flows and said that doing so is not costly, however they don't see a great benefit in providing this information. The other company maintains detailed cash flow information and has built their accounting system and processes around cash transactions. (Paragraph 28)

The summary of the filed test results regarding financial service entities was:

Today's cash flow statement presented by financial service entities is not viewed as useful by most analysts. The reasons given are: a) The categorization results in subtotals that are not meaningful. b) Meaningful amounts are netted together. c) The focus of users is on the balance sheet rather than the sources and uses of the cash that funds the balance sheet. (ibid. 8, paragraph 34)

There are strong opposing elements to be taken from the above descriptions of the discussion the standard setters' staff has had with users and preparers of the financial statements of banks. The analysts say that direct cash flow could be good but the bankers say it is not decision useful. All are in agreement that current cash flow statements are not used, not usable or not useful. The more direct arguments from the bankers and their organizations are addressed in the next section, taken from their comment letters on the discussion paper. Those further strengthen the results of analysing the comment letters from earlier.

Later comment letters compared to the older

Previously in this chapter, the main focus was on the comment letters issued on the Exposure Draft from 1986. With the Discussion Paper from 2008 described above, the goal was to get to a new Exposure Draft in 2011 for an accounting standard that would replace both the IAS 1 for presentation and IAS 7 standard for cash flows, but this new exposure draft has not been issued. There is an interesting discussion and many comments that can be found in the letters from 2009, but only two of the questions in the paper regard the cash flow and focus mainly on the direct method. Out of the 229 letters, 25 were from banks, banking associations or international institutions regarding banking, and these were the only comments considered of relevance for this thesis.

The bankers' associations letters are generally in line with the letters from banks. One letter out of ten was considered positive towards the proposal while nine opposed, and like earlier those opposing saw it from a preparer's perspective of banks while the only positive letters considered it from a user's perspective, regarding their customers. Here a few quotes are provided below to illustrate that bankers are stating much the same views in 2009 as 23 years earlier, about cash flow in banks not giving useful information. While many of the comments prefer the indirect method to the direct method if there has to be prepared cash flow statement, from the beginning, in 1987, the preferred method of the accounting standard was the direct method, while practitioners have in great majority selected the indirect method. The representative comments regarding the direct vs. indirect methods are:

We do not believe that the direct method of presenting operating cash flows provides superior information to the indirect method ... We do not agree that the direct method is more consistent with the proposed cohesiveness and disaggregation objectives. (CL 2009 no. 144: 7)

We are not convinced that the arguments in support of presenting the statement of cash flows using the direct method are strong enough to justify the significant additional cost of collecting the necessary information. (CL 2009 no. 163: 1)

While the outreach program of the Staff of IASB and FASB has visited financial institutions that use the direct method of preparing cash flow statements and have said this process is not difficult or costly, this is in opposition to what is claimed by the bankers above.

The disaggregation approach itself has no practical application to financial institutions such as banks ... We are of the view that the direct cash flow method in the detail proposed by the DP is unworkable; We believe the separation of cash and cash equivalents in the cash flow statement is an artificial distinction which does not reflect the cash management activities of entities ... In addition, the cash flow statement itself is not a sufficiently adequate foundation upon which to build further additional detailed levels of disclosure and reconciliation, since it is generally not considered by users to be a particularly useful tool. (CL 2009: no. 86: 2)

Deutsche Bank has two main concerns, while generally supporting the DP proposal, the former being the direct method statement of cash flows:

We do not believe that the direct method is meaningful or useful for users of financial statements of banks as it does not satisfy the main benefits of cash flow statements ... To go one step further, it is questionable whether a statement of cash flows, whether direct or indirect, is indeed useful at all in analyzing financial statements of banks. (CL 2009 no. 168: 1)

In their comment, Deutsche Banks refers to paragraph 4 of IAS 7 regarding the benefits of the cash flow statements, *“which are to provide information regarding the change in net assets of a bank, its financial structure (including its liquidity and solvency) or its ability to affect the amounts and timing of cash flows in order to adapt to changing circumstances and opportunities”* (IAS 7, 2010: A340, paragraph 4).

In their direct answer to question 19, Deutsche Bank outlines the reasons for why the cash flow statement is not meaningful: *“because, for a bank there are numerous cash transactions on a daily basis that are not under the control of the bank but are controlled by customers of the bank who decide on the amounts and timing of payments and receipts.”* (CL 2009 no. 168: 8). They continue:

It should be noted that, internally, the management of a bank does not view the statement of cash flows as an indicator or tool to assess the bank’s liquidity risks and analyse the bank’s ability to general cash created value for shareholders and therefore it is questionable how much information external users derive from them. We, therefore, question the usefulness of the statement of cash flows of a bank, whether direct or indirect, and request that the boards consider whether banks should be exempt from preparing a statement of cash flows. (*ibid.*: 8)

One of the four key concerns in the letter from HSBC, one of the largest banking and financial services organization in the world, is the cash flow:

The statement of cash flows does not have a significant role in providing information that is meaningful in understanding the future cash-flow generation of a bank, nor is it meaningful to a bank’s liquidity position. (CL 2009 no. 193: 2)

The HSBC then points out that the disclosures in the proposal are equivalent to a Source and application of funds statement, but they believe that for banks a more useful information is source and application of capital, by referring to their own source and application of tier 1 capital disclosure as an example. In the direct answer to question 19, they continue:

HSBC is strongly opposed to the use the direct method of presenting cash flows in the statement of cash flows for a bank. There is ample evidence that the users of financial statements of banks do not find the cash flow statement to be relevant information. (*ibid.*: 11)

Finally, the last bank quoted is BNP Paribas. Similar to most of the banks commenting in 2009 and in line with the general feedback from bankers in the comment letters from 1987, they state: *“We believe that the cash flow statement, whether in direct or indirect format, is meaningless for financial institutions.”* (CL 2009 no. 174: 1). Then BNP Paribas states regarding the different methods:

Direct method cash flow statements are very difficult to produce, which is today evidenced by the fact that there is hardly any company that

produces a pure direct cash flow statement, let alone an industry that uses it as its reporting standard. (CL 2009 no. 174: 1)

Theoretical ideas need to be thought through to their usefulness and their cost benefit, of which, the direct cash flow does not provide a benefit. In reality, the users of bank's financial statements do not reference the indirect cash flow statement. Although indirect cash flow statements have been previously produced, they have not been shown to be of value. Therefore, indirect cash flow statements for financial institutions should be optional. (*ibid.*: 2)

From the bankers' associations that sent letters, all nine that took up the question of cash flow were against the direct method for preparing it. The global organizations, IIF and IBFed are both strongly opposed the direct method and the other three, EIB, BIS and World Bank, are not supportive. The CEBS did not discuss the cash flow question.

The International Banking Federation (IBFed) summarizes the similar comments made by most of their members (country or regional bankers associations) in the feedback regarding the cash flow:

In the banking industry, cash flow statements do not provide users with the information on the entity's ability to generate future cash flows or anticipation of liquidity risk. While banks manage their liquidity risk on a day-to-day basis, cash flow statements provide information on the current period but do not provide much perspective on the liquidity risks incurred by the reporting entity for the next period. Cash flow statements present a restrictive view of the processes that create value in banks. A major difference from other industries is that banks' cash flows are not related to their income generation. Analyzing performance of a bank by means of cash flow is as relevant as measuring a manufacturing entity's performance with in and outflows of inventory. (CL 2009 no. 187: 2)

They continue: *"IBFed is unaware of cash flow statements—whether direct or indirect—being used by banking analysts. They are regarded as inadequate and irrelevant for the evaluation of banks' performance, and such cash flow statements are not used internally for management purposes."* (*ibid.*)

Only one comment letter in 2009 from the banking industry was found that was positive towards the implementation of a standard demanding the use of the direct method for preparing the statement of cash flows in banks. From the banking industry organization, all were explicitly against the direct method, except for one that did not discuss the cash flow issues at all. Similarly, from the international banking organization, one letter did not discuss the question about the direct method while the others were strongly against.

Out of the ten banks, two did not mention the cash flow question specifically but were generally negative against the proposal. Seven banks state the direct method for cash flow as one of their main concerns

and are strongly opposed to it. One bank, Allied Irish Banks (AIB), answered the question positively, and was in agreement with the proposal, stating:

We agree that the direct method would result in information which is decision-useful as it allows the reader to see clearly the operating cash receipts and payments in order to assess the entity's ability to generate cash flows. [...] we believe that the direct method is more consistent with both objectives [proposed cohesiveness and disaggregation] as users of financial statements will be able to link information about operating assets and liabilities to operating cash receipts and payments. (CL 2009 no. 170: 6)

It is more likely that AIB Group is commenting here in the role of user (reading customer's financial statements) rather than preparer of the banks' reports. The following statement at the beginning of their letter is in line with other comment letters from other banks: *"Information needs of financial institution's shareholders differ from those of corporates, therefore a balance of user information requirements needs to be considered in finalising the amendments to IAS 1"* (CL 2009 no. 170: 1).

Future improvements on the statement

The latest comments regarding the proposal for preparing new cash flow statements according to the direct method were found in the minutes of the Financial Statement Presentation Team (FSPT) meeting from 12 February 2010 of the Financial Statement Presentation Working Group and in their *Working Group Paper 3: Statement of cash flows* (WGP 3), following points stand out:

Generally, working group members questioned the usefulness of the statement of cash flows useful for financial service entities and wondered whether a direct method statement of cash flows would improve the usefulness of that statement. [...]

Working group members generally agreed that the indirect method statement of cash flows could be improved in meaningful ways that would be less problematic and less costly than implementing a direct method statement of cash flows. They noted that an "improved" indirect method statement of cash flows might provide a similar level of decision-useful information as a direct method statement of cash flows. (FASB-IASB WGP, 2010: 4-5, paragraph 11 and 13)

These are the latest comments regarding cash flow in banks from the IAS 1 and IAS 7 discussions related to a new IFRS standard replacing both, but the project has been on hold since 2011. According to the discussion paper on financial statement presentation issued jointly by FASB and IASB in 2008 (DP 2008) and the comment letters (CL 2009) from banks on this discussion paper, not much has changed since 1986. The arguments made since then are therefore still relevant for the discussion, but no

exposure draft is yet available for a new standard. The twenty-three years practice of using the standard for preparing the cash flow statements, apparently for no existing users, strengthens the repeated claims.

The Exposure Draft has not been issued, and the work of the JIG-FIAG regards financial instruments and impairments at the present, while the presentation of the statement of Cash Flow is on hold. Initially the IASB started Phase B of the work plan for the Financial Statement Presentation followed by the Staff Draft issued in July 2010 (IFRS-FASB SD, 2010). The plan was to have an Exposure Draft ready in early 2011 and the target dated for the new IFRS was late 2011 but this is on hold. The proposal was to have the new standard replace the IAS 1 and IAS 7, but as of 6 March 2011 the *“project is paused until the IASB concludes its ongoing deliberations about its future work plan”* and the next steps are unclear: *“If and how the project will be continued, will be decided after the competition of the IASB’s agenda consultation”* (IFRS, 2011).

6.7 – Concluding comments

The problems with the functioning of cash flow statements in banks, as pointed out in the comment letters, were grouped into five themes: *inconsistency, classification, definition of cash* and its equivalents, numbers being *net or gross* cash flow and the method for preparing it being *direct or indirect*. The arguments against preparing the cash flow statements for banks were derived from the letters sent by practicing bankers commenting on the proposed standard in 1986 and again on the discussion paper regarding changes issued in 2008. The critical comments illustrate a difference from what the accounting standard assumed about the reporting of cash flow in banks. Most of these arguments were ignored by a narrow majority of the standard setting board. Credit creation of banks is not considered and it stated that banks, like any other firms, needed to generate positive cash flow and should therefore prepare reports just like non-financial firms.

The criticism raised regarding the accounting standard prior to the implementation was partly restated in the comment letters from 2009. The banker's original arguments against the functioning of the cash flow in banks have been derived in this chapter from analysing the critical letters. Many problems relating to accounting of cash flow in the operations of banks and financial institutions were indicated beforehand but not considered relevant. This relevance needs to be reconsidered in light of the financial reports from banks that have been prepared according to the standard. Preparers, the standard itself and the resulting reports should all explain for users of this financial information, the potential long-term negative cash flow from operations in banks. This negative operative flow presented in the statements is illustrated in the next chapter.

The arguments in the comment letters indicate explanations for why the cash flow statement does not fulfil its function in banks, and provided both preparation and information for the interview study with bankers later in this thesis. These arguments did not provide a prediction of or explanation for the negative cash flow from operations during credit growth, only that the statement would not function for banks. The failure of the standard setters to accommodate the credit creation of cash in banks is in line with the ignorance of this feature of banking seen in mainstream economics and finance theories as shown in the first part of this thesis. The theoretical framework of this thesis helps in understanding part of the problem, but does not come into full force of use until after the interview study. Claims by bankers in 1986 that cash flow statements would not function for banks have been confirmed in the

comment letters from 2009 and with the empirical fact that the statement is not used. The plans for changing the standard are currently unclear.

The next step is to look at the evidence provided by the financial statements of banks presented in line with the cash flow accounting standard. In the next chapter the cash flow statements from eight Scandinavian banks are analysed over a period of fourteen years. The negative numbers in the accounting reports presented there have not raised concerns until this research. They turn out not to be a non-issue, because nobody uses them, according to the interviews in the last study. Still, the quest for an explanation of the negative numbers and to understand the functions behind it is ongoing until the last interview, and then further explored by using the theoretical framework after that. The letters studied in this chapter provided the insight to understand that ignorance, and show that the cash flow statements are problematic in banks and therefore are not used.

Chapter 7: Cash Flows

7.1 – Statements of cash flow

This chapter presents the accounting numbers from the financial statements of banks and illustrates with graphs the cash flow development over a period of fourteen years. These empirical facts are gathered from the annual reports of nine Nordic banks and support the findings in the previous chapter. Banks have been described as being different from non-financial firms when it comes to cash flow and their statements function differently according to previous studies in this thesis. This study confirms *ex post* the claims made *ex ante* in the comment letters regarding the accounting standard for cash flows that would not function in banks. The illustration of the negative operative flow further prepares for the next study, which asks bankers about the statement of cash flow.

The current chapter begins with a short overview of the development of the cash flow statement and the historical lessons drawn from the classical case of the W. T. Grant bankruptcy in 1975 that illustrated the importance of operational cash flow. This case initiated the cash flow analysis of the bankrupt Kaupthing in the pre-study as shown in Chapter 1. The bankrupt bank is included in this chapter for comparison after the eight selected Scandinavian banks have been analysed. These empirical examples illustrate how the original intent and purpose of cash flow statements is not applicable to banking operations and thereby the negative numbers support the comments of the bankers regarding the problems of cash flow accounting in banks. The bankers did not state beforehand that the cash flow would be opposite or that the numbers would be negative, but only that it would not function for banks as intended. The negative numbers presented here in this chapter show it.

The combined cash flow of the Scandinavian banks is analysed at the end of this chapter, and the four Swedish banks in particular are summarized together. Their negative numbers from the operative cash flow during 2001–2010 cannot be explained by the accounting rules or analysis of the financial statements. Even though the rules demand positive long-term total cash flow, and not specifically operative cash flow, the positive financing flow compensating for negative operating flow cannot be sustained in a going concern—unless it constantly continues with more borrowing. It is worth noting that the financial statements do not mention in notes the reasons for the negative operative cash flow or when it suddenly changes to positive.

The banks generate potential profit money from three sources: the *interest rate differences*, the provisions or *fee income* and from *other* items, like

change in value of financial assets. It is inconsistent how each activity is to be split between financing and operations. But after the next study and theoretical insight, the negative flow looks more sensible by using the money view perspective of the theoretical framework.

These financial statement analyses of each bank provide an overview of a large part of the Scandinavian banking sector. In an overview of the numbers from each bank is provided in the graphs based on the financial information from each bank's annual report (see also Appendix 7 for the actual graphs used in the interviews in 2011). The analysis in the chapter gives a simple financial overview of the banks, focusing mostly on long-term perspective of the cash flows. The narrative description of each bank is to give insight into the differences between each bank and an overview of the banking sector in the region. It also sets the scene for the interviews in the next chapter by presenting selected key facts of the financial statements. The analysis in this chapter is an additional step on the way to find out why the cash flow statements are not used. The cash flow numbers of banks are not part of common financial databases so all information for this chapter was manually collected from the banks' annual reports. Setting these facts, from the cash flow statements, straight in purpose built database was a critical step in preparing for returning to the theoretical literature after the studies in order to understand the appearance of credit creation in the cash flow statements in banks. This resulted in the simple accounting model presented in Chapter 1 that is extended in Chapter 9.

7.2 – Development of cash flow analysis

The step prior to the analysis in this chapter was to look at relations between cash flow and key accounting numbers on one hand and the bankruptcy of banks on the other. When so many banks have been going bankrupt, as became apparent during the crisis (see the top ten list of biggest bankruptcies in the world in Appendix 2), a first reaction is to look at their financial reports. Maybe it was a simplistic move, as an instant reaction, to find out what was going on. But it was not a successful endeavour to look for explanations in the cash flow statements of the annual reports in Kaupthing—as was shown in Chapter 1, the numbers prior to bankruptcy looked good. Looking at other bankrupt or nationalized banks like Northern Rock, Washington Mutual, Royal Bank of Scotland and the other Icelandic banks did not provide much

explanation, either. The bankruptcy relation of cash flow was abandoned but its difference from non-financial firms was still intriguing.

The next step was to look at the four large Swedish banks, where it turned out that the total and operative cash flow numbers were either negative or positive in the two of the four banks that were considered amongst the most secure banks in the world in 2010. The other two banks were close to collapsing in 2008–09 and had both negative and positive operative and total cash flow during that time. These fluctuating signals from the cash flow numbers in the otherwise similar banks increased the curiosity about what these numbers signalled. The financial statements did not provide an explanation of the negative cash flow numbers in the notes and operational cash flow was constantly fluctuating. These numbers looked different from what can be seen in non-financial firms, such as in real estate. A real estate firm was considered to be a good comparison, as cash flows out into big investments, and is financed with borrowing and generating operational income paid back over many years.

But the banks turned out to be very different, and an explanation was not to be found in the literature. That is why the focus was first put on the historical information about cash flow statements and its accounting standards, as has been described and analysed in the in previous chapters. Then the time period and the sample of banks from the pilot study were extended, including the biggest bank in each of the other Nordic countries to avoid country bias. The next step was to analyse the selected banks in order to compare them and then finally to interview the bankers, shown in the next chapter. In the current and next chapter the analysis of the cash flow issues will be taken through and then beyond the numbers in order to first present the facts and then ask for an explanation of the negative cash flow numbers in the banks' operations. New signals were appearing in the financial statements of the banks after the interviews when the numbers for the ongoing year (2011) were added to the analysis, first from quarterly reports and then for the full year. The negative operative cash flows of a decade had suddenly turned positive and on a much larger scale, and this fluctuation continued with the 2012 numbers.

It is necessary in future research to conduct both a deeper financial analysis of the accounting statements and more detailed cash flow studies in the banks, to go behind the numbers. This could also illustrate some critical incidences affecting the changes visible in the cash flow statement numbers. The common spike in operative cash inflow in 2011 in most of the banks in this study, illustrated clearly in the graphs, is one such critical incidence. One hypothesis is that this spike is related to the

regulatory change for increased liquidity reserves. It could also be flight to security due to the Euro-crisis, but both possibilities require further research. In the current chapter, the simple route of presenting the facts is selected, and the explanation is kept for the interviews in the next chapter. The actual numbers are illustrated with two graphs for each bank. Similar graphs, which only covered up until 2010, were used in the interviews that took place in 2011; these graphs are shown in Appendix 7. The idea here is not to compare the performance of the banks as such, but the illustrations show that the statements present negative cash flow from operations of the banks over an extended period of time. For comparison, the real estate company from Chapter 2 was used in the interview presentations to illustrate a simple traditional cash flow with constant positive operative cash flow. There, the growth of investment in buildings and how these are funded with financing and operational activity is clear and in line with the basics of the accounting standard.

At the time of the interviews in the next chapter, when the graphs from this chapter were presented, the credit creation of cash had not become an apparent explanation of the negative cash flow from operations. If the numbers from the banks are analysed according to the standard explanation of the operative cash flow, then the banks were having problems in operations due to negative cash flow for a decade. A sudden turnaround would then also have been taking place in their operations in 2011, with an exceptional positive inflow of cash from operations as never seen before. That is not what can be read from the whole annual reports as such or other key financial numbers. These changing facts from the spike in 2011 came as additional information during the process of this research, after the interviews, and helped when finding the credit creation of cash. None of the annual reports had a note or comment mentioning the negative operative cash flow or commenting on when it turned positive.

The concept of cash flow here concerns banks' cash flow and the accounted cash flow is from the numbers in the published annual reports. In principle, the numbers should represent real cash transactions in and out of the firms. But only one of the banks prepared the cash flow statement according to the direct method. All other banks in the study, like most firms, use the indirect method for presenting cash flow. It is an important fact for future research that the only banker in the interview study who could explain the negative numbers was in the single bank that used the direct method to prepare the cash flow statement.

The accounted cash flow, and not the expected future cash flow, is the focus of this study. Many analysts, and the banks themselves prior to lending, use cash flow statement analysis to evaluate the expected future cash flow potential of the customer or the company. The concept of Free Cash Flow commonly used in finance but lacking focus in accounting research, is also not the focus of this study. The concern here is not focused on bankruptcy prediction of the banks, either, but instead on finding out the reason for the negative operative cash flow of the banks, excluding the expected future and free cash flow. In the pre-study both analysts of banks at the authorities and bank analysts of investors were interviewed, but they could not explain the negative operative cash flow. After finding out how the cash flow from operations in banks can be negative over a decade it is different to look at the analysis in this chapter. But it is kept intact and it is important to remember that the explanation was found following the analysis done in this chapter, with the help of an interview in next chapter and adding the credit creation explanation from the theoretical framework. After these measures, it is now obvious why the operative numbers are negative, and the future research can then look further into how banks' cash flow statements can be used as they are in other firms and if they can be used to predict anything about the future.

7.3 – Historical cash flow from operations

W. T. Grant Company was a big department store and retailer like Wal-Mart and *“serves as the classic case of the importance of a cash flow statement”* (Kam, 1990: 71). The start of the classic article by Largay III & Stickney about the bankruptcy of W. T. Grant in 1975 could as well be used for the sudden collapse of Kaupthing in 2008.

Although they surfaced as a gusher rather than a trickle, the problems that brought the [...] company into bankruptcy, and ultimately, liquidation, did not develop overnight. (Largay III & Stickney, 1980: 51)

The lessons taken from the case of W. T. Grant illustrate how profitability, turnover and balance sheet growth as well as rising equity price on the stock market fooled the owners and managers of the firm. They lacked information about the operations of the firm, namely the cash flow provided by operations. Working capital provided by operations was as bad as net income. Most key ratios had been good and trended upwards over the ten years prior to the bankruptcy, just as in the case of Kaupthing. The case of Lehman shows, like W. T. Grant, a company having negative operative cash flow for the most part of the decade prior to its bankruptcy.

On the other hand, the case of Kaupthing contradicts the operative cash flow measure, because only in 2006 did Kaupthing have negative operational numbers and this was reversed to a two times higher positive cash flow from operations in the next year, 2007. Then Kaupthing got the highest, AAA, credit rating from international rating institutions. Only a few months later, in October 2008, it was a bankrupt bank.

As the graph from the Largay III & Stickney (1980) article illustrates, in Figure 12 below, the negative cash flow from operations during several years had made it impossible to sustain the W. T. Grant company as a going concern. Even though in the last two years before the bankruptcy the downward trend was turned around, it was too negative. The operations of the company lost money for the most part of the decade; it consumed cash instead of providing it, so according to Largay III & Stickney it was impossible to save it from bankruptcy. This information was not presented to its stakeholders, investors, managers, employees or creditors, because at that time the statement of cash flows was not part of the annual financial report. It became obligatory with a standard imposed in 1987. Three decades after the implementation of cash flow statements in the financial reporting requirements of all firms, it can be noted that the lesson from W. T. Grant does not apply to banks.

Banks are allowed different classifications of loans in the accounting standard, but they are assumed to have to provide cash to pay owners and creditors. It is not stated in the standard that it is good for banks to have negative operative flow but bad for non-financial firms. Even though the negative operative cash flow of Grant could explain its bankruptcy, it has since been difficult to confirm the predictability of bankruptcy. Still, the operative cash flow is considered to be useful information. But for banks it is different.

The help and insight gained from investigating historical evidences in the standard setting background material in the previous chapter was sparked by the lessons of W. T. Grant. The historical graph also inspired the formation of line graphs that were used in this chapter, though working capital is not relevant in banks. The more important illustration for the cash flow is the bar chart with the break down of operating, investment and financing activity.

In the analysis of the W. T. Grant company, Largay III & Stickney (1980) use Net Income and Working Capital Provided by Operations in addition to their own calculation of Cash Flow from Operations that was not demanded in reports at the time.

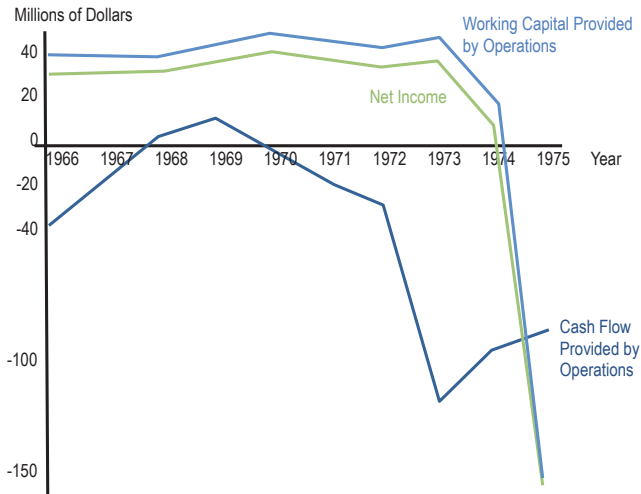


Figure 12: W. T. Grant Company: net income, working capital and cash flow from operations for 1966 to 1975 - Exhibit III from Largay III & Stickney (1980: 54)

Working capital is not a relevant concept here, because current assets and liabilities are difficult to separate from long-term assets and liabilities of banks. It is impossible to know what part of the liabilities in the form of deposits will be kept longer than a year and which deposits will be withdrawn. Similarly, loans that are the bank's main assets can be repaid earlier than contracts state, so current assets and long-term assets are also hard to separate. The working capital concept is therefore not applicable for banks.

The key numbers used are not called exactly the same terms in the income statements of banks. But in general, the red line on the graph is the total sum of income. Total Revenue (prior to all costs) is used in a few banks, but most use Total Income (or Total Operative Income or Total Core Income, in the English versions of the Scandinavian banks' annual reports). The bottom line used is Profit for the Year, and always selected after all items as Taxes, Amortization, Depreciation, Loan Losses, etc. The cash flow from operations or operational activity is in all cases based on the indirect method, except in DNB.

The goal in the coming section is not to replicate the *ex post* bankruptcy prediction from the W. T. Grant case, and the line graph is not replicated either. The bar chart illustrates the composition of the total cash flow

from operations, financing and investment activity, with negative below the line and positive above. The graphs presented include numbers from annual reports of the banks until 2012, but the graphs as presented for the bankers in 2011 including up to 2010 information are shown in Appendix 7. In two cases the older version of graphs are included as well here below for special illustration.

7.4 – Statements in Nordic banks

In this section the financial statements of the selected eight Scandinavian banks in the study are summarized. In the end of the section, the ninth bank, the bankrupt Kaupthing, is included for comparison, as previously presented in Chapter 1. The tenth case, also used only for comparison, is a Scandinavian real estate firm rather than a bank, and was presented in a similar manner in Chapter 2.3.

A short summary presents each bank and includes key numbers and the two graphs. One bar chart is drawn for the cash flow statements' three key numbers each year: cash flow from financing, investment and operational activity. The other is a line graph drawn with the three key numbers of operational results for each year, displaying annual profit with a green line and total operating income with a red line. The blue line is the same as the blue bars, showing cash flow from operations. Balance sheet numbers of total assets are covered in the text along with other non-financial numbers. These are the number of employees, customers and offices in the home country and abroad, as well as key shareholders.

The three key cash flow numbers from the statement are presented in the bar chart, showing inflow (positive + above 0 base line) and outflow (negative - below 0 base line) of cash for each of the fourteen years. If cash reserves are equal at year-end and beginning, the bars should be symmetric above and below the zero-line. But if cash at year-end is greater than in the beginning, the bars above the line should be higher than below, while longer bars below the line indicate total outflow of cash and reduction of cash reserves over the year. The division of where cash is generated (or consumed) is seen from the split in the three colours of the bars, which show cash flow from *investment* activity (red bar), *financial* activity (green bar) and *operational* activity (blue bar).

The following banks are covered below: Nordea, SEB, Handelsbanken, Swedbank, Danske Bank, OP Pohjola, Ålandsbanken, and DNB. Nordea is the biggest bank of the study, registered in Sweden but also one of the biggest banks in Finland and Denmark. The other big banks in Sweden—

SEB, Handelsbanken and Swedbank—are all included, but Swedbank declined to be part of the interview study in the coming chapter. Danske Bank is the biggest bank of Denmark and OP is the second largest bank in Finland, being a network of savings banks. Nordea is the biggest bank in Finland and the second largest bank in Denmark. Ålandsbanken is the smallest bank of the study, but they acquired the operations of Kaupthing in Sweden after bankruptcy from the Riksbank, and have operations in Finland as well. DNB is the biggest bank in Norway. This selection of banks covers all the big Nordic banks, measured in assets over 1,000 billions, and also the four big banks of Sweden, covering over 80% of the bank market in the biggest country. At the end of the section, Kaupthing is covered in a similar manner for comparison purposes. In the next section, other cash flow studies of banks that have been found are presented. At the end of the chapter, prior to the summary, the total cash flow of the bank groups in Sweden and Scandinavia are provided and briefly analysed.

Numbers in the coming sections are from annual reports in 2012 unless otherwise stated. The introduction descriptions of the banks are based on information from the annual reports and their web sites, listed in the references list.

Nordea

Nordea is a Nordic bank, with its operations and assets distributed between the Scandinavian countries. The bank was created through several cross-border mergers of different banks (the last step by merging Nordbanken in Sweden, Merita Bank in Finland, Unibank in Denmark and Christiania Bank & Kreditkasse in Norway). Nordea is by far the biggest bank in the Nordic region and has its operations most evenly distributed over the countries, not primarily belonging to a single specific country, even though its headquarters is in Stockholm. A few years after the mergers, operations were extended around the Baltic Sea, including operations in Estonia, Latvia, Lithuania, Poland and Russia. The original banks behind Nordea can be traced back to the 1820s, including up to 300 banks gradually being merged. These counted 80 banks in the 1970s and 30 banks in the 1980s, finally resulting in 4 banks in the 1990s forming the latest bank entity in 2001. Nordea in 2012 has 10.5 million private customers and 500,000 corporate, with 32,000 employees and 1,400 offices in 9 countries. Its biggest owners are the Finnish Sampo Group with a 21.5% share (owned largely by pension funds in Finland) and the Swedish state with 13.5%.

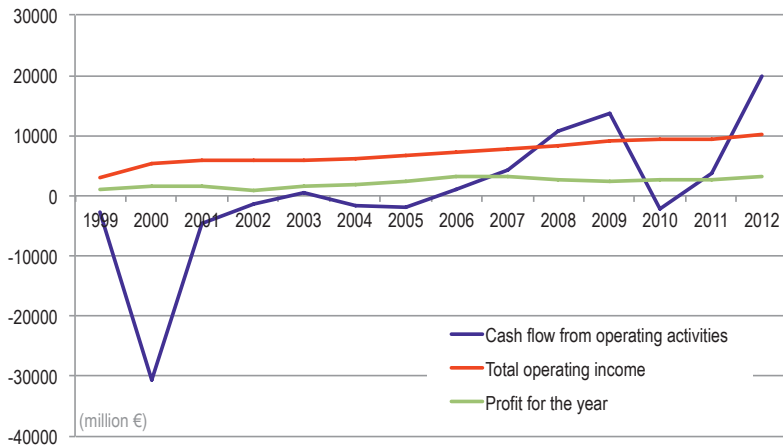


Figure 13a: Nordea Financials AR 1999-2012

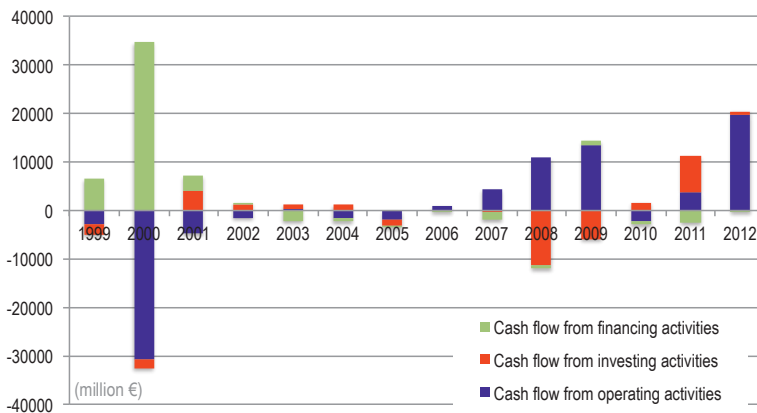


Figure 13b: Nordea Cash Flow AR 1999-2012

The first thing to notice on the graphs generated from the Nordea annual reports is the dramatic cash outflow in the year 2000 as can be seen in Figure 13a and 13b. This could be explained during interviews with the merger of acquiring Christiania Bank and Kreditkasse, and also in that year the Merita-Nordbanken and Uni-Danmark were merged. Why this was booked as operative cash flow is still not fully explained, but labelled as changes in ordinary business assets and liabilities, indicating accounting changes that resulted in larger outstanding loans. This shows a lack of breakdown and consistency in the financial reports and policies. It also exemplifies an area where the cash flow rules create fluctuating

patterns during acquisitions that could be taken into consideration in the new accounting regime. A different scale of the picture, when ignoring the period with the merger, can be derived from the period since the group was formed, during the decade 2001–2010 as shown in Figure 14.

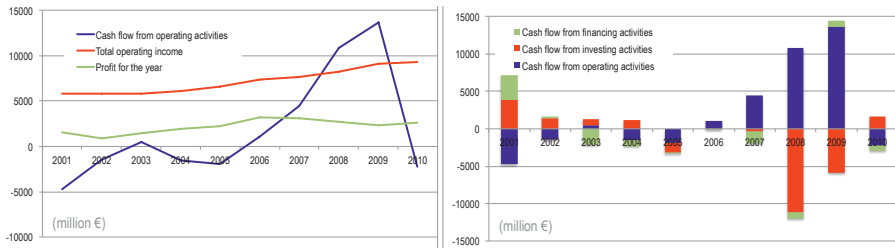


Figure 14: Nordea AR 2001–2010

Here, a substantial inflow of cash from operations building up from 2006–2009 and again in 2011–2012 is most remarkable. In 2008 and 2009, the cash flow derived from operations is several times the profit of the year, while the total cash flow of 2008 is more negative. The total cash flow is negative for the years 2003–2005, which means the bank is losing cash reserves, while the operative cash flow is also negative for 2001–2002 and 2004–2005. The negative cash flow from operations and in total for the year 2010 has not been explained, nor has the positive flow in 2012.

Total operating income is constantly growing over this period, from € 5.8 billion in 2001 to over € 10 billion in 2012, and annual profit is from € 0.9–3.2 billion over the period. The total profit for the twelve years since its establishment in 2001 has been € 27.8 billion and a total cash flow of € 36 billion, with both investment and financing activity negative but with operational activity of € 42 billion in total over the period. The balance sheet of Nordea has continued to grow until last year. Total assets were € 580 billion in 2010, € 716 billion in 2011 and € 677 billion in 2012. The equity for the same period was € 24.5 billion in 2010, € 26.1 billion in 2011, and € 28.2 billion in 2012.

SEB

Skandinaviska Enskilda Banken, or SEB, was the first private bank in Sweden, established by André Oscar Wallenberg in 1856. SEB still belongs to the Wallenbergs, according to the traditional view on Swedish economy, but it is traded with wide ownership on the Stock Exchange. Investor, the investment company originating from the Wallenbergs, owns over 20% of SEB and most of the other twenty biggest shareholders, holding an additional combined 35% of the shares, are pension funds or related entities.

Traditionally SEB is seen as the bank of big corporations but it has also many private customers and has been increasing its presence on the mortgage market in Sweden. It was hard hit in 2008 due to the exposure in east Europe but has recovered well. SEB has offices in 20 countries, but focuses on the Nordic market and Baltic Sea region as its home market. Germany is the second largest country of operations after Sweden, even though SEB is reducing its presence there by divesting corporate banking. Its customers include 4 million households and 400 thousand companies. It has 17,000 employees, with 8,500 in Sweden. Total assets amount to 2,453 billion SEK, and equity is 109 billion SEK.

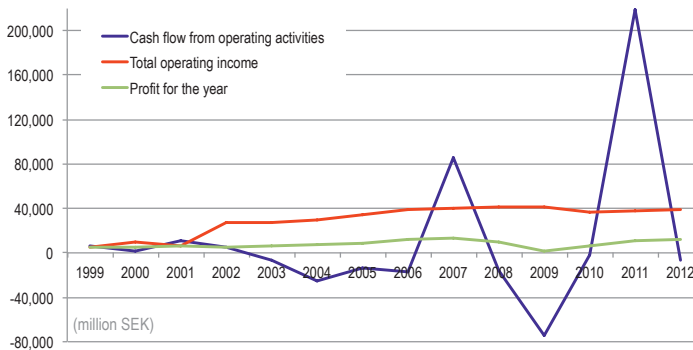


Figure 15a: SEB Financials AR 1999–2012

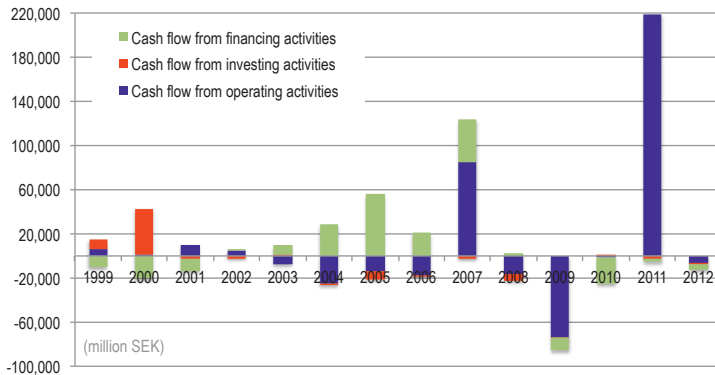


Figure 15b: SEB Cash Flow AR 1999–2012

The cash flow numbers in SEB are symmetric until 2005 except from the year 2000, when there was a big positive inflow from investment, explained as the divestment of the insurance arm of the group. The operative cash flow numbers are negative for many of the years, but are financed by positive inflow from financing activity, or funding as the bankers call it. The financing activity increases dramatically from 2002 until 2005, by which time the total cash flow has increased tenfold from the prior years. While 2006 looks to be back to a balanced situation in line with previous years, a new and even bigger jump occurs in 2007 when both financing activity and especially operative activity increase dramatically on the positive side, increasing the inflow six times or by 100 billion SEK. Total cash inflow in 2007 is almost four times that of the record year of 2005, and operative cash flow is increased by 100 billion SEK as compared with each of the previous four to five negative years. In 2008, operative cash flow is reduced by 100 billion SEK and total cash flow turns negative for a three-year period, with the year 2009 by far the worst year in operative cash flow. From 2010 to 2011 the total cash flow is turned around by 250 billion SEK and operative cash flow from zero to 220 billion SEK.

Total operating income had been steadily increasing during the course of the decade until 2009, with the exception of 2001. From 2009, the reduction in total income was approximately 10%, while profit, which had been on a steady rise until 2001 with a dip of 25% in 2002, saw a steady rise until 2007 and after a 30% reduction in profit in 2008 took a 90% collapse in the year 2009. However, it increased six fold in 2010 and was back to pre-crisis levels in 2011.

Handelsbanken

Svenska Handelsbanken (SHB) has for some years been ranked as one of the most secure banks in the world (Bloomberg, Moody's CDS listing), but in the last two years Canadian and then Qatar-based banks took over the top of these rankings. Each and every one of the big banks in Scandinavia is different and direct comparison therefore is difficult. But as another measure, the cost of funding can be used, and only Nordea has a funding cost almost as low as Handelsbanken, while the other banks pay a higher price for their funding.

Handelsbanken is linked through mutual ownership to the Industrivärden group, a big player in the Swedish business economy. The bank is one of the leading banks in the Nordic region and they refer to Bloomberg ranking as *"one of the ten strongest banks in the world and the strongest bank in Europe"* (SHB, AR 2012: 2). Its biggest owners are Industrivärden and Octogonen, the fund of Handelsbanken staff, with shares of 10.3% each. Others on the list of the twenty biggest shareholders are mutual pension funds and fund companies of banks in addition to the Lundbergs, who also are the biggest owners of Industrivärden, holding 2.4% in Handelsbanken. Octogonen is a special profit-sharing pension organization for the staff of Handelsbanken, and instead of bonuses, employees get a share of the ownership in the bank if it performs better than average as compared to its competitors.

The bank was founded in 1871 after a personal dispute at SEB when 8 board members resigned and formed the new business-oriented bank. Handelsbanken has 765 branches operating in 24 countries and over 10,000 employees. It has been a decentralized bank and mainly has been expanding organically. The expansion abroad has been gradual, entering the other Nordic countries one by one beginning in 1989. From the same time, it has started slowly in the UK, but has been increasing the amount of office branches there since 2001, doubling the number in 2007 to 50, and in 2012, it has 130 branches in the UK. In total, over 300 branches of Handelsbanken are outside of Sweden.

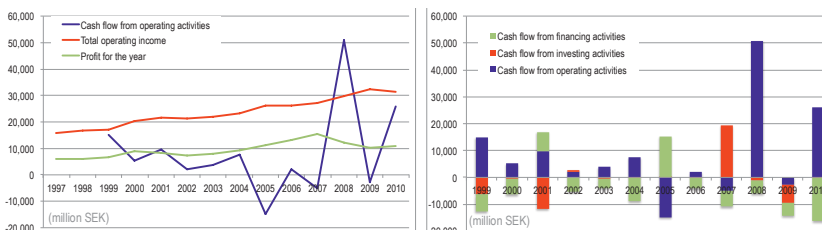


Figure 16: Handelsbanken AR 1997–2010

Handelsbanken was the only bank that survived the banking crisis in the 1990s without governmental help. In the crisis since 2008, it is not fully disclosed how much help each bank received from the government, but Handelsbanken is likely to be the only one again not using official support. At least the actions of the bank strongly indicate that it rather took on extra cost to avoid governmental support. For example, Handelsbanken paid a negative interest rate for deposits at the Swedish central bank and was not utilizing favourable official funding during the turmoil in 2009.

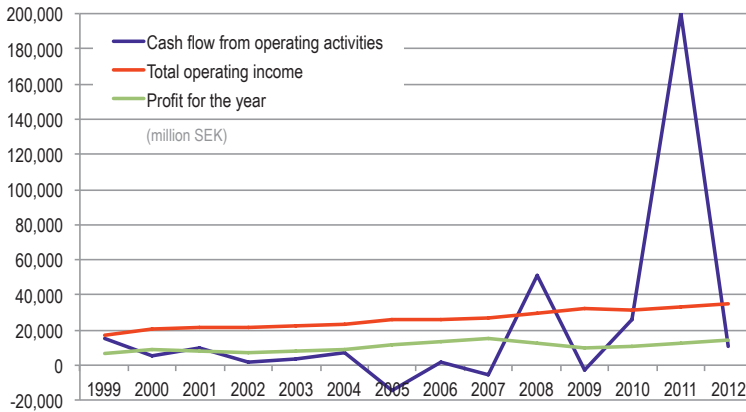


Figure 17a: Handelsbanken Financials AR 1999–2012

Looking at the numbers prior to the interviews as Figure 16 shows, Handelsbanken had a negative trend in cash flow from operations (blue line) during the years until 2007. The crisis year of 2008 resulted in an extraordinary positive cash flow from operations, while 2009 had negative numbers for all three cash flow activities. As the line chart illustrates, the turnover measured in total income is still constantly increasing and profit has a positive trend even though it declines in the years after 2007. The negative operative cash flow during three of the last five years prior to the interview study in 2011 would indicate issues in operations prior to knowing about the credit creation of cash. The bank was ranked as number 1 or 2 of the world's most secure banks when the flow was negative, so it was clearly not a sign of weakness or financial stress.

When updating the numbers with the two most recent years, the scale of the graphs goes out of proportion (see Figure 17). The positive operative cash flow increased tenfold from 2009 to 2010 and then again eightfold from 2010 to 2011. In 2012, the operative cash flow was over 10 billion SEK but was 200 billion SEK a year earlier. One explanation for the dramatic cash inflow from operating activity in 2011 is a significant increase in deposits; customers sell financial assets to put money in

savings accounts and customers from other banks and countries move their money in a capital flight to security. There are also significant dollar inflows this year that “are placed with the Federal Reserve and comprise part of the Bank’s total liquidity reserve” (SHB, AR-H, 2011: 8). The balance sheet illustrates a fivefold increase in deposits at the central bank, supporting this statement, but no notes are provided for the cash flow from operations in the annual report.

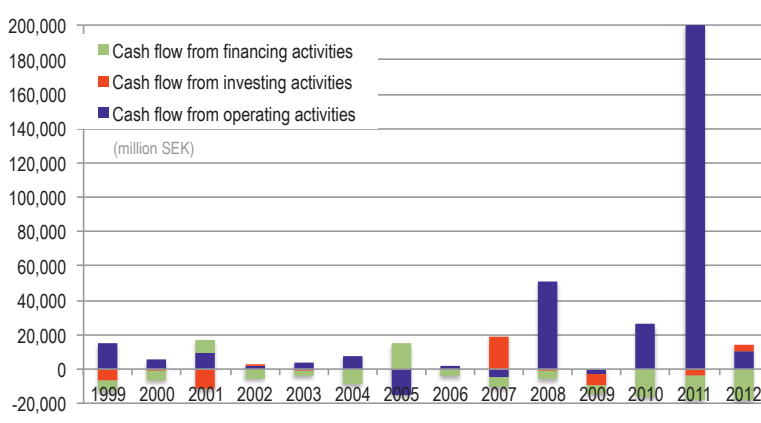


Figure 17b: Handelsbanken Cash Flow AR 1999–2012

The numbers illustrated in the graphs show how cash flow from investing activity is negative, except for the year 2007 when the SPP insurance company was sold. Although when SPP was acquired in 2001, a big negative post is clearly illustrated on the bar chart, in that same year Midtbank in Denmark was also acquired as part of the Nordic expansion. In 1999 the Bergenbank in Norway was acquired for the same purpose, and is also visible in the chart. The final red bar to notice is the negative investment flow in 2009. It cannot be related to acquisition but could instead be due to divestment in interest bearing securities.

The total cash flow over 14 years amounts to 300 billion SEK, 2/3 of which, or 200 billion SEK, are from the single year 2011. Total operating income has been growing steadily from 15.8 billion SEK in 1997 to over 35 billion SEK in 2012, with no year showing declining numbers. Annual profit has similarly grown from 6 billion SEK in 1997 to 14.5 billion SEK in 2012, but saw a 20% decline in both 2008 and 2009. However, in 2012 it is back to pre-2008 levels.

Swedbank

Swedbank was the hardest-hit big bank in Sweden during the financial crisis, mainly due to its foreign operations. Kaupthing was taken over by the Riksbank in 2008 and two smaller banks later lost their license but Swedbank was only few hours from collapsing in 2009 when the panic escalated around the three small Baltic States. Swedbank's Ukrainian operations also came under scrutiny as the general insecurity in global financial markets was critically affecting the whole banking system in Europe. The National debt office in Sweden flushed the bond market to support the banking sector, which had experienced trouble in funding. The central bank then put up a guarantee scheme to support the banks and secure the bank system from the effects of other countries.

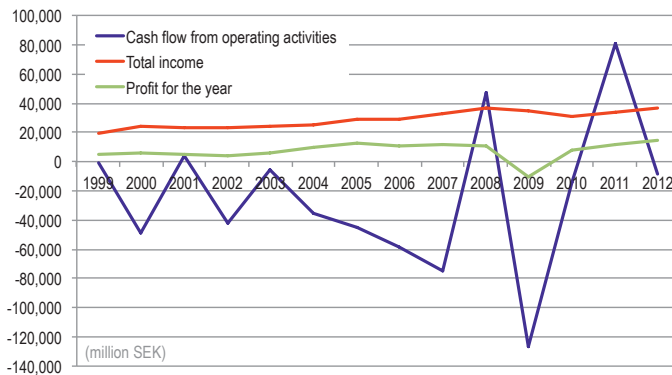


Figure 18a: Swedbank Financials AR 1999–2012

A more detailed description of these dramatic events can be read about in Forsberg's book about the *Free fall* and the game of Swedbank (2010). However, without an explanation other than lack of time, the management of Swedbank declined to participate in the interview study for this thesis. Board members were approached after the bank turned down the researcher, but they also declined to participate in 2011. But a manager at Swedbank accepted a meeting together with three other researchers in January 2012. That interview did not change the interview study, and fit with most of the results already gained by then, so it was not included in the study. However, in order to keep same structure, and to provide a complete overview of one country, the financial statements of Swedbank are included here.

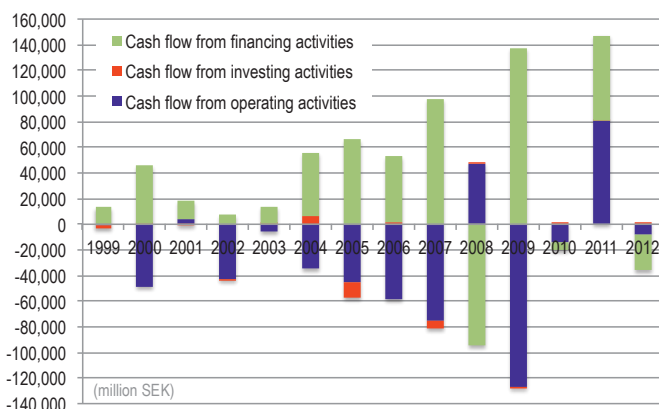


Figure 18b: Swedbank Cash Flow AR 1999–2012

According to the cash flow statements of Swedbank, it only had positive operative cash flow in three years out of fifteen from 1997–2012 and in twelve years had negative flow. The three positive years are when the IT bubble burst in 2001, the crisis year of 2008, and 2011. The cash flow from financing activity was positive for all the years except 2008, when it was negative 94 billion SEK, and 2012, with a negative flow of 28 billion SEK. The total operating income has been stable and growing but reduced by approximately 10% in 2009 and again in 2010. Swedbank and Ålandsbanken are the only banks in this study that have had a year of loss during the period studied. Swedbank in 2009 lost 10.4 billion SEK compared to a profit of 10.9 billion SEK the year before. During this loss year the negative cash flow from operating activity was -61.8 billion SEK but in the annual report for the next year, in 2010 numbers for the previous year are shown and the same operative cash flow has increased to -126.7 billions. These differences are not explained in a note, and no explanation has been found in the published financial statements.

Danske Bank

Danske bank is the largest bank in Denmark. The bank has over five million customers, mainly in retail banking. Business units are divided into personal banking, business banking and corporate & institutions in Northern Europe. It has origins from 1871 in Den Danske Landmandsbank but the Danske Bank Group itself came into being in 1980. In the 1990s, the Norwegian Fokus Bank and Swedish Östgöta Enskilda Bank joined the group following the merger in Denmark of Handelsbank and Provinsbank with Danske Bank. In 2005 the group acquired National Irish Bank and Northern Bank as well as the Finish

Sampo Bank in 2006. The group also includes the Danish mortgage financier Realkredit and Danica pension. Danske Bank Group has 327,000 shareholders; the biggest are A.P. Møller Mærsk with 23% and Cevian Capital with 5% at the end of 2012.

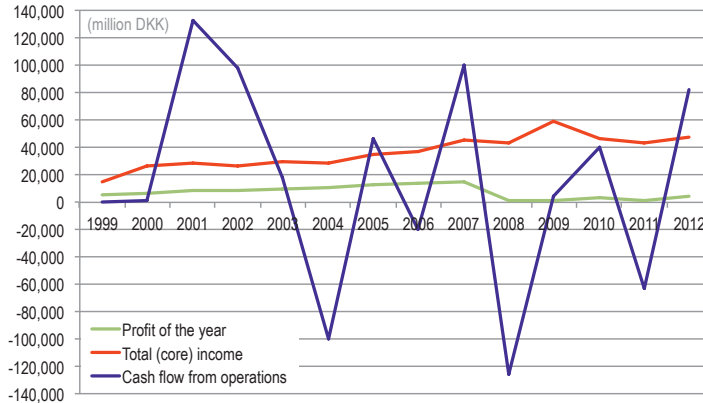


Figure 19a: Danske Bank Financials AR 1999–2012

According to the cash flow statements in Danske Bank, very little part of the flow is derived from investment and financing activity, but cash flow from operations are the which numbers jumping the most between positive and negative over the year in this study. The total operative cash flow is mostly negative in 2004, 2008 and 2011. The total cash flow is also volatile, being negative for some years and positive for others. It has not been compared in this study whether the national rules are different between the Nordic countries in this respect, but all the banks follow the same IAS 7 international accounting standard. An explanation has not been provided for the fluctuating cash flow in Danske Bank, either in interviews or in the financial reports.

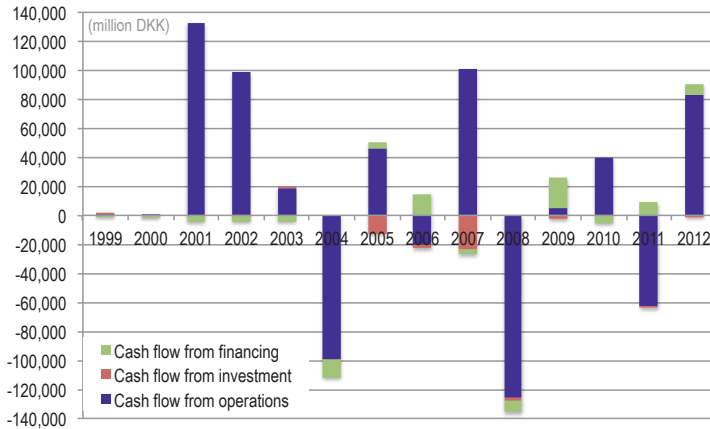
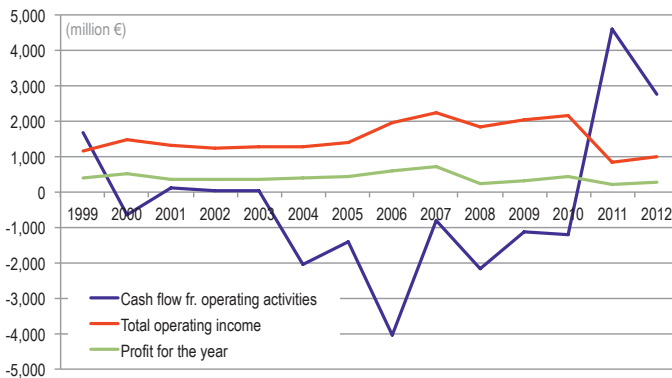


Figure 19b: Danske Bank Cash Flow AR 1999–2012

In a TV documentary during the autumn of 2012 the Danish Radio revealed how the special banking law (Bankpakke) that the Danish parliament had passed during the autumn of 2008 was specifically aimed at saving Danske Bank from a collapse. This took place during a period when the global and the European banking systems were fragile and the legislation was presented as supporting the Danish system as a whole. Since then several updates of the legislation have been passed by the parliament; the so-called Bankpakke II, III and IV, are aimed at handling break-up and take-over of bankrupt banks in Denmark. The country has had more banks with problems since 2007 than their Nordic neighbours, while it was less affected in the Nordic banking crisis during the 1990s. Fifteen bankrupt banks have been taken over by the government, usually on a Friday afternoon, and over the weekend the assets are split up into good bank and bad bank. The good part is normally taken over by a bigger Danish bank, while the government operates the bad banks in a special entity.

OP-Pohjola

OP-Pohjola is Finland's savings banks organization and includes an insurance company in the group. The group dates back to 1891 but banking operations were started in 1902. OP-Bank is the second largest bank in Finland, but was selected for this study because Nordea is the biggest in both Finland and Sweden. OP is different from the other banks of the study as it is a savings banks organization and also the only bank not listed on a stock exchange. The investment arm of the OP-Pohjola Group is, however, listed as a separate company. Even though OP-Bank is not listed on the stock exchange, the group presents its annual reports in accordance with international accounting standards. Its predecessor, OKO Bank, was listed on the Helsinki stock exchange from 1989–2006. The financial numbers for the OP Bank Group were only available from 2004, but prior to that the parent company numbers are used for the graphs. In 2012 the OP Bank Group consisted of over 200 savings banks with a total of 13,000 employees. The parent company, Pohjola Group, acts as internal bank for the banking, insurance and asset management parts of the firm, and is listed on the Helsinki stock exchange with 34,000 shareholders. Part of the group has had structural changes take place in 2011 making it complicated to compare. The total assets of the group are € 99,769 million.



*Figure 20a: OP Pohjola Financials AR 1999–2012
(Pohjola Group 1999–2003 & OP-Pohjola Group 2004–2012)*

The numbers for OP Bank's operative cash flow were negative during 2004–2010 and these were the numbers used during the interviews. Over the last two years the operative cash flow has turned very positive, in line with the Norwegian and all Swedish banks in the study. The total cash flow in OP is quite symmetric until 2008 when financing flow is more positive than the negative operative flow. The total flow in 2010 is

negative, while the last two years have both had positive operative cash flow substantially bigger than the negative financing flow. This change in the last two years can be interpreted as more repayment of borrowing of the bank, reducing leverage, and the positive investment flow indicated as divestment in assets. It is likely that the increased regulatory requirements for liquidity buffers are resulting in a total positive cash flow but the banks have not explained it this way with regards to the cash flow. The turnaround in the operative flow also needs to be investigated further, but one hypothetical explanation of the increased inflow from operative activity is more inflow of deposits from other assets classes of savings and/or to build up liquidity and capital buffers.

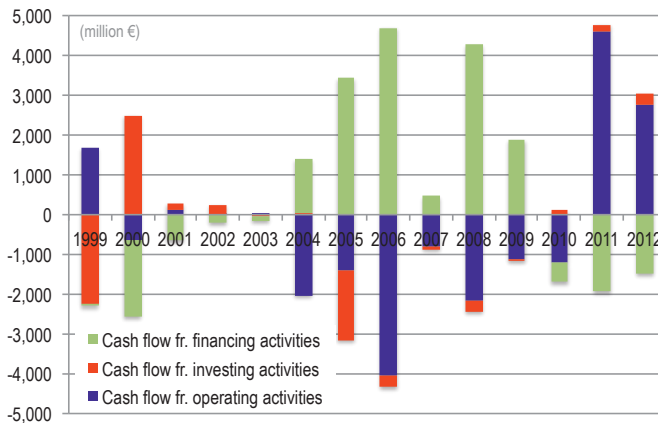


Figure 20b: OP Pohjola Cash Flow AR 1999–2012 (Pohjola Group 1999–2003 & OP-Pohjola Group 2004–2012)

The annual report of the OP Group provides an amalgamation of the savings banks or co-operative banks in Finland, which makes it the second largest bank in Finland. This means that different banks in the group can be experiencing very different operations. This composition of OP makes it different from the other banks in the study.

Ålandsbanken

Bank of Åland or Ålandsbanken is also different, being the smallest bank in this study. Even though Åland is not a fully independent country, its partial independence from Finland and close relation to Sweden makes it a special case in the Nordic region. It was included in the study instead of Iceland, after its acquisition of the remainder of Kaupthing in Sweden. Iceland was excluded due to the bankruptcy of all major banks. The Bank of Åland is the only one in the interview study reporting a loss, but this happened in 2011 and therefore did not affect the interview study. Swedbank also reported a loss, in 2009, but did not participate in the interview study.

Ålandsbanken was established in 1919 by entrepreneurial people on the Åland islands, and was listed on the Helsinki stock exchange in 1942. It is headquartered in Mariehamn on Åland, expanded to Helsinki in 1982, and now has eight branches in Finland. The expansion to Sweden in 2009 took place by purchasing the remainders of the Swedish operations of Kaupthing, which had been taken over by the Swedish central bank, Riksbank. The total number of employees is 750 and total assets are € 3,637 millions. The three biggest shareholders are Wiklöf with 20% of the shares, and two of the island's insurance firms, which keep 9.2% and 7.3% of the shares, respectively. The total number of shareholders was 9,435 in 2012.

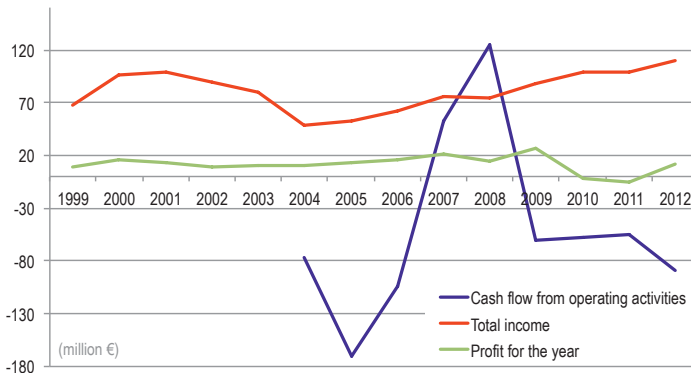


Figure 21a: Ålandsbanken Financials AR 1999–2012

The size of Ålandsbanken in relation to the other banks makes it out of proportion for comparison but it is still considered to be a relevant case in the sample of the banks selected, as the bank follows the same international accounting rules, operates in the same market and has the pattern of fluctuating cash flow. With operative cash flow negative to the amount of two to three times the total operating income during the years 2004–2006, it then turns to positive total flow and operational flow during 2007–2008. The operative and total cash flow turns back to negative flow in 2009–2011 and increasingly so in 2012, for the operational activity but not for total activity, as the financing flow reaches a record amount. These fluctuations and almost constant negative operative cash flow are not explained in the accounting statements.

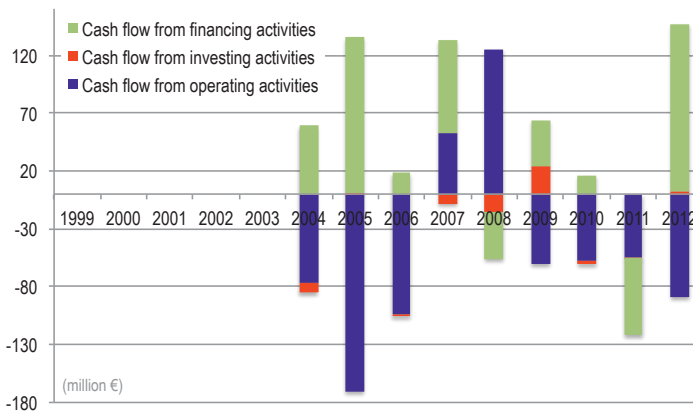


Figure 21b: Ålandsbanken Cash Flow AR 2004–2012

DNB

DNB is Norway's largest and oldest bank, established in 1822, and has grown and been built through many mergers. The bank has 220 offices throughout Norway and operations in Sweden, Poland, the Baltic States and Luxemburg. The total number of employees is 13,600. Internet customers total 1.4 million while almost 600,000 customers hold mutual funds with assets under management at the bank. The total assets of the bank amount to 2,126 billion NOK. The Norwegian government owns 34% of the shares, the Savings bank foundations hold 10%, and the National Insurance Scheme Fund owns almost 6%.

Prior to 2003, when DNB-NOR was created with the merger of DNB and Gjensidige NOR, the DNB part had been constructed through three mergers and four acquisitions since 1990, while the Gjensidige NOR had been made from three mergers involving seven banks and three other acquisitions since 1985. Due to this history, only numbers from 2003 are fully comparable for the financial statement analysis. The name of the bank was then changed to DNB in 2011 after three additional acquisitions from 2005–2010.

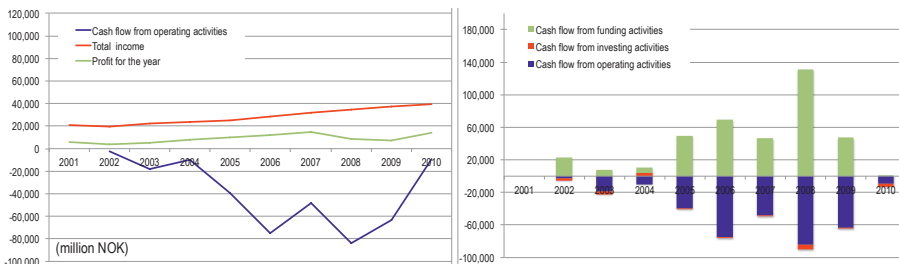


Figure 22: DNB Annual Reports 2001–2010

The total operating income has grown steadily throughout the period. The profit was reduced by half during 2008–09 but is back to 2007 levels in 2011–12. From the cash flow statements, operative flow has been constantly negative during the all years in the past decade until 2010. DNB is the only bank in this study that uses the direct method and has a note concerning accounting principles of the cash flow statement in the financial report:

The cash flow statements show cash flows grouped according to source and use. Cash is defined as cash, deposits with central banks and deposits with credit institutions with no agreed period of notice. The cash flow statement has been prepared in accordance with the direct method. (DNB, AR 2011: 62)

For half of the years with available numbers, the bank has negative total cash flow and half of the years show positive cash flow. At the time of the interview study, all years had negative operative cash flow except 2010. This fact and the direct method used by the bank helped in the interview for the researcher to press for an explanation of why the numbers are negative. The answer and results will be described in the next chapter where the interview study is covered. Here above, in Figure 22, are the graphs based on numbers at the time of the interview. In the graph below, the latest numbers are included, showing the same peak of inflow in 2011 as in other Nordic banks. The numbers for 2010 in the Figure 23 below are negative and restated according to the 2011 annual report, as a special note below the statement describes:

During 2011, certain items in the company's cash flow statement were reclassified. Among other things, Net receipts/payments on loans to credit institutions and appurtenant interest were included in operating activities. Prior to this, these items were included under funding activities. Comparable figures for previous periods have been restated. (DNB, AR 2011: 53)

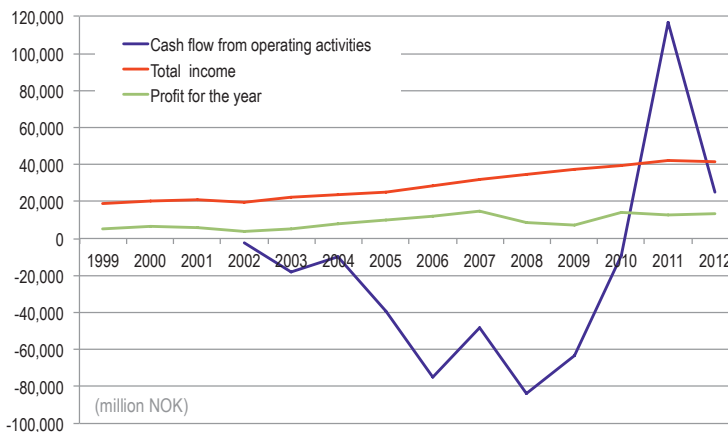


Figure 23a: DNB Financials AR 1999–2012

The numbers from DNB are the most consistent of all the banks investigated in this research. The operative cash flow was negative for all the analysed years, except in 2010, the year prior to the interview study. The cash flow from financing activity had mirrored the operative cash flow, but not to the exact same amounts from 2008. The graphs from the interview meetings in DNB are presented in Figure 23 due to the restatement in the 2011 annual report. The total cash flow is unchanged, but operative flow is changed from an inflow of 16.7 billion NOK to an outflow of -9.5 billion NOK. Investment outflow is changed from -2.8 billion NOK to -3.2 billion

NOK. Cash flow from funding activity is changed from an outflow of -26.4 billion NOK to an inflow of 60 million NOK.

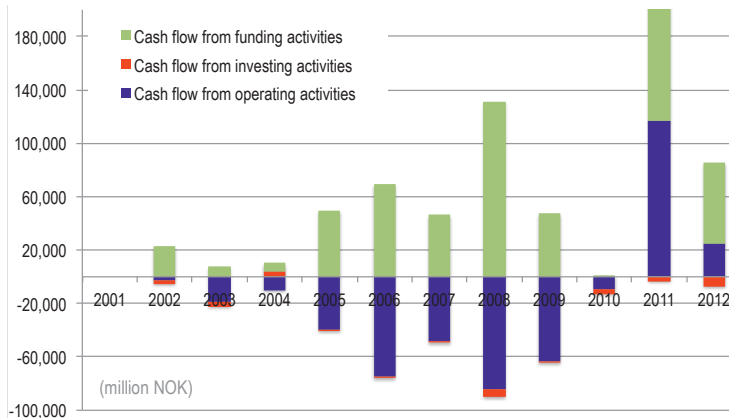


Figure 23b: DNB Cash Flow AR 2002-2012

The most compelling difference in the cash flow of DNB as compared to the other banks is the direct method it uses for preparing the cash flow statement. The direct method is more consistent with the goals of the cash flow standard as it was planned, while the indirect method used by most companies is more of an adjustment of the income statement. DNB is the only bank in this study to use the direct method for preparing the cash flow and the bank is also one of few that has an explanatory text together with the cash flow statement, quoted here from the report at the time of the interview:

The cash flow statement shows receipts and payments of cash and cash equivalents during the year. The statement has been prepared in accordance with the direct method and has been adjusted for items that do not generate cash flows, such as accruals, depreciation and write-downs on loans and guarantees. Cash flows are classified as operating activities, investment activities or funding activities. Balance sheet items are adjusted for the effects of exchange rate movements. Cash is defined as cash and deposits with central banks, and deposits with credit institutions with no agreed period of notice. (DNB, AR 2010: 13)

The increase in operative cash flow during 2011 can here directly be related to increases in deposits at the central bank. At year-end 2010, these deposits amounted to 16.2 billion NOK, and a year later in 2011 had risen fourteen fold, to 224.6 billion NOK. This cash inflow has to be considered in relation to the situation at in the European banking market at year-end 2011. But as all the Swedish banks in this study are experiencing this peak inflow in 2011 just like DNB, this also has to be considered in relation to the changing rules for liquidity requirements at the same time. Further research is needed after the implementation of the

new regulatory liquidity framework. However, what could be interpreted from the cash flow numbers is that solid banks are experiencing flight to security and inflow of money that is deposited at their central bank.

Kaupthing Bank

The main analysis of this chapter is focused on the seven big Scandinavian banks that are further investigated in the interview study. Also included above is the single remaining big Swedish bank that did not participate in the interview study, Swedbank. This selection of eight banks covers then all the banks in the Nordic region with a balance sheet larger than 1,000 billion SEK, as well as the single biggest bank in each country. Iceland is replaced by Åland, due to the status of the Icelandic banking system, which collapsed totally, and the fact that the newly established banks therefore lack sufficient history for comparison. Kaupthing, however, was included in the financial statement analysis of the pilot study as a comparative example and introduced already in Chapter 1, see Figure 4 there. The bankrupt Kaupthing bank is analysed here in the same manner as the Scandinavian banks in the previous sections.

Kaupthing was Iceland's largest bank, and was at the time of the bankruptcy the biggest company in the country. Being the biggest taxpayer, it also held a key position in this small economy, with assets amounting to several times the GDP. The total assets of the Icelandic banking system had, prior to the collapse, grown to ten times the GDP, or, as one IMF official put it, *"You have to understand [...] Iceland is no longer a country. It is a hedge fund"* (cited in Lewis, 2011: 1). Banking systems that are too big have become problematic in other countries like Ireland and Cyprus, but also exist in stable ones like Switzerland and the UK. The numbers of Kaupthing are an extra example that tells an interesting story.

The balance sheet with the bank's lending had grown rapidly and almost doubled in size every year for eight years. Total income grew similarly, as can be seen on the line graph, and profit grew steeply as well. This amounts to 85-fold total growth over a decade, a rate that is much faster compared to the approximately twofold growth seen in the other Scandinavian banks. On the cash flow statement, Kaupthing bank had only one negative year in operations out of eleven before going bankrupt. This is very different from the cash flow reported in all the other Scandinavian banks. When the cash flow from operations collapsed in the year 2006, Iceland had what has been called the mini-crisis in its banking

sector. International funding ceased and ex-post we learned about serious troubles in the banking industry that had been toned down at the time. This was turned around by an international road show, including ministers of the government. The funding structure was changed by the offer of high interest-bearing internet savings accounts in several European countries. The diversified funding structure resulting from this situation was for example one of the factors that let Icelandic banks get up to AAA rating from the global credit rating agencies. The bar chart shows how the symmetry is altered when more cash flows into the bank than out during 2005–2007. What cannot be read from the graph, but is clear in the cash flow statement breakdown numbers, is how much of the financing flow comes from interbank lending, bond issuing and deposits (the hottest money). When too big a part of the funding comes from foreign depositors, a run on the bank becomes even more difficult to stem, as the national supervisor and lender of last resorts have difficulties with oversight and emergency funding when the funding is in different currencies. Another noteworthy observation from the analysis of the decade before Kaupthing's collapse is the symmetry in the cash flow until 2005, with equal inflow and outflow, mainly flowing in from financing and out to investment (the only bank with so big investment). This activity split is differently from the other Scandinavian banks, which only have occasional big investment activity on the cash flow statements. The operative cash flow starts to appear in 2002, which is the same year the bank starts to adjust to reporting according to international accounting standards. In the year 2005, the operative cash flow had multiplied from 25 to 88 billion ISK, then was negative by 50 billion ISK in the year after, and then went back up to positive, jumping to 100 billion ISK of operative cash flow in 2007, the year before the collapse.

The history of Kaupthing was more or less known to the bankers interviewed in the study in next chapter. Bankers in many of the Scandinavian banks said without being asked that they had had no exposure towards Icelandic banks since 2004 or 2005. While many other European and international lenders lost money from their financing of the huge and temporarily highly profitable banking sector in Iceland, neighbouring banks have had better insight than the bankers from the bigger European institutions that relied more on ratings and suffered substantial losses, some of which were insured. The financial statements prepared according to international accounting standards provided, at least in the case of Kaupthing, little more than one signal to the investors about the coming troubles. It was something else that signalled warning to the Nordic neighbours.

For those not familiar with the background of Kaupthing, this short overview is based on information found in the financial statements. Eight persons established Kaupthing in 1982 as a small financial advisory and securities brokerage agency. The company was then acquired by the savings banks of Iceland to act as their independent investment and brokerage arm. Kaupthing established the first global mutual fund in Iceland and opened a subsidiary in Luxembourg in 1998 as the first Icelandic financial institution abroad. Kaupthing became a licensed investment bank in 1997 and was then licensed as a commercial bank in 2002, followed by the acquisition of Bunadarbanki Islands in 2003. In the cash flow overview above, the numbers from 1997 reflect the period since Kaupthing became an investment bank. As can be seen in the graph, the growth of the company escalates in 2002 when it becomes a commercial bank and then again in 2004. The numbers until 2002 only include the Kaupthing investment bank and not the Bunadarbanki commercial bank. During the year 2000, offices were opened in New York and Faeroe Islands. The brokerage house Sofi Oyj in Finland was acquired in 2001 and the Swedish banks JP Nordiska AB and Aragon in 2002, as well as the Geneva-based Handsal Asset Management. In 2003, the asset management company Tyren Holding AS was acquired in Norway along with A. Sundvall ASA securities a year later. Also in 2004, the Danish FIH Erhvervsbank AS was acquired, but Kaupthing had already opened an office in Copenhagen during 2001. Singer & Friedlander Group PLC in the UK was acquired in 2005 and merged with the bank's UK operations, which already had opened in 2003. Under the UK operations, the bank also had an office on the Isle of Man, and as part of the Luxembourg operations they had an office in Belgium as well. During 2007, the bank got a license for operations in Qatar, Dubai and India. The rest is history. The resolution process and court cases are ongoing in 2014.

7.5 – Studies of cash flows in other banks

In addition to the historical lesson from W. T. Grant above, alternative comparisons for banks were looked for. Searching through previous research in the area of cash flow in banks was not successful, although two studies were found, one comparing the fifteen biggest banks in the US in 2008, which will be briefly presented below. In addition, the previously mentioned Maux & Morin (2011) study showed that Lehman Brothers failed to generate cash from operating activity during 2005–2007. But the Maux & Morin study is focused on an investment bank and therefore is difficult to compare with the Scandinavian commercial banks. Further studies when the autopsy of the bankrupt estates of the banks is finished will most likely provide a vivid research field in the future.

Mulford & Comiskey at Georgia Tech Financial Analysis Lab presented a research report in 2009 (see also 2005) where they suggest that if banks would more *consistently* account for their operating cash flow, it would be possible to get a better understanding of the commercial banks' financial health. They find *inconsistency* in classifications of cash flow in the fifteen biggest banks in the US as measured by assets at year-end 2008. In the report, they correct for differences and get both up- and downward adjustments in the cash flow from operations. They also find inconsistency in how banks divide cash flow into operating, financing and investment activity that makes it difficult to judge an entity's financial strength from the cash flow statement.

The implementation of an accounting standard and harmonization of statements of cash flow for financial institutions and companies should have made them easier to compare. But the current accounting practice makes it more difficult to *compare* banks using the statement of cash flow, especially when looking at cash from operations. This applies to both comparing banks with other companies and comparison between banks. Mulford & Comiskey (2009) claim "*operating cash flow for a bank is basically meaningless*" based on their study. Their results are in line with the study of the cash flow numbers in this thesis regarding the Nordic banks as seen in the previous sections that illustrate the numbers and also backed by the statements in the interviews presented in the next chapter. But there are some patterns to be seen, like in the common spike of the operative inflow in almost all banks in 2011. Here in this thesis no adjustments have been made to make the numbers more comparable, while Mulford & Comiskey do make adjustments that involve changing the operative cash flow both upwards and downwards, increasing the positive flow in some while increasing negative flow in other cases. They find it therefore

understandable that analysts of banks do not use the cash flow numbers in a similar way as for other firms, because of the adjustments needed.

For most companies, the cash flow is normally considered to be their "lifeblood" and the cash flow statements thereby indicate whether companies are generating cash or consuming/losing it. Within the banking sector the cash flow statements are not useful for this purpose, as has been illustrated above. Funding can be secured for negative operative cash flow, and funding can be stopped even though cash flow is positive. The remedy suggested by Mulford & Comiskey (2009) is *consistency* and to account for *customer-driven deposits* in operating cash flow. Instead of reaching a conclusion about how the negative cash flow can be understood in some of the biggest banks in the US, they end with an open invitation to the FASB and a call for more attention to the cash flow statements of banks by those concerned with their financial stability. No response to that call, however, has been found since 2009.

The critical comments regarding the accounting standard for cash flow put forward in the bankers' letters regarding the exposure draft illustrated in the previous chapter indicate similar problematic feature of operative cash flow as Mulford & Comiskey (2009) observed. This shows how many problems identified in banks' cash flow statements here were actually pointed out a long time before by the practitioners.

In contrast to Mulford & Comiskey (2009), the study of Maux & Morin (2011) presents a cash flow analysis of the Lehman Brothers financial statements for the years 2005–2007 using working capital calculations and revisiting the techniques by Altman (1968) to predict firms' financial distress. The title "*Black and white and red all over: Lehman Brothers' inevitable bankruptcy splashed across its financial statements*" illustrates a bank with cash flow statements assumed to be similar in nature as those of other firms. In summary, the analysis of Maux & Morin shows how the financial distress of Lehman Brothers was visible in several main factors: Chronic inability to generate cash from operating activities; Massive investments in working capital items and financial instruments; Systematic use of external financing to offset operating deficits; and Steady deterioration of the cash situation over three years. The conclusion of Maux & Morin is that the statements of cash flows for 2005–07 in Lehman indicated strongly the coming bankruptcy with clear signs of imminent financial distress starting in 2006. It is a finding in itself that no user noticed the obvious negative signs pointed out by Maux & Morin (2011). But in light of Mulford & Comiskey's (2009) study of the fifteen biggest banks in the US, where some other banks also had negative operative cash flow, it cannot

be argued that the negative numbers in Lehman Brothers' cash flow statements were the reason for their bankruptcy. The signals were the same in other banks that did not go bankrupt, and also in the sample of the eight Scandinavian banks in this thesis.

The analysis by Maux & Morin (2011) of the Lehman Brothers financial statements before its bankruptcy fails to note that total cash at year-end increases over the period from 2005 to 2007. Looking at the historical numbers further back, the cash flow in Lehman had also been negative in 2004 and 2001, as well as from 1997–98. During this period the revenues are growing constantly. The negative cash flow from operations is covered by positive cash flow from financing in all years. So the financiers had a different opinion than Maux & Morin, until close to the end, when funding got increasingly more problematic, more expensive and more short-term.

7.6 – Total cash flows

Having looked at bankrupt banks in the pre-study of the first chapter and in the end of the previous section of this chapter, it shows differences between the operational banks and the bankrupt. But Kaupthing is only included on the list here for illustrative comparison and due to its role in the beginning of the crisis. It is not part of the study as such, nor is Swedbank; both of these banks are not part of the interviews, although Swedbank is important to include for the summary of cash flows in the Swedish banks in this section.

The cash flow of a single year can be misleading for any company and needs to be considered from a longer perspective. In this chapter, the focus has been on two periods, first for the decade of 2001–2010, which was the focus of the interviews, and second for the extended period from 1999–2012. Adding two years before and after the initial decade led to increased fluctuation, which provided even further insight after returning to the theoretical framework.

Another addition to the analysis was to look at all eight banks together, and then in particular to look at the four big banks in Sweden together in order to grasp the capital flows after netting and get at the payment system flows. The total operative cash flow of the four big banks in Sweden for each year of the decade was negative during eight years out of ten and the total cash flow for the decade was -162 billion SEK. The year before, in 2000, it was -317 billion SEK, while in 2011 it was positive 533 billion SEK, so these numbers are constantly fluctuating (see Figure

24 below). The operations of Nordea are converted from euros to SEK on a single currency exchange rate of (€1=9 SEK) for simplification. The negative cash flow from operations for the big banks in Sweden over this decade is seen in light of the standard that states all firms will have to have positive or neutral cash flow in the long run to repay their debts. In the banks, the total cash flow is positive, but negative operations are funded with inflow from financing activity, for example on the interbank market. Therefore, the repayment of loans is financed with more debt, which, in a Minsky-based theoretical framework, is speculative.

During four of the years during this decade the total cash flow was negative, but that could be explained by positive total cash flow the year before. Due to the nature of banks with cash flowing through their operations, it can be arbitrary when certain big transactions take place in one bank versus another or late in the year rather than early next year.

Summarizing the cash flow of the biggest banks in the Nordic countries can be misleading, but looking at one country, like Sweden, where the four biggest banks cover over 80% of the market, can extend the analysis to cover the total cash flows. In order to compile the banks together and correctly add their numbers, adjustments could be needed to correct for different classifications. In this study, the numbers have been taken directly from the three key activities in the cash flow statements without adjustments. Indications for inconsistencies were pointed out already in the comment letters in the previous chapter, but further study of the practices in each bank are needed to make the numbers comparable in full. The summary is here presented with the unchanged numbers as published in the reports. This provides an indication of the total cash flow in each class and sets the stage for the final study when asking the bankers about the negative numbers.

| Big4Banks in Sweden | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Sum 01-10 | Sum 99-12 |
|--------------------------|--------|---------|--------|--------|-------|--------|--------|--------|--------|---------|--------|--------|--------|--------|-----------|-----------|
| Cash flow from operatin | -3559 | -317385 | -18197 | -48738 | -5087 | -66638 | -90406 | -64019 | 44748 | 178906 | -81406 | -11086 | 533314 | 173376 | -161923 | 223823 |
| Cash flow from investinc | -21243 | 23848 | 20020 | 10537 | 7905 | 16071 | -31899 | 924 | 7491 | -107454 | -60439 | 16881 | 62576 | 11520 | -119963 | -43262 |
| Cash flow from financinc | 56324 | 332426 | 39639 | 4421 | -448 | 63469 | 136602 | 68022 | 116158 | -103785 | 128935 | -52199 | 26387 | -51972 | 400814 | 763979 |
| Cash flow for the peric | 31522 | 38889 | 41462 | -33780 | 2370 | 12902 | 14297 | 4927 | 168397 | -32333 | -12910 | -46404 | 622277 | 132924 | 118928 | 944540 |

Table 7: Summary of cash flow in biggest four banks in Sweden 1999-2012 total of: Nordea, Swedbank, SEB & Handelsbanken (in million SEK)

Aggregated cash flow from operations in the four big Swedish banks during the fourteen years observed is 224 billion SEK, as Table 7 shows, and the negative operative cash flow for the decade 2001–2010 changed already after 2011. The total cash flow for the period is 945 billion SEK, with two thirds of that amount coming from the year 2011 alone. The total cash flow for the decade was 119 billion SEK, but by extending the

period by four years, it makes the total flow eight times more. The last two columns in Table 7 below summarize the decade and the 14-year period. Yellow colour indicates negative flow and the red indicates negative total.

One result that could be drawn from these summarized cash flow numbers is that in order to find out the reason for the negative flow it is necessary to analyse where the funding comes from. It would also have to include an analysis of how much the banks are lending to each other and between countries. That analysis exceeds the scope of this thesis but opens up for a broad range of further research in the future. It can be expected that big parts of the cash flows netted out between the banks, when the four big banks in Sweden cover such a big part of the market. But finding out the netted flow is a difficult task and it is uncertain if further research could solve that issue without getting access to internal data or with a regulatory change.

Putting the aggregated numbers into a graph similar to the single banks' earlier in the chapter continues to illustrate a fluctuating picture, as shown in Figure 24. These are based on the sum of the cash flow numbers in Table 8. The left hand graph covers the fourteen-year period, while the right hand graph shows the decade on a smaller scale.



Figure 24: Total cash flow in four biggest banks in Sweden Nordea, Swedbank, SEB & Handelsbanken, 1999-2012

| Biggest 4 banks in Sweden | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Total | Total 99-12 |
|------------------------------|--------|--------|-------|--------|--------|--------|--------|---------|--------|--------|---------|-------------|
| Cash flow from operating ac | -18197 | -48738 | -5087 | -66638 | -90406 | -64019 | 44748 | 178906 | -81406 | -11086 | -161923 | 223823 |
| Cash flow from investing act | 20020 | 10537 | 7905 | 16071 | -31899 | 924 | 7491 | -107454 | -60439 | 16881 | -119963 | -43262 |
| Cash flow from financing ac | 39639 | 4421 | -448 | 63469 | 136602 | 68022 | 116158 | -103785 | 128935 | -52199 | 400814 | 763979 |
| Cash flow for the period | 41462 | -33780 | 2370 | 12902 | 14297 | 4927 | 168397 | -32333 | -12910 | -46404 | 118928 | 944540 |

Table 8: Summary of cash flow in four biggest banks in Sweden 2001-2010 total of: Nordea, Swedbank, SEB & Handelsbanken (in million SEK)

These fluctuating numbers are not easier to interpret when plotted in the graphs. Even though the single biggest factor in the year 2000 was Nordea and the positive flow could be explained by its mergers and acquisitions, the common positive cash flow in 2011 is even bigger. The eight years of negative operative cash flow in the biggest four banks in Sweden during the decade in between, illustrated in yellow in the top line of Table 8 above, can be explained with credit creation in lending growth. During this decade, 2001-2010, the total operative cash flow is negative as well as the total investment cash flow, illustrated in green in the last column in Table 8. But the four years of total negative cash flow are more of a puzzle, illustrated in orange in the bottom line of Table 8 above. Part of the explanation has to come from the positive financing flow of external funding coming from abroad and the lending of the banks outside of Sweden can be another part, but this demands further investigation.

7.7 – Summary of the financial statements

The relevance of the numbers in banks' cash flow statements was considered limited by the bankers in their letters commenting on the standard before its implementation in 1986. The bankers made the same claims in comment letters in 2009, as the previous chapter showed. After the standard setting board decided that banks should nevertheless prepare cash flow statements like other firms, banks have been obliged to do so. In this chapter the financial reports of eight big Scandinavian banks, and one bankrupt bank, were analysed over a fourteen-year period. An overview was made of the financial results and the key cash flow numbers, presenting each bank with two graphs covering three key numbers each.

The overview shows a diverse picture of the banks operative flow and confirms that nothing is explained about the cash flow in the financial statements, confirming their limited usefulness. Users would have reacted to such fluctuating numbers, or preparers at least would have made some comment about it, if these cash flows had been considered relevant.

Nevertheless, the comparison confirms an empirical outcome of the standard as it is applied in the Nordic banks. After adding the insight of credit creation and the last two years of turnaround from a decade of negative flows to much larger positive flows, a pattern emerges from looking at the banks within a common payment system. The numbers can make sense when looked at in the light of the overall results of this thesis.

The results of the financial statements analysis in this chapter, with the negative cash flow from operations, cannot as such explain the ignorance of the practitioners who do not use the cash flow statement. Using the theoretical framework of the thesis, in the spirit of Minsky, helps clarifying the negative numbers. The claim of the standard, that cash has to be generated to pay for financing, cannot be sustained with only more borrowing. That would be speculative finance to borrow more to pay for financing and not sustainable in the long-term. The negative operative cash flow of the banks is considered an example of what the bankers said would not function with the statement—even though they did not spell that out as a specific consequence. But when credit creation is considered, things look different.

It is possible to see that while the net total cash flow is positive for the banks the negative operative cash flow is not a problem. But in the long run, operations need to cover the financing flow, and when interbank markets are frozen and further funding halted this becomes problematic for some banks. Long-term negative flows and then sudden positive

inflows are neither mentioned in any notes of the statements nor in the narratives of the annual reports. The bankers stated in their comment letters that the cash flow was not applicable for banks, but the classification of the credit creation was not explicitly stated as a reason for this. In this thesis, after having initially been introduced to the credit creation in the model in Chapter 1, it is possible that the reader has no trouble with seeing the negative operative flow. But prior to the last interview, in the next chapter, where the lending growth explanation was first put forward, it was problematic to make sense of a negative operative cash flow. Some bankers were troubled when confronted with negative numbers, and neither accountants nor academics had explained this negative operative flow in banks—but immediately after the explanation is given, it becomes very obvious.

After having looked at the accounting standard for cash flow and the critical comments from bankers in previous chapters as well as the numbers of the cash flow statements in the current chapter, the next step is to talk to those responsible for preparing the statement in the banks. Both preparers and users of the statements in the banks are interviewed in the final study and the graphs presented here were used as introductory material for these interviews in 2011. The contribution resulting from this study is to also to put together the first overview of cash flow information from banks in the Nordic region, over an extended period of time.

The preliminary conclusion from this chapter is that the negative operative cash flow is not explained as being normal in the prepared statements or in the regulatory framework. Further investigation within the banks to find out how the bankers understand, measure, manage and report the cash flow in banks was the next step. The credit creation was neither explained there, nor in this study, in spite of the negative numbers questioned. Then going back to theory, finding out about the credit creation and using the money view to understand the cash flow between banks, together provided the path for the final steps. Seeing how cash is created in credit growth by the banks and how this cash product of the bank is treated makes the negative numbers over the decade and the positive flow of last years presented here more sensible.

Chapter 8: Bankers' View

8.1 – Interview study

This chapter analyses the interviews with Scandinavian bankers to investigate how they view their own and other banks' cash flow statements. The interview study is the last of four studies in the thesis and the second one focusing on the bankers. All three previous studies—of the accounting rules, bankers' letters and cash flow numbers—are synthesized with the interviews in banks. The first study provided the regulation and regarded how the special issues of banks credit creation are and are not sufficiently taken into consideration in the accounting rules. The accounting framework and the rules for banks regard the purpose of preparing the statement. The second study analysed the bankers' comments on the cash flow rules prior to the standard setting and when discussing changes to it later. These written comments of the bankers concerned the function of the cash flow statement, and stated that it would not function for banks. In the third study, presented in the preceding chapter, the cash flow numbers were analysed, showing the empirics of the negative operative cash flow during 2001–2010. It was not successful in explaining the negative flow from operational activity using only the financial statements and the regulatory framework. Practitioners were instead interviewed during the autumn of 2011 to find out how the banks prepare and use the cash flow information, as presented in this chapter. It was anticipated that the bankers would be able to help find out why the numbers were negative, and one of the bankers could do so.

The main point of the interview study was to find out how bankers explain the functions of the cash flow statements of banks, both as preparers and users. The graphs from the previous chapter were used as introduction to get the bankers to clarify how the cash flow statement functions. When none of the bankers, except the last interviewee, could explain why the operative numbers were negative, the remaining discussion during the interviews examined what information was used instead of the cash flow statement. Other parts of the financial statements and additional external and internal information turned out to be used instead of the cash flow statement. These substitutes, which replace some of the assumed functions of the cash flow statement, are drawn from different sources and vary according to the professional opinions, providing multiple aspects for the analysis. In order to reach a conclusion about the substitution of the cash flow statements in banks the different perspectives were consolidated in an analysis model for the interviews. The answers of the bankers point to an indication of the components needed to be included in a new accounting regime for banks that is taken

up in the conclusions of the last chapter. The single answer to why the numbers are negative and the summary of the substitutes jointly provide important parts of the answer to why the cash flow statements are not used in banks.

8.2 – Analysis model for the interviews

Every single person interviewed for this research said they never used the cash flow statement of a bank. They had never been asked about it and considered it irrelevant for banking. This homogenous feedback gives clear results without much analysis.

This conclusion indicates that ignorance of cash flow of banks is a common truth in the banking business. But common truth does not have to be the final answer. The result was not an answer to the research question of why the statements are not used. Cash flow is not used in banks because it is irrelevant—but why is it irrelevant? Because banks are different—but how are banks different? Cash is their product—but why does that lead to negative operative cash flow? Because the loan flows out of the bank—but is the cash flow then not relevant? The circle is closed and the first answer, both from the comment letters and in the interviews, might be not fully correct. But it was not until after the last interview that the outflow in operations could be seen as normal in lending growth. Then, after revisiting theory, the credit creation finally became clear. New relevance of the statement could then start to be established, contradicting all but one of the answers.

The discussion in the interviews did not end with the irrelevance of the statement but provided instead many other different insights. In order to answer the research question of why the cash flow is not used and get a deeper answer than only that it is 'irrelevant', the interviews were turned towards what is used as a substitute for the cash flow. The key part of these interviews is what the bankers said they used instead of the cash flow statement. The initial goal with this discussion and analysis was to understand the difference between banks and non-financial firms from a practitioner's and user's perspective in order to understand what made the cash flow statement irrelevant. Afterwards this turned out not to explain why the cash flow information is not used, but instead the results of what is used in place of the cash flow statement provided an indication for what would be needed in a redesign of the accounting regime for banks.

The interview material is categorized according to the *profession* of the interviewee and analysed in themes after the practical *functions* of the

cash flow statement in general. This analysis of what the bankers used instead of the cash flow statement was done with a matrix model, consisting of the two dimensions of function and profession as shown in Figure 25. The first is the professional perspective of the *accountants*, *operators* and *directors*; and the other dimension is the functional perspective on the traditional cash flow statements, indicating *operative performance*, *financial strength*, *sources of funding* and *liquidity*.

| Professions: | Accountants | Operators | Directors |
|-----------------------|-------------|-----------|-----------|
| Functions: | | | |
| Operative Performance | | | |
| Financial Strength | | | |
| Funding Sources | | | |
| Liquidity | | | |

Figure 25: Analysis matrix of banker professions and cash flow functions

The information collected in the interviews with the bankers consists of thirty hours of talk about cash flow, accounting and banks, which demands a method for sorting out the most relevant information. This content has here been analysed in four steps: first, transcribing and listening; second, focusing on selected interview questions; third, grouping the answers according to the three professions of the interviewees; and fourth, identifying the four themes of answers regarding the substitutes for the cash flow statement that were linked to its function. The analysis used the research question—why are the cash flow statements of banks not used—as guidance for finding background explanations that led to deeper discussion than the initial short answer “it is not relevant”. The model is set up to draw together the different purpose of each profession and the mainstream functions of the cash flow to find what is substituted for the cash flow statements in banks. The interview guide was partly followed, but the key questions that garnered the most attention are listed in Figure 26 below.

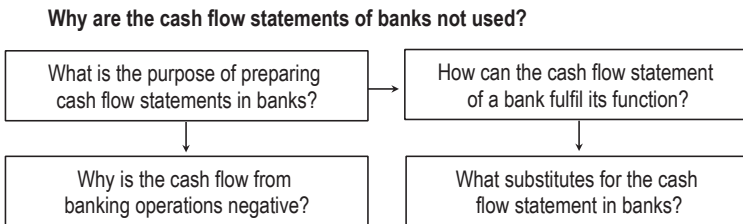


Figure 26: Key questions for interviews and their analysis

The first question of each interview, regarding *how bankers use banks cash flow statements*, was quickly answered because the bankers do not use the cash flow statement; no user looks at the statements or analyses the numbers of the operative cash flow in banks. Then the question had to be twisted towards *why do they not use it*. But as previously stated, one of the interviewed bankers could actually explain *why their cash flow numbers were negative* and his special answer is dealt with in a separate section at the end of the chapter. In the main analysis, focus is then put on the questions of how the cash flow functions, whether it can fulfil its function and finally *what do bankers use instead of the banks cash flow statement?* The answers to the last question in Figure 26 are divided using the grid in Figure 25 above where each function is based on the different purposes of the statement and according to the interviewee's profession.

Where and when the interview took place and how it was performed was described previously in Chapter 4 regarding methods. The complete list of interviewed persons, positions and time is provided in Appendix 3, and the initial interview questions in Appendix 4, the prepared interview guide in Appendix 5 and the letter requesting an interview presented in Appendix 6. Presentation material from the interviews is shown in Appendix 7. Due to the special issue with cash flow, which the interviewees did not want to talk that much about, this interview study was developed during the ongoing process in line with the multiple methods approach. The analysis later in this chapter is therefore a synthesis of all four studies, combining the standard text, statement number and the things that the bankers said about them during the interviews. Direct quotes are limited, but instead the common messages of the bankers groups are rephrased.

A general overview of the whole interview analysis is given in the next section. Then each part of the cash flow function gets a separate section. Finally, the analysis is summarized, the single answer explanation of negative cash flow numbers given and the summary of the conclusion of the study is presented at the end of this chapter.

8.3 – Overview of the interviews

The most significant observation from the analysis of the interviews is that none of the interviewed bankers had thought of it as a problem that their banks presented negative operative cash flow in many annual reports. The interviewed bankers seem to have generally not looked at the cash flow statement of their own bank, and some were even sceptical towards the numbers when presented with them, and questioned where they came from. Several of the bankers claimed that during all their working experience in the banking industry they never had been asked questions about the cash flow statement.

Since the beginning of the financial crisis in August 2007 and especially after the collapse in September 2008 the liquidity of banks has been in focus, but the cash flow statement has not been considered at all in that respect. This is interesting, because in most companies the cash flow statement is considered an important measure of liquidity. This initiated the question of why the cash flow statement is not used in banks.

The response from most of the interviews about cash flow statements in banks is that they are irrelevant. In the accounting departments, the statement is prepared because it has to be included as a part of the annual report according to the rules, even though it is not used. Being one of the four statements in the annual report, it is an interesting result in itself that bankers consider this one statement irrelevant. Other parts of the report, like the balance sheet and income statement, are seen as both relevant and important. *Operators* in finance departments like treasury, credit assessment and risk management often talk about 'cash flow' in a different way than the accountants. *Accountants* consider cash flow both from the statement itself and for the expected future cash flow, while operators consider the flow of funding through the bank or the daily cash in- and outflow to be more important than the statement. The *Directors* simply do not see the cash flow as relevant and focus on other issues, not wanting to enter into accounting details. When cash flow is mentioned in the text of the annual reports, other than the title of the financial statement it is only in the context of customers' cash flow or future cash flow of financial instruments and not in relation to the banks' own cash flow statement.

An important observation is that several of the bankers questioned the source of the numbers when they were presented with the negative operative cash flow from their own public annual reports at the beginning of the interview. When it became clear to them that these were official and reported numbers they were puzzled but could not provide

explanations. Two of the bankers even looked for their own annual report to check if it was correct that the numbers presented for their bank were in fact negative in the report.

Analysis of the answers

After the introduction in each interview, using a presentation of the graphs with the cash flow numbers, the common reply was that the cash flow report is not used and is not relevant in banks. The negative numbers could not be explained except for a few instances when mergers and acquisitions were the reason. The main focus in each interview instead dwelled on what was or could be used instead of the cash flow to analyse the bank. The answers have been categorized according to the interviewees' position or profession, as illustrated in Figure 25 above. The professional groups are:

- *Accountants* (heads of accounting, internal auditors and specialists)
- *Operators* (from treasury, finance, credit and risk departments)
- *Directors* (top management and their senior advisors)

The other aspect of the categorization followed the functions of the cash flow statement. These four groups emerged as themes from the interview analysis and matched the purpose derived from the repeated readings of the cash flow standard and statements. When thinking about what the purpose of the cash flow statement is, these came up as key items. They also emerged from the interviews when discussing what to look at instead of the cash flow and what are important items when evaluating banks as other firms. These four items show a synthesized view of the statements considered in line with the common purpose of preparing the statement of cash flow, and illustrating what bankers use instead of standard cash flow analysis to evaluate banks:

- *Performance*, focus on operations, related to Income Statement (IS) & Operation
- *Strength*, focus on financial stability, related to Balance Sheet (BS) & Investment
- *Funding*, focus on financing cost and secured periods, related to BS, IS, Financing
- *Liquidity*, focus on matching and maturity structure, related to Cash Flow

Each of the main themes will be discussed further in the next part of the chapter, but the key answers are summarized in Table 9 below to provide an overview and show the interconnection between the themes in the cash flow purpose and banking professions.

| Analysis questions | Accountants | Operators | Directors | All |
|---|--|--|---|---|
| What do you look at instead of the Cash Flow Statement? | Income statement results and return on equity. Balance sheet breakdown. | No accounting statements. Maturity of financing. Daily flow of funds. Limits of risk exposure to regions and banks. | Balance sheet: Structure & asset quality. Cost/Income Results, Return on Equity and Assets, Survival period, Funding cost. | Emerging Basel III: NSFR, LCR and Survival period. Ratings only used for comparison. |
| How do you evaluate banks' operational performance? | Income statement. | Balance sheet, where the money is made. | Composition of income. Asset quality. Relation to historical record. | Return on Equity, Funding cost, Credit losses. |
| How do you know banks' strength or financial stability? | Asset, structure and survival period. | Difficult and complicated. Survival period. | Trust and history. Quality of assets. Income structure. | Rating, Balance sheet structure, Survival period and Reputation. |
| How do you secure bank funding, amount, time period and cost? | Deposits/liability structure, Covenants and Assets for securitization. | Matching of maturities. Long-term financing. | Relationships, customer deposits and duration of debt as well as from central bank. | There is an inherent risk in banking from maturity transformation. |
| How do you measure banks' liquidity? | Not easy, but new measures like LCR and NSFR help. | Maturity, funding cost, bond spreads, CDS. | Reputation, relation, financing terms and conditions. | LCR and NSFR, It can change very quickly! |

Table 9: Analysis overview of the interviews
- with the most common feedback from each professional group to each key question

The types of accounting information in banks' reports that bankers look at instead of the cash flow statements are diverse as can be seen in the table above. Some of the items are connected to each other and others appear in more than one box, while some others are not to be found in the annual reports. Certain groups of the bankers wanted to focus on the results from the income statement, including key ratios like Net Interest Income, Cost/Income ratio and Return on Equity, while other bankers

wanted the focus to be put on the Balance Sheet and its structure and composition, like deposits/asset ratio. Furthermore, certain items are based on qualitative aspects, like quality of assets and strategic balance sheet, while others are adjusted like results and equity. Certain items involve measurement challenges, like risk weighted assets or maturity structure of debt and different time aspects of maturity transformation, the matching of contracted in/outflow and survival periods.

Explanations gathered in the interviews

In certain interviews the discussion reached the level that banking boils down to the role of *money* and the concept of *risk*, because the business of a bank is to transfer money and maturity while managing the risk involved, both credit risk and liquidity risk. Cash or money is a concept of *confidence* and the definition has become of increasing importance. Other conceptual discussions regarded the definition of the quality of assets (which are credit-based) and trust over time (which is maturity mismatch). These concepts did become important for the analysis as well as the definitions of the key items like money, cash, risk and confidence. It is complicated to define concepts like these and there is a risk that interviewees use them differently.

All the money that flows through banks as part of the payment system sums up to a very large number of both inflowing and outflowing cash every single day and is not accounted for in the annual report. But the treasury function in each bank manages this on a day-to-day basis, as well as providing funding to the lending activity of the bank. At the end of each day the banks have to close their positions towards the central bank. The gap between incoming and outgoing cash is restricted by means of limits in the banks (see for example SHB, Risk and Capital Management 2010: 38). The liquidity planning of the treasury department in a bank is used to match contracted incoming and outgoing cash flows and then cover the differences over different periods. Some fluctuation always occurs, but historical statistics information provides an indication of the average flow to expect. The concept of the '*actual*' cash flow through the payment system refers to the daily flow of cash and is distinct from the '*accounted*' cash flow of the numbers found in the reported statements of cash flows on an annual basis.

The liquidity planning of every bank aims at maintaining its cash reserves and usually the banks borrow on the financial markets to secure further funding. This had not been a problem until after the Lehman Brothers collapse, when this interbank lending came to a halt. In its

simplest form, banks only want to keep the minimum amount of money in cash, because capital buffer and reserve money is generally not generating much income for the bank. But the regulators now want to raise the minimum capital requirement and increase reserves, so that banks have greater capital and liquidity buffers to absorb credit losses and meet increased demands for cash during difficult periods. When searching for that delicate balance, the definition of cash also comes under debate, and what is allowed to be included in the reserves for both capital and liquidity.

Banks have a full overview of their daily cash flow in and out of all the bank accounts, and this is all registered in the data system, so they can know not only their current funding needs and reserves but also the status of all customer accounts. The cash flow statement at the end of each financial year is only an old net sum, and therefore of no use according to the bankers. The gross flow of transactions is handled in the data systems and then net sums are cleared at the end of each period, but only a small part with actual money coins and paper notes. These inflows and outflows are taken care of on the aggregate level by the treasury function in each bank. The treasury function, functioning like a bank within the bank, handles the transactions between the banks' departments, its customers and other banks, as well as incoming funding and outflowing lending. Some bankers say the treasury department is the heart and lungs of every bank, where all the cash flows through and daily matching and clearing is performed. Only the net amount enters the accounting reports on certain dates. The important task is to match known maturity of funding and lending for each day of the known future. Contractual payments for both outflow and inflow are matched for each day. Liquidity reserves are also measured and kept on the right level, where eventually extra funding is prepared or limits are put on lending in order to make sure that minimum capital required is met with liquid buffers.

The accounted cash flow in a company is the same as the actual flow of cash through the bank account, but in banks this is more difficult to match due to the fact that customers' cash also flows through the bank. This is one key finding regarding the difference between banks and other firms.

Purpose of preparing the statements

No serious banker would agree to lend money to anybody, either a person or a company, without knowing the borrower's ability to generate cash to repay the loan, or at least to cover interest if there is good security collateral. The historical cash generation of the debtor can be seen from

her cash flow statements. Expected future cash flow is always judged in uncertainty, therefore collaterals are used for loans, but the previous cash flow is seen as an indicator of future cash flow ability. The interviewed bankers agreed that they would of course look at the cash flow statement of a company before lending money to it. But those who handle lending to other banks also acknowledged that they would never have looked at their counterpart banks' cash flow statement. This contradiction confirms that in practice a bank's cash flow statements are different than those of other firms. The most common explanation was that banks are different and therefore their statements of cash flow do not fit. The claim that the purpose of preparing the cash flow statement for banks was not relevant was consistent between the professions, but otherwise their viewpoints regarding the cash flow statement were distinctly different:

- *Accountants* take the accounting point of view and focus on the accounted flow.
- *Operators* take the financial view and focus economically on the daily actual flow.
- *Directors* take the bank management view and consider the liquidity in a wider scope.

The accountants prepare the statements, while the directors are closest to being users, even though they also sign the prepared reports with the board. *Operators* can be considered as partly both preparers and users, as they supply the data used for preparing the reports but they can also be expected to use the reports of their own bank for presentations and those of other banks due to the lending between banks.

Substitutes for analysis of cash flow in banks

The interviews confirm that bankers do not analyse the cash flow statement of other banks. But the concept of cash flow is used in a wider sense internally and the treasury department makes a daily analysis of funding, inflow and outflow, lined up in time slots for each day of the coming months. Thereby the maturity structure of contracted inflow and outflow is matched. This does not cover the actual cash in- and outflow of deposits in the bank, but statistical analysis of historical data can provide indications of the average amount. Similar internal information of counterpart banks is not possible to get, so the funding structure and survival period are used instead.

Liquidity has a relation to cash flow. It involves a lot of uncertainty and liquidity risk is considered to be more important in stress tests for banks and when banks evaluate each other. Survival period, Liquidity Coverage

Ratio and Net Stable Funding Ratio are new measurements that were on the agenda in the banking industry during the interviews. These ratios for Basel III rules originated from the Basel Committee, but in their publications no rules or regulations with regard to cash flow statements are found. Interviewed bankers frequently mentioned these new ratios of liquidity as a potential substitute to the cash flow statement, but these were new ratios and have not yet been implemented. The bankers generally discussed longer term funding, structure of the balance sheet, and deposit/lending ratio when liquidity was mentioned. The cash flow statement does not grasp these important liquidity issues, they commonly said.

The funding came up during interviews as a critical factor for liquidity issues. At the time of the interviews the issuance of senior-unsecured bonds of the banks had been halted for many weeks during the summer of 2011 in the whole of Europe. Some of the banks saw this as an indication of a problematic situation in the banking industry, even though the Scandinavian banks had secured their own funding at that time for up to one year. Asset-backed securities were traded so the situation was not as bad as in 2008.

In the interviews, another part of the discussion regarded what the bankers look at instead of the cash flow statement. The analysis of the substitutions matched well against the four themes of how the banks evaluate their own and other banks: operative performance, financial stability, liquidity and funding. These themes are also in line with the functions of the cash flow statement analysis as presented in Table 9 and the substitutes differed according to the professional positions of the bankers, as seen in the matrix set up in Figure 25.

Substitute information is gathered from other parts of the financial statements such as the income statement and the balance sheet, but supplementary information in both the annual report and extra reports, like the Pillar 3 report for risk and capital management information, are sources as well. Finally, the information can be derived from other sources than financial reports. The recurring themes of the substitute for the cash flow report are listed below with linkage to the synthesis of its purpose. Each of these is discussed in the next part of the chapter.

- *Performance* focuses on operations to see the generation and uses of cash
- *Strength* focuses on the stability to see asset structure and solvency
- *Funding* focuses on sources of financing to see the ability to provide cash
- *Liquidity* focuses on matching and maturity to see changes in structure and the amount and timing of cash flows in order to adapt to circumstances and opportunities

8.4 – Functions of cash flow statements

This part of the chapter describes the four key functions of cash flow statements in banks that emerged from the interview analysis and showed what the bankers use instead. Each function gets a separate section below, but first a short list of specifics of the cash flow in banks is synthesized from the previous studies as they influence the interviews.

Banks usually are generating more money than they use, from the differences of higher interests collected on loans and lower interest paid on deposits. These interest rate differences as well as the fees and commissions collected generate the bank's main income. Additionally, a third income source is other income from financial activity, like gains on financial instruments. Credit losses can change the income situation quickly, reducing profit and even turning it into big losses. Asset valuation can also affect the results in banks. From a cash flow perspective, the situation in banks is different as money flows out of a bank as part of the lending operations. That cash outflow is different from the cost of operations and the cost of funding and is classified differently.

The business of banks is to move money, both in a time perspective and from savings to loans, and thereby it involves a current outflow of money due to the maturity transformation. A corresponding inflow of the money that has been lent is pushed into the future, and when loans are fully paid back, that asset stock of the bank disappears. In a growing bank the operational outflow is therefore more than the inflow. Not until the lending is shrinking and more loans are paid back than new loans provided does the operative flow of lending become positive. If all deposit holders would like to take out their money, the bank does not have enough cash to pay it. The bank has used the deposited money for funding in order to generate revenue from the deposits—or, put differently, to lower the cost of funding from more expensive financing. If the cash stayed in the bank vault it could not earn interest. The lending involves risk, and it is paid for with the interest margin. The interest rate the bank pays for borrowing on a shorter term is usually lower than the interest rate paid to the bank for providing loans, as normally the loans are also contracted over a longer term than the deposits.

The most significant items that can influence the operational performance in a bank are both changes in the cost of operations, like the cost of funding, and unexpected credit losses. Loans not paid back are the factor that can change the results to a big extent due to the size of the balance sheet compared to the income stream and risk of sudden changes. These

factors are different from the operation of manufacturing or service firms. Therefore, the way the cash flow statement functions in banks is different, even though their main operation can be seen as flow of money. The interviews find out how and why this is so.

Performance from operational activity

Short recapitulation regarding the first function of operative performance is derived from the primary purpose of cash flow statement, which is to provide relevant information about cash receipts and cash payments of an enterprise during a period (FAS 95, 1987: 5). Put differently, users of financial statements are interested in how the entity generates and uses cash and cash equivalents. Furthermore, the accounting standard clearly states: *“This is the case regardless of the nature of the entity’s activities and irrespective of whether cash can be viewed as the product of the entity, as may be the case with a financial institution”* (IAS 7, 2010: A340, paragraph 3). Any business needs to generate more money than it spends; otherwise the operative performance becomes unsustainable. The difference in revenue-producing activities does not change this and the accounting standards therefore require all entities to present a statement of cash flow.

The cash flow from operations in a bank should, according to the accounting standard, be expected to show if the bank is making money from its operations. But in that case, the Nordic banks accordingly should have been in trouble with the numbers presented in the previous chapter. The financing of negative operations with increased leverage cannot be considered sustainable in the long run. The bank with the least negative performance according to operative cash flow during the first decade of the century was Kaupthing bank, who ended up in the fifth place on the list of the biggest bankruptcies in the world.

But the cash flow statement for banks is not used. Interviewees answered that they often measure operative performance instead by the cost to income ratio (C/I ratio), where most banks now strive for higher income and lower cost. In the Nordic banks this ratio is commonly around 0.5, meaning the cost is usually around half of the total income. Loan losses of a relatively small share of the total assets can erase a substantial part of a bank’s annual profit and that makes the credit losses another important key ratio of importance in evaluating the performance of the bank’s operations. Non-Performing Loans (NPL) and Loan To Value (LTV) are additional ratios used as early signals of trouble.

Some credit losses are always to be expected, according to the interviewees, and these normal credit losses can be compared with a

depreciation of other assets. If the asset stock (loans provided by a bank) is built up carefully in the beginning and the assets maintained well (good follow-up and relations with customers) the risk of credit losses is limited. But credit losses can also increase due to external factors and become so big that the impact on the results of a certain period are substantial, while most other costs are stable and can be known beforehand. If credit losses are anticipated to increase dramatically this affects the cost and possibilities of the funding for the bank. When the asset quality in a bank (the loans) becomes questionable then difficulties start to arise, and these can influence the bank's results quickly, resulting in a worse performance.

Another consequence of sudden or heavily increased credit losses is the effect on the financial strength of a bank. When the financial strength weakens, the bankers explained, it impacts the funding cost of the bank and by increased financing cost it also influences the operative results. Therefore, a negative spiral can start worsening the situation quickly and even spread to the whole sector when many banks start being questioned. The regulatory reactions have been increased capital requirements and bigger reserves for liquidity buffers. These changes involve more cost for the banks. Maintaining the same results requires more revenues and/or reduced cost, but expectations of returns have also lowered after the financial crisis, as many of the bankers agreed.

More careful lending leads to a higher quality of assets, said several bankers from one of the banks, in order to limit credit losses that reduces the cost but can also limit growth. *'We want to build up our own loan stock and not grow with acquisitions'* one of the *Directors* explained, and similar ideas were expressed in interviews with another bank. The good reputation of a careful bank can result in a lower funding cost and thereby deliver better results. In some respects the Nordic banks were experiencing this in comparison to the European banking industry and two of them could illustrate examples of them having lower funding cost than the industry. Banks in trouble can get funding from the central bank, while those that have not been in trouble are proud to present themselves as not in need of the support. Even though that independence did result in higher funding costs during turbulent times, over the long run they have gained a lower funding cost, according to the interviews with directors in three of the banks. Two of them considered their reputation as so valuable that it was worth the temporary higher cost. *'We have never accepted help from the central bank'*, these two directors proudly said. The stock market punishes banks for less profit and calls for faster growth in

booming times. This illustrates the effect of a broader time perspective on results and performance in addition to the underlying issue of the quality of the assets and how to measure it.

There is an alternative view to the cost/income focus for operational performance. In banks, the daily operations of the treasury function are about the inflow and outflow of money. The balance sheet functions for the treasury as a container with inflow and outflow of money, one of the experienced *Operators* explained in one of the long interviews. The foundation for the cash flow in banks is the balance sheet, another operator explained. The cash flow statement is therefore of no importance according to them, but instead the balance sheet is the item with the main focus. According to this idea, the liabilities are in sum based on the inflow and the assets are the total outflow. Interviewees from treasury functions said changes in line items on the balance sheet between years could illustrate the flow of the year better than the cash flow statement.

It is frequently stated that the ultimate purpose of all business is to generate money, resulting in a higher amount of cash at the end of the period than at the beginning. This is also stated in the accounting standard for cash flow, and in general the *Accountants* interviewed wanted the focus to be put on the income statement, to show the results. All the accountants interviewed in this study were unable to offer any comments or explanations about the cash flow statements, and many expressed the view that the statements would never be used and were only prepared to fulfil the requirements. Some were clearly frustrated and defensive when asked, and said, “*We just make the cash flow statement from the numbers we get in the system*”, and others asked back, “*Are you not happy with our numbers?*”

The performance of the bank is best seen from the results of the income statement, especially the *net interest income*, which was a view shared by many across the three professional groups. This is how we benchmark ourselves with other banks, they said. The main measure of performance we use is the *return on equity*, others said, and then it has to be adjusted equity (correcting for all changes in the amount of equity) over the long term, one director added. This shows the real value creation of the bank for shareholders, he continued. But the underlying factor for the above result is the *quality of the assets* when bad lending makes bad assets turn into *non-performing loans*, which then turn into *credit losses* that can evaporate substantial parts of the bank’s annual profit, as they had explained earlier. The experienced bankers usually added the asset quality later on in the interviews after having discussed the financial

accounting numbers, and these were both directors and operators. But no general measure for asset quality was agreed on.

The principle of a going concern is the basis for the whole point of a company to have ongoing operations that are of more value than the asset stock. This simplifies the business idea, as one of the directors said: *'The goal of the bank director is to keep the concern going'*.

In the modern view on banking, technology and risk are the key factors of managing and measuring the performance of banks. Kaupthing bank had as one of its core business ideas the use of technology for *"intelligent risk taking"* for increased returns. But others, like one of the Scandinavian banks, claim they want to *'reduce risk taking'* by limiting credit losses and the lower cost then increases returns. The common message derived from the interviews regarding operational performance in banks is the relationship of long-term sustainable performance ties to the financial strength and stability, resulting in lower financial cost for funding. This leads to the next section with the second function.

Financial strength from investment activity

The second function of the cash flow statement is to present financial strength or stability and is derived from the purpose of statement showing changes in net assets, financial structure and solvency in order to evaluate the company's ability to generate cash. (IAS 7, 2010: A340, paragraph 4).

Banks' financial strength is sometimes connected to their size, but recent years have shown how the big banks are unstable. The biggest banks are classified as too-big-to-fail and both an implicit and explicit guarantee from the state is a part of their stability structure. Some banks even became too-big-to-save, as was the case in several islands with big banking sectors, such as Iceland, Ireland and Cyprus. The discussion of the state backing of the banking system came up in the discussions related to the recent crisis.

At the level of each bank, the strength of the balance sheet lies in the quality of the assets that are, for traditional commercial banks, based on the credit giving and the loans the bank has provided to its customers. Other types of banking include tradable financial instruments, in which case the asset quality is derived differently, but these are outside of the scope of this thesis. The asset quality is generally difficult to evaluate, but according to *Accountants* and *Operators* the transparency is increasing regarding the assets. The different types of loan and their geographical location as well as industry sectors are now revealed in supplementary reports (Pillar 3 reports for risk and capital management information,

published with the Annual report). Bankers from all three professional groups mentioned that the stability of the asset side of the balance sheet of each bank was based on the company culture at the time of lending and how the credit assessors had been trained. Some of the more experienced interviewees also mentioned examples of acquisitions of banks being dangerous because of the unknown credit process and thereby it is hard to know how good the assets are. Typical comments in that respect would be: *'You do not know if your customers will pay back the loans in some years if you have not taken part in selecting whom to lend to and what customers to turn down'*. If the asset stock is acquired instead of internally grown, it is problematic to evaluate its quality and therefore the financial stability is more insecure. This also explains the focus on the historical heritage of banks and the trust building up over a long period of time that can be easily lost by making mistakes.

Turning to the other side of the balance sheet, liabilities are linked to how lenders of the bank view its strength. The reputation of the bank makes an impact on how these investors and depositors view its operational history and affects the financial strength of the bank. In difficult times, the access to funding can be decided based on 100 years of historical relations and the personal reputation of key managers, as the *Directors* repeatedly explained. The cost of funding and availability of longer terms for financing are also factors that can indicate the bank's strength. Here the symbolic value of not having taken on help from the government or the central bank was a signal of strength that bank directors from one of the banks were willing to pay a premium for. That is, they were willing to pay more for market funding and give up potential shorter-term profit of lower cost of capital in order to illustrate independence and stability. Not all banks can illustrate financial strength and stability by declining access to support from the Central Bank, as one of the directors explained:

We want to show our strength by not going to central banks, anywhere, even though it costs us more to get funded on the market. Even double the price. Of course we could generate profit from borrowing at the low price from the central banks, but that would not give the signal we want. We have never needed any help from the government. This is one of the reasons for the increased inflow of money the bank has experienced since 2008, flight to security. Therefore, this bank was the only Nordic bank able to get dollar funding in the global markets during the summer of 2010 and 2011 when Greece created big mistrust on the interbank market and almost all European banks had trouble getting access to the dollar.

In critical times, when banks really need to get access to funding, trust is a crucial factor in deciding which banks get that access. The *Directors* interviewed explained how *trust*, based on the bank's reputation, long-

term relations and business history and even personal contacts were key factors in deciding what banks to stop lending to and whom to continue business with during crisis time. Historical relations and operational reputation have a significant impact on the judgment of a bank's financial stability or strength, according to the senior bankers in the directors group. *'When things are normal, there are of course limits on lending to banks and regions, but it is when we reduce the limits during difficult periods—that trust or confidence becomes the critical factor'*, the Directors explain in the interviews. These concepts of trust and reputation lie outside the scope of this thesis, but can be important elements in understanding why the cash flow statement is not used.

The *Operators* focused more on the *survival period* of the bank as well as the structure of a balance sheet and the strategy or business model of the bank. These items impact how counterparts perceive its financial strength, both in a normal situation and during difficult times. The amount of household customers and housing lending is one aspect of the Swedish and Norwegian banks. Deposits are considered 'sticky', even though they are not contracted, and make an important stable funding, backed by the depositor insurance. This funding can quickly change from stable to 'hot money', flowing quickly out of the bank if trust in the bank or the banking system evaporates. Mortgages for households are on the other side of the balance sheet and are considered stable assets and high quality lending with almost no credit losses.

The balance sheet structure in the deposit/lending ratio, as well as the evaluation of the underlying assets and the collaterals behind it, play an increasingly important role when judging banks' stability according to a general agreement in the interview answers. From the treasury department there was a strong focus on providing the rating institutions with good information. The viewpoint of these *Operators* was that the rating institutions judgment could not be excluded; even though ratings are not trusted blindly anymore, *'it is one of the parameters we look at'* and of course it plays a role if a bank is downgraded. But lending between banks is not based on the ratings as such anymore. The market discipline increases with the survival period becoming an increasingly important factor for evaluating the financial strength of a bank. If it is in trouble it has to pay more to secure longer funding, or if it is very solid it can get cheaper funding for a longer period of time. The funding amount and length is used to calculate the survival period of the banks; that is, the amount of time they can operate without any new funding during crisis time. But problems arise from different methods of calculating the

survival period, so it is not a uniform measurement. In general, *'this is very complicated to evaluate'* is a repeated feedback in the discussion of financial stability and banks' strengths.

Measurements of financial strength, outside of the financial statements, are for example the grade given by international rating institutions, the spread on bonds used for funding and the CDS (Credit Default Swaps) trading prices of insurance indicating the bankruptcy risk of each bank. Common feedback in the interviews was that analysts and the bankers conduct their own analysis and never rely on ratings as stand-alone information, but use them in combination with other indicators. The banks do their internal rating when evaluating each counterparty bank, but this information was not made available except only briefly being showed in two interviews. Some analysis relies on the CDS while others consider it a very thin market that can easily be manipulated. The key issue with the trading spread on bond for funding and the CDS is that the market pricing of these can change quickly during turbulent times and can even increase the fluctuations and uncertainty. Especially in 'thin' markets, the prices can even be driven by rumours, but the advocates still claim it does signal a problematic bank before other measures get it.

The bankers frequently used a term called *survival period* in order to present financial strength. This is a simple measure of the period of contractually secured funding where the bank has to hold out without any new funding. What few bankers mentioned is that the survival period assumes a certain outflow over the period and this differs between the banks so their calculated survival period is not comparable. The Nordic bank with the longest survival period—1083 days at the time of the interview study—was still not considered to be the most secure or financially stable. Compared to another bank with a two-year survival period, over 700 days, calculated in a different manner, both banks had similar funding costs. When asked how they decided in difficult times which banks to end business with and which to continue with, the experienced bankers said it was not the numbers that were crucial for what is decided.

The *survival period* is the contracted time that the bank has for secured funding, so it is an indication of an extension or reduction in the terms of financing. This can involve increased financial cost to get more strength towards an uncertain future, and use that to signal stability. But the cost of secured funding over a longer term affects the operational results, relating to the previous section. Good access to funding increases financial strength and affects the cost of further financing; this funding is discussed in the next section.

Funding from financial activity

The third function of the cash flow statement is related to its purpose of illustrating the financing of the company. This is normally useful for separating cash inflow coming from operations on the one hand and funding inflow from borrowings on the other. Financing structure can indicate liquidity and the ability to affect the amounts and timing of flows to adapt to changing circumstances and opportunities (IAS 7, 2010: A340, paragraph 4).

Traditionally, the funding of banks comes from the deposits its customers put into their bank accounts. The deposits are a big economic part of the balance sheet and are considered stable cost effective funding for most banks. Private persons' deposits are more stable than the deposits of companies, who want to use their funds and not keep them sitting still in the bank account. In the event of a bank run, the deposits are not contractually secured, except for a certain portion of fixed-term accounts; all other "on-demand" deposits are supposed to be available for withdrawal at any point in time. No bank in a fractional reserve system like the modern banking system survives if many customers start to withdraw their demand deposits all at the same time. Deposit guarantee of the state is therefore vital to keep the financial system stable and avoid runs on banks. Historical evidences shows that deposits are not taken out of banks other than a small portion. That is why this type of funding is generally considered very stable. But when doubt rises about a bank's condition, it can be reasonable for each individual to take out his or her deposits in order not to be the last one, even though collectively this behaviour is irrational.

From the start of the financial crisis in 2007, the financing cost of banks has generally been rising, while at the same time banks have been increasing their long-term funding and thereby the total financing cost. This is one of the factors for increased cost of more security in the banking sector, but prior to 2007 profit had been increasing through shorter funding at lower financing cost. Furthermore, increased collaterals are now demanded for bank financing, and during the summers of 2010 and 2011 the funding of banks through senior-unsecured bonds dried up for over twelve weeks. Asset-backed securities like mortgages are therefore the key funding sources after deposits. Central banks and governments have facilitated the support for bank funding, and this has reduced the banks' cost and provided better results for many of them.

The funding of a bank influences the results or operative performance through the cost of financing, as discussed in an earlier section. In the Nordic banks, deposits approximately amount to half of the liability side of the balance sheet. The other half is financed through various types of obligations and bonds, both asset-backed securities, and so-called senior-unsecured bonds, as the *Operators* explained. When banks are heading for trouble the cost of these types of funding increases and maturity shortens. Lenders become reluctant, shorten the duration and require both higher interests and more collateral, even demanded in the form of cash. *Directors* described this scenario during the interviews as the case of both Lehman Brothers and the Icelandic banks. The maturities were not matched in the banks and therefore liquidity shortage led to insolvency when the value of the assets was reduced. Better relationships might save some banks with equal maturity structure, but then asset quality is the key issue for survival or not. The maturity mismatch is a central part of banking operations, based on lending long and borrowing short. It is in this maturity transformation where banks make money, and these operations have to be managed.

The operative question is how much of the funding is to be contractually secured and for how long of a term. This determines the liquidity and while the financing cost increases with longer funding terms, it also buys stability and security. Several *Directors* and some experienced *Operators* explained in the interviews how credit losses affecting solvency kills a bank most securely, although usually before that can happen it is the liquidity issues that kill a bank more quickly. The traditional liquidity issue that *kills the bank* is a lack of liquidity due to a run when deposit holders take out money. But the lack of liquidity can also come from a reversed run, when funding is withdrawn or not rolled over. It is the managing of these funding, liquidity and maturity issues that banking is all about, according to repeated stories of the *Directors* and a few *Operators* with long experience.

A key factor of the financing of the banks' funding is the term length until the maturity of the loan. It is part of every bank's business to hold the risk of the maturity mismatch. Funding shorter and lending longer makes it tempting for a bank to shorten funding maturity when liquidity is freely available, the cost of capital is low and excess amount of funds are available. Because shorter funding is even cheaper, the results can be improved short-term by borrowing more short to lend out with a margin. But, like the *Directors* mentioned, this is not serious banking. The *Operators* focus on reducing maturity risk with matching the contractual

flows. By that they try to keep similar funding structure mirroring the lending terms. If a new loan has a five-year term, the fully matched funding would be to issue five-year bonds for an equal amount. Then less profit is made than with funding from shorter term and deposits, due to the net interest income.

The cost of securing liquidity for the transformation of maturities increases with longer survival periods and with demands for bigger liquidity buffers, but more secure banks should also get lower rates. This makes it attractive for banks to grow and expand lending to customers while limiting the buffers and shortening the term of the funding in order to increase profitability. If credit losses emerge from bad lending or lack of trust reduces funding possibilities, the bank can quickly run into trouble. That is why the relationship is so much emphasized as the core of banking, especially by *Directors* regarding customer relations, while both experienced *Operators* and *Directors* focused on relationships with regard to funding providers.

The financial crisis influenced many of the interviews in 2011, but since the crisis began in 2007, insurance against bankruptcy, or CDS, for banks has gained increased attention. The CDS rate influences the cost of financing from the funding sources. Another measurement of the cost is the spread on the bonds issued by a bank for funding its lending operations. The Nordic banks rank well on European and global listings of this cost. The most secure banks in Scandinavia experienced a '*flight to security*' during the latest periods of the Euro-crisis in the last few years. This "flight" was commonly mentioned, and can explain parts of the big bump in positive operative cash flow seen in 2011 as illustrated in Chapter 7. It is a twofold flight—first, existing customers sell financial assets like bonds and stocks to put the money into traditional savings accounts, and second, deposits also increase with money flowing in from banks in southern parts of Europe. This was confirmed with Nordic banks having to increase multilingual personnel in their call centres.

Two of the Swedish banks illustrated during the interviews how they were getting the lowest funding cost of all European banks. Getting access to funding, especially in other currencies, has become more expensive and difficult during the crisis. The Nordic banks have done well in that comparison, one of them being the only bank able to secure funding in US dollars at a critical point in the crisis. But most European banks have had difficulty in funding and liquidity constraints since the summer of 2010, although in the autumn of 2011 and the beginning of the

year 2012 the ECB has been providing substantial amount of liquidity with the LTRO in addition to the Emergency Liquidity Assistance (ELA).

Balance sheet structure and what some of the bankers called strategic balance sheets appeared as important tools for providing a stable base for funding operations and good performance. Many interviewees mentioned the Deposit/Liability ratio as a good measurement of stability in funding. The deposits are mostly not contractually bound but are available on-demand. This makes them only stable in normal times. Funding is about access to financing liquidity, but definitions are not very clear, and access changes.

To secure funding for a bank you need three things, according to one of the bankers interviewed: *“Good reputation, good rating and a good name”*. He continued, *“if the financiers lose confidence in your bank, then you do not get any more funding”*. Then it is preferable to have a good central bank that can provide help. The help that central banks provide as lender of last resort is a liquidity support. Central banks are, according to the Bagehot rule, supposed to help solvent banks, while insolvent should be allowed to go bankrupt. The requirements of the liquidity support are good collateral and the funding is provided at a penalty rate. The issue of liquidity is the key theme of the next section.

Liquidity of cash flow in banks

The general purpose of cash flow statements is to provide information, in conjunction with other parts of the financial statements, about the financial structure and liquidity of the entity (IAS 7, 2010: A340, paragraph 4). The financial structure of banks has been read from other sources than the cash flow statement, as previous sections in this chapter show. What can be read from the statements is a little investment activity and a lot of financing activity used in operations. The liquidity of banks cannot be read from their cash flow statement.

Banks move money, and one of the fundamental functions of the finance industry is to maintain liquidity for its customers. The deposits in banks are used as short-term liquid financing of longer-term illiquid lending. This transfer of incoming and outgoing payments must run smoothly, and the system is not designed for this flow to stop; it has to constantly continue to flow. Even though few expected it could happen, the interbank market was frozen after the Lehman Brothers crash in 2008. Then the central banks moved in to provide liquidity in the system.

Another liquidity crisis example is a bank run, where deposit holders take their money out of the bank due to uncertainty. This happened, for

example, with Northern Rock. A reversed bank run can also occur when the funding of a bank is drained, so instead of too much outflow, too little inflow can strain the bank as well. This was part of the problem in both Lehman and Kaupthing. After the crisis, increased liquidity buffers are demanded as one reaction to create more resilience in the system.

Liquidity is crucial for banks as the flow in and out of the bank is vital for their core operations. The mismatch in maturity involves risk, but is the key business idea of banking: lending money that flows out and is not expected to flow back until after a certain period and it needs to be funded, often over a much shorter term. The money is generated from differences in interest rates, which pay for the risk and operations of the bank.

Access to funding, its term and the cost of financing are indicators of a bank's strength, as illustrated in the previous section. Even though solvency problems surely lead to insolvency and make a bank bankrupt, it usually is the lack of liquidity that takes banks out of operations much quicker. Several of the bankers interviewed mentioned this comparison of banks' survival that can end surely or quickly. Here lies one of the paradoxes of banking. According to the old Bagehot rule, the central bank should only provide a solvent bank with extra liquidity, but to know if a bank is solvent or not can be difficult in a time of crisis. On the other hand, liquidity problems can start with rumours, even for a healthy bank, but these still involve the risk of taking the bank down. Then it becomes difficult to define when a liquid bank ceases to be so, and shortly later the lack of liquidity can affect the solvency and turn it into an insolvent bank. Two experienced bankers said *'it only takes a few days to change from liquidity issue to a solvency issue'*. It was also said that one or two of the Swedish banks were a few hours away from risking bankruptcy in the autumn of 2008. All the big banks in the City of London could have become bankrupt within a couple of months during the autumn of 2011, according to a central banker. These problems show the importance of liquidity.

The sudden risk of bankruptcy makes banks look different from other firms. The depositor guarantee that supports the banks can also confirm that difference. In principle the guarantee is a liquidity support that is only provided to banks. This speciality indicates that the liquidity measure from the cash flow statements might differ. Senior experienced bankers interviewed said recurrently that what made banks different was the task of transferring money and the product being cash. Some even mentioned the same comparison as the bankers in the comment letters that the cash flow statement for a bank would be like a statement of product flow.

The standard cash flow statement is problematic in both these respects. It is split into three sections of operations, investment and financing, and fits banks badly due to the unclear split of the banking activities into these three classes. The investment activity of a bank can be lending because loans are the main assets, while lending can also be seen as an operational activity. Similarly, the financing activity of the bank can be seen as an operational activity when it is short-term funding and deposits. Long-term funding is classified as financing activity. While loans are the main asset of a bank, the cash flow of them is not classified as an investment. All these factors make the liquidity measurement of the cash flow statement in banks dysfunctional.

The capital adequacy ratio had been the main focus of Basel II rules and after the crisis in 2008 the banks have been required by Basel III suggestions to increase their capital in order to absorb losses. New requirements for liquidity buffers with more cash reserves have also been added to the proposal, and partly implemented in some countries. Nordic banks have been preparing early for the new rules to come, according to the interviews. Before Lehman, "*liquidity was almost considered a free good*" and always expected to be available, the bankers repeatedly said, but then this changed.

One key source of liquidity is by holding cash, but this is expensive because money that is in reserves is not used and thereby is not generating income but is instead a cost. The wider definition of cash equivalents, like treasury bills and the changing counterparty risk of holding money overnight at another financial institution, make this more complex. But cash on hand and placed at the central bank is what is considered the fully secure liquidity during crisis times. These cash holdings at central banks have increased and gotten more attention after the crisis, as the bankers confirmed in the interviews.

Another source of liquidity is from *funding* from other banks, mainly through interbank lending. In the autumn of 2010 and 2011 this interbank market tightened and the flow almost froze, as it did completely after Lehman Brothers collapsed in 2008. When discussing the interbank lending in the interviews, the survival period often came up as it had been increased substantially after the crisis. The accountants mentioned the new measurements provided in Basel III for the LCR and NSFR. The operators seemed to be more occupied with funding for longer maturity and matching the lending and the funding. The directors did not focus much on the new ratios or the matching, but instead talked about the relations and *reputation* in order to have an impact on financing liquidity.

All agreed that liquidity was a difficult concept but also an important one and high on the agenda for all bankers.

In addition, the central bank provides a source of liquidity for banks as the lender of last resort. Repeatedly during the interviews, the bankers mentioned that the most secure way to make a bank bankrupt is through insolvency, but the fastest way to kill a bank is through illiquidity. Therefore, central banks are important for liquidity. But deciding which banks are solid and which are not is difficult. Valuations of assets play an important role in that aspect, as well as the liquidity of the assets or how easily they can be traded. In crisis times, the *reputation* of the bank can be a key issue in whether it gets funding or not.

The measurement of liquidity is a key issue but also a difficult one. No clear or common agreement on its definition could be found in the interviews, but a lot of emphasis was placed on the new measures of LCR and NSFR, even though these were not clear at the time. For a company, the cash flow statement can illustrate how much liquidity the previous period of operations provided and how that cash was generated or used in operations, financing and investment. Not so for banks. Banks are different. They can solve liquidity issues after credit creation with netting of flows between banks and by borrowings. The different cash flow activities do not illustrate the liquidity of the bank and the measurement of it is unclear, just like the definition of the concept. As a result of the interview analysis it becomes clear that the cash flow statements of banks are not used because of all the differences and difficulties discussed above. Liquidity is one of the complicated concepts that add to the cash flow complexity.

8.5 – Summarizing the analysis

All four different cash flow functions analysed in the interview study are interconnected; for example, operational performance is directly affected by the financing cost of funding. Similarly, the funding cost is dependent on both the bank's financial strength that is derived from asset quality and access to longer term borrowing which is derived from, among other things, the current maturity structure and the availability of funds in general. Lower borrowing cost reflects both how strong the bank is considered to be based on its financial stability and the general macro conditions. This interconnectedness and external factors show that a bank's financial situation can change, both upwards and downwards, for many different reasons. The reflectiveness/reflexivity of the functions is important for understanding the analysis in general. The liquidity function connects the other three functions and the operator's professional viewpoints combine the user and preparer perspectives. The matrix in Figure 25 puts together the financial accounting and operational economics with the bank management issues. Sorting these issues into the matrix is not to be considered clear-cut, and many overlaps exist, but the highest-ranking concept, or that with the highest priority, is represented in each box. The matrix provides an overview of how differently the professions view the cash flow functions and how many alternative substitutes are used for it. The four functions are also linked differently; here is provided the third list of them with different connections:

- *Operational performance* is connected to the cash flow from operations
- *Financial strength* can be related to the cash flow from investment
- *Funding sources* are linked to the cash flow from financing activity
- *Liquidity* ties the other three functions together as total cash flow

Each of the points can be related to different parts of the annual report, in line with the original goal of the implementation of the cash flow statements in order to supplement the income statement and the balance sheet. Performance is derived from the cost/income ratio and the results from the income statement. Strength of the financial structure is built from the assets on the balance sheet, while funding is connected to the liabilities and the interest cost. The liquidity is linked to the three previous functions, and ties them together and illustrates the purpose of the cash flow statement as such.

All the functions relate not only to the purpose of the cash flow but also to the key functions of banking, in the management of operational risk for the transfer of capital and maturity as well as the credit risk and liquidity

risk. Bankers claimed in their comment letters for the accounting standard that the product of a bank is money and therefore the cash flow statement would not be applicable, and this was repeatedly claimed in the interviews. Some claimed differently, like one CFO who said *“the product of a bank is trust”* and therefore the cash flow statement is not relevant. This idea of trust as a product is not found in standard banking theory (Berger et al. 2012), but similar examples in economics or finance can be found, such as: *“Banking is not money lending [...] The fundamental banking activity is accepting, that is, guaranteeing that some party is creditworthy”* (Minsky, 2008a: 256).

One main result of the interview analysis was that bankers do not use the cash flow statement of banks and they have not been asked about these statements or analysed them themselves before. Another key result was that the bankers could not explain the negative numbers, except by saying that cash flow is not a relevant statement for banks.

The research question of why the cash flow statement in banks is not used was only answered in a few words by the interviewees. The analysis of the interview study is done in synthesis with the previous studies, which all connect to the interviews, and this process enhances the short answers. It shows that the bankers did not consider the general purpose of cash flow statements to be applicable for banks and that the statement would not function in banks. The accountants or accounting standard setters perhaps saw it as obvious that banks would have a negative operative cash flow, without stating anything about it. But there is a disconnect in the documentation. All the bankers said that the cash flow statement does not fit for banks and the functions are fulfilled with substitutes. The result is that the bankers look at different items instead of the cash flow statement. A condensed overview is summarized in Figure 27 below. Another result of the analysis is the discovery of the now-obvious explanation of the negative cash flow, which is covered in the next section. These results taken together contribute to explain why the cash flow statement is not used.

Several different items, both from accounting statements and non-financial items, are used instead of the cash flow. It is difficult, though, to systematize these substitutes of the cash flow statement in banks. The items mentioned differ between the professional groups and within them. Those most often mentioned are the *net interest income* as the difference of a big portion of the inflow and outflow in *operations*; the *avoidance (or low ratio) of credit losses*, which also defines performance; and the measure of *NPL*. The balance sheet in a bank is made of inflowing and outflowing capital and therefore the *asset quality* and *debt* and *equity resilience* define the *financial strength* and stability of the bank. Access to *funding* and its cost influence *operations* and facilitate financing of growth. The new ratios like LCR and NSFR are often mentioned as new *liquidity* measurements in addition to the traditional *survival period* (how long the bank can survive without new funding) that many banks have measured.

| Professions: | Accountants | Operators | Directors |
|------------------------------|------------------------|---------------------|-------------------|
| Functions: | Income Statement | Balance Sheet | Quality of assets |
| Operative Performance | Asset quality | Survival period | Trust and history |
| Financial Strength | Deposits / Liabilities | Matching maturities | Relationship |
| Funding Sources | LCR & NSFR | Funding cost | Reputation |
| Liquidity | | | |

Figure 27: Interview analysis matrix with the results of key substitutes

The items put into the grid for the substitutes, or what the different professions look at instead of the cash flow statement for each of its functions, are an indication only and not as clear-cut as the boxes. The purpose of the grid is to show the variety of items that banks mentioned they looked at instead of the cash flow. It should not be considered as an exact replica, but a prioritization of the most frequent or important concept for each. In addition, there are several critical incidences that contribute to the conclusion in the next part.

8.6 – Explaining negative operative cash flow

In the final interview, a banker finally was able to give an explanation of the negative numbers on the cash flow statement. All the other bankers had said that they did not use the cash flow statement and therefore could not explain why it had negative operational flow, and that it was irrelevant. These bankers agreed that they would not lend money to a customer with negative cash flow from operations because it indicates that the entity is losing money and generating less cash than it uses. But banks are different and lend to each other in spite of negative operative cash flow, even though they cannot explain why.

The single banker who could explain it had decades of experience in several banks during previous crises and booms. His current bank used the direct method for preparing the cash flow statement, and he was responsible for the treasury operations, so he was confident that the numbers were correct and the bank had not been bleeding money. The explanation developed under a short session near the end of the interview. The interviewer and the interviewee sat down with two annual reports of the bank to go through each line of the cash flow statement of the last four years. The banker examined each line item, and after few minutes he had an aha-moment—of course it could be clearly and simply explained that the operative activity had a negative flow. As has been explained previously in this thesis, the lending growth, credit creation and different classification explain it. In the setting with the Norwegian banker, the credit growth of new loans was flowing out as operational activity, while funding was classified as financing activity. It is noteworthy that no one else could explain it in this simple manner. Never was the credit creation of cash mentioned, or was it explained how loans create deposits simultaneously, and even the different classifications of lending in operations and funding in finance activity did not become apparent until after this interview.

Getting an explanation of the negative cash flow in banks could not be the single purpose of the interviews, because of the general feedback from the bankers. In almost all interviews the first reply after the opening presentation (see Appendix 7) of the banks' cash flow was '*Cash flow is not relevant for banks*' or '*Banks are different*' and then when pressed with the actual numbers in the graphs, the interviewees would simply respond with '*I cannot explain why it is negative*'. Instead, the discussion focused on how banks are different and what is used instead of the cash flows in the banks. The underlying research question of why the cash flow statement is not used required a search for more answers than the short quotes above.

Two striking, and almost identical, reactions happened when senior bank managers asked the interviewer *“Where did you get these numbers from?”* after they saw the negative operative cash flow. When the interviewer explained that the numbers came from the annual reports of their own bank, these interviewees were both, in two different interviews, still in doubt and stood up to get their own annual report. They had to look up the page with the cash flow statement in order to believe the negative operative cash flow. There was a long silence while they looked at the statement. *“These are not relevant numbers for banks!”* was the explanation finally provided. The fluctuation was obviously a surprise, and the simple fact that the lending flows out in operations was not mentioned, nor was the credit creation ever discussed. This controversy of the signal from negative operative cash flow confirms that the statements are not used. This lack of available justification from bankers for the specialty of banking with regard to accounting that leads to cash outflow of newly created credit in a lending growth can explain why the statements are not used.

These three critical incidences during the interviews, one explanation and two identical reactions to the negative operative cash flow numbers, provide a background for the result of the thesis that *cash flow in banks needs reconsideration in a new accounting regime.*

8.7 – Concluding the interview study

In this chapter, the fourth study of the thesis has confirmed through sixty interviews in the Nordic banking sector that bankers do not use the cash flow statements of banks. The seven banks studied had negative operative cash flow that only one banker could explain. Thirty of the interviews were analysed to find out why the bankers do not use the cash flow statements, in line with the research question. Preparers of the statements in banks neither considered it useful nor could they explain the negative operative cash flow. For a more complete answer than the simple statement, '*it is irrelevant*', the interviews evolved into an investigation of what substitutes are used for the cash flow statement of banks.

The interviewed bankers came from different departments, mainly accounting, treasury, credit, risk, finance and top management. They were grouped into three categories, *Accountants*, *Operators* and *Directors*, and their professional views provided one angle for the analysis of the purpose of the cash flow. Accountants are *preparers* and Directors are *users* of the cash flow statements, but Operators are combined users and preparers. The other angle of the analysis is derived from the functions of the cash flow statements, found in the following themes: *Performance*, *Strength*, *Funding* and *Liquidity*. At the core of banking operation is the activity of moving money or transferring purchasing power between different actors, both instantly through the payment system and over time with deposits and lending. This maturity transformation affects the operational performance potential of the bank and the resilience of its financial strength.

Banks' cash flow statements show negative numbers for the operative activity in Sweden for eight of the ten years in 2001–2010 as the sum of the four biggest banks, with a total negative operative cash flow over the period. Normally, in a non-financial firm, a prolonged negative operative cash flow is due to continued bad operations losing money, but in the banking sector this is different. Nevertheless, bankers failed to explain the logic of this difference and banks are still required to follow the standardized accounting rules like other companies in preparing their annual reports, including the statement of cash flow. Even though the numbers are negative over such a long time period, none of the bankers could explain why, except for one. The practice in the banks seems to differ from the intention of the regulatory framework regarding the accounting of operative flow. The statements are prepared according to the standard to fulfil the rules, but practitioners do not see them as

reflective of the financial situation of the bank, while users do not use them and preparers cannot explain them.

The substitutes, or what the bankers use instead of the cash flow, become part of the solution to the research problem when analysing the interviews. There are complicated non-financial concepts that bankers used in their answers, like *relationships*, *reputation*, *trust*, *confidence* and *quality*. These central themes in the judgements of banks are not part of the accounting reports, and are outside the scope of this thesis, but nevertheless important indications of the complexities of banking. The next chapter will conclude by answering the research question, drawing on all four studies, combining the theoretical framework with the accounting standard, the overview of the cash flow numbers and the bankers' comments in both letters and the interviews.

The fact that the cash flow statements in banks are not used in practice can explain why negative cash flow numbers have not been noticed. But the claimed irrelevance of the cash flow in banks due to this ignorance can be challenged with the money view perspective using the concept of credit creation to explain the negative cash flow. A more detailed answer comes from a synthesis of all four studies in the next chapter.

Chapter 9: Conclusions

9.1 – Results

This chapter concludes the thesis by drawing together the results of the four studies. The answer to the research question is based on the empirical findings of each study and interpretations of them using the theoretical framework. It has managerial implications in the fields of banking and financial accounting. This thesis also contributes to the theoretical field in accounting. Brief reflections on the results of the research are given and paths for further research are pointed out.

Portions of the results have been presented at the end of each study in the four previous chapters, in line with the multiple methods approach of the evolving problem through separate stages of the research. In this last chapter, conclusions are drawn together to answer the question asked in the first chapter regarding why the cash flow statements of banks are not used.

The remainder of the chapter is divided into four parts. The next part uses the results of each study to answer the research question. The theoretical aspects of the results are covered in the third part. In the fourth, reflections on the conclusion of the research are discussed. Finally, the fifth part identifies further studies for future research.

9.2 – Answer to the research question

The results of the four studies in this thesis have managerial implications within the field of business administration for both bank management and financial accounting. The problems presented in the first chapter were delimited to a single research question that can now be answered based on the empirical results from the studies in previous chapters.

The research question was: *Why is the cash flow statement in banks not used?*

The question is answered stepwise based on the separate studies in the following four sections. The theoretical framework of the modified modern money view has been used as a lens to view the empirical material and draw the conclusions that are illustrated in the accounting three simple accounting models. The results of each study deliver parts of the final answer, which has managerial implications for both banking and accounting. The independent studies are intertwined, and the conclusions from them all contribute together to give the answer.

The short answer to the research question is that standard cash flow statements do not work for banks because banks' operations are different from non-financial firms with respect to cash. Experience from using the standard can now show that the minority vote in the standard setting board was more correct than the majority. The reason why bankers do not use the statements for banks is that they do not consider the information provided there to be relevant, and external users support this view as well. The bankers do not see a purpose of preparing the cash flow statement for banks; they only do it because the rules require it. The theoretical framework of the thesis helped to solve the question of the negative operative cash flow and see how the credit creation of cash affects the function of the cash flow. This solution goes further than the minority of the standard setting board, and the bankers' comments, pointed out. Banks' activity in lending makes their cash flow statements unconventional, so in a lending growth period the operations are negative, and many years later, large positive inflows of cash can be experienced in the banks' operations. This indicates that signals and patterns can be read from the cash flow numbers even though practitioners in the banking industry do not consider the statements relevant or useful.

Purpose of the standard cash flow

The general purpose of the cash flow statement in the annual reports of companies is to provide information in addition to the balance sheet, income statement and equity changes. To recapitulate, the *objective* according to the standard is to provide “*a basis to assess the ability of the entity to generate cash and cash equivalents and the needs of the entity to utilise those cash flows*” (IAS 7, 2010: A340)—that is, to see how cash is generated and spent over the period and these changes are classified as operating, investing and financing activities. The scope of the accounting standard explicitly states that this information is also needed for banks, and claims that users are interested in it.

Users [...] are interested in how the entity generates and uses cash [...] regardless of the nature of the entity’s activities and irrespective of whether the cash can be viewed as the product of the entity, as may be the case with a financial institution. Entities need cash for essentially the same reasons however different their principal revenue-producing activities might be. They need cash to conduct their operations, to pay their obligations, and to provide returns to their investors. Accordingly, this Standard requires all entities to present a statement of cash flows. (IAS 7, 2010: A340, paragraph 3)

The first conclusion of this thesis is to empirically show that users are not interested in the cash flow information from banks. It is derived from the studies that show banks’ claims beforehand that the cash flow will be meaningless and afterwards when bankers also confirm in letters and interviews that they have never been asked about the cash flow statement, either by investors or other stakeholders. They also say that the banks never use it themselves, at least in Scandinavia.

The purpose of requiring financial institutions to prepare cash flow statements fails when the provided information is not used by the users. Accountants in banks nevertheless prepare the statement, because it is required by the standard. For a banker, as the interview study shows, there is no reason for preparing the statement. In the pre-study both the rating institution and bank analyst said they never looked at the statement of cash flows from banks, further strengthening the bankers’ claims. The users mentioned in the standard are therefore non-existent according to the empirical results of this thesis. This shows that it does matter “*whether the cash can be viewed as the product of the entity*” in terms of how interested users are in the statement of cash flows.

The fact that reported financial numbers show banks generating negative cash flow from operating activity during the course of an entire decade indicates that the statement is not used. This negative flow continued

unnoticed for years without being mentioned in the annual reports. Nor is the generation of cash from new loans explained. The banks have in most cases had positive cash flow from financing to fund the negative operating activity, as the third study shows. But how the negative cash flow from operations is sustained with the credit creation of cash is never explained in the statements or the standard.

It can be concluded as the first empirical results of this research that the purpose of preparing cash flow statements in accordance with the IAS 7 is solely to fulfil the requirement of the standard and that the prepared statements are not used in Nordic banks. The argument in the standard 'to provide information to users' does not hold when these users cannot be found. For both the banking and accounting professions, the results from this study indicating that no banker uses the statement and none of them has ever been asked about it should point to a possible failure in the standard. With a simple accounting model of lending activity, as shown in Figure 1 in Chapter 1, the operational credit creation of cash is exemplified. That example provides the foundation for two variations of the model in the coming sections to show how the current cash flow standard is not useful for banks and why it needs to be changed.

Functions of the cash flow statement

Banks are different from non-financial firms and the reporting of banks' cash flows functions differently because cash is their product and they create deposits on their balance sheet when they provide loans to their customers. The amount of the loan is new cash that did not exist before, and the loan is an asset of the bank while the deposit is the liability. By providing credit the bank creates cash, as the example in Chapter 1 illustrated. This function of cash in the bank does not fit the accounting framework of the standardized statement of cash flow according to this thesis. The internal generation of cash through credit creation takes place in the lending operation of each bank. It gets expressed as negative operative cash flow in the standard statement because the bank's activity is to lend cash to customers and thereby the internally generated cash normally flows out of the bank. *This flow needs to be funded afterwards.* But the generation of cash for the bank from its operational activity is derived from the cash that is created for its customer. This classification issue leads to a different functionality of the cash flow statement in banks, with no users, and few who can explain it. But in the comment letters prior to the standard setting, parts of the explanation are provided. Together with the theoretical framework, this result is best explained below by an extension of the accounting model from Figure 1 in Chapter 1.

Prior to this explanation, here is a short summary of the claim that the cash flow statement would not function for banks, made earlier by bankers but ignored by standard setters. The banks *“commented that a bank creates money through its lending activities”* (FAS 95, 1987: 59). But the accounting standards board *“considered, but was not persuaded by, the arguments that a statement of cash flows of a financial institution, especially a bank, would not provide useful information.”* (*ibid.*). The board’s conclusion was: *“To survive, a bank—like a manufacturer—must generate positive (or at least neutral) cash flow from its operating, investing, and financing activities over the long run”* (*ibid.*). The main task of the second study was to analyse the comment letters from bankers behind this conclusion of the board. The results of the analysis of the letters helped in the research process, and provided a background for what the other studies found out regarding how the cash flow functions differently when cash is the product. This contribution, together with the theoretical framework, resulted in the example below.

A question can arise if it is not sufficient merely that total cash flow is positive, based on the funding of negative operations from positive financing activity. That seems to have been the case in the banks in Scandinavia during the decade investigated, but the bankers themselves admit that a customer with a cash flow statement like the banks’ would not be approved for a loan. The sustainability of a firm’s survival with positive net cash flow generated from increased financing activity is questionable when continued over an extended period. Borrowing more to compensate cash outflow in operations and/or for the repayment of previous loans is generally speculative and not sustainable. But when considering the operative outflow in lending as a kind of investment in the banking context this can be differently understood with reclassification.

After years of reporting the cash flow in banks, the results shown in the third study are that the numbers during the first decade of the century present a total cash flow from operations in the four biggest banks in Sweden that is negative in eight out of ten years. During the last three years of the decade, the total cash flow of these Swedish banks was negative every year, see Table 7-8 in Chapter 7. For the full decade, only one year (2007) resulted in a total positive cash flow, and this single year turned the total sum of the decade from negative to positive, or from more outflow to more inflow of total cash. At the end of this ten-year period, two of these banks were ranked among the most secure banks in the world. The fact that not a single user of the cash flow statements of banks could be found is a compelling empirical evidence for the result of

the thesis showing that the cash flow statements in banks function differently than anticipated and are therefore not used.

During the many rounds of analysis in this research there was still some potential found for a useful functionality in the cash flow reports by looking at the numbers differently. This requires the simple accounting model from Figure 1 in Chapter 1 to be extended and to see it from the modified money view perspective provided in the theoretical framework. The model explains the balance sheet exchange during the lending activity of two banks, illustrated in Figure 28 and 29 below (alternative versions showing different scenarios are presented in Appendix 9).

| Accounting Model: NETTING - Bank 1 | | | | Bank 2 | | | |
|--|----------------|--------------------|---------|--|----------------|--------------------|---------|
| Customer gets a loan of 300 and uses it to buy from customer of Bank 2 | | | | Customer gets a loan of 300 and uses it to buy from customer of Bank 1 | | | |
| Balance Sheet 1/1 | Assets | Liabilities | | Balance Sheet 1/1 | Assets | Liabilities | |
| Cash and reserves at central bank | 200 | | | Cash and reserves at central bank | 200 | | |
| Deposits from customers | | 1000 | | Deposits from customers | | 2000 | |
| Borrowing from others (banks and bonds) | | 800 | | Borrowing from others (banks and bonds) | | 1600 | |
| Loans to customers | 1800 | | | Loans to customers | 3600 | | |
| Equity | | 200 | 10,0% | Equity | | 200 | 5,3% |
| Total | 2000 | 2000 | | Total | 3800 | 3800 | |
| Income Statement | Cost | Income | | Income Statement | Cost | Income | |
| Interest rate income | | 180 | 10% | Interest rate income | | 360 | 10% |
| Financing cost | 90 | | 5% | Financing cost | 180 | | 5% |
| Operational cost | 60 | | 33% | Operational cost | 120 | | 33% |
| Net operating income | 30 | | 17% | Net operating income | 60 | | 17% |
| Cash flows | Outflow | Inflow | | Cash flows | Outflow | Inflow | |
| Profit from operations | | 30 | | Profit from operations | | 30 | |
| Dividend paid | 30 | | 15% | Dividend paid | 30 | | 15% |
| Change in deposits | 300 | 600 | 300-300 | Change in deposits | 300 | 600 | 300-300 |
| Change in financing from banks/bonds | | | | Change in financing from banks/bonds | | | |
| Change in lending | 300 | | | Change in lending | 300 | | |
| Change in cash and reserves | 0 | 0 | | Change in cash and reserves | 0 | 0 | |
| Balance Sheet 31/12 | Assets | Liabilities | | Balance Sheet 31/12 | Assets | Liabilities | |
| Cash and reserves at central bank | 200 | | | Cash and reserves at central bank | 200 | | |
| Deposits from customers | | 1300 | 300 | Deposits from customers | | 2300 | 300 |
| Borrowing from others (banks and bonds) | | 800 | | Borrowing from others (banks and bonds) | | 1600 | |
| Loans to customers | 2100 | | 300 | Loans to customers | 3900 | | 300 |
| Equity | | 200 | 8,7% | Equity | | 200 | 4,9% |
| Total | 2300 | 2300 | | Total | 4100 | 4100 | |

Figure 28: Accounting model of netting between two banks - equal lending growth of banks nets out cash flows between them

To explain how the cash flow in banks functions differently than in non-financial firms, an example of the lending activity of two banks shows how the netting of the cash flow between them eliminates funding during equal lending growth. In the model, two banks exist with two customers each, doing business with one another. Each bank makes a loan of an equal amount to one of their customers and these two customers spend their respective loans by buying something for the full amount from the non-borrowing customer in the other bank. The equal lending growth then flows out of each bank but is netted with the opposite inflow of the other customer in the counterpart bank. No financing is needed to fund the spending of the loans that flow between the banks and no real change

occurs in the total numbers for each bank after the lending has taken place and extended both balance sheets.

The cash flow in both banks is unaffected and the example illustrates how the cash flow statement functions differently in banks due to the netting in the operations of the payment system. The example also shows how savings are not needed prior to lending, even when the loan is spent in another bank, as long as symmetric lending growth and spending occurs. Both banks have created cash to lend and extended their balance sheets and both customers have spent their loans before any savings are needed to fund the loans.

This netting in the payment system operated throughout the banking system illustrates how the banking practice does not fit the standard cash flow statement, and by this shows the second key result of the thesis. When cash is the product of the firm and it operates a payment system, the statement of cash flow does not function according to the standard. In order to get to the full explanation of the negative cash flow numbers found in practice, another version of the model is needed, as will be shown in the next section.

Operative cash outflow

The common contribution of the first two results was that the statement of cash flow functions differently in banks than in non-financial firms and is therefore not used by banks. But the fact that the bankers do not look at banks' cash flow statements when cash is the product of the bank indicates that the different functioning is not relevant to them. No other potential user of the statements could be found, and the bankers had not met any. Then when the cash flow numbers were analysed, the results were that operative cash flow can be more negative than positive for a decade in growing banks.

The answer of the interviewed bankers to the question about the negative cash flow did not provide any contribution to results explaining why it is so. Only one of the bankers could explain that the negative operative cash flow was due to the lending growth. That is a contribution as such. But after the interviews, two new financial years were analysed and the issue became even more fluctuating as the positive cash flow continued to increase and then fall. Also, when adding together banks in the region, and in Sweden in particular, more explanation was needed. One notable finding was that the four big banks in Sweden had a combined total negative cash flow from operations during 2001–2010 (see Table 8).

In order to get an understanding for the negative numbers in the financial statement of banks the analysis had to be supplemented with interviews and historical as well as theoretical insight. This was gained from the bankers' comments to the standard setters presented in previous studies and the bankers' answers in the interviews of the last study. The insight from the theoretical framework was applied, both during the studies and afterwards in the analysis. Credit creation of cash deposits helps to give an understanding of the negative flow. The money view perspective on cash flowing through the balance sheets of banks helps with grasping the operation of the payment system and understanding the outflow. The accounting framework for the cash flow statement does not provide this explanation in the standard. But the answer found during the process of this research is, in summary: In a bank, there will be more inflow in the future, while in the present there are more outflows, when lending grows with credit creation. The cash flow statement of the past does not grasp this maturity transformation and netting of flows.

If payback of the loans in the future occurs in a period of no lending growth, the inflow of cash will lead to credit destruction, evaporating the income-generating asset and eventually questioning the going concern of the bank. A bank has to keep on lending in order to survive and has a difficult time existing if all loans are paid back. *In banks, cash is different.*

The goal of the cash flow statement is to show which activity cash is generated from and in what way it is spent. For banks, the core operational activity of lending leads to negative operational cash flow and therefore the bank does not have the possibility to generate positive cash flow from its core operations. Because the core operation is in the form of letting money flow out of its account to customers, this naturally generates a negative current flow with a future flow of payback. This long maturity transformation leads to inconsistency from the accounting standard when the cash flow statement is negative over a decade due to operations that are not losing money. The inconsistency can be part of the explanation as to why the cash flow of banks is not used by bankers.

When shifting the perspective from *exogenous* money to *endogenous* money, a clearer picture emerges. The credit creation explains the sustained cash outflow during the lending growth. The first key lies in realizing that a new loan provided by the bank creates a cash deposit on the customer's account. Only after this cash is used, when flowing as payment to another bank, does it have to be funded. The funding or financing of the cash outflow can both be netted against other opposite flows, as the modelled example in the previous section showed. But this netting only holds when

all banks are increasing lending simultaneously, and then no serious problem arises. The second key is to realize that banks can finance themselves or solve funding constraints by borrowing from another bank. This makes things a little more complicated in separating lending to customers and lending to other financial institutions.

These two key items from the results of the research provide help with the explanation of the negative operative cash flow in banks that has not been found in earlier writings on accounting and banking. This result has managerial implications for the practice of preparing and using the accounting statements of banks. In order to explain the negative flow better, Figure 29 below is an illustration of another extension of the model from Chapter 1, now showing unequal lending in the two banks of the model.

| Accounting Model: FUNDING - Bank 1 | | | | Bank 2 | | | |
|--|-----|----------------|--------------------|---|-----|----------------|--------------------|
| Customer gets a loan of 300 and uses it to buy from customer of Bank 2 | | | | No lending to customers but inflow from Bank 1 funded back w interbank loan | | | |
| Balance Sheet 1/1 | | Assets | Liabilities | Balance Sheet 1/1 | | Assets | Liabilities |
| Cash and reserves at central bank | | 200 | | Cash and reserves at central bank | | 200 | |
| Deposits from customers | | | 1000 | Deposits from customers | | 2000 | |
| Borrowing from others (banks and bonds) | | | 800 | Interbank financing (or bonds) | | 1600 | |
| Loans to customers | | 1800 | | Loans to customers | | 3600 | |
| Equity | | | 200 | Equity | | 200 | 5.3% |
| Total | | 2000 | 2000 | Total | | 3800 | 3800 |
| Income Statement | | Cost | Income | Income Statement | | Cost | Income |
| Interest rate income | | | 180 | Interest rate income | | 360 | 10% |
| Financing cost | 90 | | | Financing cost | 180 | | 5% |
| Operational cost | 60 | | | Operational cost | 120 | | 33% |
| Net operating income | 30 | | | Net operating income | 60 | | 17% |
| Cash flows | | Outflow | Inflow | Cash flows | | Outflow | Inflow |
| Profit from operations | | | 30 | Profit from operations | | 60 | |
| Dividend paid | 30 | | | Dividend paid | 60 | | 30% |
| Change in deposits | 300 | 300 | | Change in deposits | 300 | 300 | |
| Change in financing from banks/bonds | | | 300 | Change in interbank financing (or bonds) | 300 | | -300 |
| Change in lending | 300 | | | Change in lending | | | |
| Change in cash and reserves | 0 | | 0 | Change in cash and reserves | 0 | | 0 |
| Balance Sheet 31/12 | | Assets | Liabilities | Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | 200 | | Cash and reserves at central bank | | 200 | |
| Deposits from customers | | | 1000 | Deposits from customers | | 2300 | 300 |
| Borrowing from others (banks and bonds) | | | 1100 | Interbank financing (or bonds) | | 1300 | |
| Loans to customers | | 2100 | | Loans to customers | | 3900 | 300 |
| Equity | | | 200 | Equity | | 500 | 12.2% |
| Total | | 2300 | 2300 | Total | | 4100 | 4100 |

Figure 29: Accounting model of funding with interbank lending - between two banks with unequal lending growth results in negative operative outflow of the bank funded with borrowing

To explain how the cash flow in banks can be negative, the cash flow of the two banks is illustrated in Figure 29 above through the balance sheet change. In this version, only one out of the two banks lends to its customer. The borrowing customer of Bank 1 spends the loan by buying from one of the customers in Bank 2. This creates a negative operative cash flow in Bank 1 and a positive operative inflow to Bank 2, which has not provided any loans to its customers this period. The lending growth flows out of the first bank but cannot be netted with an opposite flow of

spending from a customer in the other bank, as shown in the previous model. New financing is now needed to fund the outflow of the newly created cash when the customer of the first bank spends it and the receiver of the cash is a customer in the other bank. Lending between the banks solves this financing need so no new savings are needed for the lending. But a real change occurs in the cash flow of the first bank, causing negative operative cash outflow to be balanced with a financing inflow borrowed from the other bank. The second bank has not made any loans to customers but instead has now increased its balance sheet by lending to the first bank.

This threefold simple accounting model building, of the *Lending*, *Netting* and *Funding*, is a result of synthesizing the empirical studies by using the theoretical framework. The goal is to illustrate the cash flow issues of banks. It is a simplified banking and accounting model, and results have to be taken one step further to explain the total negative flow in a region and over decade. In the case of the four big banks in Sweden, their combined negative operative cash flow is not yet answered. When thought of in light of the three models above, the explanation can come from foreign banks and financing of the negative operative cash flow during the decade can have come from abroad. Lending in other countries could also explain part of it. When the cash flow statements fail to show the facts of where cash is generated and spent, their limited usefulness is the result. This also explains why the statement is not used.

This contribution of the research provides arguments for the conclusion of this thesis that the reporting of banks' in- and outflow of cash needs to be redesigned in order to grasp the *funding constraints* of these flows. This redesign will have to be a part of a new accounting regime for banks that is being called for by others as well. The conclusion does not include how it shall be designed, but instead underpins that it needs to be done.

Cash flow statements not used in banks

The final study with the bankers' interviews presented the main contribution to the results showing that they do not use the cash flow statement. This part of the research showed strong results with the same answer from all those who were asked: the bankers do not look at the cash flow statement of banks at all. They had not been asked about the statements before, either. This common answer confirms the research question, but does not provide an answer as to why it is not used.

It is an important input for the call for a new accounting regime for banks to have it confirmed that *users* of financial statements do not *use* the cash

flow statements of banks. This is contrary to what is stated in the standard. For practitioners in accounting this contribution confirms that when the accounting standard discusses 'users', these are not users of a bank's cash flows. But the results of the study also single out items that have been used instead of cash flow statements. These substitutions provide some indications of features that need to be considered for the new undeveloped accounting regime for banks. When this new accounting regime is made, it will have managerial implications for bankers.

These indications from the interviews regarding *what the bankers used instead of the cash flow statement* do not provide a homogeneous answer as a result. Some of the bankers referred to balance sheet items while others pointed to lines in the income statement. Many of them mentioned items outside of the financial statement. The analysis of the interviews mapped out the different substitutes that are used for gathering information instead of the cash flow. The previous chapter provides these results, which can contribute to further research in developing the regime.

It can be concluded from this part of the research that bankers use a variety of other accounting items and non-financial information substituted for the cash flow statement in banks. These accounting items are differently viewed depending on the position and professions of the banker. So the question of why they do not use the cash flow statement can have a different answer based on the banker's different function and position in the bank. Comparability between banks and conformity with the purpose of the accounting standard are therefore lost. The various answers indicate different views on the specialty of banking operations, and offer diverse viewpoints without providing a single, uniform substitute to use instead of the cash flow statement itself. It also does not provide a single, uniform answer as to why the statement is not used.

Every bank knows their daily cash in- and outflow by the end of the day and this information is available in the accounting system when it is closed in the evening. It is an inherently important feature of the payment system. At the beginning of each day, every bank does not know exact numbers for all expected cash flow amounts, but historical statistics allow for estimation, in addition to all contractual cash flows which are known. The clearing with the central bank and other banks covers the remaining fluctuation of each day.

But the common arguments of bankers both in the interview study and in the comment letters from 1986 and in 2009 support why the cash flow is not used. The key point of the bankers has been that banks are different

from non-financial firms and that the cash reporting of banks is not useful because of the specialty of cash itself.

The contribution of this thesis could alter the views on the cash flow accounting standard, and get some attention from standard setters to reconsider if different measures are needed for the cash flow in banks. The decision was made by a narrow voting margin originally, and new evidences are provided here. The simple accounting models of lending netting and funding activity in the two previous sections had not been developed prior to the interviews and the empirical results of the negative cash flow analysis have not been explicitly presented before. These results can now contribute to the debate that is needed in accounting and banking about useful cash flow statements for banks and can provide an overview to start designing a new accounting regime.

This thesis started from the base assumption that financial accounting information is, or at least should be, reliable. The perceived reliability was questioned when statements from well-performing banks, compared over many years, showed negative operations in the cash flow reports. In accounting theory no support was found explaining the special issues of cash flow in banks or the credit creation. But studying the history of the accounting standard resulted in finding criticism from banks that was ignored by a majority of the standard setting board. Presenting the negative numbers over the previous decade and asking bankers about the cash flow resulted in finding out that none of the bankers has noticed the negative flow and an explanation for the numbers was not readily available. This supports the conclusion that a new accounting regime for financial accounting in banks is needed and that it should include a new way of looking at banks' cash flow, incorporating the credit creation.

The answer to the research question is that the cash flow statements of banks are not used because the existing accounting standard does not provide room for the functioning of cash flow in banks. Users do not get reports that can account for credit creation of excess debt during periods of lending growth.

The money view is a key element in strengthening these measures of the flow between banks, netting and funding between the connected balance sheets, combined with liquidity measures. Those key elements of the credit creation, which are missing from the current standard, can explain why the cash flow statements are not used. The cash flow between countries is also a missing link. These same elements can also be the building blocks of a new accounting regime that is needed for banks.

9.3 – Theoretical contribution

The empirical findings of the four studies provided answers to the research question in the previous part of the chapter. The answer has managerial implications for the practical fields of banking and accounting. The thesis results also have implications for studies of business administration and within the academic fields of bank management and financial accounting. This section discusses the theoretical contribution of this thesis.

During the last few decades it has been customary to view banks as intermediaries taking deposits from the savings of those with excess capital and lending it to those in need of financing. This model of intermediation is problematic, and is not sufficient to understand what actually takes place with borrowing in the world of banking, as the accounting model showed in the previous section. Banking theory formulates the role of banks as providing liquidity and transforming risk (Allen & Saunders, 2012; Strahan, 2012; Berger et al., 2012). In an accounting perspective, a bank is where the cash is kept, listed in the first or last line of assets on the balance sheet. The banks also have a role in running the payment system. From a finance point of view, banks have to deliver return on equity and growth to make investors satisfied, and are evaluated on the stock market in the same manner as other listed firms.

The lending activity of banks is seen as production in the worlds of accounting, banking and finance. But this is problematic, and the economic idea of bank intermediation is based on a generalization that lacks representation in reality-backed facts. Exemplifying the difference between banks and non-financial firms, from a credit creation perspective, is a key part of the contribution of this thesis. The production of a loan is theoretically funded with itself, as the financing of the lending is the deposit lent and is produced at the same time as the loan contract is signed. This does not fit well to the standard cash flow statement. Revision of how financial accounting theory deals with banks is necessary. This thesis shows how the current structure of cash flow statements for banks is based on the misconception of how banks created money that BoE has clearly pointed out (McLeay et al., 2014).

This thesis illustrates with accounting model the lending activity that is not a cash transfer to borrowers from those with excess savings. The three step model provides a theoretical illustration of how the credit creation in two banks takes place in an accounting setting of lending that can be netted and funded. The old idea that credit creates cash deposits was discreetly pointed out by a few practicing bankers in the 1986 letters and was a

known fact in economic theory historically long before. The idea that banks *create cash ex nihilo*—out of thin air—through their lending activity is now again openly acknowledged, as can be seen for example in recent writings by Sims (2011, 2013), Turner (2013a, 2013b, 2014) and Borio (2012). When a loan is provided to a customer by a bank, it becomes a new asset and the deposited amount of the loan is a new liability on the other side of the bank's balance sheet, as illustrated in the accounting model in the previous section. No saving is needed prior to lending. These facts need representation within the field of accounting theory with regard to banks.

The theoretical framework used in this thesis has its origins in the fields of economic history and monetary economics, called the *money view perspective*. It was invoked to understand the financial crisis, but turned out to be helpful in the analysis of the banks in this thesis as well. The framework provides tools to clarify the contradictions between banking operations and cash flow accounting by adjusting the modern money view perspective from a focus on central banking to the level of traditional banking activity of lending.

The modern money view perspective provided a lens for understanding the financial crisis (Mehrling, 2011). But when moved from the central banking to lending activity in bank accounting, it helped to solve the question of the negative operative cash flow. It also helps to understand the netting of flow and the lending between banks, as illustrated in the different versions of the accounting model in previous sections.

The research problem of why the standard statements are not used in banks was partly solved through the explanation given in the last interview, together with the comments from the letters and further analysis of the financial statements. In order to grasp the coherence of the contradictions and differences in banks, an unconventional theoretical framework was needed. When the view on money becomes endogenous instead of exogenous, it is much simpler to accept the facts illustrated in the negative numbers of banks' operations. The money view was used to help solve the problem and provided the theoretical lens needed to understand how the negative numbers could be coherent when connecting the balance sheets of the banks for the model building.

The theoretical contribution of this thesis has implications for both banking and accounting by adjusting the *money view perspective* to accounting practice in banks. This perspective provides an intellectual lens to understand how deposits created with loans on interlinked balance sheets in banks can potentially result in funding constraints if netting from equal credit growth does not exist. The modern money view

has described the important elements of the current financial system as money market funding of capital market lending. This has been reduced to a simple model of banking operation of deposit funded lending, in two banks, where external financing is limited to lending between the banks or with netting of flows.

The theoretical framework of this thesis changes the modern money view and moves its focus from economics of money market funding of capital market lending, to the field of accounting in a simple banking setting. This brings up important points regarding banking from Minsky (1967, 1975, 1982, 2008a) that have been missing in accounting and accounting theory. In this transfer, the level of analysis is changed from Mehrling's (2011) central bank economics focus to the individual bank and the accounting focus on the lending activity. This modified money view offers a theoretical lens to see features of a bank's negative cash flows in an understandable way that is currently not provided in accounting theory books. It is necessary to connect the operations of cash with interbank lending, money markets, and capital markets as well as the central bank funding and reserves. This is needed to illustrate the coherence of the credit systems where banks operationalize their cash flows through their interconnected balance sheets.

In this thesis, the money view has been used as theoretical tool to understand the practical cash flow of a few of the biggest banks in a small regional banking system. The contribution on a theoretical level is to show that the money view perspective can be used in the accounting world for banking. The modified money view can provide a connection between banking and accounting, just as the modern money view connects the world of economics and the world of finance. The modern money view is the present point in between the economics of the past and the finance of the future. With the modified money view, it is the cash flow effect of the bridge between the 'outflow' of banks lending and the 'inflow' inherently created in the accounting of the lending activity, through mutual funding of netting or interbank lending (see Figure 28 & 29). The money view, on this level of bank accounting, contributes to this bridge between banking and accounting by theoretically supporting the model that represents the facts found in the negative financial statements.

This thesis also provides a connection between the practical and theoretical fields of accounting in banks. This research investigated the practical and theoretical context of the conceptual framework for accounting standard. This is derived from the fact that banks follow the accounting standard for preparing the statement of cash flows and report

negative cash flow from operations for over ten years in statements that are not used. Those banks would not be granted new loans if they were non-financial firms, but in practice they are fully funded and operating well. This implied contradiction displays a special feature in the framework that needs to be better spelled out. Allowing financial firms a different classification, as the standard does, is not enough to make the reader understand the credit creation that generates negative operative cash flow during credit growth. This leads to the conclusion that the accounting standard needs to be updated together with a restructuring of the cash flow statement in order for it to function in banks. As it currently stands, it is not used and thereby the facts support Haldane's (2011b) call for a new accounting regime for banks.

One necessity for this understanding is to accept that banks *create cash* by providing *loans* or, put differently, that private banks hold *credit instruments* by *issuing deposits* on their balance sheet (Mehrling, 2013) and not the other way around. This turnaround was a critical factor in solving the research problem, and it is a fundamental change that needs to reach accounting theory. If that can be the theoretical contribution of this thesis, then it has been worthwhile. Recent BoE support is an important backing.

This thesis draws on both the empirical evidences and the theoretical framework. An important element is to incorporate the *funding constraint* of banks (Minsky, 1954, talks about the *survival constraint* of firms and Mehrling, 2011, uses the central banks' *reserve constraint*). This constraint is changed after lending has created a deposit on the balance sheet of a bank and the cash flows to another bank, where it appears on the balance sheet when the customer uses the loan. Modelling more than one bank shows how part of the constraint is solved with netting of flows in opposite directions.

This thesis uses the theoretical framework of the modified money view to connect banking and accounting and explain the credit creation of cash in lending growth with a simple accounting model of two banks. This explains theoretically how negative operative cash flow is sustained. Then, when the *funding* between banks occurs, either the cash flow *constraints* (of funding) can arise or more interbank lending eases the flow.

When most banks are increasing lending, the credit growth occurs without a need for much funding due to netting. The constraints arise when banks have different speeds of credit growth or when the contraction starts and questions of survival make funding between the banks unsecure. During periods of credit growth, the banks have

negative operative cash flow, which turns positive when liquidity buffers and reserves are increased.

The theoretical challenges in this field continue, and for example regard the gross flows, cross-border capital flow, interbank lending, netting between banks, and credit destruction when loans are repaid. But the first step is resolved by accepting the accounting model of credit creation of cash deposits.

9.4 – Reflections on the conclusions

At the end of the research process, the researcher has diverse reflections on the results. There are more possible reasons for why the cash flow statements are not used in banks than those, which comprised the answer to the research question. The answer previously given in this chapter concludes this thesis, but also calls for further research listed in the last part of the chapter. Additional banks must be investigated and new time periods covered for further analysis. It is also necessary to go back to the bankers and present the findings of this study and get feedback for the next steps.

There is potential for both a wider scale and a deeper scope of the analysis, looking at total capital flows in a specific countries or regions to grasp the globalization of finance. Nevertheless, the current results give an answer to what makes possible the negative operative cash flow over a decade and why the Scandinavian bankers do not use these statements.

The initial motivating factor for this thesis was drawn from the financial crisis and the bankruptcy of big banks had an impact. One reflection is that more focus could have been put on the predictive power of financial statements and the signalling effect of the cash flow. The predictability of the bankruptcy of banks was not relevant when their cash flow was not understood. More work needs to be done here, in line with the review of Kumar & Ravi (2006), which has to be renewed after the bankruptcies of many big banks since the crisis started in 2007 and adjusted to the lending growth, credit creation and capital flows.

The claim that nobody uses the cash flow statements has constantly kept the researcher wondering if this was the right or wrong issue to study. On the one side, if it is not used is there any use for it, but on the other if it must be done according to the standard then it should have some use. This is considered a healthy doubt, and was useful in the research quest to find the answer. The result of this thesis looks for a balance between both of these extremes.

It is possible to view the accounting standard for cash flow in banks in such a way that no problems arise from negative operative cash flow, as long as financial markets are ready to fund it and total cash flow is then positive. That might have been the view of the users who did not use the statements. This should then be explicitly stated and explained, because the standard mentions specific issues for financial firms versus non-financial firms without taking up negative operations. The standard illustrates different examples with financial and non-financial firms and discusses how the firms can apply the standard differently, but no comment is made regarding credit creation or sustained negative operational flow during lending growth. Neither is any comment included in the cash flow standards regarding different operations nor is there a note in the annual reports explaining the negative operative flow.

Questioning if the standard is compatible or not for both non-financial and financial firms, has influenced this thesis in both process and results. But due to the methods used, the reflection is that it was necessary to first find out why the statement is not used and how it works before taking on the study of the compatibility and providing complete solution. It is even possible that the new accounting regime that is needed for banks, incorporating the cash flow of credit creation, will have to be applied to more than just financial firms. One reflection after the study is that all firms can be seen as financial firms, in a specific way, and furthermore, non-bank financing has become increasingly more common.

The researcher reflected during the process if the interview questions should have been put forward in a different manner. It is possible that readers are sceptical about the method of showing negative numbers in a graph and asking for explanations. But as this was repeatedly done and in meetings with a variety of bankers, openly asking for help in understanding how the cash flow works, and why the operations flows are negative, it is not considered to have been misleading. When the explanation was first given in the last interview out of sixty, it was simple and clear that negative flow came from lending growth. The danger is then that readers think this should have been obvious from the beginning, and in previous interviews. But such was not the case, and future research will have to find out how the bankers view the cash flow when presented with the results of this thesis and the explanation of the credit creation of cash.

9.5 – Suggestions for further research

The final point in this thesis is that further research is needed regarding banks' cash flows and relevant statements as well as with regard to the accounting regulation of banks.

The results of this thesis provide a diverse scope for future research, but here three main directions are pointed out. First, a compatible *regulation* of banks and their accounting needs to incorporate credit creation and be in line with developments in global finance. Second, useful *measurement* of cash flows and liquidity in banks needs a clear definition and more research focus. Third, the required *changes* of accounting standards, banking regulation and supervision are processes that call for research attention, not only prior to and afterwards but also during the change.

The call for a new accounting regime for banks is a consequence of the results of this thesis regarding the cash flow statements that are not used, and more research is needed in order to formulate how the regime should be designed. This change in accounting regime has been called for (Haldane, 2011b) as a consequence of the lack of common financial language in light of the financial crisis (Haldane et al., 2012). Compatible *regulation* as part of a new accounting regime for banks has to consider the development in global finance. Different reports, previously mentioned, on the financial crisis, financial regulation and on financial stability and banking provide a good starting point (for example Turner, 2009; Levin, 2011 and Liikanen, 2012; see also Wilson et al., 2010 and Goddard et al., 2009).

A minimum requirement, irrespective of a new accounting regime, is to manage *measurement* and classification of the cash flow activity for banks within the current accounting regulations. This is necessary to make sure that inflow and outflow of deposits are classified consistently and together with lending. Funding needs to be classified as financing activity in the same manner in all banks. This requires further research and facilitating cooperation between banks and authorities. Another step, can be demanding that the direct method be used for preparing the cash flow statement, as originally intended, also requires research. The example of a bank from Norway in this thesis shows no problem, and rather shows benefits, with using the direct method. Finally, if the cash flow statements of banks are to be used, it requires regulatory change—ultimately a new accounting regime for banks—and change in how cash flow is measured, statements prepared, and credit creation accounted for.

The focus in this thesis has been cash flows in banks, but there are other accounting *measurements* that also need further investigation. The quality of assets and valuation of financial instruments indicate some pressing issues that were not included here. Earning measurements as well as impairments and measures of hedges and credit losses are accounting fields that could also be included. The earnings measurement and fair value were outside the scope of this thesis, but as Laswad & Baskerville (2007) point out, the relation between cash flow and historical earnings, which has been extensively researched, needs to be updated with the effects of fair value accounting. Furthermore, the effect of the financial crisis on bank earnings is also a potential research area together with the focus on liquidity and asset quality.

The liquidity requirements for banks' operations are already being *changed* and now implemented with global Basel III *regulation* after the financial crisis and need further research related to the cash flow *measurement*. The international transfer of money and capital flows between countries is another field of relevance for expanding the research on cash flow in banks. The connection of cash flow accounting in banks and capital flows on a national level is considered important future research areas focusing on foreign funding of banks. This can be investigated both on a banking level and at the level of central banks and financial supervision. Research on cross-border capital flows also is a key issue in this respect, and the recent work of Turner (2013a, 2014) can guide the way forward.

Recently, the Bank of England officially acknowledged that most of the money in the economy is created by commercial banks making loans (McLeay et al., 2014). That is a very good starting point, and in order to continue correcting the misconception of the money multiplier, more research of cash flow statements in banks is needed.

Epilogue

In the final chapter of this thesis a new accounting regime for banks is called for as a result of the answer to the research question. It requires further research and consultation with practitioners before the proposal can be presented. This thesis provides insights that cash flow accounting in banks is not sufficient as it is and shows that it has to be reformulated in order to be useful.

The urgency of rethinking business and economics has been much debated since 2008. Calls for new models in banking and finance are also being raised more frequently. But little has been done regarding new ways of thinking about accounting of cash in banks. This thesis can shed some light on the cash flow in banking and help supporting the call for a new accounting regime for banks from Haldane (2011b).

The modern money view of Mehrling (2011) modified here for the level of commercial banks' cash flows marks the path of future research to improve the accounting regime of banks. That research has to bridge the world of banking and accounting and to investigate the interconnected payment systems through cash flow statements and regulatory regimes, involving legal aspects of finance and economics. Joint work is needed to build a proposal for a revised accounting of cash flow in banks.

The theories presented in the first part of this thesis were broadly defined to fit the banking context, and the theoretical framework of the modified money view used the level of accounting in banks provided a vital perspective for tackling the research problem. This interdisciplinary approach was a key element in untangling the inter-dependences of banking and accounting in order to get to the cash flow issues. Furthermore, the reflexivity theory of Soros (2013) helped in adjusting the aspects of the study towards practice.

The empirical part of the thesis was carried out with research focused on practice, after consuming various theories, and by using multiples methods in four different studies: First, studying the current accounting regulatory framework; second, studying bankers' perspectives on the framework in the comment letters both from twenty-five years ago and the more recent ones as well; third, studying the financial statements over the past fourteen years; and fourth, investigating the bankers' opinions of the cash flow statements and why they are not used. More theories were

consumed after the empirical work in the autumn 2011 in order to solve the research problem and straighten out both the negative numbers and the credit creation, that was not as clear then as it is now.

It has been shown in this thesis that the statements of cash flows for banks made within the system of the international accounting standards need to be reconsidered and potentially reformulated. Existing conceptual framework for accounting statements of cash flows as applied to banks results in prepared statements that are not used. Empirical facts show negative numbers from credit creation of lending growth that are not explained within the existing framework.

The conclusion is that a new accounting regime for banks is needed, where cash flow is considered with relation to the credit creation of cash in lending growth. Better liquidity measures of financial institutions are also needed. The problem of cash being the *object* and *unit* of measure has to be overcome and the separation of different flows has to be accounted for. Rethinking how the regulatory framework for the global financial system and international capital flows are interrelated and must be included with the changes in order to be useful. The cash flow issues addressed in this thesis are a part of a wider necessary overhaul of the financial system.

Even now, there are still many pundits who do not accept the idea that the recent string of economic crises demonstrates a problem with the system. (Krugman, 2000: 158)

'Even now'—fourteen years after Krugman wrote this, and six years into the financial crisis—this acceptance of a systematic problem continues to be debated. Minsky already thought over three decades ago that:

The most significant economic event of the era since World War II is something that has not happened: there has not been a deep and long-lasting depression. (Minsky, 1982: 5)

It is still possible that the current crisis will not have to develop into this *'long-lasting depression'*. But it requires an acceptance of the analysis that the financial crisis demonstrates a problem with the financial system—including its accounting system. We are still dealing with the unresolved consequences of *'too much debt'* and *'too much of wrong capital flows'* (Turner, 2013b, 2014). And we need accounting tools to deal with these.

During the 50 years between the 1930s depression and Minsky's book *Can "It" happen again?* the world economy avoided "It" for different reasons than those observed in the 25 years following the book's publication in 1982. The latter period was the period of deregulation and increased financialization. During the same time period, cash flow statements

became obligatory for banks as well as non-financial firms. Minsky's description of the financial nature of the economy still holds:

Cash flows to business at any time have three functions: they signal whether past investment decisions were apt; they provide the funds by which business can or cannot fulfill payment commitments as they come due; and they help determine investment and financing conditions. In a cash-flow analysis of the economy, the critical relation that determines system performance is that between cash payment commitments on business debts and current business cash receipts due to present operations and contract fulfillment. This is so because the relation between cash receipts and payment commitments determines the course of investment and thus of employment, output and profits. (Minsky, 1982: 9–10)

Inspired by Minsky, and the Mehrling way of looking at the world, the journey in this thesis has been through the world of banking and the world of accounting using the *money view*. It has trespassed on the world of finance, focusing on the expected future cash flows, and on the world of economics, focusing on the past in a balanced view on general equilibrium. This world is not in equilibrium but is '*inherently instable*', and the *money view* helps to focus on this unsteady present of current cash flows that are constantly changing. The cash flow statements of banks are not used, but need to be adjusted to, precisely that changing present. For that we need to set up a new accounting regime for banks. The practical money creation in commercial banks has to be acknowledged in that respect, in line with Bank of England's recent statement:

Money creation in practice differs from some popular misconceptions — banks do not act simply as intermediaries, lending out deposits that savers place with them, and nor do they 'multiply up' central bank money to create new loans and deposits. (McLeay et al., 2014: 14)

The next step is to follow Minsky's vision and search for a way to better account for the critical relations between committed cash payments of debts and current cash receipts in banks as well as account for the credit creation operations. The challenge will also be to separate the flows.

Reykjavík, April 2014

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- IFRS-FASB SD (2010) *Staff Draft of Exposure Draft IFRS X Financial Statement Presentation* 1 July 2010 <http://www.ifrs.org/Current-Projects/IASB-Projects/Financial-Statement-Presentation/Phase-B/Documents/FSPStandard.pdf> 9 April 2013
- IFRS (2010) *About the Staff Draft (IFRS-FASB SD 2010)* <http://www.ifrs.org/investor-resources/2010-perspectives/september-2010-perspectives/Pages/fsp.aspx> 10 September 2010
- IFRS (2011) *Projects Work plan for IFRS Financial Statement Presentation Phase B Replacement of IAS 1 and IAS7 Paused* <http://www.ifrs.org/Current-Projects/IASB-Projects/Financial-Statement-Presentation/Phase-B/Pages/Phase-B-Replacement-of-IAS-1-and-IAS-7.aspx> 6 March 2011
- IFRS (2014) *Who we are at what we do - about IFRS & IASB* (IASB, London) http://www.ifrs.org/The-organisation/Documents/WhoWeAre_JAN-2014_ENG.PDF 22 January 2014

Comment letters used for direct reference:

- CL 1986, Comment Letters sent to FASB, no, page no. from compendium & sender:*
- | | | |
|---------------------|---------|--|
| CL 1986 no. 59: | 264-5 | Hawkeye Bancorporation |
| CL 1986 no. 67: | 283-5 | First Charter National Bank |
| CL 1986 no. 81: | 303-12 | First National Bank of Chicago |
| CL 1986 no. 98-98A: | | 335-7 Old National Bank in Seattle |
| CL 1986 no. 101: | 340-352 | William J. Odendahl, Certified Public Accountant |
| CL 1986 no. 153A: | 455-7 | First Interstate Bank of California |
| CL 1986 no. 349: | 1035-8 | United Virginia Bankshares |
| CL 1986 no. 406: | 1193-5 | Manufacturers Hanover Corporation |
| CL 1986 no. 431: | 1271-4 | Price Waterhouse |
| CL 1986 no. 432: | 1275-8 | Ernst & Whinney |
- CL 2009 Comment Letters to IASB/FASB: Reference no. 1630-100, letter no. & sender:*
- | | |
|------------------|--------------------------------|
| CL 2009 no. 86: | Commonwealth Bank of Australia |
| CL 2009 no. 144: | US Bancorp |
| CL 2009 no. 163: | Morgan Stanley |
| CL 2009 no. 168: | Deutsche Bank |
| CL 2009 no. 170: | AIB |
| CL 2009 no. 174: | BNP Paribas |
| CL 2009 no. 187: | IBFed |
| CL 2009 no. 193: | HSBC |

Annual Reports

The annual reports of each company are public records, and are available under the investor relations part of each web site, main links are provided below.

In all cases the Annual Report (AR) of the group is used:

Ålandsbanken, (AB, AR) 1999-2012, www.alandsbanken.ax

Castellum, 1997-2012, www.castellum.se

Danske Bank, (DB, AR) 1999-2012, www.danskebank.com

DNB, (DNB, AR) 1999-2012, www.dnb.no/en

Fastpartner, 2009, www.fastpartner.se

Handelsbanken, (SHB, AR) 1997-2012, www.handelsbanken.com

Handelsbanken, *Highlights of the Annual Report* (SHB, AR-H) 2011

Risk & Capital Management – information according to *Pillar 3* (SHB, AR-P3) 2010

Kaupthing Bank, (KB, AR) 1997-2007, www.kaupthing.com & www.vefsafn.is

Lehman Brothers Holding, (LB, AR) 2001-2007, www.lehman.com & www.sec.gov

Nordea, (Nordea, AR) 1999-2012, www.nordea.com

OP Pohjola Group, (OP, AR) 1999-2012, www.op.fi

(Pohjola Group 1999–2003 & OP-Pohjola Group 2004–2012)

SEB, (SEB, AR) 1999-2012, www.sebgroup.com

Swedbank, (SB, AR) 1999-2012, www.swedbank.com

Laws and Regulation

Dodd-Frank Wall Street Reform and Consumer Protection Act (2010)

www.sec.gov/about/laws/wallstreetreform-cpa.pdf

European Union – Accounting: http://ec.europa.eu/internal_market/accounting/

European Union – Legislation: http://europa.eu/eu-law/index_en.htm

Glass Steagall Act known as the Banking Act (1933)

<http://fraser.stlouisfed.org/publication-series/?id=991>

Sarbanes-Oxley Act (2002) <http://www.sec.gov/about/laws/soa2002.pdf>

Securities Act (1933) <http://www.sec.gov/about/laws/sa33.pdf>

Securities Exchange Act (1934) <http://www.sec.gov/about/laws/sea34.pdf>

Reports on the Financial crisis

- following are listed above under the name of the chairperson, even though not being the sole author:

Angelides, P. (2011) *The Financial Crisis Inquiry Report* (US Government)

Larosiere J. d (2009) *The high level group on Financial Supervision in the EU* (EU)

Levin, C. (2011) *Wall Street and the Financial Crisis: Anatomy of a Financial Collapse* (US Senate)

Liikanen, E. (2012) *High-level Expert Group on reforming the structure of the EU banking sector* (EU)

Stiglitz, J. E (2009) *Report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System* (UN)

Turner, A. (2009) *The Turner Review: a regulatory response to the global banking crisis* (FSA, UK)

Vickers (2011) *Independent Commission on Banking – Final Report Recommendations* (ICB, UK)

Volcker P. A. (2009) *Financial Reform – A Framework for Financial Stability* (G30)

Appendix 1: Balance sheets of central banks

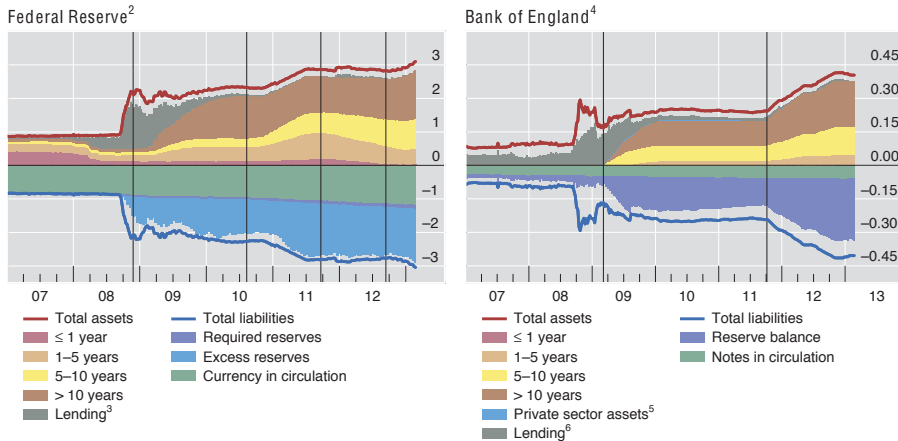
The financial system of the world almost froze in late 2008 but was restored by substantial actions of the main central banks that provided support with their balance sheets.

The total size of Fed balance sheet increased threefold (see Figure below). Similarly the balance sheets of the ECB and BoE doubled to quadruple, to save the financial system.

Central bank balance sheets¹

In trillions of national currency units

Graph 1



¹ Breakdown of securities held outright refers to remaining maturity. The vertical lines represent the launch date of each asset purchase programme. For the United States: 25 November 2008 (LSAP 1), 10 August 2010 (LSAP 2), 21 September 2011 (MEP) and 13 September 2012 (LSAP 3). For the United Kingdom: 5 March 2009 (APF 1) and 6 October 2011 (APF 2). ² The breakdown of securities held outright by the Federal Reserve includes agency debt and MBS and US Treasuries; face value. ³ Includes repurchase agreements, term auction credit, other loans, Commercial Paper Funding Facility and central bank liquidity swaps. ⁴ The breakdown of the Bank of England assets includes gilt holdings of the Asset Purchase Facility (APF). APF transactions are undertaken by the Bank of England Asset Purchase Facility Fund Limited. The accounts of the Fund are not consolidated with those of the Bank. The Fund is financed by loans from the Bank which appear on the Bank's balance sheet as an asset. ⁵ Includes holdings of sterling commercial paper, secured commercial paper and corporate bonds financed by the issue of Treasury bills and the Debt Management Office's cash management operations and by the creation of central bank reserves. ⁶ Includes sterling reverse repo operations and currency swaps.

Sources: Bank of England; Federal Reserve; Datastream.

Bank of International Settlement Quarterly Review March 2013 (BIS, 2013: 25)

"Since late 2008, the Federal Reserve and the Bank of England have carried out a number of large-scale asset purchase programmes in order to improve financial conditions, revive credit flows and stimulate economic activity." (ibid. 24)

"The programmes have also had a significant effect on the composition of the balance sheets. This has tilted increasingly towards longer-dated assets, with debt instruments of maturity beyond five years dominating the two institutions' asset holdings. The liabilities side of the balance sheets grew through the expansion of bank reserves." (ibid. 26)

Appendix 2: Bankruptcy lists

Moody's list of the biggest bankruptcies of listed companies since 1920:

Largest Moody's-Rated Defaults, 1920-2008

| Corporate Family | Default Volume (US\$ Mil) | Default Year | Specific Industry | Domain |
|-------------------------------|---------------------------|--------------|------------------------------------|----------------|
| Lehman Brothers Holdings Inc. | \$120,483 | 2008 | FIRE: Finance | United States |
| Worldcom, Inc. | \$33,608 | 2002 | Telecommunications | United States |
| GMAC LLC | \$29,821 | 2008 | FIRE: Finance | United States |
| Kaupthing Bank Hf | \$20,063 | 2008 | Banking | Iceland |
| Washington Mutual, Inc. | \$19,346 | 2008 | Banking | United States |
| Glitnir Banki Hf | \$18,773 | 2008 | Banking | Iceland |
| NTL Communications Corp. | \$16,429 | 2002 | Media: Broadcasting & Subscription | United Kingdom |
| Adelphia Communications Corp. | \$16,256 | 2002 | Media: Broadcasting & Subscription | United States |
| Enron Corp. | \$13,852 | 2001 | Energy: Electricity | United States |
| Tribune Company | \$12,674 | 2008 | Media: Diversified & Production | United States |

Moody's Global Credit Policy – Annual Corporate Default Report February 2009.

<https://www.moodys.com/sites/products/DefaultResearch/2007400000578875.pdf>

Euromoney 5 March 2010 article “The failed state of Iceland”:

How big is big?

Failure of three largest Icelandic banks superimposed on the largest US corporate bankruptcies

| Rank | Firm | Year | Type | Assets (\$bln) |
|------|--------------------|------|----------------------------|----------------|
| 1 | Lehman Brothers | 2008 | Investment bank | 691 |
| 2 | Washington Mutual | 2008 | Savings and loans | 328 |
| 3 | WorldCom | 2002 | Telecommunications | 104 |
| 4 | General Motors | 2009 | Auto manufacturing | 91 |
| 5 | Kaupthing Bank | 2008 | Commercial/investment bank | 83 |
| 6 | CIT Group | 2009 | Bank holding company | 80 |
| 7 | Enron | 2001 | Energy trading | 66 |
| 8 | Conseco | 2002 | Financial services | 61 |
| 9 | Landsbanki Islands | 2008 | Commercial/investment bank | 50 |
| 10 | Glitnir Bank | 2008 | Commercial/investment bank | 49 |

Article by Elliot Wilson, source of the table: Financial Supervisory Authority in Iceland.

<http://www.euromoney.com/Article/2406144/The-failed-state-of-Iceland.html>

Appendix 3: Interviews list

In order to make the interview list anonymous the bank name has been removed and the titles made as uniform as possible. The banks that were visited were: Nordea, Handelsbanken, SEB, DNB, Danske Bank, OP and Ålandsbanken. In addition the Swedish Central Bank, the Swedish Debt Office and the Financial Supervisory Authority of Sweden were also visited. Discussion took also place with representatives from the Swedish Bankers Association, a global rating institution, bank analysts from

| Title of person interviewed | 2011 |
|--|--------|
| Chairman of the Board | 22-Aug |
| Head of Treasury | 23-Aug |
| Head of Group Accounting | 23-Aug |
| Executive Vice President - Merchant banking | 23-Aug |
| Head of Investor Relations | 23-Aug |
| Accounting IFRS specialist | 24-Aug |
| Internal Auditor | 24-Aug |
| Senior Advisor to the CEO | 24-Aug |
| CRO - Head of Group Risk Control | 25-Aug |
| Group Financial Risk Control | 25-Aug |
| Senior Advisor - Group management | 25-Aug |
| Financial Journalist | 25-Aug |
| Senior Advisor - Finance | 29-Aug |
| Senior Executive Vice President | 30-Aug |
| Managing Director | 30-Aug |
| Chief Economist | 30-Aug |
| Financial Journalist | 30-Aug |
| Head of Audit | 31-Aug |
| Senior Credit Manager - Group Credit | 31-Aug |
| Head of Banking Analysis Division | 31-Aug |
| Head of Liquidity Unit | 31-Aug |
| Director | 01-Sep |
| Senior Advisor - CRO | 02-Sep |
| Financial Journalist | 05-Sep |
| Researcher Analyst | 05-Sep |
| Head of Risk & Capital management - Treasury | 06-Sep |
| Head of Risk Management - Group Risk Center | 06-Sep |
| Group Supervisor | 06-Sep |
| Investment Analyst | 06-Sep |
| CFO | 07-Sep |
| Head of Credit | 07-Sep |
| Head of Group Liquidity Risk Management | 07-Sep |
| Group Reporting - Chief Accountant | 07-Sep |
| Group Reporting - Accountant | 07-Sep |
| CEO | 08-Sep |
| CFO | 08-Sep |
| CFO | 09-Sep |
| CRO | 09-Sep |
| Executive Vice President - Treasury | 23-Sep |
| Deputy General Manager - Treasury | 23-Sep |
| Credit Research Analyst | 23-Sep |
| Accounting Consolidation | 23-Sep |
| Accounting Control | 23-Sep |

two European banks with office in Stockholm and financial journalists that had been analysing and writing about banks for the Nordic business media. In all cases one person was interviewed at the time, except in three cases where a pair of people were interviewed.

From one bank nine persons were interviewed, seven from two banks, five from one bank, two persons from one bank and one person from two banks. Total 30.

Two board members in banks participated in the interview study, counted as bankers.

Seven banks participated in the main study and one bank in the post-study.

Eleven interviews outside banks were part of in the main study. (43 listed in List 1).

Nineteen more in the pre-studies (List 2).

Additional interviews had been done in the pilot study first late 2010 and the then early 2011, listed in List 2 here below. In all three parts of the pilot study, totally 19 people were talked to, mainly from the banking industry, both during branch conferences, telephone interviews and private meetings. Some were former bankers and others came from companies holding big ownership in a bank or banks. Some had followed the banking industry from outside analysis.

Furthermore, one big Swedish bank that did not accept to participate in the main study opened up for an interview in the first half of 2012. This was with a manager in the finance and treasury function of the bank that had also former experience from other banks. During the same day a governmental institution was also visited. These two interviews were done in a same manner as in main interview study, starting with a presentation of the numbers. Nothing different came out of these interviews and they were not included in the analysis of the main study.

Summary over the main interview study:

21 interviews in three Swedish banks
 11 interviews in Swedish institutions
 11 interviews in other 4 Nordic banks

Nationality of interviewed bankers:

Swedish 20
 Norwegian 5
 Finish 3
 Danish 2
 Ålandish 1
 Icelandic 1

Number of people in main interview study:

Interviewed bankers: 32 (4 female/28 male)

Non-bank interviews: 11
 (4 female / 7 male)

Total main interviews: 43 in 40 meetings
 (27 in banks / 13 others)

Additional interviews in three pilot/post studies: 19 persons, List 2 (mostly male Swedes)

| Pilot study part I | | 2010 |
|--|--|-------------|
| Financial Advisor | | 21-Sep |
| Former Bank Manager | | 15-Oct |
| Head of Sales and Marketing in Bank | | 16-Oct |
| Business Manager in Bank | | 20-Oct |
| Pilot study part II | | 2011 |
| Former Bank Manager | | 3-Mar |
| Bank analyst | | 11-May |
| CFO in a Nordic part of Global bank | | 11-May |
| Treasury department | | 11-May |
| Former CEO in a Bank | | 11-May |
| Business Development | | 12-May |
| Communication manager in Bank | | 12-May |
| Risk Analyst | | 12-May |
| Partner in banking group of Audit firm | | 12-May |
| Business Development in Bank | | 12-May |
| Former Head of Treasury | | 31-Aug |
| Former Banker | | 2-Sep |
| Board member in a Nordic bank | | 8-Sep |
| Post study part III | | 2012 |
| Manager Group Treasury | | 12-Jan |
| Liquidity analyst | | 12-Jan |

Pilot study:

Prior to the main interview study, pilot study was done in two parts, informal one in autumn 2010 and in the spring of 2011 using parts of the interview guide and some of the interview questions prepared for the main study. During the main interview study in the autumn of 2011 three interviews were grouped as pilot study interviews. After the main interview study two additional interviews were done early 2012, these are considered not as part of the main, but rather for comparison only.

Appendix 4: Interview Questions

Personal Background:

- Can you describe shortly for me your banking career and previous work and education?
- What do you consider the most important qualification for your job?
- How have you gathered competences for a successful work in the banking industry?
- What do you consider illustrative for a good banker?
- Has the financial crisis influenced your professional view in this respect?

Annual Reports in Banks:

- Show the cash flow graphs for the interviewed banks and Kaupthing - and ask for help:
- How can I make sense of the cash flow numbers in a bank?
- Is it not possible to measure and account for the cash flows in a bank?
- Can you help me making sense of the cash flow statements in the main Nordic banks?
- What is or can be used instead of the cash flow statement in the accounting of banks operations?
- How do you measure liquidity?
- How do you evaluate the operational performance and cash flow of a bank?

Liquidity and Funding:

- From your perspective, how can the cash flow statement in a bank be connected to the balance sheet?
- Can you discuss the following issues in relation to cash flow:
- Liquidity management & Loan maturity structure
- Funding base & Treasury: external funding, between banks and through deposits
- Capital strength & Risks for bankruptcy
- How do you see income being generated in a bank? (Discuss the difference of the three main sources, and relate each one to the Cash Flow)

Accounting and Reporting

- How would you describe the cash flow from operations in your bank?
- What would you suggest as best way to analyse other banks cash flow and operations?
- What do you measure in addition to cash flow to understand the banks operations?
- Is there a big difference in internal and external accounting measurements
- if so, can you show me?

- How do you judge or evaluate your bank in comparison to other banks?

- Who is it in the bank that evaluates other banks?
- What is important when evaluating banks (with focus on liquidity and cash)?
- What is the main difference during crisis time compare to normal situation?
- How do you recognize when crisis is coming?
- How is the judgment of market value changed during crisis?
- How do you know if a bank is solvent?
- How do judgments change during crisis?

- What are the other important parts of the accounting statement in a bank?
- How is it different that in other type of firms or institutions (what about governments)?
- What is important to look for in comparison of banks annual report?

- Do you know, if and how the Financial Supervisory Authority uses cash flow statements of the banks? Or if not, what they use instead?

Problem themes from the standard setting process for statements of cash flow

To initiate discussion / dialogue around the historical background of cash flow accounting.
How would you consider / explain problems in bank's cash flow with respect to:

- *Inconsistency in cash flow statements resulting in comparison problems:*
 - *Between banks*
 - *Within bank over time*
- *Classifications problems in banks between activities of:*
 - *Operations*
 - *Investment*
 - *Financing*
- *Methods of cash flow accounting:*
 - *Direct*
 - *Indirect*
- *Definitions of cash*
 - *Judgment based*
 - *Not transaction related*
- *Non-cash items included in the cash flow statements*
- *Difference and special requirements for cash flow in banks compared to other firms*
- *Other*

How do you consider the practical implications since the implementation of the cash flow standard in the 1980s until today?

Is there a difference with respect to the current financial crisis since 2007?

Judgment and evaluation

- How would you define the problems (if any) with judging the cash flow
 - in your bank
 - in other banks
- What do you see as the biggest problem relating to the cash flow in banks in general with respect to financial stability and the issue of "too big to fail".

Final questions

- Is there some question that you think I might have forgotten?
- Can I contact you again for clarification?
- In the light of the discussion, can you recommend some other persons in the bank or outside it, for me to interview as well?
- Thanks!

Prepared on 4 August 2011
First interview on 22 August 2011
Last interview on 23 September 2011

Original interview guide was adjusted after the feedback from bankers during telephone and email communication after the letter was sent out on 7 June 2011.

Appendix 5: Interview Guide

A study of bank management and cash flow accounting in banks

The idea behind the interview study is twofold. First, to gain deeper understanding of how the banks differentiate from other companies with regards to cash flow. Secondly, to investigate how the banks describe their analysis and control of cash flow in practice.

Representatives from the top management of the big Nordic banks are interviewed as well as managers in the departments of accounting and treasury as well as risk and credit. Their view on the actual cash flow, the accounted cash flow and alternative measures to cash flow are sought. The treasury department provides the bank with inflowing cash or liquidity and the accounting department prepares the cash flow statements. The current financial crisis was also a liquidity crisis and the cash flow numbers in the accounting statements could not provide information about the situation in the banks.

This results in several phenomenon to study:

1. How does each bank work with cash flow in the accounting and treasury departments? (Analysing, reporting, evaluating, controlling).
2. Do the departments of accounting and treasury have similar view on the cash flow?
3. How is the top management involved (interested/ reported to/controlling) in the cash flow issues and what is different in the view of credit and risk management departments?

The following questions regarding accounting, cash flow and liquidity are wide in approach and intended to open up for a discussion or dialogue in a semi-structured manner.

Depending on how the bank management organizes the functions of treasury, accounting and credit risk as well as the access to the relevant people, it is estimated that around 30 interviews will be enough to get saturation, mainly in the big Nordic banks. Furthermore, official authorities, journalists and rating institutions are interviewed about how they evaluate the banks and their view on the liquidity and cash flow issues. The interviews will mainly take place in August and September 2011.

The persons in the banks that have been approached for the interview study are mainly in the positions of CEO, CFO, Accounting manager, Treasury manager, Credit and Risk managers as well as some Internal auditors and board members. Additionally, persons in the following institutions have accepted interviews: the Financial Surveillance Authority, National Debt Office, the Central Bank, rating institutions, financial media journalists and the Bankers association.

Plan for the Interview:

1. Show graphs with cash flow numbers and operations results in W.T.Grant, Castellum and Kaupthing, prior to show similar graphs for their own bank.
2. Ask for help and find out how they do the evaluations of cash flow in banks.
3. Go into specific areas, like comment letter issues, depending on each person.
4. Discuss crisis and judgments with regard to bank's accounting information.

Appendix 6: Interview Letter



GÖTEBORGS UNIVERSITET
HANDELSHÖGSKOLAN

«Bank»
«Namn»
«Post»
«Nr» «Stad»

Göteborg, 7 juni 2011

Likviditet i banker – intervjuer för forskningsprojekt

Undertecknad är doktorand vid Handelshögskolan i Göteborg och en av fem forskare i projektet *"Cash Flows in Banks"*. Detta projekt är del av ett större forskningsprojekt som studerar *"Qualities in Credit Assessments"* på Gothenburg Research Institute.

Studiens forskningsfråga är hur bankerna analyserar sitt eget och andra bankers kassaflöde i praktiken med fokus på de större bankerna i Sverige. Därmed är projektet orienterat till hur ledande befattningshavare i praktiken uppfattar flödet av pengar i banker.

Projektet är baserat på en gedigen empirisk grund. I den första delen analyserades bankernas årsredovisningar. Därefter studerades den offentliga debatten om internationella redovisningsregler för kassaflöde. I den tredje och avslutande delen görs intervjuer med centralt placerade befattningshavare från de svenska bankerna och några offentliga institutioner.

Sammanfattningsvis skulle jag vara mycket tacksam för en personlig intervjutid under senare delen i augusti månad eller i början av september månad.

Undertecknad kommer att höra av sig inom de närmaste dagarna för att avtala tid för intervju. Intervjun är beräknad att ta ca 30-45 minuter i anspråk. Samtliga intervjuer kommer att anonymiseras. Frågorna kommer att vara öppna till sin karaktär och är inte inriktade mot teknikaliteter.

Forskningsprojektet finansieras av Jan Wallanders och Tom Hedelius Stiftelse samt Stiftelsen Olle Engkvist Byggmästare. Resultatet från studien kommer att presenteras i form av doktorsavhandling året 2012.

Med vänlig hälsning

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asgeir.torfason@gri.gu.se
tel: 031-7865483 / 0707-154615

Gothenburg Research Institute
Handelshögskolan vid Göteborgs universitet
Övre Fogelbergsgatan 6, Box 603, SE 405 30 Göteborg
031 786 00 00, 031 786 56 19 (fax)
www.handels.gu.se gri@gri.gu.se



Appendix 7: Interview Presentations

Every interview was started in the same manner, after brief verbal introduction of the researcher, by presenting the following slide show, and two slides with graphs based on annual report numbers for the relevant bank were changed.

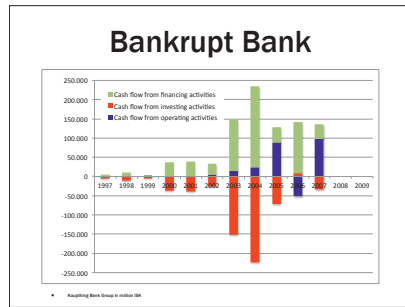
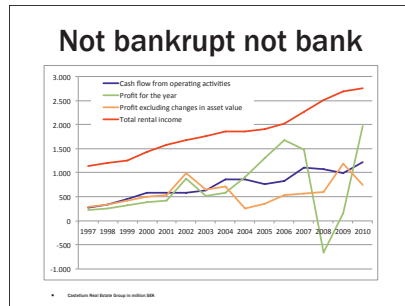
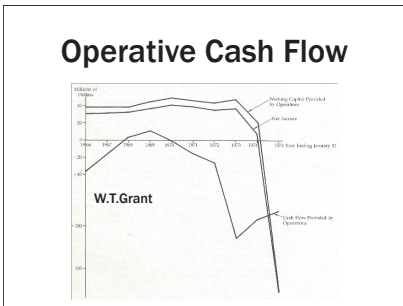
Making sense of Cash Flow Statements in Banks

Interview study
Asgeir B. Torfason

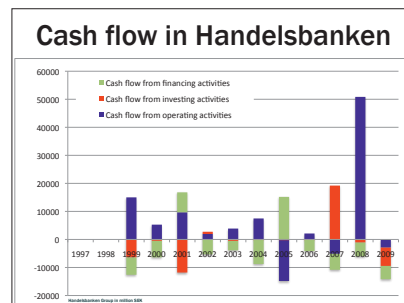
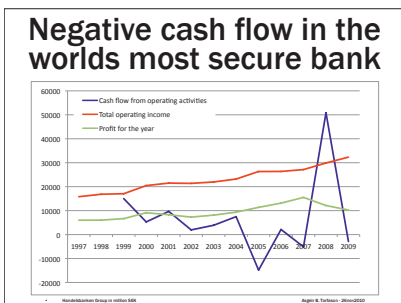
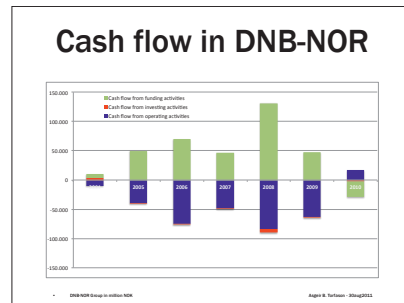
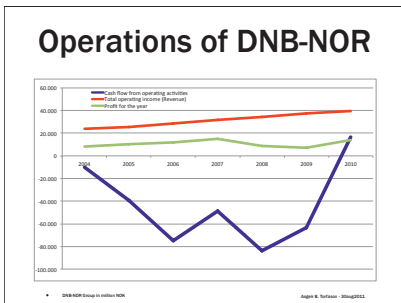
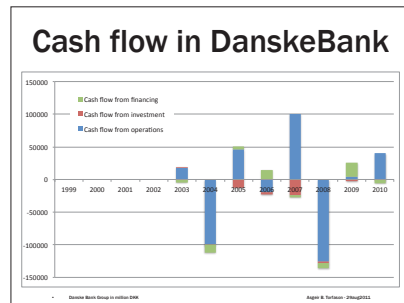
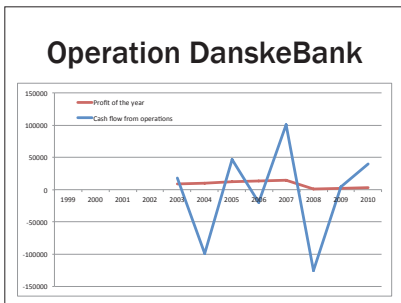
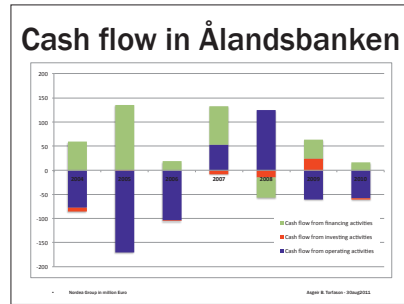
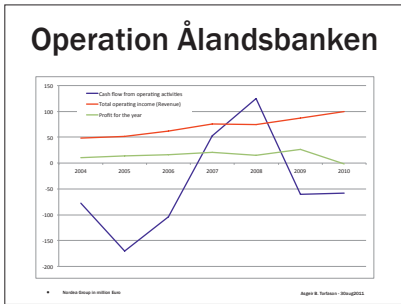
22 August - 23 September 2011
Stockholm/Mariehamn/Helsinki/Copenhagen/Oslo

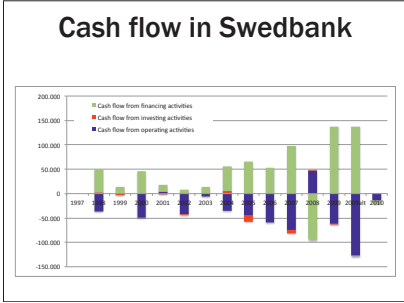
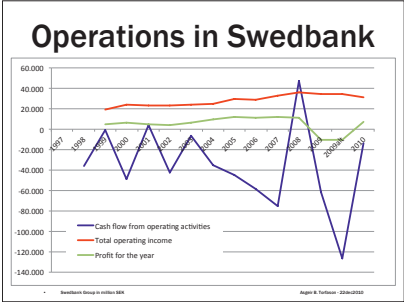
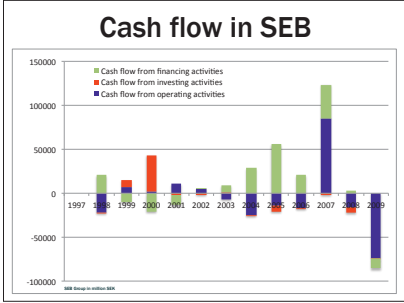
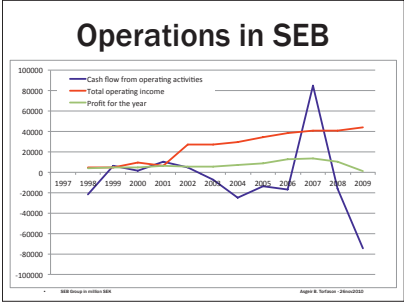
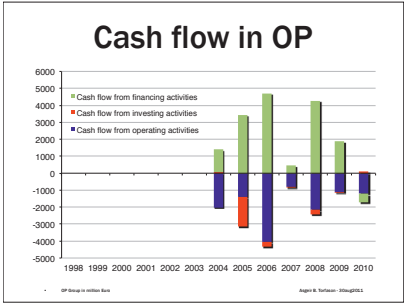
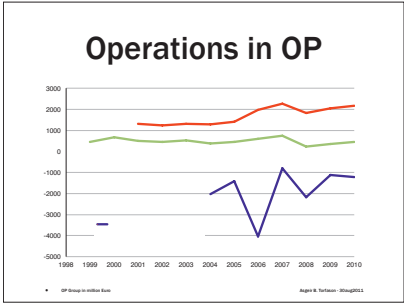
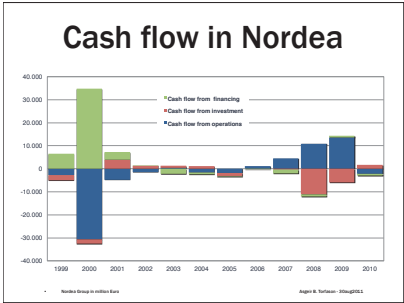
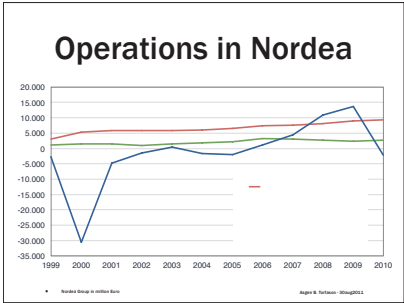
Selected cases

| | Bank | Not bank |
|---------------|------------|------------|
| Bankrupt | Kaupthing | W.T. Grant |
| Going concern | Xil - bank | Castellum |



The graphs for each bank are updated in Chapter 7 in the thesis with latest numbers from the 2012 annual report but here are shown the graphs as presented.





The numbers from the annual reports of the last 10 to 15 years were summarized in one table for each bank.

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---------------|---------------|---------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Handelsbanken Group | | | | | | | | | | | | | | | |
| Handelsbanken Group mSEK | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Cash flow statement | | | | | | | | | | | | | | | |
| Cash flow from operating activities | 15 008 | 5 278 | 5 278 | 9 661 | 1 949 | 3 882 | 7 483 | -14 824 | 2 120 | -5 125 | 50 843 | -2 906 | 26 030 | 200 097 | |
| Cash flow from investing activities | -6 419 | -5 066 | -11 802 | -1 802 | 794 | -520 | -205 | 48 | -140 | 19 203 | -1 120 | -6 544 | -2 906 | 200 097 | |
| Cash flow from financing activities | -6 187 | -5 878 | -7 113 | -5 295 | -5 295 | -3 383 | -8 576 | 15 117 | -4 029 | -5 690 | -4 910 | -4 772 | -15 851 | -13 934 | |
| Cash flow for the period | 2 402 | -1 106 | 4 992 | -1 106 | -2 552 | -1 | -1 298 | 351 | -2 049 | 8 388 | 44 813 | -14 172 | 9 930 | 182 504 | |
| Liquid funds at beginning of the period | 4 054 | 6 285 | 5 258 | 10 614 | 8 166 | 8 166 | 7 640 | 6 396 | 7 014 | 4 800 | 13 590 | 66 894 | 49 882 | 56 637 | |
| Exchange rate differences on liquid funds | -171 | 79 | 104 | 364 | 104 | 104 | 54 | 267 | 165 | 402 | 8 491 | -2 840 | -3 175 | 12 716 | |
| Liquid funds at end of period | 6 285 | 5 258 | 5 258 | 10 614 | 8 166 | 8 166 | 7 640 | 6 396 | 7 014 | 4 800 | 13 590 | 66 894 | 49 882 | 56 637 | |
| Income statement | | | | | | | | | | | | | | | |
| Net interest income | 11 169 | 11 526 | 11 508 | 11 284 | 14 526 | 17 006 | 18 345 | 16 628 | 15 090 | 14 727 | 15 608 | 19 223 | 22 000 | 21 337 | 23 613 |
| Net fee and commission income | 3 337 | 3 408 | 3 978 | 5 278 | 4 856 | 4 587 | 4 707 | 5 480 | 7 055 | 7 316 | 7 745 | 6 795 | 7 393 | 8 022 | 7 673 |
| Net gains/losses on financial items at fair v | 743 | 1 659 | 1 214 | 2 105 | -226 | -1 093 | 1 071 | 3 459 | 3 459 | 3 448 | 3 054 | 3 169 | 2 457 | 1 377 | 1 016 |
| Other | 566 | 618 | 356 | 3 896 | 2 105 | -226 | 1 071 | 719 | 856 | 856 | 719 | 703 | 485 | 560 | 507 |
| Total operating income | 15 815 | 16 837 | 17 056 | 20 458 | 21 487 | 21 367 | 21 959 | 23 179 | 26 323 | 26 347 | 27 126 | 29 890 | 32 335 | 31 296 | 32 809 |
| Staff costs | 4 150 | 4 579 | -4 888 | -5 300 | -5 909 | -6 203 | -6 216 | -6 248 | -6 678 | -7 184 | -7 528 | -8 114 | -10 018 | -9 504 | -9 942 |
| Other admin exp | 2926 | 3543 | -3 030 | -2 928 | -3 346 | -3 267 | -2 855 | -2 996 | -3 747 | -3 995 | -4 487 | -4 688 | -4 719 | -5 062 | -5 060 |
| Depreciant and impairments of prop/equipt | 617 | 685 | -7 50 | -7 53 | -805 | -866 | -807 | -770 | -513 | -366 | -261 | -353 | -483 | -452 | -462 |
| Net loan losses | 231 | 330 | -219 | 67 | -152 | -392 | -492 | -167 | 261 | 55 | -27 | -1605 | -3392 | -1507 | -816 |
| Appropriations | 532 | 505 | 581 | 914 | 217 | -540 | -128 | 58 | -3698 | -4296 | -2 201 | 4 656 | 457 | 216 | 166 |
| Taxes | -2326 | -2168 | -2 525 | -3 353 | -2 817 | -2 817 | -3 358 | -3 698 | -4 296 | -3 970 | -3 879 | -3 382 | -3 519 | -3 962 | -4 372 |
| Profit for the year | 6 007 | 6 663 | 6 663 | 9 105 | 8 290 | 7 282 | 8 116 | 9 358 | 11 354 | 13 128 | 15 508 | 12 131 | 10 244 | 11 025 | 12 323 |
| Dividend paid | | | | -2 144 | -2 751 | -3 120 | -3 294 | -3 602 | -4 018 | -4 585 | -5 022 | -8 416 | -4 364 | -4 988 | -5 611 |
| Balance sheet | | | | | | | | | | | | | | | |
| Cash and balances with central banks | | | | | 10 614 | 8 166 | 7 640 | 6 396 | 7 014 | 4 800 | 13 590 | 66 894 | 49 882 | 56 637 | 251 857 |
| Loans to the public | | | | | 800 068 | 839 340 | 823 142 | 861 250 | 983 681 | 1 100 538 | 1 292 988 | 1 481 475 | 1 477 183 | 1 481 678 | 1 591 128 |
| Loans to credit institutions | | | | | 70 857 | 79 517 | 115 273 | 108 906 | 136 546 | 177 175 | 185 149 | 164 981 | 168 100 | | 106 823 |
| Interest-bearing securities | | | | | 128 347 | 137 327 | 127 309 | 155 141 | 184 710 | 266 743 | 375 972 | 466 278 | 576 002 | | |
| Other assets | | | | | 164 635 | 213 164 | 187 090 | 217 397 | 270 956 | 290 752 | 191 683 | 279 156 | 251 676 | | |
| Total assets | | | | | 1 174 521 | 1 272 514 | 1 260 454 | 1 349 090 | 1 582 907 | 1 790 008 | 1 859 382 | 2 158 784 | 2 132 883 | 2 153 530 | 2 454 366 |
| Deposits and borrowing from the public | | | | | 263 692 | 292 838 | 269 326 | 320 872 | 289 017 | 533 985 | 512 841 | 543 760 | 549 726 | 546 673 | 624 888 |
| Due to credit institutions | | | | | 220 126 | 223 113 | 202 689 | 258 995 | 289 053 | 320 482 | 393 458 | 319 110 | 229 790 | 269 941 | 201 889 |
| Subordinated liabilities | | | | | 440 981 | 464 402 | 438 701 | 441 614 | 486 344 | 593 001 | 706 478 | 893 709 | 968 075 | 963 501 | 1 140 074 |
| Other liabilities | | | | | 28 976 | 26 801 | 26 322 | 25 182 | 46 795 | 51 672 | 219 205 | 263 805 | 223 137 | | |
| Total equity | | | | | 132 634 | 206 168 | 212 171 | 241 317 | 287 340 | 222 742 | 219 205 | 74 963 | 83 088 | 88 991 | 94 524 |
| Total liabilities and equity | | | | | 48 112 | 52 192 | 56 833 | 61 109 | 63 758 | 66 226 | 74 491 | 79 963 | 83 088 | 88 991 | 94 524 |
| Additional: | | | | | 1 174 521 | 1 272 514 | 1 260 454 | 1 349 090 | 1 582 907 | 1 790 008 | 1 859 382 | 2 158 784 | 2 132 883 | 2 153 530 | |

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Appendix 8: Comment letters overview

Grouping of comment letters sent on the proposed standard (CL 1986):

| Groups: | Positive | Neutral | Negative | Total |
|----------------|----------|---------|----------|--------------|
| Industry | 133 | 30 | 13 | 176 |
| Public | 64 | 18 | 5 | 87 |
| Banks | 171 | 6 | 18 | 195 |
| Total | 368 | 54 | 36 | 458 |

The summary table with the groups is the same as Table 4 in Chapter 6. The numbers behind it are broken down in the table below.

Breakdown of letters in each group, and view on the ED 1986:

| Respondents | No of letters | Share | Positive | Neutral | Negative | Neg+Neu | N+N | Pos |
|--------------------|----------------------|--------------|-----------------|----------------|-----------------|----------------|------------|------------|
| Industry | 176 | 38% | 133 | 30 | 13 | 43 | 24% | 76% |
| Public Accountants | 43 | 9% | 28 | 14 | 1 | 15 | 35% | 65% |
| Academy | 18 | 4% | 15 | 1 | 2 | 3 | 17% | 83% |
| Banking | 191 | 42% | 170 | 4 | 17 | 21 | 11% | 89% |
| Other | 21 | 5% | 17 | 2 | 2 | 4 | 19% | 81% |
| Government | 5 | 1% | 4 | 1 | 0 | 1 | 20% | 80% |
| Securities | 4 | 1% | 1 | 2 | 1 | 3 | 75% | 25% |
| Total | 458 | 100% | 368 | 54 | 36 | 90 | 20% | 80% |
| Industry | 176 | 38% | 133 | 30 | 13 | 43 | 24% | 76% |
| Public | 87 | 19% | 64 | 18 | 5 | 23 | 26% | 74% |
| Finance | 195 | 43% | 171 | 6 | 18 | 24 | 12% | 88% |

The FASB grouped the 458 letters according to respondent's occupation in seven groups: Industry, Public Accountant, Academy, Banking, Government, Securities. The number of letters in each group is shown in second column and their share of total letters.

The general viewpoint of the sender was classified in three groups by the researcher, and a reference group of three-four other researchers at GRI. The sender was considered positive, neutral or negative towards the proposed standard, as presented in the exposure draft (ED 1986).

For working with the material, the negative and neutral were grouped together, as neutral often included sender that was positive towards some points and negative towards other points in the standard, see three far right columns of the table.

Also the occupation groups of seven were combined into three, see the lowest three lines of the table. Finance includes Banking and Securities. Industry is single. Public and Others, includes also Academy, Government.

Grouping of comment letters sent on the discussion paper (CL 2009):

| Groups: | Positive | N/A | Negative | Total: |
|-------------------------------|----------|----------|-----------|---------------|
| Banking industry associations | 0 | 1 | 9 | 10 |
| International banking org. | 0 | 1 | 4 | 5 |
| Banks | 1 | 2 | 7 | 10 |
| Total: | 1 | 4 | 20 | 25 |

The table above is the same as Table 5 in Chapter 6, and it is a breakdown of the comment letters grouped as Banking in the table below that includes all the letters.

Positive or negative arguments against the direct method for cash flow according to comments on discussion paper (DP 2008) were only analysed for banks and the banking industry, as well as from those public accountants mentioning banks. The group of neutral was not applicable, but those not answering the question got N/A.

The total number of comment letters (CL 2009) in response to the discussion paper (DP 2008) was 229. The breakdown of the respondents is listed in the table below.

A difference from the earlier study in the US is the number of banking industry associations and the international ones; therefore each gets its own category line.

Breakdown of the CL from 2009 in each group commenting on DP 2008:

| Respondents | No of letters | Share |
|---------------------------------|----------------------|--------------|
| Industry | 26 | 11% |
| Public Accountants | 55 | 24% |
| Academy | 5 | 2% |
| Banking | 25 | 11% |
| Unaffiliated | 28 | 12% |
| Other | 67 | 29% |
| Rating | 2 | 1% |
| Government | 2 | 1% |
| Securities | 19 | 8% |
| Total | 229 | 100% |
| Industry | 26 | 11% |
| Public Account. (+Academy+Gov.) | 62 | 27% |
| Others (+Unaffiliated) | 95 | 41% |
| Finance (Bank, Sec. & Rating) | 46 | 20% |

At the bottom of the table the respondents grouping is tried in similar manner as the 1986 grouping, but due to different original respondents grouping, Public and Others are separated, where others includes unaffiliated, but Public same as public before (excluding others). The viewpoints of all respondents were not analysed as this question in the discussion paper only regarded the direct method, and the banking sector was only in focus here.

Appendix 9: Accounting model scenarios

Bank Scenario 1

customer repays 100 loan with his own savings at the same bank

| Balance Sheet 1/1 | | Assets | Liabilities |
|--------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | 100 | |
| Deposits from customer | | | 1000 |
| Borrowing from banks/bonds | | | 800 |
| Lending to customer | | 1900 | |
| Equity | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | 190 |
| Financing cost | | 90 | |
| Operational cost | | 50 | |
| Net operating income | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations | | | 50 |
| Change in deposits | | 100 | |
| Change in financing from banks/bonds | | | 100 |
| Decreased lending | | | 100 |
| Change in cash and reserves | | 50 | |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | 150 | |
| Deposits | | | 900 |
| Interbank / Bonds | | | 800 |
| Loans | | 1800 | |
| Equity | | | 250 12,8% |

Balance sheet shrinks, cash increases at central bank

Bank Scenario 2

customer loans 200 to buy house from other customer in same bank

| Balance Sheet 1/1 | | Assets | Liabilities |
|--------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | 100 | |
| Deposits from customer | | | 1000 |
| Financing interbank / bonds | | | 800 |
| Lending to customer | | 1900 | |
| Equity | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | 190 |
| Financing cost | | 90 | |
| Operational cost | | 50 | |
| Net operating income | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations | | | 50 |
| Change in deposits | | 200 | 200 |
| Change in financing from banks/bonds | | | 200 |
| Increased lending | | 200 | |
| Change in cash and reserves | | | 150 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | 50 |
| Deposits | | | 1000 |
| Interbank / Bonds | | | 800 |
| Loans | | 2100 | |
| Equity | | | 250 11,9% |

Balance sheet grows, partly with borrowing from central bank

Bank Scenario 3

customer loans 300 to buy house from customer in other bank, half interbank funded

| Balance Sheet 1/1 | | Assets | Liabilities |
|--------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | 100 | |
| Deposits from customer | | | 1000 |
| Financing interbank / bonds | | | 800 |
| Lending to customer | | 1900 | |
| Equity | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | 190 |
| Financing cost | | 90 | |
| Operational cost | | 50 | |
| Net operating income | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations | | | 50 |
| Change in deposits | | 300 | 300 |
| Change in financing from banks/bonds | | | 150 |
| Increased lending | | 300 | |
| Change in cash and reserves | | | 100 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | 0 | |
| Deposits | | | 1000 |
| Interbank / Bonds | | | 950 |
| Loans | | 2200 | |
| Equity | | | 250 11,4% |

Balance sheet grows, no cash left at central bank, interbank funding

Bank Scenario 4

customer loans 100 to buy house from customer of other bank without interbank

| Balance Sheet 1/1 | | Assets | Liabilities |
|--------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | 100 | |
| Deposits from customer | | | 1000 |
| Interbank / Bonds | | | 800 |
| Lending to customer | | 1900 | |
| Equity | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | 190 |
| Financing cost | | 90 | |
| Operational cost | | 50 | |
| Net operating income | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations | | | 50 |
| Change in deposits | | 100 | 100 |
| Change in financing from banks/bonds | | | 150 |
| Increased lending | | 100 | |
| Change in cash and reserves | | | 50 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | 50 | |
| Deposits | | | 1000 |
| Interbank / Bonds | | | 800 |
| Loans | | 2000 | |
| Equity | | | 250 12,2% |

Central bank reserves decreased when lending within same bank

Bank Scenario 5

customer gets 200 loan and spends half of it and keeps half as deposit

| Balance Sheet 1/1 | | Assets | Liabilities |
|--------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | 100 | |
| Deposits from customer | | | 1000 |
| Interbank / Bonds | | | 800 |
| Lending to customer | | 1900 | |
| Equity | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | 190 |
| Financing cost | | 90 | |
| Operational cost | | 50 | |
| Net operating income | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations | | | 50 |
| Change in deposits | | 100 | 200 |
| Change in financing from banks/bonds | | | 200 |
| Increased lending | | 200 | |
| Change in cash and reserves | | | 50 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash at central bank | | 50 | |
| Deposits | | | 1100 |
| Interbank / Bonds | | | 800 |
| Loans | | 2100 | |
| Equity | | | 250 11,6% |

Balance sheet grows, outflow covered partly from central bank

Profits increases equity in all six scenarios

Bank Scenario 6

customer brings new 300 deposit

| Balance Sheet 1/1 | | Assets | Liabilities |
|--------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | 100 | |
| Deposits from customer | | | 1000 |
| Interbank / Bonds | | | 800 |
| Lending to customer | | 1900 | |
| Equity | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | 190 |
| Financing cost | | 90 | |
| Operational cost | | 50 | |
| Net operating income | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations | | | 50 |
| Change in deposits | | | 300 |
| Change in financing from banks/bonds | | | 200 |
| Increased lending | | 200 | |
| Change in cash and reserves | | | 350 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash at central bank | | 450 | |
| Deposits | | | 1300 |
| Interbank / Bonds | | | 800 |
| Loans | | 1900 | |
| Equity | | | 250 10,6% |

Both profit and new deposits placed at central bank

Bank Scenario 1b

customer repays 100 loan with his own savings at the same bank

| Balance Sheet 1/1 | | Assets | Liabilities |
|---------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits from customer | | | |
| | | | 1000 |
| Borrowing from banks/bonds | | | |
| | | | 800 |
| Lending to customer | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | |
| | | | 190 |
| Financing cost | | | |
| | | 90 | |
| Operational cost | | | |
| | | 50 | |
| Net operating income | | | |
| | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations paid as dividend | | | |
| | | 50 | 50 |
| Change in deposits | | | |
| | | 100 | |
| Change in financing from banks/bonds | | | |
| | | | |
| Decreased lending | | | |
| | | | 100 |
| Change in cash and reserves | | | |
| | | | |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits | | | |
| | | | 900 |
| Interbank / Bonds | | | |
| | | | 800 |
| Loans | | | |
| | | 1800 | |
| Equity | | | |
| | | | 200 10,5% |

Balance sheet shrinks, cash unchanged at central bank

Bank Scenario 2b

customer loans 200 to buy house from other customer in same bank

| Balance Sheet 1/1 | | Assets | Liabilities |
|---------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits from customer | | | |
| | | | 1000 |
| Financing interbank / bonds | | | |
| | | | 800 |
| Lending to customer | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | |
| | | | 190 |
| Financing cost | | | |
| | | 90 | |
| Operational cost | | | |
| | | 50 | |
| Net operating income | | | |
| | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations paid as dividend | | | |
| | | 50 | 50 |
| Change in deposits | | | |
| | | 200 | 200 |
| Change in financing from banks/bonds | | | |
| | | | |
| Increased lending | | | |
| | | 200 | |
| Change in cash and reserves | | | |
| | | | 200 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | |
| | | | 100 |
| Deposits | | | |
| | | | 1000 |
| Interbank / Bonds | | | |
| | | | 800 |
| Loans | | | |
| | | 2100 | |
| Equity | | | |
| | | | 200 9,5% |

Balance sheet grows, partly with borrowing from central bank

Bank Scenario 3b

customer loans 300 to buy house f/customer in other bank, half interbank funded

| Balance Sheet 1/1 | | Assets | Liabilities |
|---------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits from customer | | | |
| | | | 1000 |
| Financing interbank / bonds | | | |
| | | | 800 |
| Lending to customer | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | |
| | | | 190 |
| Financing cost | | | |
| | | 90 | |
| Operational cost | | | |
| | | 50 | |
| Net operating income | | | |
| | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations paid as dividend | | | |
| | | 50 | 50 |
| Change in deposits | | | |
| | | 300 | 300 |
| Change in financing from banks/bonds | | | |
| | | | 150 |
| Increased lending | | | |
| | | 300 | |
| Change in cash and reserves | | | |
| | | | 150 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | |
| | | | 50 |
| Deposits | | | |
| | | | 1000 |
| Interbank / Bonds | | | |
| | | | 950 |
| Loans | | | |
| | | 2200 | |
| Equity | | | |
| | | | 200 9,1% |

Balance sheet grows, borrowing from central bank and interbank

Bank Scenario 4b

customer loans 100 to buy house from a customer of other bank w/o interbank

| Balance Sheet 1/1 | | Assets | Liabilities |
|---------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits from customer | | | |
| | | | 1000 |
| Interbank / Bonds | | | |
| | | | 800 |
| Lending to customer | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | |
| | | | 190 |
| Financing cost | | | |
| | | 90 | |
| Operational cost | | | |
| | | 50 | |
| Net operating income | | | |
| | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations paid as dividend | | | |
| | | 50 | 50 |
| Change in deposits | | | |
| | | 100 | 100 |
| Change in financing from banks/bonds | | | |
| | | | |
| Increased lending | | | |
| | | 100 | |
| Change in cash and reserves | | | |
| | | | 100 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | |
| | | 0 | |
| Deposits | | | |
| | | | 1000 |
| Interbank / Bonds | | | |
| | | | 800 |
| Loans | | | |
| | | 2000 | |
| Equity | | | |
| | | | 200 10,0% |

Central bank reserves disappear when lending within same bank

Bank Scenario 5b

customer gets 200 loan and spends half of it and keeps half as deposit

| Balance Sheet 1/1 | | Assets | Liabilities |
|---------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits from customer | | | |
| | | | 1000 |
| Interbank / Bonds | | | |
| | | | 800 |
| Lending to customer | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | |
| | | | 190 |
| Financing cost | | | |
| | | 90 | |
| Operational cost | | | |
| | | 50 | |
| Net operating income | | | |
| | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations paid as dividend | | | |
| | | 50 | 50 |
| Change in deposits | | | |
| | | 100 | 200 |
| Change in financing from banks/bonds | | | |
| | | | |
| Increased lending | | | |
| | | 200 | |
| Change in cash and reserves | | | |
| | | | 100 |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | |
| | | 0 | |
| Deposits | | | |
| | | | 1100 |
| Interbank / Bonds | | | |
| | | | 800 |
| Loans | | | |
| | | 2100 | |
| Equity | | | |
| | | | 200 9,5% |

Cash at central bank used to cover outflow

Bank Scenario 6b

customer brings new 300 deposit

| Balance Sheet 1/1 | | Assets | Liabilities |
|---------------------------------------|--|---------|-------------|
| Cash and reserves at central bank | | | |
| | | 100 | |
| Deposits from customer | | | |
| | | | 1000 |
| Interbank / Bonds | | | |
| | | | 800 |
| Lending to customer | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 |
| Income Statement | | Cost | Income |
| Interest rate income | | | |
| | | | 190 |
| Financing cost | | | |
| | | 90 | |
| Operational cost | | | |
| | | 50 | |
| Net operating income | | | |
| | | 50 | |
| Cash flow | | Outflow | Inflow |
| Cash from operations paid as dividend | | | |
| | | 50 | 50 |
| Change in deposits | | | |
| | | | 300 |
| Change in financing from banks/bonds | | | |
| | | | |
| Increased lending | | | |
| | | | |
| Change in cash and reserves | | | |
| | | 300 | |
| Balance Sheet 31/12 | | Assets | Liabilities |
| Cash and reserves at central bank | | | |
| | | 400 | |
| Deposits | | | |
| | | | 1300 |
| Interbank / Bonds | | | |
| | | | 800 |
| Loans | | | |
| | | 1900 | |
| Equity | | | |
| | | | 200 8,7% |

New deposits put into central bank