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Implementation of IAS 39 by Swedish Banks

Interest Rate Swaps in Hedging Applications

Master's thesis within Financial Accounting

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Abstract

In 2005, all groups listed on European stock exchanges are required to prepare their consolidated financial statements according to International Financial Reporting Standards (IFRS). IFRS are different from local regulations across Europe in many aspects, and observers expect the transition process to be thorny and resource-draining for the companies that undertake it.

The study explores transition difficulties faced by Swedish bank groups on the way of implementing IAS 39, Financial Instruments: Recognition and Measurement. Deemed the most controversial and challenging Standard for adoption by the financial sector, it indeed poses new demands on classification, recognition and measurement of financial instruments, and sets out new hedge accounting rules, previously unseen in Swedish practice. Additionally, the structure of banks' balance sheets makes IAS 39 also the central one among all other Standards in terms of number of balance sheet items it impacts.

The study uses qualitative method to explore whether transition to IAS 39 is likely to improve transparency in reporting derivatives. Focus is on use of interest rate swaps as hedge instruments in mitigation of interest rate risk.

It is concluded that differences between two reporting frameworks have been well understood by the banks early in the implementation process. A new negative feature of the Standard is increased volatility in earnings as a result of a more wide-spread reliance on fair value measurement method. This accounting volatility impedes comparability of performance results, as well as conceals true efficiency of economic hedge relationships. To some degree, the volatility can be minimized by application of hedge accounting. However, a bank must methodically follow a set of rigorous rules if hedge accounting is to be adopted. Fair value option is a more straightforward alternative to hedge accounting, but it brings in additional concerns, and has not yet been endorsed in the EU.

It is additionally argued that recognition of all derivatives on BS and measurement at fair value are two important features of IAS 39 that indeed increase reporting transparency by minimizing risk of undisclosed hidden losses.

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1 Introduction

1.1 Background

For decades, accounting profession has been striving to achieve greater accuracy, transparency and user friendliness in financial reporting data (Schroeder, Clark & Cathey, 2001). Consistent efforts have been taken to reduce judgmental bias and subjective estimates so that data are easily and accurately comparable among companies, thus facilitating informed investor decisions.

In the current age of developed information and communication technologies, investors are no more restricted by geographical boundaries of own country in the search for investment alternatives. On the other hand, companies seeking for financial resources (both in the form of equity and debt) can now use international capital markets which offer a larger choice of alternatives compared to local borrowing/ stock placement. In such conditions, financial data should be comparable not only among different national industries and companies, but also on international scale. Direct comparability of financial data not only helps individual market players to make informed decisions, but also (according to Ketz & Wyatt, 1991) works towards increasing efficiency of international capital markets in general.

However, diverse national political, legal and regulatory environments make harmonization/ convergence of accounting rules a long and painful process. This process is governed by IASB on international level, and regulators in majority of world countries accept recommendations of IASB regarding IFRS introduction in attempt to increase transparency and comparability of financial data among markets.

As part of the initiative to harmonize financial reporting frameworks across the European Union, the European Parliament and Council have issued Regulation Nr 1606/2002 (dated 19 July, 2002), according to which groups listed on any European stock exchange must prepare their consolidated financial statements (henceforth FS) in compliance with IFRS starting from 1st of January 2005. In order to facilitate comparability, the accounts should have been restated based on IFRS already as of 31 Dec 2004 (subject to different financial year end dates for individual companies). Transition from local reporting framework to IFRS might potentially cause difficulties for the groups, especially if local reporting framework in their country of origin is considerably different from IFRS.

In Sweden, financial reporting framework for companies listed on stock exchanges is developed by Redovisningsrådet (RR) (RR official website, 2005-03-10). The recommendations are set out as good accounting practice for listed entities, and they are frequently named as RR Standards or Swedish GAAP for listed entities. When developing Swedish GAAP for listed entities, RR has frequently referred to IAS/IFRS for guidance (RR official website, 2005-03-10), therefore listed companies might be quite familiar with IFRS, and switch to the new consolidated reporting framework potentially would take place more smoothly than elsewhere.

In some cases, however, no equivalent of IFRS exists in RR Standards, or guidance in RR Standards is limited compared to IFRS. A vivid example of such situation is IAS 39, for which no analogue exists in RR Standards (Ernst & Young Sweden, 2004).

1.2 Problem formulation

Discussion with auditors at a pre-study stage (see Appendices 10.2 through 10.4) revealed that *IAS 39* is indeed the most problematic Standard to comprehend and to implement in practice. It poses a challenge for those companies dealing with financial instruments (henceforth FI) on regular and diverse basis: primarily, *banks*. Complexity of the Standard itself, introduction of new concepts which were not previously common in Swedish GAAP, ongoing changes to the Standard made by IASB, and carve-outs of some paragraphs by the EC all demand considerable effort to understand and to appropriately follow the new rules.

Theoretically, IAS 39 gives preference to fair value-driven recognition and measurement of FI – contrasted to Swedish GAAP currently in place, which puts more reliance on amortized cost approach (see Theoretical Framework and Regulatory Basis sections for more detail on concepts). Besides, possibility to recognize FI off-BS is eliminated in IAS 39. These aspects, along with other ones discussed in Chapter 4, make a changeover to IAS 39 in consolidated reporting not only an organizational challenge and a call for new accounting routines, but indeed a *shift in the approach to recognition and measurement of financial assets and liabilities*, both (currently) on- and off-BS ones.

We select interest rate swaps (henceforth IRS) as an example of FI most commonly used by all the studied banks (see subsection 2.2). Focus is on use of IRS in hedging, since IAS 39 approach to hedge accounting is quite different from that of current Swedish GAAP. These differences are expected to add to an insightful and interesting analysis.

In our work, we assume a perspective of an external user of financial information.

1.3 Purpose

This thesis aims to analyze *whether changeover to IAS 39 by Swedish banks is likely to enhance quality and transparency of financial reporting* of derivatives in general and their specific use as hedging instruments.

The subjects of study are Swedish listed bank groups; the focus of the study is on IRS in hedging applications.

2 Method

2.1 Research approach

Selection of a method to tackle a scientific problem is driven by the nature of the problem itself. Broadly, two types of research design exist (following the classification of Blaxter et al, 1996):

- Quantitative method
- Qualitative method

They differ in terms of requirements for input data, data collection styles, commonly accepted standards of analysis, and expected outcomes.

Quantitative method, as argued by Blaxter et al (1996), implies structured approach to collection and analysis of data in numerical form. The research outcome tends to be more representative and therefore more readily generalizable to the population of studied subjects. Welman and Kruger (2001) propose multiple approaches of quantitative research, e.g. surveys and experiments, coupled with precise measurements. In order to be able to analyze the data in meaningful fashion afterwards and to arrive to valid results, sampling techniques are given painstaking attention.

Qualitative method, on the other hand, tends to focus on understanding, exploring and interpreting a phenomenon from different angles, rather than quantifying its degree or frequency of occurrence. Several approaches of qualitative method, like case studies, are traditionally used to gain insight in previously untapped territories of scientific knowledge. Case studies help to understand the issue and to develop a framework for further exploration of the subject. Thus, qualitative method aims to achieve depth, rather than breadth (Blaxter et al, 1996).

In our study, *we adopt qualitative method* for two main reasons:

- Since transition to IFRS is still in progress (full transition in consolidated reporting will be achieved by the end of FY 2005), time series of numerical data for quantitative analysis are simply not available yet.
- Transition issues are complicated in nature and require consideration of multiple factors, including organizational change, requirement for development of new competence, consideration of costs, as well as impact of transition on reporting figures of the entities subject to adoption of IFRS. We select qualitative method due to its ability to help in exploration and in-depth study of complicated phenomena. Besides, transition from local GAAPs to IFRS in consolidated reporting in Europe is a relatively new development, and published academic literature addressing transition problems in Sweden is still scarce, meaning the problem is yet to be understood better.

Novelty of the studied problem, as well as lack of definitive theoretical guidance to rely upon, has shaped our next choice in research method: *inductive approach*. The motivation behind the choice is twofold:

- Lack of unified model to test with the help of empirical data (ruling out deductive method). Smith (2003), describing research method that is specifically applicable to

accounting, points out that in the absence of widely accepted unified framework or commonly accepted model, the research within the discipline relies on concepts rather than models. Financial accounting research is thus considerably fragmented, and is frequently inductive and explorative in nature. Concepts themselves are often borrowed from other disciplines, including organizational behavior, sociology, finance, and economics.

- Necessity to follow a commonly accepted research paradigm within financial accounting discipline. Ryan, Scapens and Theobald (1992) state that in the early days of development of financial accounting, prompt introduction of reporting requirements by practitioners left academics somewhat behind, and the researchers tried to synthesize what has been observed in practice into theoretical concepts. This tradition has maintained its strong influence until nowadays. Some academics even state that there is no rational measure to evaluate whether one theory is more viable than the other one, thus further adding to fragmentation of research within the financial accounting discipline.

Qualitative method encompasses a range of techniques available to a researcher. These are interviews, participant observation, focus groups (part of an in-depth interviewing technique) (Blaxter et al, 1996; Welman and Kruger, 2001). Participant observation demands constant presence on-site and observing behaviour of studied subjects. Such approach is common in sociology, anthropology, and criminology (Welman and Kruger, 2001). In our research, *observation method is ruled out* due to the following:

- The transition process from one reporting framework to another one is an extensive process ranging in time well before YE2004 and involving team effort of many people from different departments in a bank, as well as extensive collaboration with external parties, e.g. auditors. In a setup like this, it is impossible to pinpoint a single subject or subject group for observation.
- Besides, even if previous condition would be satisfied, observation should have been started well before YE2004, and continued beyond YE2005, after complete transition for consolidated reporting is over. Squeezed time span allotted to this study, however, does not allow extending data collection phase over more than 1-2 months.

Focus groups are indeed an option, but since the respondents are full-time working professionals with packed schedules, we consider that organizational costs of bringing all the required respondents to the same place at the same time far outweigh benefits of the collected responses, especially when similar outcome can be achieved by administering one-to-one interviews with each of the respondents at a time, instead.

Therefore, *interviews are deemed the most appropriate technique for data collection.*

2.2 Procedure for interviews

Benefits of interviews are (Welman and Kruger, 2001):

- Instant feedback
- Ability to pose follow-up questions immediately
- Unclear or ambiguous statements may be clarified with the respondent in real time

Semi-structured type of interviews used as a good balance between an unstructured discussion and a structured, restrictive interview:

- Question list still prepared beforehand; this allows obtaining responses for same questions from all respondents, thus achieving consistency in collected data
- On the other hand, contrasted to structured interviews, semi-structured design allows more freedom and flexibility for respondents in their responses. Additional valuable information and in-depth insights, which were not apparent to researchers when designing a questionnaire, might be obtained.

Tape recorder is used for recording interviews. This allows accurate transcription of interviewees' answers, as well as poses an opportunity to return to an original tape in case further questions arise later on in the study. Besides, during the interviews, the authors are not distracted by taking notes, but rather can actively participate in following the discussion and asking clarification questions, should a need arise.

Interviews are conducted over phone as a good cost-benefit trade-off compared to personal interviews. Respondents receive their questions by email beforehand, which allows them to prepare for the interview and to see the question list on the screen during the discussion. Although it might be argued that unprepared responses of interviewees reflect their opinions more precisely and in a less biased fashion, it must be borne in mind that the topic under investigation is a complex and contradictory one, which calls for time-consuming consideration of different sides of the problem by a respondent. Thus, prior preparation and thinking over the issue is likely to produce a more complete and balanced response. Moreover, questions for the main study frequently operate with numerical information, which might be difficult to retrieve without prior search and preparation. Therefore, telephone interviews with prior "homework" done by both researchers and respondents are deemed to yield similar quality of responses than personal interviews, simultaneously saving travel costs and time.

2.3 Validity

According to Smith (2003), each research design is subject to validity considerations. Validity is broadly classified into internal validity and external one. *Internally valid research* demonstrates a clear relationship between dependent and independent variable, as well as resistance to contamination of dependent variable by other factors beyond the scope of the research. Internal validity is a crucial concern in quantitative experimental studies. *External validity* is a possibility to generalize the results of the study to a population on the whole (population), occurrence of events in other situations (ecological), or other time frame (temporal). Welman and Kruger (2001) hold a lengthy discussion on validity concerns in differently designed studies, and come up with conclusion that for qualitative studies in general, ecological external validity is the most crucial one (p. 125). Validity issues in our research have been addressed by the following measures:

- Understanding of Swedish GAAP and the most problematic issues of the transition process confirmed during an extensive interview with FSA Accounting experts, adding to validity of the reached conclusions
- Only highly qualified expert respondents selected both for pre-study and main study interviews (see Appendices, subsections 10.2 and 10.5, for more details), leading to collection of trustworthy first-hand opinions

- Respondent groups are homogeneous in terms of professional background and positions both for pre-study (management of Big4 firms, who advise on implementation of IFRS to large clients, including banks, in Sweden) and main study (line management at headquarters of listed banks, having everyday hands-on experience with the issues). This permits direct comparative analysis of responses
- Questionnaires prepared both for pre-study and main study, thus adding to consistency and later comparability between responses by different interviewees
- The four bank groups selected for the main study represent 100% of listed bank groups on Stockholm Stock exchange. Thus, external (population) validity condition is satisfied: results of the study can be generalized to all the listed banks on Swedish stock market.

2.4 Sample selection

During the pre-study (summarized in subsection 10.4), interviewees regarded IAS 39 (Financial Instruments: Recognition and Measurement) to be the largest problem for the companies attempting the transition to IFRS (recall answers to Q3 in the questionnaire). Logically, commercial banks are the entities which deal with financial instruments on a daily basis, and the banks are most of all companies involved in IAS 39 implementation issues – again, according to the interviewees (Q6). Also, restatement of balance sheet figures according to IAS 39 might have a material effect on total asset value for banks (Q9).

Time restrictions for this thesis do not allow pursuing an in-depth cross-industry broad study of implementation of each and every IFRS in Sweden. Therefore, based on results of the pre-study, it was decided to narrow the focus to IAS 39 and challenges as seen from point of view of Swedish banking industry.

All four Swedish bank groups listed on Stockholm Stock Exchange were selected for main study, based on study design. The *respondent companies* therefore are:

- FöreningsSparbanken AB (publ) Swedbank
- Nordea Bank AB (publ)
- Skandinaviska Enskilda Banken AB (publ)
- Svenska Handelsbanken AB (publ)

Additionally, in pursuit to narrow down the research even more so that in-depth study is feasible time-wise, consolidated FS 2004 of all four bank groups listed on Stockholm Stock Exchange were examined to find out which derivative instruments are the most commonly used by the banks (condition as of YE 2004, as reference is made to balance sheet items). Only on-BS derivatives are presented in Table 1, since they constitute more than 95% of all derivatives (on- and off-BS, at fair value) in use by each of the banks.

Table 1 Fair value of derivative instruments on consolidated FS (on-balance sheet items, 31.12.2004)

With POSITIVE BS value, asset								
	FSB		HandelsB		Nordea		SEB	
	In M SEK	In % of total derivatives	In M SEK	In % of total derivatives	In M EUR	In % of total derivatives	In M SEK	In % of total derivatives
IR-related derivatives	23 559	64.6%	57 712	52.3%	17 718	67.2%	59 215	61.5%
Of those, IRS	21 445	58.8%	55 176	50.0%	14 603	55.4%	57 064	59.3%
<i>Total derivatives</i>	<i>36 471</i>	<i>100%</i>	<i>110 425</i>	<i>100%</i>	<i>26 367</i>	<i>100%</i>	<i>96 260</i>	<i>100%</i>

(Table 1 continued)

With NEGATIVE BS value, liability								
	FSB		HandelsB		Nordea		SEB	
	In M SEK	In % of total derivatives	In M SEK	In % of total derivatives	In M EUR	In % of total derivatives	In M SEK	In % of total derivatives
IR-related derivatives	27 184	58.2%	58 317	45.8%	17 399	65.2%	64 332	59.8%
Of those, IRS	25 025	53.6%	55 874	43.9%	14 319	53.7%	62 056	57.7%
<i>Total derivatives</i>	<i>46 693</i>	<i>100%</i>	<i>127 308</i>	<i>100%</i>	<i>26 677</i>	<i>100%</i>	<i>107 631</i>	<i>100%</i>

Source: consolidated FS of the bank groups for FY2004, retrieved from banks' websites (see Reference section for direct links).

As follows from the table, IRS are the most vastly used derivatives. Their primary designation is hedging interest rate risk arising from mismatch in fixed and floating rate quoted assets and liabilities (more detailed discussion of IRS is presented in Theoretical Framework). Since IRS are so common for every bank in focus, hedge accounting implementation issues should be familiar to the respondents in the main study.

Additionally, as seen from discussion later on in the paper, hedge accounting rules are quite different in IAS 39 contrasted to current Swedish GAAP. The examination of discrepancies is likely to provide additional evidence when addressing the research question of the paper.

3 Theoretical Framework

3.1 Main literature sources for pre-study

Preparation for pre-study interviews involved acquaintance with a vast array of generic academic literature that addresses problems of transition to IFRS reporting, and is not particularly related to only Swedish circumstances. Several bright examples of such sources include Blake et al (1999), Agami and Monsen (1995), Larson and Street (2004), Stittle (2004). These articles helped to gain insights into nature of problems that new reporting framework is likely to bring in for different industries and in varying regulatory conditions.

A more specific source of information on Swedish circumstances is Archer and Alexander (1998). The authors describe Swedish GAAP for listed companies, and name the regulatory bodies that endorse standards to be followed by listed entities. The authors also refer to relevant legislative acts. We realize that the source is somewhat outdated; therefore, additional effort had been invested into investigation of changes that took place since 1998 by studying Swedish legislation and normative documents that are in force today.

The standards setter for reporting format of publicly traded companies in Sweden is Redovisningsrådet (RR, or in English: Swedish Financial Accounting Standards Council) (Archer and Alexander, 1998; RR official website, 2005). Therefore, we reviewed RR Standards and their comparison to IFRS, drawing directly from RR Standards themselves (FAR, 2005) and IFRS in original (IASB, 31 March 2004), as well as such complementary sources as Ernst & Young Sweden (2004) and the study by Edenhammar (2002). The pinpointed major differences served as an important source for design of pre-study questionnaire.

The results of pre-study can be found in Section 10.4. Based on results obtained, the focus of main research is narrowed to IAS 39, recognition and valuation of derivatives (specifically, IRS), and their application in hedging. *Fair value* is a key theoretical concept on which IAS 39 is built. Thus, next subsections of this paper introduce the reader to the concept, and later on present contrasting views on fair value, drawing from a number of publications on the subject.

3.2 The concept of fair value

The aim of financial accounting is to provide true and fair view of the company's financial position. Morris (2004) illustrates the concept of fair value. For example, if a firm bought a real estate 200 years ago for \$US 100,000 and still has this value on its books, this would imply an understatement of several millions of dollars. Even though it is booked at \$US 100,000, the true value that a potential buyer of the building would be willing to pay today is far greater than \$US 100,000 (perhaps \$US 10,000,000). This amount is also known as market or fair value. It is the value at which two unrelated, informed parties agree to conclude an asset purchase/sale deal. According to Ernst & Young Sweden (2004) and Rayman (2004), fair value is the amount for which assets are exchanged, or liabilities settled, between willing parties that have equal information in an "arm's length transaction". The sources also independently state that, in principle, all FI can be measured at fair value.

Revised IAS 39 suggests a number of approaches to determination of fair value of FI (Ernst & Young Sweden, 2004), which is also agreed upon by Rieger (2005):

- *Active market - quoted market price;* This is the optimal way to measure fair value, provided there is a publicly available price quotation. “Quoted in an active market” implies that prices are given by various actors in the market place, and these prices represent actual and regularly occurring transactions on arm’s length basis. Even if a security is quoted on several markets, a no-arbitrage principle implies that prices in those markets will be identical. This excludes potential for manipulation with fair value of FI, when a company might be able to choose the most beneficial quote from one of the markets.
- *No active market – valuation techniques;* In case of an absent active market, there is still a need for a reasonable valuation technique to determine fair value. Usually, a comparison is used with transactions that occurred recently or with similar transactions elsewhere. Discounted cash flows calculation is another commonly applied technique, although necessity to project future CF and to apply an appropriate risk-weighted discount factor limits its accuracy.
- *No active market – equity instruments;* If a reasonable fair value cannot be reached for an equity instrument, the company can measure the equity instrument at cost less impairment as a final solution.

3.3 “What’s so fair about fair value?”

Using the title of the article by Rieger (2005), this subsection takes a critical approach on the view of fair value as a panacea for achieving ultimate accuracy and transparency in reporting on financial instruments. The discussion in this section will serve as a reference for analysis later in the thesis.

It is commonly agreed (e.g. see Hague, 2004; Chisnall, 2001; Hernandez, 2004) that fair value measurement provides the most accurate depiction of reality when a price for financial instrument can be readily obtained from a liquid and perfect (no bid-ask spread) market. Moreover, it is argued that fair valuing instruments held for short-term profit making is the *only* feasible way to reflect their true value. In fact, banks have valued their trading books at market for a long time already. What researchers are concerned about, though, is application of fair value measurement to non-traded items, as well as treatment of hedge accounting by full fair value approach. Although some comments address publication of Draft Standard by Joint Working Group in 2000¹, features of the Draft Standard are already present in IAS 39 (e.g., fair value option for hedging). Thus, we consider that those comments are relevant for our discussion on IAS 39.

According to Jackson & Lodge (2000), banks in England use a mixed approach, i.e. both fair value and historical cost methods. The mixed approach, however, was not always successful in showing the true value of the balance sheet items held by the banks. This is due to the fact that trading and banking books are treated differently. Losses on instruments at fair value could be hidden by treating them as hedges at book value, while a complete fair value approach might show a net overall loss (Jackson and Lodge, 2000). This comment has initiated a debate. The authors argue that the advantages of historical cost approach are

¹ Joint Working Group (JWG) consists of representatives of major standard setting bodies in the world. JWG purpose is the development of next generation global standard for recognition and measurement of FI. Draft Standard has been published in 2000, and is still widely discussed today. The main features of new standard are full fair value approach of measuring FI, and elimination of hedge accounting. Hedge accounting is deemed unnecessary when both hedged item and hedging instrument are fair valued with their value changes reflected in PL.

that value is known historically, and that this method is quite easy to use. On the other hand, this method does not take into consideration the related losses (specifically in loan portfolio) that occur due to changes in interest rates or counterparty's credit rating deterioration, for example. The authors describe the case in the United States, where loan institutions had excess of liabilities over assets of \$118 billion USD under market value approach, but historical cost approach demonstrated that they were still solvent. Thus, in the US a move was made towards fair value disclosure in the notes.

Jackson & Lodge (2000), Jackson and Lodge (2000a) expect that hidden losses would be avoided under full fair value accounting. Loans would be marked to market on regular basis, with changes in value reflected in PL. However, banks are worried about expected increased volatility in their earnings as a result of regular re-estimation of fair value of assets (Fargher, 2001; Horton & Macve, 2000; Chisnall, 2001a; Damant, 2002).

Denmark was the only country that had implemented a full fair value approach by the time Jackson & Lodge (2000) article was published. Danish regulations demand that traded instruments are valued at market value, and impairment estimation is regularly applied to non-marketable assets. It was found that full value approach in Denmark indeed increased earnings and equity volatility. However, it has not been proven that increased volatility in earnings had an impact on volatility in the price of banks' shares (Jackson & Lodge, 2000).

As a justification of full fair value method, Jackson and Lodge (2000a) point out that banks nowadays tend to aggregate and manage risk exposure across the entire entity, without separation of, say, interest rate risk emanating from banking books and trading books. Such situation puts pressure on mixed model of historical cost and fair value, ultimately leading to establishment of one valuation approach (i.e., full fair value).

Ebling (2001) describes the differences in opinions that standard setters and banks have regarding the issue of fair value of FI. The author makes a reference to Jackson & Lodge (2000a) cited above. Standard setters consider that gains and losses should be recognized not only when they are already realized, but when they in fact occur. The historical cost approach, in their opinion, does not report gains or losses on a FI in the appropriate accounting period (Ebling, 2001). Thus, the accounts do not show an accurate picture of company's financial standing.

Ebling (2001) argues that if there is an active market for a financial asset, FI should be reported at market price, and any change in that price should be accepted instantly in the accounts, even if the instrument is designated for hedging. If there is no active market for the instrument, the measurement procedure should be based on a recognized valuation model. Banks, on the other hand, argue that fair value approach is more appropriate for short term assets rather than long-term ones, and fair value approach is already applied by the banks in trading books, anyway. In addition, fair value creates volatility in earnings, and that calls for further considerations when making financial decisions, which in turn may have impact on credit policies, for example. Further objection is that banks are unique, because they hold financial instruments for different reasons than other industry sectors might do. However, this reason is not valid for setters, who consider that all FI should be measured in the same way regardless of company type that holds them.

Ebling (2001) agrees with Jackson & Lodge (2000) that effects caused by interest rate changes are considered by the full fair value model. He also agrees that accounting is about showing how things are, e.g. if volatility exists, then it should be shown on the accounts. Moreover, risks due to historic cost approach could be reduced by using a full fair value method. Financial sector representatives suggest that fair value approach requires subjec-

tive valuation of banking books because no liquid market for loans exists, and this would ultimately affect the reliability of financial statements. The advocates of fair value, however, consider that subjective approach is already present in historic cost method. This issue is problematic for standard setters and practitioners, and has been widely debated (Ebling, 2001).

Chisnall (2001) comments on article by Jackson and Lodge (2000) referred to above. Chisnall (2001) and Hague (2002) agree with the criticism of applying fair value accounting to banking books. The problem lies in inconsistency of fair value approach and banks' function as long-term lenders. Value is delivered through strategic long-term relationships with the clients, and not through day-to-day changes in interest rates. Loans are issued based on fundamental economic factors, and revaluation of loans one by one as a result of market-wide interest rate changes is an inappropriate approach that contradicts the way banking operations work and value is created. Interest rate exposure stemming from lending activities is taken care of on aggregate level by the treasury, by means of hedging. Hedging is currently a separate function from lending, while fair value approach demands that interest rate factors are intertwined with credit factors, which inevitably leads to wrong allocation of loan portfolios, as banks get driven by inappropriate short-term stimuli. Industry sectors with high credit ratings volatility would unlikely be seen as appropriate borrowers anymore, and small and medium sized enterprises would find it difficult to obtain loans on reasonable conditions. As a result of "flight to quality", the banks would prefer holding long-term government bonds instead of lending; thus, adopting fair value method for banking books would lead to restructuring on asset side of banks' BS.

Chisnall (2001) also attacks the concept of fair value because of its too theoretical nature. Unrealized gains that result from re-measurement of BS items contribute to profits, but cannot be distributed to shareholders (while distribution might be expected). Similarly, losses degrade the income statement and ultimately credit rating of a bank; however, those losses are nothing but results of artificially created revaluation.

The author continues by analyzing fair value concept from the perspective of fundamental characteristics of financial reporting: relevance, reliability, understandability, and comparability. He concludes that liquid markets needed to obtain quotes for assets held on a BS are not present for loans or deposits (unlike in case of derivatives, for example), therefore it is difficult to obtain unbiased fair value for loan portfolio. Additionally, fair value measurement of own debt leads to a paradox: deterioration in credit rating of a bank (and rise in borrowing costs as a result) produces accounting profit from decrease in discounted value of bank's liabilities. On the contrary, successful banks that manage to improve their credit rating are punished by expenses (this is also a concern of Horton & Macve, 2000). Chisnall (2001) agrees to opinion of Ebling (2001) regarding subjectivity of fair value method. In cases when no readily available market information is available, decision makers use assumptions about liquidity, credit standing, collateral and customer behaviour when fair-valuing individual loans.

Hernandez (2004) holds a different point of view. He argues that full fair value approach would be theoretically more feasible, since right now the same financial instruments can be classified into different categories under IAS 39, and this creates problems of comparability across firms. Classification differences, in turn, affect financial ratios, e.g. earnings per share and debt to equity. This leads to misperception of company's financial health by external parties. However, he continues, full fair valuation has its own pitfalls, too. Macintosh et al (in Hernandez, 2004) describe a risk of self-referential sequence between performance of companies and value of derivatives they hold: earnings influence share prices, and certain derivatives are determined by share prices; as values of derivatives change in the market, a

company reevaluates its holdings of derivatives, and this revaluation in turn directly affects earnings. Thus, this circle is self-sustaining, and is not rooted in any external fundamental economic factors.

Hernandez (2004) and Wilson (2001) are also concerned with valuation of financial instruments in imperfect (and most frequently met, indeed) markets: low liquidity is the case, entity acts as a market maker, or different quotes from several markets are available. Under such circumstances, fair value approach fails to provide objective comparability among the companies holding even identical financial assets or liabilities.

Raeburn (2004) views implementation of IAS 39 from the perspective of a corporate treasury. His main concern is IAS 39 incomplete acceptance of net hedging of aggregated risk exposure. Traditionally, treasury in a company aggregates risks from all departments, nets the flows off where possible, and then goes on to the market to hedge the resulting net exposure. Under IAS 39, however (*especially in EU, where EC has not yet endorsed macro hedging option – comment ours*), companies are required to arrange hedges on gross basis, which is economically unfeasible. To formally follow IAS 39, and at the same time to retain transaction costs on the previous level, the so-called special purpose vehicles (SPV, non-consolidated shell companies) are created as artificial netters of risk exposure: an entity settles hedging gross with SPV, while SPV nets the exposure and goes to market for hedging the resulting risk. Raeburn (2004) comments that such development is a troubling indication that IAS 39 fails to go in line with best business practices, and compliance with the Standard sometimes is only formal.

3.4 On swaps

This subsection is a brief reference material regarding nature and main uses of IRS. We focus on IRS applications by the banks.

Swap is a rather new financial instrument. It was created by the banking industry during 80's, while futures contracts and options date back a few centuries (Johnson, 1999). A *swap* is an agreement between parties to exchange all or part of future cash flows (i.e., cash flows are exchanged in gross or settled net), using a benchmark rate as a reference. First swaps were created for managing currency risk, and interest rate swaps appeared later on, gradually gaining popularity and consequently becoming a standardized financial instrument traded on the interbank market (Smithson, 1998). In case a party could not find an exact match for its need in the market, techniques of financial engineering helped to create synthetic instruments that matched the need more accurately, while were composed of simple building blocks of standardized traded swap contracts (Neftci, 2004).

We will focus on IRS in our further discussion, although it must be acknowledged that a large amount of different types of swaps exist (e.g. currency, oil, equity index based).

IRS provide users with an opportunity to exchange cash flows arising from assets or liabilities bearing a fixed interest rate into cash flows from floating rate bearing ones, or vice versa. Due to the fact that IRS, unlike other swap types, are stated in the same currency units, exchange of principal at maturity is unnecessary (Smithson, 1998). Thus, only interest payments on gross or (more frequently) net basis are settled periodically between the counterparties. This partially reduces the risk of default by one of the parties, since only comparatively moderate sums are exchanged at each point in time of contract existence.

Johnson (1999) illustrates application of IRS by companies with an example. Company A, with high credit rating, takes a loan from the bank at a fixed rate of 10%, while company B

with much lower credit rating is forced to take a loan at floating rate of 12% (6M LIBOR +x%) at the moment before swap is signed. However, Company A believes that the interest rates are about to fall under 10%, and company B has quite the opposite expectations. Hence, A and B agree to arrange a swap deal, which demands A to pay B any increase in LIBOR above pre-specified rate, and B agrees to compensate A with the difference if interest rates fall below 10%. This makes sure that A can take real advantage of fall in interest rates even if its nominal borrowing arrangements do not change, and B does not have to worry about increase in the floating component.

Another common setup of a swap deal involves a broker bank, which orchestrates the agreement. The initial needs of the companies may be as above, and in this case Company A also wants to take advantage of expected fall in interest rates. If so, borrowing at floating rate is more feasible for A. B expects rates to rise, and therefore wishes to protect itself by borrowing fixed. If originally for some reason (e.g. more beneficial covenants) Company A borrows fixed, while B borrows floating, A may enter a swap with B to pay floating and receive fixed from B. In practice, Company A pays 6M LIBOR to a broker bank, which then transfers the full amount to Company B. In return, Company B pays a fixed rate of, say, 10% to A, which is then used to repay the original loan interest of A. Thus, effectively, Company A, although initially borrowing at fixed rate, is able to convert its interest payments into floating ones and thus take advantage of expected fall in interest rates, while company B is able to lower its fixed interest rate by 2%².

Johnson (1999) states that since swaps are purely private agreements between companies, there is a lack of protection that exist in exchange markets. First, there is no clearing house that guarantees the occurrence of transactions. Second, there may also be a lack of a resale market for the swap, and in such case termination or transfer has to be done with permission from the counterparty.

We will now summarize uses of IRS by the banking industry. Most assets and liabilities on a bank's balance sheet are interest-yielding or interest-paying items (e.g. loans, fixed rate government debt, marketable securities, interbank borrowing, deposits and subordinated capital). Thus, both sides of the BS are subject to considerable interest rate risk: a sudden unfavourable movement in interest rates, including a change in the shape of interest rate curve, would cause a material impact on PL. Banks routinely use IRS for the purpose of hedging interest rate risk, as well as for maturity matching of assets and liabilities.

Smithson (1998) describes a typical situation when a bank has a portfolio of long-term loans on the asset side, and short-maturity deposits on the liabilities side. A rise in short-term interest rates not accompanied by equivalent rise in long-term IR (change in shape of the IR curve) would put a bank into unfavourable financial situation. A bank can use IRS to swap part of long-term fixed rate based cash flows for short-term floating rate based ones. This procedure is an element of series of actions commonly referred to as *maturity matching*. In this case, the bank uses IRS to cover up *own* position.

Besides, as discussed above, a bank may *act on clients' orders* by entering a swap deal as a broker or as a dealer (Smithson, 1998). *Brokerage* implies that the bank acts as a matchmaker between clients with opposite needs, and therefore the arrangement of the deal introduces no additional risk for the bank itself – all the risks of IR volatility are borne by the eventual

² Only a principle is demonstrated here. In practice, the calculation of interest payments and bank's commission draws on factual credit spread between floating and fixed borrowing rate for both companies, and requires precise numerical data both on credit spread and on default spread/risk premium. Gain on IRS is also traditionally shared between the counterparties. Such computation is not essential for following further discussion in this paper, and is therefore omitted.

parties to the contract. In the case of *dealership*, however, a bank enters a swap deal with a client assuming a contractual position without yet having a suitable counterparty for the swap agreement. In this case, the swap deal is concluded between the bank and its client, and thus poses an additional IR risk for the bank. The bank offsets its position in the inter-bank market, selecting IRS as a primary hedging instrument.

Price of a swap contract at the inception is set to zero (Neftci, 2004, p. 105). Thus, in practice, no money changes hands when a swap is entered into. This implies that at the moment of initiating a swap deal, situation at the market is taken as a reference point. As market conditions change over time, value of the contract starts deviating from zero in any direction, reflecting gain or loss for counterparties to the contract. As a result of market movement, deterioration of swap value for counterparty A is an automatic rise in swap value for counterparty B. Before swap matures or is derecognized, negative value is reflected as liability (to the other counterparty), while positive balance is accounted for as an asset/receivable (from the other counterparty). Changes in swap value are thus mirror-imaged in the books of the two parties to the agreement.

In conclusion, we stress that in order to retain the necessary focus of the study, we will not discuss valuation of swap instruments. Valuation is done by the market, and can then be used by a company (a bank) entering a swap agreement as a fair value measurement for initial recognition, which is a common approach under IAS 39. Thus, we assume market price as given, and omit discussion of swap valuation techniques from this paper.

4 Regulatory Basis

4.1 IAS 39: summary and explanations

Group of publications closely related to IAS 39 and intended by IASB to be used together, are

- **IAS 39 (revised in 2003)** itself, prescriptive summary of practices related to recognition, measurement, valuation, hedging and derecognition of financial assets and liabilities
- **Appendix A, Application Guidance:** additional explanations of IAS 39 paragraphs; sometimes includes illustrative numerical examples. Designated to facilitate understanding of potentially unclear issues. The Appendix is an integral part of the Standard.
- **Amendments to IAS 39, Fair Value Hedge Accounting for a Portfolio Hedge of Interest Rate Risk** (issued in **March 2004**), outcome of an exposure draft: updates and clarifies some paragraphs of IAS 39 (2003) section on hedge accounting; includes updated paragraphs of original (IAS 39, 2003) Basis for conclusions and Application guidance. *This update allows application of interest rate risk hedging on portfolio basis (so-called macro hedging), but has not yet been endorsed by the EC (carve-out of paragraph 81A, see below)*
- **Illustrative Example**, attached to Amendments issued in March 2004: sets out numerical examples of hedge accounting; is not a part of the Standard, but is rather provided as a technical guidance to practitioners.
- **Implementation Guidance** for IAS 39: attempts to answer practical/technical questions related to IAS 39 implementation; puts IAS 39 in perspective to other IAS and IFRS
- **Basis for Conclusions:** summary of logical arguments that led the Board to adopt IAS 39 as it is; sometimes contrasts competing approaches and argues why a particular way was chosen for adoption in IAS 39.

IAS 39 (2003) has been endorsed by the EC for use in consolidated accounts starting from 1st January 2005; however, carve-outs (i.e. exclusions) of the following paragraphs were made (European Union Informational Portal, 2005-02-03):

- Standard:
 - Paragraph 9 b (exclusion of possibility to initially recognize any financial asset or liability at fair value through profit or loss; essentially prohibits fair value option as an alternative to hedge accounting); debated, final solution by EC expected in late 2005
 - Paragraph 35 (fair value is not applicable for liability valuation if related asset is measured at amortized cost)
 - Paragraph 81A (from Amendments text; permission to hedge interest rate risk on portfolio basis); final solution by EC expected in late 2005
- Application Guidance: 31, 99A, 99B, 107A, 114 (c) and (g), 118 (b), 119 (d), (e) and (f), 121, 122, 124 (a) and (d), 126, 127, 129 and 130.

Further discussion regarding aspects of IAS 39 will be closely based on texts of IAS 39 (2003) itself and Application Guidance that complements the Standard. Direct references will be denoted as P (paragraph in the Standard) or AG (paragraph in the Application Guidance).

4.1.1 Evolution of IAS 39

The original IAS 39 was first issued in 2000. The subject that the standard deals with is complicated and controversial by its nature, and since publication of year-2000 edition, the Board has accepted a large number of comments from practitioners regarding application of the Standard in different situations. A decision was made to revise IAS 39 altogether, and new Standard was issued in 2003. Edition 2003 superseded edition 2000, and nowadays, when one refers to IAS 39, he/she means “IAS 39, edition 2003”.

The objective of revision was to reduce complexity by clarifying and adding guidance and eliminating internal inconsistencies. The changes concerned measurement and derecognition of financial instruments, evaluation of impairment, methods to determine fair value, and aspects of hedge accounting.

4.1.2 Relevant aspects of IAS 39

Only issues relevant for the purposes of our thesis will be reviewed here. We will consider Standard’s guidance on

- classification of financial instruments (def.) and related different accounting treatment (acc.)
- measurement methods (fair value vs. accumulated cost)
- aspects of hedge accounting, including clarification of differences between fair value and cash flow hedges, as well as hedge instruments measurement aspects.

4.1.2.1 Classification of financial instruments

The Standard subdivides all financial instruments that an entity holds into four groups. Initial designation of an instrument into the correct group is important not only because of comparability within the group, but also because groups follow different recognition and measurement approaches. The method of accumulated cost referred to in this subsection is explained in 4.1.2.2. The groups of FI are as follows:

- *Held for trading (HFT)*. *Def.* The instrument is initially designated for purposes of short-term profit taking or is itself a derivative (with exception of derivatives held for hedging purposes). According to AG 15, this category refers to both long and short positions in financial instruments intended for speculation. Examples of HFT instruments might be call options or commodity futures that are frequently traded to benefit from day-to-day fluctuations in their market value. *Acc.* The Standard requires that this group of FI is accounted for at fair value (marking to market), and value fluctuations are carried directly to profit and loss; thus, value fluctuations of HFT instruments have a direct impact on volatility of PL bottom line.
- *Held to maturity (HTM)*. *Def.* Usually a non-derivative *floating interest rate* financial asset that has been bought with the purpose of holding it to maturity. Frequently such assets are government bonds and T-bills or corporate debentures, which can also be used by financial institutions for maturity matching of assets and liabilities. AG 16 and 17 specify that equity instruments do not qualify into this category since a company whose shares are acquired is expected to have an infinite life span (hence “maturity” is expected never to occur). *Acc.* Although for most financial instruments fair value approach is the method that reflects instrument’s value best, it is believed that HTM is an exception. Amortized cost approach is believed to pro-

vide a better estimate of HTM instruments' value. However, the holder of an HTM instrument must indeed be committed to hold the asset till maturity, otherwise the asset cannot be classified into HTM group, and amortized cost approach is not applicable.

- *Loans and receivables (LR)*. *Def.* In contrast to previous category, LR are financial assets with *fixed or determinable payments*. The category consists not only of typical fixed-rate loans and trade receivables, but can also include debt instruments where interest rate is fixed in the contract. Nevertheless, according to AG 26, debt instruments that are traded in the active market do not qualify for recognition as LR. *Acc.* The Standard (P46a) requires that LR are measured at amortized cost.
- *Available for sale (AS)*. *Def.* AS are all other financial instruments that do not fit into any of the above categories. *Acc.* This group of instruments is measured at fair value, but fluctuations must be booked into *equity*, not PL.

4.1.2.2 Measurement methods

As has been discussed previously (see Theoretical Framework), valuation of financial assets on basis of historical cost, which is close to amortised cost, has been compared to fair value approach by a number of accounting theoreticians. In addition to discussion above, we will go into greater detail regarding impact that two valuation methods have on the set of financial statements. It must be noted here, however, that financial instruments that serve solely for hedging purposes are subject to different accounting methods, and will be addressed in subchapter 4.1.2.3. Since the focus of the thesis is on IRS for hedging, we will mainly refer to that subchapter as guidance. Nevertheless, hedging valuation techniques rest on principles of amortised cost and fair value, thus we find it relevant to discuss the two fundamental methods in greater detail, too.

Amortized cost approach makes use of effective interest rate (AG 5-8). The Standard describes an effective interest rate (EIR) as the rate at which cash flows arising from an asset exactly discount over asset's useful life to the purchase/initial value of that asset. An important aspect in EIR calculation is that *all* cash flows that an asset generates (not only interest payments) must be considered as income. Other sources of income for a holder of an asset might include transaction costs, fees and premiums, and they all must be included into EIR computation to arrive at the correct EIR figure. Amortized cost then is a difference between initial recognition and principal repayment, adjusted for cumulative amortization under EIR method (in case EIR differs from original IR used for discounting the cash flows), and impairment.

Impairment of an asset (as specified in P58-69 and AG 84-93) is deterioration of its value (e.g., a lender realizes that further interest payments on a loan are unlikely to be collected, as a result of weakening of borrower's financial standing). Impairment needs to be estimated periodically, and in our opinion, this has a conceptual link to fair value method under which instruments are constantly monitored and market value fluctuations are reflected in PL.

Any asset impairment charges (difference between carrying amount and present value of newly estimated future cash flows, using *original EIR*, as per P63) are reflected in PL in the respective period.

In contrast to amortized cost approach, *fair value method* is a simpler and more transparent way to record values of financial instruments. We have discussed ways to obtain a fair value for an asset previously (see subsection 3.2). IAS 39 takes a similar approach to methods for

obtaining a reliable fair value measure (IAS 39, Introductory P18; a more detailed explanation of fair value measurement methods are presented in AG 69-83).

It must be noted that although the Standard allows usage of valuation techniques for estimating fair value, usually a liquid market is present for majority of instruments designated to be recognized and held at fair value. This means that all available valuation information is already contained in the market quote, and can readily and reliably be used by an entity for revaluation of its position.

Changes in fair values (e.g. drop in market value of a held long option as it goes increasingly out-of-the-money) are booked directly into PL, thus having an immediate impact on the bottom line of the PL. It has been argued (see subsection 3.3 and banks' financial statements for FY2004) that valuation at fair value increases volatility in earnings, which has a consequent negative impact on comparability of operational results between quarters and financial years. In case of banks, large part of FI is held for purposes of hedging a risk (primarily stemming from fluctuations in interest or currency rates). To smooth out fluctuations in earnings, IAS 39 offers hedge accounting alternative. FI designated as hedges are required to meet specific criteria, and cannot be excluded from or included into the group sporadically. We consider hedge accounting principles in the next subchapter.

4.1.2.3 Hedge accounting aspects

Generally, usage of FI to manage and minimize exposure to financial risk is referred to as *hedging*. How well a hedge offsets changes in value of the hedged item is termed *hedge effectiveness*. A good hedge is expected to offset changes in the value of the hedged item with 80-125% effectiveness (AG 105).

The Standard sets out specific criteria for hedge instruments. *First of all*, only contracts with counterparties external to the reporting entity can be regarded as hedges. This means that for purposes of consolidated reporting (group as an entity), hedge contracts signed within the group between different vertically and horizontally associated companies or departments are *not* considered to be hedges at all, since the group in its entirety is still exposed to the risk of the hedged item. *Second*, the Standard actually permits that a number/portfolio of financial instruments can be considered in combination as a single hedge. For hedged items, similar regulations apply: a group of financial assets or liabilities exposed to a particular financial risk can be considered a single hedged item, if adequate documentation is set up upon inception of the hedge. Additionally, it is allowed to set up and recognize one hedge against several types of risk at the same time, provided the respective documentation and subsequent commitment to the initial design of the hedge are in place.

There are restrictions as to which hedging instruments (HI) can be recognized as such. In particular, the following requirements must be met (P88):

1. Designation of a financial instrument or group of FI as a hedge must be appropriately documented at the inception of the hedging relationship
2. HI must be highly effective (as mentioned above, hedge effectiveness should be in range 80-125%)
3. Effectiveness of the hedge can be reliably measured
4. Cash flow hedges (see below) must be related to a hedged transaction with a high probability of occurrence (i.e., an entity must be sure that fixed rate interest income will be paid out by the counterparty as designed in the borrowing/lending contract, meaning credit risk or risk of default is low)

5. An entity must keep an eye on the performance of the hedge and reassess its effectiveness on a regular basis till expiration. If a hedge relationship falls out of 80-125% range, hedge accounting must be terminated, and hedge dismantled.

Hedge accounting recognizes two principal types of hedges:

- Fair value hedges (FVH)
- Cash flow hedges (CFH)

Besides, there is a distinct third group of hedges (investments in a foreign operation, as per P86c), but they are irrelevant and thus disregarded for this study. We will now discuss each of these two types in more detail, focusing on differences in accounting treatment³.

Fair value hedges are designed to safeguard against fluctuations in fair values of financial assets or liabilities. A vivid example is hedging of fluctuations in value of a debt instrument with fixed interest payments (as set out in AG 101). E.g., changes in value of a fixed rate bond are reversely related to shifts in relevant interest rates. An entity that holds such a bond might wish to engage in hedging arrangement to protect fair value of the debt instrument against adverse interest rates movement (i.e. increase in interest rates). Accounting treatment for FVH is fairly straightforward: any changes in fair value of a hedging instrument are recognized directly in the PL, and accounting for hedged item is modified so that its changes in value are also reflected in the PL similarly to hedging instrument (P89). E.g., a company issues fixed-rate debt. Since rate is pre-determined in the contract, shift in market conditions changes fair value of the debt instead of cash flows from it. As interest rate decrease, fair value of the debt (from the company's perspective) decreases, too, because now the company has to pay unfeasible above-market rate to serve its debt. *Receive-fixed and pay-floating IRS*, on the contrary, becomes more valuable when rates decline in the market: a company holding such IRS can still benefit from receiving higher fixed rate from counterparty, although rates have declined elsewhere. Designating the two FI in a hedge relationship helps to offset their individual fluctuations in fair values, thus appropriately reflecting in accounts the economic nature of hedge relationship.

On the contrary, *cash flow hedges* are designed to protect against variability in expected cash flows. AG 101 states that debt instruments with variable interest rate coupon payments qualify to be hedged by CFH, as fluctuations in interest rates will affect expected cash flows. E.g., if a company issues floating-rate debt, and is worried about interest rate fluctuation in the future, it may enter a *receive-floating and pay-fixed IRS*. Thus, if rates rise, and cash outflow on debt increases, the received cash inflow from floating-rate leg of IRS compensates the loss.

We can further illustrate the difference between CFH and FVH with an example:

Assume Bond A, maturity 2 yrs, has a face value of 100, and pays annual coupon at fixed interest rate of 10%. Thus, cash flow in years 1 and 2 will be +10 and +110, respectively. Cash flows are certain and predictable at the inception of the contract, however fair (i.e. market) value of a bond will fluctuate in response to changes

³ Use of CFH and FVH is not limited to managing pure interest rate risk. Such hedges are used to deal with foreign exchange, commodity prices, or mixed (foreign exchange and interest rate) risks. However, the focus of this thesis is application of hedges in mitigation of interest rate risk *only*, which means we will disregard any other uses of CFH or FVH in the paper.

in market interest rates. To hedge risk arising from an asset like Bond A, an entity will engage into a fair value hedge.

Bond B also has face value of 100 and will mature in 2 yrs, but this time coupon rate is USD LIBOR + 2%. LIBOR rate changes daily, and logically, so does also total coupon interest rate. Thus, a holder of such bond might receive CF=+7.2 in year 1 (if LIBOR=5.2%) and +105.4 in year 2 (if LIBOR drops to 3.4%). Variability and uncertainty of future coupon payments (cash flows) calls for hedging the position with a cash flow hedge, possibly with an IRS.

CFH are recognized in the accounts as follows (P95):

- Portion of the gain or loss on the hedging instrument which is considered an effective hedge should be recognized in the BS through statements of changes in equity.
- The remaining ineffective portion of the hedge is carried directly to PL. An ineffective portion of HI arises from imperfect design of a hedge, and is an “overhead” which does not offset changes in value of the hedged item one-to-one. As stated above, P88 specifies that a hedge is still effective if at least 80% of value changes in the hedged item are offset by HI. The remaining ineffective portion (20%) may e.g. be attributed to foreign exchange risk if hedged item and HI are denominated in different currencies, and the currencies do not move in tandem (AG 109).

AG suggests that effectiveness of HI against interest rate risk may be evaluated by setting up a maturity schedule of all exposed assets and liabilities, and then arranging the hedge and assessing its effectiveness against resulting net position. IRS are a good example of an effective hedge, provided IRS is sufficiently accurate in matching maturity, amount, and other attributes of the hedged item.

Remark:

It must be recalled that not entire text of IAS 39 and AG has been adopted by EC for implementation in the European Union (see beginning of subsection 4.1). To avoid unnecessary confusion for the reader, we have carefully reviewed the paragraphs that have been excluded by the EC, and, to the best of our knowledge, we *do not* cite those here or elsewhere in the text, thus maintaining focus on implementation issues in Sweden, which is a member of the European Union where EC carve-outs are effective.

4.1.3 Hedge accounting in practice

This subsection draws from the book by Ian Hague (2004). The author is a Principal of Accounting Standards Board of Canada; he has been personally involved in the development of IAS 39 as a member of numerous working groups. We hope discussion in this subsection helps the reader in better understanding of comments by banks’ representatives (Chapter 5) and of the following analysis (Chapter 6).

“Hedge accounting is optional <...> Hedge accounting is not synonymous with the economic practice of hedging risk. A company may hedge risk exposures but elect not to apply hedge accounting” (p.117).

As discussed above, *CFH and FVH are two hedge accounting types permitted by IAS 39*. However, if hedge accounting is applied, strict documentation rules and systematic measurement of hedge effectiveness must be in place. Otherwise, hedge accounting cannot be even initiated. If a company considers that such additional measures are too costly or difficult to implement, a firm might opt to carry on its economic hedging activities as usual, but hedged item and hedging instrument then would be not treated as related pair in accounting. If no hedge accounting is applied, hedge pair is recognized and measured inconsis-

tently, leading to incorrect perception of situation by an external user of company's accounts.

Inconsistencies are related to recognition and measurement, as well as may arise because one part of hedge pair emerges in the future, and cannot yet be recognized in the accounts.

Table 2 Reasons for adopting hedge accounting

Reason	Accounting problem and hedge requirement	Example
Recognition inconsistency	<p>One side of economically related pair of assets/liabilities is recognized on the BS, while other side is not. Leads to gains and losses recognized at inappropriate periods.</p> <p>Company desires to recognize gains/losses stemming from both sides of the related pair in the same period.</p>	<p>Company enters into a currency forward contract to manage foreign exchange risk from not yet completed transaction. Forward is recognized immediately upon inception, and consequent fluctuations in fair value are reflected in PL in this accounting period.</p> <p>The transaction that gives rise to the foreign exchange risk is completed only in the next accounting period, and recognized only then. Foreign exchange gains or losses from transaction would therefore be recognized in a later period than gains/losses from a forward contract (booked now). Temporal mismatch.</p>
Measurement inconsistency	<p>Sides of economically related pair of assets/liabilities are measured on different bases.</p> <p>Company desires to recognize gains/losses stemming from both sides of the related pair on the same basis and in the same period.</p>	<p>Company enters into fixed-to-floating IRS to manage interest rate risk from fixed-rate borrowing. IRS (as a derivative) is measured at fair value, while debt is measured at amortized cost. Changes in interest rates impact fair value of IRS immediately, and gains/losses are reflected in PL, while debt is influenced in a different way. IRS gains/losses are included in PL in different period from those stemming from debt.</p>
Risks associated with future transactions	<p>Future sales or purchases cannot be recognized at current accounting period, but companies commonly enter into FI in current period to mitigate the expected risk.</p> <p>Company desires to recognize gains/losses stemming from both sides of the related pair in the same period.</p>	<p>Company enters forward commodity contract for a purchase of sugar cane in 6 months from now. Forward is recognized immediately and gains/losses are reflected in PL in this accounting period. However, purchase deal is actually concluded only in 6 months, and will be recorded in a different accounting period.</p>

Hedge accounting needs to be applied to deal with these problems. However, that calls for extensive documentation, and a company might decide to go "the easy way": IAS 39 allows recognition of any financial asset or liability at its inception at fair value through profit or loss. Such approach assumes that fair value fluctuations of hedged item will be offset by opposite (negatively correlated) fluctuations in fair value of the hedging instrument, and thus any specific hedge accounting tricks would automatically become unnecessary⁴. *Never-*

⁴ Abolishment of hedge accounting altogether as a result of full fair value approach is one of the most controversial recommendations in the Draft Standard, which is now being developed by Joint Working Group. The new standard is unlikely to be implemented in the nearest years, but eventually it will serve as replace-

theless, fair value option is one of the IAS 39 carve-outs in Europe; such method is not yet endorsed by EC (solution is expected in 2005).

Thus, so far, in Europe the companies are left only with possibility to go for hedge accounting. Hedge accounting modifies basic recognition and measurement requirements of FI. Brief outline of modifications to “normal accounting practice” for FI is presented below, and it concludes the descriptive discussion on IAS 39.

Table 3 Accounting treatment to achieve consistency of recognition and measurement within a hedge pair

Type of hedge	Solution
FVH	<p>Derivative carried at fair value with changes in PL, as usual.</p> <p>Special entry added in PL for item traditionally measured at different method, and thus not recognized in PL in the same way as a derivative (e.g., debt at amortized cost).</p> <p>Result: fair values of both hedged item and hedging instrument fluctuate in opposite directions with results reflected directly in PL. If hedge is highly effective, gains/losses offset each other accurately, leaving a close-to-zero net effect on earnings.</p>
CFH	<p>Changes in fair value of a derivative are deferred through a special account in equity, rather than carried to PL immediately. The time period when a gain or loss on derivative is transferred from equity to PL is exactly the same when cash flows from hedged item impact PL.</p> <p>No amendments made to accounting treatment of hedged item.</p> <p>Result: offsetting cash flows from hedged item and hedging instrument recognized in PL at the same period, leaving a close-to-zero net effect on earnings.</p>

4.2 Swedish GAAP on accounting for FI

Operations of financial institutions in Sweden are regulated by a set of rules and practices that are somewhat different and more elaborated than those for conventional limited liability companies. In particular, laws and regulations applicable to financial institutions are *ÅRL (Annual Accounts Act)*, *ÅRKL (Act on Annual Accounts of Credit Institutions and Securities Companies)*, and *normative acts by the Swedish Financial Supervision Authority (FSA)*. FSA monitors companies that operate in the financial market, and contributes to stability in the financial sector (FSA, 2005-04-10). Furthermore, FSA complements legislation with regulations and guidelines through FSA Regulatory Code (FFFS). FFFS is used by financial institutions as a basis for working out accounting practices.

Besides, Redovisningsrådet (RR) recommendations are followed by banks in preparing their financial statements, too. However, there is no RR standard similar to IAS 39, as previously mentioned in the paper.

In this subsection, we will briefly discuss legislative and normative frameworks for derivatives accounting in Sweden, as applied by the banks. The main sources of information, thus, are

ment to IAS 39 and a similar standard in US GAAP. Some negative comments on full fair value from practitioners and academic community have been included in our Theoretical framework.

- ÅRKL (§1, chapter 1 of ÅRKL specifies that banks are indeed regulated by this law)
- ÅRL
- FSA recommendations (FFFS 2002:22; 2003:10; 2004:20).

It must be noted that implementation of EU directive 1606/2002 in ÅRL and ÅRKL, as well as in the new FFFS 2003:10 and 2004:20 allows more items on a balance sheet to be fair valued, following the spirit of IAS 39. These amendments in laws, as well as FFFS 2003:10 and 2004:20 are still optional for implementation. Mandatory changeover will be required starting from 2006. Annual reports (e.g. one by *Nordea*) state that banks are reluctant to proceed with the new guidance, and would rather await further developments. Thus, we review newer versions of Swedish GAAP regulations only in passing.

4.2.1 Classification and accounting treatment

ÅRL specifies that financial instruments should be classified into two large groups:

- Financial fixed assets (FFA)
- Financial current assets (FCA)

Recognition and measurement is different for each group. *FFA* are recorded at acquisition value, and accounted for at amortized cost. The concept of amortized cost in Swedish GAAP is similar to its interpretation in IAS 39. However, Swedish regulations are less specific than IAS 18 (Revenue) regarding what constitutes income, and therefore more freedom is allowed for managerial judgement when deciding which income items to include in calculation of EIR. *FFA* group comprises such financial assets that are generally intended to be held for a long term. The examples for banks include loans to customers and securities intended to be held to maturity (such intent should be properly documented). However, IAS 39 subdivision of FI into groups is more thorough (e.g., loans and receivables is a separate group in IAS 39, while it is still under *FFA* header in Swedish GAAP).

Periodical adjustment for impairment is necessary to verify whether the instrument is held on books at reasonable value. Banks should perform an impairment test at least as frequently as they release interim reports (i.e., quarterly).

Another group, *FCA*, includes all other financial instruments, including derivatives. The instruments are recognized and measured at market value, which is close to the concept of fair value in IAS 39. Marking-to-market is done on frequent and regular basis. Unrealized profit, emerging as the surplus of market value over book value at the closing date of accounting period, is brought to a special restricted reserve account in equity, and cannot be distributed as earnings. Realized gains and losses are reported directly in the PL.

As stated by representatives of FSA during the interview, one of key problems in transition from Swedish GAAP to IAS 39 is in reclassification of FI. Since the categories are not transferable on one-to-one basis, reclassification of *FFA* and *FCA* into four new categories under IAS 39 will depend on purpose for which FI is held, and will involve managerial judgement.

Financial liabilities are usually held at amortized cost under Swedish GAAP, but there are minor exceptions when market valuation is permitted (say, when liabilities are held for purpose of trading).

ÅRKL often refers to paragraphs in ÅRL, thus both Acts are closely connected. For example, §1 chapter 4 ÅRKL refers to derivatives valuation rules specified in §14a chapter 4 ÅRL. §1 chapter 5 ÅRKL also refers to ÅRL regarding disclosure of financial instruments. Reference is made to §4a chapter 5 ÅRL, which states that for each FI agreement entered into, an entity should disclose the following:

- Type of instrument
- Book value
- Conditions that are likely to affect future cash flows related to the instrument.

4.2.2 On hedging

FFFS 2002:22 provides guidance for hedge accounting at Swedish banks. Instruments designed to serve as hedges are generally valued according to the same principles as the underlying hedged asset or liability. For hedge accounting to be applied, the following conditions are to be met:

- The hedged position is exposed to interest, stock, foreign exchange, or commodity risk that might lead to a decrease in the market value of the position.
- The hedged position consists of either individual or groups of identifiable items. It should be clear whether a separate asset or liability, on- or off- BS, is a hedged item or not. Thus, proper documentation of hedging arrangements is required.
- The hedge is expected to be effective. Unlike IAS 39, FFFS 2002:22 does not supply any benchmark rates of hedge effectiveness. However, it is implied that for an item to qualify as a hedging instrument, cash flows from it must be to a high degree negatively correlated with the cash flows from the hedged item itself. Banks decide themselves whether the hedge is “highly effective” or not. In addition, banks have to disclose what methods are used to measure effectiveness, and description of those needs to be available in the annual reports.
- Hedged items are assets, liabilities or future cash flows that are fixed in a contract with counterparty. Hedge accounting of budgeted flows is not in accordance with good accounting practice applied by the financial sector.

Besides, the following should be observed when hedge accounting is applied (FFFS, 2002:22):

- Appropriate documentation regarding hedging strategy and hedged items needs to be maintained at all times while the hedge is active.
- The estimation of correlations should be documented. In certain cases, documentation is permitted for groups of hedged positions rather than individual items.
- Deferral accounting is generally applied for recognizing fluctuations in value of hedging instrument and the hedged item (see below).
- When the hedged position is realized or when hedge accounting is interrupted for some reason, deferred realized gains or losses are booked immediately into the PL.
- Should sharp deviations between value of the hedging instrument and the hedged position occur, this is an indication that a hedge is not effective. The credit institution should reconsider whether to continue with hedge accounting in such situation.

- Hedge accounting should only be interrupted if one of the requirements above is not fulfilled, or if an essential event occurred that changed the original intent to hold a position hedged.

On disclosure:

- In its annual report, the company needs to disclose how large deferred unrealized gains or losses stemming from hedge accounting are.
- Reasons for applying hedge accounting need to be disclosed, also.

However, the above-specified disclosure is required only if:

- the sum of the total positive market values and the total negative market values exceeds 10 % of the equity, or
- the sum of the nominal amounts exceed 200 % of the equity.

Deferral hedge accounting is a method that ignores (postpones) unrealized gains/losses of both hedged item and hedging instrument until hedge relationship is abandoned. At the moment when a hedge is ceased, gains/losses are measured at market rates and net outcome of a hedge is booked into PL. Thus, effects of changes in values of hedged item and hedging instrument are effectively held off-BS until termination of the hedge. This clearly contradicts IAS 39 approach of bringing changes to values of hedge pair on-BS (for CFH) and into PL (for FVH) since the inception of designated hedge relationship. As argued by FSA, such differences in accounting treatment of hedges pose another transition difficulty for the banks.

It must be noted that FFFS 2004:20 is more aligned with IAS 39, and it does *not* allow deferral hedge accounting method anymore. Nevertheless, as mentioned above, implementation of FFFS 2004:20 is optional so far.

Hedged item and hedging instrument are valued in the same way (meaning when FFA exposure is hedged, a hedging instrument is also considered FFA, and similarly with FCA). Both hedged item and hedging instrument are recognized on-BS.

4.3 Two frameworks contrasted

In this section, we present main differences between Swedish GAAP and IAS 39. The comparison between two frameworks is not readily available from any public sources; therefore, the summary presented here is the result of our own scrupulous study of two frameworks and synthesis of findings. The sources of information are IAS 39 (including Application Guidance and Implementation Guidance) and Swedish GAAP (consisting of latest editions of ÅRL, ÅRKL, FFFS 2002:22). FFFS 2003:10 and 2004:20 are still optional for implementation and not widely used in practice, as evident from banks' FS; therefore, they are disregarded in this summary.

To back up the outcome of our findings with competent commentary, a discussion with FSA Accounting experts was held (2005-05-11). The discussion allowed making sure that key aspects are covered, and that the conclusions are accurate.

Table 4 Key differences between Swedish GAAP and IAS 39

Area	Swedish GAAP	IAS 39
Classification of FI	FFA or FCA (see subsection 4.2.1 for detail)	HTM, HFT, LR, AS (see subsection 4.1.2 for detail)
Measurement methods for FI	FFA: amortized cost, impairment tests FCA: market value	HTM and LR: amortized cost, impairment tests HFT and AS: fair value
Placement of derivatives	On- or off-BS. Derivatives with positive or negative value need to be reported on-BS.	All derivatives only on-BS, independent of purpose of holding the derivative (i.e. derivatives as hedging instruments are also recognized on-BS)
Hedging methods and accounting treatment	Deferral hedge accounting: unrealized gains/losses from hedge relationship are not recognized in books. When hedge is terminated, resulting realized gain or loss is reported through PL. Hedged item and hedging instrument reported on-BS.	CFH: applied for managing variability in cash flows from a FI. Unrealized gains/losses attributable to effective portion of hedge are booked in restricted equity; ineffective portion reported in PL FVH: applied for managing fluctuations in fair value of a FI. Unrealized gains/losses from both hedged item and hedging instrument are recognized in PL directly Both hedged item and hedging instrument recorded on-BS
Effectiveness of hedging	“High effectiveness”, no numerical range. Companies have to disclose in annual reports how effectiveness is measured	Hedge effectiveness should lie in the range of 80-125%
Methods to evaluate effectiveness	No definitive guidance, management’s judgment	No definitive guidance, management’s judgment
Portfolio hedging of interest rate risk	Not specified separately, only general deferral hedge accounting applicable	Available in latest edition of IAS 39, but not yet endorsed by the EC

5 Empirical Results

The questionnaire for the main study is separated into two sections: Common and Individual questions (Appendix, subsection 10.6). All the discussion that follows (Chapters 5 and 6) relies *exclusively* on answers to Common part of the questionnaire, which is identical for each of the interviewed banks. The Individual section is different for each bank, and therefore answers are *not* directly comparable. The only purpose of Individual questions was to obtain additional clarifications to information already contained in the annual reports. The answers to Individual questions are *neither* referred to *nor* analyzed in Chapters 5 and 6.

Common questions section starts with the discussion of general matters and respondents' perceptions (Q 1-3). Later on, questions related to specific issues and problems within IAS 39, IRS usage and accounting for hedges, are posed (Q 4-9).

5.1 Generic issues (Q 1-3, Common section)

The respondents come to an agreement that implementation of IFRS has not been a surprise for the banks. Work on transition from one reporting system to another has usually been initiated several years ago, and differences in two systems have been comprehended early in the process.

This is not to say that the banks did not face any difficulties. As expected, some problems are common for all banks. The most frequently cited challenge is a need to report all derivatives on-BS under IAS 39 starting from YE2005, which was not previously required by Swedish GAAP. Derivatives, disregarding their purpose of usage, now need to be fair-valued when reported on-BS, while previously some derivatives could be held off-BS, with only accrued interest recognized in the books. Another challenge is abolition of deferral hedge accounting: it is not allowed for consolidated accounts anymore.

Additionally, each of the banks had its own problems with IAS 39, and reasons are rooted in specifics of operations of each interviewed bank and its history of dealing with derivatives. *FSB* states that mortgage lending through its subsidiary, *Spintab*, is largely financed by issue of corporate bonds. Although interest exposure is usually matched between these liabilities and corresponding assets (they both are fixed-rate bearing ones), smaller imbalances need to be corrected by establishing interest rate hedges with the help of derivatives. Previously, such hedges were valued at amortized cost, since loan portfolio was considered a fixed financial assets group, and was intended to be held till maturity (repayment). Now, IAS 39 demands that derivatives previously embedded into hedging arrangement are sorted out and measured at fair value. *FSB* attempted to apply hedge accounting in this case. However, it proved impossible, since exposure of *Spintab* had been hedged by entering deals with other departments in the bank. However, as discussed above, now IAS 39 prohibits internal hedging: the entire group is treated as an entity for consolidated reporting, which automatically means *Spintab* hedging cannot be considered as hedging at all. Furthermore, interest rate risk had first been aggregated on the bank's level, and then treasury (via trading department) dealt with external parties based on this aggregated exposure. This logically also made it impossible to trace individual internal hedging deals to equivalents in external ones (so that IAS 39 requirements could still be satisfied), and hedge accounting possibility was discarded altogether. HI related to *Spintab* exposure had to be treated at fair value, without application of hedge accounting. However, *FSB* uses FVH for risks stemming from other parts of the balance sheet. In general, the bank largely adopted fair value measurement for financial assets and liabilities, which would ease complete transition to IAS 39 at the end of 2005, but some discrepancies and mixed treatment are still present.

SEB mentions that off-BS derivatives now need to be transferred on-BS. Nevertheless, the bank admits that proportion of off-BS derivatives as of end of 2004 is small, and work has been done to estimate market values of all derivatives. The bank seems optimistic about the new rules in general, and suggests that majority of aspects of IAS 39 have been applied in their accounting practice well before 2004. Thus, transition is not expected to pose considerable challenges.

HB is primarily concerned not with implementation of new rules as such, but rather with consequences that IAS 39 will bring in: volatility in earnings. This problem has been raised in academic discussion cited previously in the paper, and referred to also in banks' annual reports for 2004. The bank aspires to apply hedge accounting wherever possible, so that fluctuations in market value of hedged item and hedging instrument effectively offset each other in the books, and ultimately reduce volatility. *HB* suggests that it is possible not to use hedge accounting at all, although risk exposure (say, fixed rate loans) is still hedged in practice by derivatives (i.e., economic hedges are in place, but not regarded in accounting as such). In this case, however, derivatives are fair valued, while loans are still measured at amortized cost. This creates an undesirable mismatch, which was also discussed previously in the descriptive section on IAS 39. Thus, in order to escape volatility in earnings, it is essential to "make hedge accounting work", as summarized by the respondent.

Nordea points out that IAS 39 is not finalized yet as such, and the bank is required to use a carved-out version of the Standard, as adopted by the EC. Changes to the Standard are expected in June 2005. The bank suggests that IAS is generally more suited for non-financial corporations, while the carved-out version is more applicable to financial institutions, e.g. banks.

The banks have instructed their subsidiaries to submit reports according to IFRS, therefore no challenges are expected when restating incoming figures from elsewhere in the group for purposes of consolidated FS. On the downside of this, however, the subsidiaries carry the burden of double reporting: locally, reports are submitted according to GAAP of a country in which a subsidiary operates, and group reports are filed according to rules set by the parent (i.e., in compliance with IFRS).

The banks seem to be working with their auditors closely, but accounting policies are nevertheless developed and adopted by the banks themselves. Auditors have a say in whether policies and changes already introduced are in line with the regulations and standards. *SEB* considers that the auditors have competence comparable to that within banks regarding IAS 39 implementation; therefore, the communication between an auditor and a client bank usually takes a form of discussion rather than consultation. *HB* is more cautious in judging auditors' contribution to the understanding of the transition process. The bank argues that today auditors sometimes are "reluctant to provide guidance" because they yet expect answers from their own global technical desks. In the future, however, it is likely that the auditors will refine their understanding of the issue, and will serve as "interpreters in the market". *FSB* admits that as long as annual reporting is done according to the regulations, "there shouldn't be any problems with the auditors". On the other hand, the bank realizes that its current "mixed" model is not entirely appropriate, and auditors point that out. According to the interviewee, "the most important contribution from auditors is that they make sure *FSB* is following the rules in IFRS [in general] and IAS 39 [in particular], and keep the bank updated". *Nordea* points out that it is not allowed to use the same audit company both as auditors and consultants on accounting issues (due to potential conflict of interests), but if a bank wishes, it might employ two different audit firms for these two tasks. *Nordea* also agrees that the auditors cannot make accounting policy decisions on be-

half of the bank; they are there only to prove or disapprove the approaches already adopted by the bank's management.

Reporting in compliance with both IFRS and Swedish GAAP is an administrative burden. *HB* uses two different systems to report individual figures (following laws and regulations of FSA) and consolidated ones (following IFRS). It is expected that in the future, individual companies might be required to report under IFRS. However, for this to happen, the tax-accounting link in Swedish GAAP needs to be loosened. *SEB*, however, points out that the differences are not that much pronounced, except for IFRS 2 (Share-based payment); thus, two reporting frameworks are comparable. Such view is also supported by *FSB*.

5.2 Specific issues (Q 4-9, Common section)

This subsection discusses applications of IRS and hedging practices at the interviewed banks. Differences in this part are expected to be more distinct compared to the first part of the questionnaire, since banks have different risk positions and policies in place. On the other hand, the reporting frameworks (both Swedish GAAP and IAS 39) are the same for all the banks, which allows assuming that responses will not be diametrically opposite.

All the banks admit that maturity matching and dealing with clients are the two primary uses of IRS. *Nordea* admits that in addition to maturity matching and dealing with clients, it is also involved in risk taking operations. We regard it as a directional betting on the future development of interest rates, and we understand that in this case, IRS are used for speculative purposes. However, share of IRS tied in risk taking is very small (potentially, 1% of the entire IRS mass held by the bank, as can be deducted from figures supplied by *Nordea* spokesperson later in the interview).

We observed that organizational structure that supports operations with derivatives is similar across the banks. Treasury department aggregates information about risk exposures, nets off those exposures wherever possible, and hedges the remaining outstanding position through trading/markets department on behalf of the bank. Both treasury and trading departments have own risk exposure monitoring. *SEB* explains that trading department is in no way involved in solving hedging issues – this is the responsibility of the treasury, which serves not only as an aggregator of information on risk exposure from the entire bank, but also acts as a cash pool.

Clients approaching any of the banks never need to wait for counterparty to an IRS agreement – the trading/markets department of any bank instantly provides a quote, and deal is concluded between a bank and a client. In such situations, banks act as dealers (see above), and offset emerging risk by entering opposite contracts in the interbank market. *HB* considers that brokerage is conducted only in cases of very unusual demands for an IRS deal by a client, when the bank is unwilling to take a non-standard risk on its own books.

SEB and *HB* have implemented both CFH and FVH accounting, while *FSB* and *Nordea* are reluctant to introduce CFH accounting so far. *FSB* uses FVH frequently when fixed-rate subordinated debt is issued, and when bank converts the exposure to floating-rate with the help of IRS. It can be deducted that *FSB* prefers to have both assets and liabilities on floating-rate basis. *Nordea* judges in line with *FSB*. *Nordea's* representative states benefits of using FVH over CFH: a) the bank is more secure having floating exposure on both sides of the BS; b) build-up of undistributable unrealized gains account in equity is avoided, since FVH demand that changes in fair value of both hedged item and hedging instrument are reflected through PL. The bank prefers not to have volatility in equity; however, volatility in earnings (PL) can be reduced considerably if FVH is effective enough so that changes in

value of the hedged item are offset by opposite movements in the hedging instrument value. The bank also comments that “FVH better reflects the way risk management works”, suggesting that the demand is mainly for fixed-rate lending, and FVH help to deal with managing the arising fixed-rate exposure risk. *HB* observes that CFH is easier to use and to make effective compared to FVH: in CFH, floating leg of exposure is hedged, and fixed leg is taken to equity, unlike in FVH hedge, when entire exposure is fair valued and changes in value are brought into PL.

Nordea reasonably considers that use of one or another method depends on the structure of the BS of an individual company, and is also determined by individual risk preferences. Usage of CFH is justified if a BS contains a lot of non-maturing deposits or loans (we would assume that current accounts and credit lines are implied, respectively). In such a case, receive-floating and pay-fixed arrangement (essentially, CFH) helps to extend interest rate exposure into the future. The risk is, if interest rates in the future change to own disadvantage, “one may get stuck with those fixed payments”. Therefore, it is understood that if uncertainty about future shape of interest rate curve is large, and understanding of interest rate risk embedded in own positions on the BS is insufficient, one would rather be better off by not using CFH hedge accounting at all, but instead leave the position uncovered.

Banks are divided on issue of ability of CFH to reduce volatility in earnings. It has been told that introduction of CFH as a method to transfer volatility from earnings to equity (i.e. from PL to BS) is generally a good solution, but still not without its drawbacks. “For a bank, it is almost as bad to have volatility in equity, as to have it in earnings”, according to a spokesperson of *FSB*. *FSB* admits that market analysts are likely to consider volatility both in equity and in income statement when they make their judgments. However, *HB* hopes that in the future, when IAS 39 becomes more wide-spread, and markets learn about how to look at volatility both in earnings and in equity, there will be more understanding on the issue.

An ability of CFH to transfer so-much-feared volatility from earnings to equity is (theoretically) also a motive to portray some of “in-fact FVH” as CFH. This would somewhat alter the true and fair view of financial statements, and may misguide the user. We asked the question “Can FVH be misrepresented as CFH in the financial statements?”, expecting a negative answer. To our surprise, some respondents suggested that FVH can be indeed portrayed as a CFH in the books. According to one of the banks, “in bookkeeping, everything is possible”. A necessary requirement, though, is to be able to defend own view and position with documented evidence. *Nordea*’s spokesperson could not recall any normative documents that would prohibit presenting FVH as CFH. However, she commented that it is not always desirable to strive for having CFH at any cost because CFH tend to introduce additional risk, if own BS and future development of interest rates are poorly understood. *HB*, on the contrary, assumes portraying FVH as CFH should not be possible “if one has good auditors”, since doing that is “not following the rules”. Both *HB* and *FSB* agree, as also discussed earlier, that volatility in equity is almost as undesirable for a bank as it is in earnings. This implies that the motive for abusing classification might be not that pronounced, after all.

The banks use similar approaches in measuring effectiveness of hedges. We observed that IAS 39 does not provide a definitive step-by-step guidance on how to evaluate hedge effectiveness, but the banks have worked out a common so-called best accounting practice that is widely used today. CFH are generally valued by looking prospectively (as summarized by *Nordea*). A bank usually uses statistical techniques to prove that in the future, changes in value of hedged item and hedging instrument are likely to be negatively correlated to a high degree, thus offsetting each other. FVH effectiveness measurement method, on the other

hand, looks back in time, using changes in market rates of hedged item and hedging instrument to prove that FVH had been effective historically. Such approaches have developed by “understanding the scope of the Standard [IAS 39]” (*Nordea’s* comment). *FSB* provides a more specific algorithm for measuring FVH effectiveness: “take the clean price of the derivative, calculate change in the fair value of the derivative and divide it by the change of the hedged risk component on the hedged item. If the result is between 80-125%, the hedge is effective.”

Banks stress that if the calculation suggests that hedge effectiveness has fallen out of the pre-specified 80-125% range, it is not allowed to continue hedge accounting by simply re-adjusting the quality of the fit. Instead, current hedge must be abolished (with realized losses or gains recorded in PL), and new hedge assembled.

Banks re-measure effectiveness of hedges more often than needed for external reporting. Banks are required to file external reports every quarter. However, effectiveness is frequently measured every month, when internal reports are circulated. *Nordea* runs the effectiveness test every day.

The next part of each questionnaire contains a number of questions calling for complementing or clarification of figures obtained from annual reports. We intended to quantify each bank’s holding of IRS in general and usage of IRS in hedging applications in particular. The banks suggest that largest part of IRS (up to 99% in *Nordea’s* case) is tied up in hedging, one way or another. However, as pointed out by *FSB*, it is difficult to present precise figures because hedging is done extensively, but hedge accounting is not used in many cases. This probably might serve as explanation of *SEB* comment that only 5-7% of IRS are strictly assigned as hedging instruments (the rest might serve for economic hedging purposes anyway, but hedge accounting not applied).

Banks use global information services (e.g. Reuters) to obtain current market values of IRS.

6 Analysis

One of the changes in the reporting format is the requirement to report all derivatives on-BS. As explained in the descriptive section on swaps, value of these derivatives at inception is zero. Consequently, *upon recognition*, it does not matter whether IRS are placed on or off-BS: they are not visible in numerical terms, and cannot be traced by a user of FS (if no disclosure in notes to FS is provided).

In practice, however, it is a rare occurrence that a swap deal is entered into exactly on the 31st of December, and therefore derivative value as of end of FY is zero. Negative changes in value of IRS *after inception* become a liability for an entity that holds a derivative, implying that if a swap would be terminated on the reporting date, the entity would owe to the counterparty to be relieved of the contract. In case when derivatives are recognized off-BS, changes in their fair values remain invisible to a user of FS, just like existence of the contract itself. We might assume a hypothetical situation when a large unfavorable movement in the market interest rates gives rise to a material liability for a holder of an IRS. A potential necessity to terminate the contract (to cut losses or because swap matures) requires material payment to the counterparty, carving into company's earnings. This way, off-BS liabilities may remain "in shade" until a critical situation occurs, and reported earnings get unexpectedly eroded.

Such nature of a number of derivative financial instruments led IASB to demand that all derivatives are reported on-BS, independently of their intended use (hedging, risk taking, operations with clients). Although Swedish GAAP is not so strict in demanding to recognize *all* derivatives on-BS, it still requires placing derivatives with positive or negative value on-BS. Clearly, IRS fall into this category, and therefore largely treatment of IRS *as such* under Swedish GAAP and IAS 39 is similar. Therefore, companies that have held IRS before application of IAS 39 should not, in principle, experience any surprises. The changeover to IAS 39 is also not expected to bring large amounts of swaps on-BS because they were already recognized in the books under Swedish GAAP.

Conclusion: In principle, both Swedish GAAP and IAS 39 demand that IRS are recognized on-BS. Thus, IRS exposure is evident to the user of FS prepared already under Swedish GAAP.

However, as follows from interviews with the banks, most IRS (up to 99%) are used in economic hedge relationships, which were recognized in books by deferral hedge accounting method. Deferral method is no longer valid under IAS 39. This change is deemed very important by the FSA. In practice, gains or losses over life of the hedge from each item in a hedge pair are *not* reported under Swedish GAAP, but are instead deferred till maturity/dismantlement of a hedge, with consequent recognition in PL. IAS 39 requires that fluctuations in values of hedged item and hedging instrument are immediately reported in the books *over the entire life of the hedge relationship*.

Under IAS 39, before a hedge relationship can even be established, precise and extensive documentation must be prepared. Hedging strategy and method to measure hedge effectiveness must be described, and exact specification of FI to be designated as a hedge should be provided. After hedge is established, systematic evaluation of hedge effectiveness needs to be done. If analysis demonstrates that hedge effectiveness falls out of the required 80-125% range, the relationship must be immediately terminated, and a bank is punished by the demand to recognize resulting realized gains or losses immediately in PL.

Hedge accounting is specifically invented to appropriately reflect in books the underlying idea behind economic hedging: opposite fluctuations in value of hedged item and hedging instrument offset each other, resulting in zero net effect on earnings. If, however, documentation requirement is seen as too extensive, or there are other reasons for a bank not to implement hedge accounting at all, the problem of severe recognition or measurement mismatches between a hedged item and hedging instrument impacts PL, causing volatility in the accounts. This volatility, however, is not rooted in any fundamental economic factors, but is rather caused by different methods of measuring hedged item and hedging instrument in accounting. A bank might have a perfectly economically hedged position, but failure to apply hedge accounting brakes the link between sides of a hedge pair, and the full picture of a hedge relationship becomes invisible in the accounts.

Volatility is regarded as a big concern in the reviewed literature. Desire to escape volatility is also a serious concern for all interviewed Swedish banks. Volatile earnings impede comparability of bank's performance not only across periods, but also with other banks. Besides, a link between management efforts to improve profitability and results reflected in annual report are lost, obstructed by impact of formal re-measurement of financial assets and liabilities to fair value. Volatile earnings make it harder for a bank to communicate to the outside world that consistent and stable growth is achieved from period to period, and that earnings are sustainable in the future. In principle, even market price of bank's shares may suffer, should results in quarterly report fail to meet market expectations. Additionally, volatility may be perceived by external users of financial information as poor risk management, while in fact economic hedges might be sufficiently effective, but only inappropriately reflected in accounts (if hedge accounting not adopted).

Conclusion: extensive requirements need to be satisfied if a bank wishes to apply hedge accounting per IAS 39. Cost of failure to meet those requirements is a considerable expected volatility in earnings as a result of different measurement bases for derivatives (as hedging instruments) and hedged items.

Therefore, one of the respondents states that it is "crucial to make hedge accounting work". The banks can choose between CFH and FVH, depending on the type of risk that needs to be mitigated. We discovered that banks' preferences lean towards FVH. In fact, only two banks of four have implemented appropriate CFH accounting so far, while all four banks use FVH one. The main explanation is interest risk management strategy: banks feel more secure when both sides are exposed to floating interest rate risk. By hedging their fixed-rate exposure with IRS, the banks protect fair values of FI on both sides of their BS against deterioration. The respondents were not enthusiastic about ability of CFH to transfer volatility from earnings to equity, stating that "for a bank, it is almost as bad to have volatility in equity, as to have it in earnings".

We see reasons for this. Banks are highly leveraged business entities. Provided total BS value and debt value remain largely unchanged, comparatively small fluctuations in equity lead to substantial jumps in debt-equity ratio. Besides, Basel Accord and local regulations place strict requirements on primary and total capital adequacy ratios. Undesirable downward changes in equity, therefore, might call for an increase in primary capital base (possibly via issue of additional shares, accepting dilution as a consequence). These are just some of the implications that volatile equity might have on bank's business activities.

It must be noted that even when hedge accounting is applied, volatility cannot be eradicated altogether, but rather considerably diminished. This depends on the quality of a hedge relationship (recall that effectiveness cannot fall outside 80-125% range). It is gener-

ally believed that IRS use in managing interest rate risk can serve as a good hedge, provided that characteristics of a hedged item (amount, maturity, dates of interest payments, basis for measuring interest rates) and the respective IRS are identical or at least very similar.

Volatility in earnings can be eliminated also *without* the hassle of implementing hedge accounting. IAS 39, paragraph 9 allows designating any financial asset or liability at fair value through profit or loss, upon its inception. Such treatment eliminates the need for hedge accounting, since both sides of a hedge pair are now recognized and measured at fair value, and changes in fair values are offset in PL throughout the life of the hedge. *Nevertheless, this more straightforward alternative to hedge accounting has not yet been endorsed by the EC.* So far, thus, the banks are left only with hedge accounting possibility.

It is important to note that granting banks an option to recognize and measure *any* FI at fair value is a mixed blessing. On the one hand, financial reporting might become indeed more transparent to external users who are not trained in tracing hedge accounting aspects in financial statements. For them, it might be not immediately evident that volatility in earnings might stem simply from reluctance to apply hedge accounting, rather than poorly covered exposure to economic risks. On the other hand, extensive criticism of full fair value method (as presented in the Theoretical framework) provides a reasonable basis for doubt regarding soundness of fair value option (as a separate case of full fair value approach). Comparability in performance of individual banks would potentially suffer if management is given *carte blanche* to fair value even those assets which are not traded in liquid markets, and therefore are traditionally carried at amortized cost. Opportunities for manipulation with valuation techniques (and, ultimately, values of assets) would emerge. Fair value option as an alternative to hedge accounting must therefore be implemented carefully. Scrupulous guidelines on valuation techniques should be provided by regulators to restrict subjective managerial judgment, as well as to ease implementation of the method in practice.

The just discussed problems with fair value option are among the major reasons why implementation of this method is not yet endorsed by the EC. The optimum solution is being searched, and the issue is expected to be finally resolved during 2005. Both the interviewed banks and the FSA eagerly expect further developments on the subject.

Conclusion: FVH are favored by the banks, primarily because banks prefer to have floating interest exposure on both sides of their BS. Volatility in equity is perceived almost as negatively as it is in earnings. Fair value option that could provide a simpler alternative to hedge accounting is not yet endorsed in EU, and cannot yet be used by Swedish banks. Nevertheless, implementation of fair value option could pose new challenges related to transparency of reporting and comparability of accounts across the banking sector.

Another important carve-out from the text of IAS 39 is macro hedging, or possibility to apply interest rate hedges on a portfolio of FI exposed to interest rate risk. Previously, IAS 39 required that hedged item and hedging instrument are individual assets or liabilities. Macro hedging introduces a possibility to designate any currency amount as a hedged item. As stated in the literature (see subsection 3.3), macro hedging is in line with banks' common approach to managing interest rate risk. Risk exposures of different departments are aggregated by the treasury, netted off whenever possible, and the resulting net exposure is hedged on the market by derivatives bought or sold through own trading department. Such system has also been confirmed by the interviewed banks as operating in practice.

As evident from a bright example of *FSB*, possibility to apply macro hedging would allow the bank to benefit from hedge accounting in the most straightforward way. Nevertheless,

so far this option is not yet available to European banks. A solution by the EC is expected during 2005.

A number of scholars and practitioners (see Theoretical framework) enumerate caveats when applying fair value accounting to some categories of FI. Primarily, their concerns are with fair-valuing those FI that are measured at amortized cost at present. Our opinion on applying fair value option to measuring FI not traded in a liquid market has been expressed previously in this chapter.

However, fair value measurement of FI is considered appropriate or even the only feasible solution if liquid market exists. Most derivatives, including IRS, are traded in such markets:

- interbank market is liquid and unified;
- bid /ask spreads are minimal;
- none of the banks studied is large enough to act as a market maker;
- common information retrieval system (Reuters) is used to obtain quotes.

We consequently argue that marking IRS to market is the only feasible and already implemented way to fair value these derivative FI.

Conclusion: carve-out of macro hedging possibility by the EC withholds banks from aligning their traditional risk management style with new hedge accounting rules.

Criticism of fair value measurement for certain FI is not applicable to derivatives because they are traded in liquid markets. Moreover, quotes obtained from the interbank market are deemed to be the only reliable way for IRS measurement.

7 Conclusions

This chapter summarizes the discussion held in Analysis, and answers the research question in a condensed fashion.

Table 5 Benefits and drawbacks of IAS 39: derivatives and hedging

Advantages	Drawbacks
IAS 39 is one reporting basis for consolidated accounts in Europe. It improves cross-company and cross-country comparability of financial data	Creates volatility in earnings if hedge accounting not adopted
Internal hedging is prohibited for consolidated reporting. On group level, works towards eliminating practice of relocating the risks between group companies. Nevertheless, still allows internal hedging for individual company reporting. This opens a possibility for a bank to use treasury at parent company as a risk aggregator (will be applicable only when individual companies are allowed to report under IFRS)	Hedge accounting rules complicated; they demand extensive documentation and performance monitoring discipline throughout the life of the hedge relationship. Although this encourages consistency, such complexity may scare companies off from application of hedge accounting altogether.
In contrast to deferral hedge accounting that disregarded unrealized gains/losses of a hedge relationship, IAS 39 demands that changes in values of each side of the hedge pair are placed on-BS. This allows an external user to evaluate effectiveness of hedges independently (of course, if enough detailed breakdown is supplied in the accounts).	Fair value option, as an alternative, is not yet endorsed within EU. Even if it gets adopted, considerable freedom in managerial judgement on values of non-traded assets might negatively impact comparability of financial statements among banks
All derivatives are measured at fair value. Market quote is the most reliable measure of fair value of derivatives, provided liquid market is in place. Inter-bank swap market meets the required criteria of a liquid market	Macro hedging is a hedge accounting extension especially applicable to the style of managing interest rate risk at banks. However, not yet endorsed by EC
All derivatives without exception recognized on-BS, thus dealing with the problem of potential hidden losses	IAS 39 itself is constantly being refined and complemented, making it a hard-to-follow moving target for adoption

Summarizing the discussion, let us recall the research question posed in the beginning of the study:

Is changeover to IAS 39 by Swedish banks likely to enhance quality and transparency of financial reporting of derivatives in general and their specific use as hedging instruments?

The answer is affirmative. Although still not without its drawbacks, the Standard indeed improves reporting transparency for an external user of FS. *First*, IAS 39 is now a unified reporting framework for consolidated FS across the entire EU, which facilitates cross-border comparability of financial information. *Second*, IAS 39 demands recognition of all deriva-

tives on BS and their measurement at fair value. Both these features increase transparency of bank's risk exposure, as well as alleviate the possibility of existence of hidden losses. *Third*, reporting changes in values of each side of the hedge pair on BS facilitates user's independent evaluation of effectiveness of hedges constructed by a bank, if sufficiently detailed breakdown in notes to FS is provided.

8 Final Comments

8.1 Suggestions for further research

This study has been done when Swedish GAAP to IAS 39 transition was still underway. Therefore, time series of numerical data from the banks were not yet available. In the future, however, the following quantitative research can be carried out:

- Analysis of volatility in banks' earnings and in equity before and after implementation of hedge accounting according to IAS 39, with discussion of whether hedge accounting implementation has proved statistically significant for the bottom line of PL. Quarterly reports of the banks used as secondary data sources
- In case macro hedging is endorsed by the EC, and provided Swedish banks start using it, study of impact of applying macro hedges on volatility of earnings. Simulation of data arrays and consecutive sensitivity analysis is possible
- In case fair value option is endorsed, and provided Swedish banks start using it, impact of applying fair value option versus traditional FVH/CFH hedge accounting on volatility of earnings. Simulation of data arrays and consecutive sensitivity analysis is possible
- Test of a statement by Jackson & Lodge (2000) that volatility in earnings does not necessarily have a negative impact on share price. Verification of the statement in Swedish circumstances, using volatility in quarterly reports as an independent variable, and share price as a dependent one. Correlation testing, sensitivity analysis.

Further qualitative studies might

- expand the discussion to include hedging alternatives for foreign exchange risk in the banking sector,
- include Swedish non-financial companies in the research sample and compare transition to IAS 39 as perceived by different industry sectors,
- consider transition difficulties faced by companies in Sweden and in any other member country of the EU.

8.2 Acknowledgements

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Indisputably, we are very grateful to all the respondents – at the audit companies, at the banks, and at the FSA – who willingly took their time and effort to answer our questions and to provide explanations. The idea of the study would not materialize without their courteous participation.

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10 Appendices

10.1 Abbreviations and explanations

BS – abbreviation for “balance sheet”. Off-BS notation refers to those financial instruments which have been left out of BS under Swedish GAAP.

CFS – consolidated financial statements, financial report of a group of companies.

IAS – International Accounting Standards, collective name for a compilation of rules governing preparation of corporate financial statements. As of December 2004, there were 41 IASs published covering all areas of financial reporting: from general issues like format of presentation of financial statements (IAS 1) and accounting policies (IAS 8) to more specific items like revenue recognition (IAS 18) and accounting for financial instruments (IAS 39).

IASB – International Accounting Standards Board, committee consisting of 14 members who are responsible for working out and establishing International Accounting Standards/ International Financial Reporting Standards. The Standards are designed to govern preparation of financial statements of companies in the major part of the world, including Europe. The Board was established in 2001, replacing International Accounting Standards Committee which was in operation since 1973.

IFRS – International Financial Reporting Standards, collective name for a group of reporting standards that serve as a supplement and update for IAS. It was believed that since the Standards primarily deal with international harmonization of financial reporting framework, the name “IFRS” would better reflect the purpose of the Standards compared to “IAS”. Therefore, new Standards that are issued by the Board since mid-2003 bear the name of IFRS instead of IAS. IFRS group so far includes 5 adopted and issued Standards. Besides issuing new IFRS, The Board keeps working on improving and refining “old” IAS. For example, considerable effort is being invested into reworking IAS 39. In our thesis, we use term “IFRS” when we refer to the Standards (i.e., both IAS and IFRS) collectively.

IRS – interest rate swap. Please refer to Theoretical Framework for definition and explanations.

PL – abbreviation for “Profit or loss statement”, also known as Income statement.

10.2 List of respondents: pre-study

- Mr. Fredrik Walmeus, IFRS implementation specialist at *Deloitte Touche Tohmatsu, Stockholm*. Over telephone, 2005-03-16, 10:00, 45 minutes
- Mr. Jan Hanner, IFRS implementation specialist at *PricewaterhouseCoopers, Gothenburg*. Over telephone, 2005-03-16, 11:00, 40 minutes
- Mr. Thomas Nilsson, partner at *Ernst & Young, Gothenburg*. Over telephone, 2005-03-14, 14:00, 40 minutes

10.3 Questionnaire for the pre-study

1. Audits are now in progress, evaluation of the IFRS transition process as of end of 2004 – what were the main challenges for listed companies? Unlisted ones (where EC regulation is not present)? Please, briefly describe feelings that industry shares about mandatory implementation of IFRS for listed groups, consolidated FS.
2. From your perspective, what can be regarded as the biggest area of concern – (*ref.*) e.g.
 - a. too scarce time for implementation,
 - b. unavailability of IFRS competence at the financial departments,
 - c. high administrative costs associated with amended reporting guidelines and need to issue another set of accounts for some companies,
 - d. managerial reluctance to assist in providing additional information for increased disclosure,
 - e. dissatisfaction of accounting profession with new norms being too complicated and too abundant; absence of unified updated source of what is required right now,
 - f. other?
3. In your opinion, which are the standards (both in IAS and IFRS group) that cause the most trouble for transition across industries? Why?
4. Can one say that reliance on “god redovisningssed”/RR recommendations and resistance to change, in spite of some differences with IFRS, is still strong for listed companies in consolidated reporting?
5. Are additional disclosure requirements of IFRS (compared to RR) generally seen as a burden by the client base?
6. Are there differences on the implementation path across industries (except obvious (in)applicability of specific standards, like Construction Contracts or Agriculture)? Which industries, in your opinion, will find or have already found the transition most difficult?
7. Adequate quality of group reporting demands that there is comprehensive understanding of IFRS on subsidiaries level, also (not only parent company’s financial department). From your experience, can complicated group structure inhibit parent company’s efforts for timely implementation of IFRS for consolidated FS?
8. Considerable amount of companies which are listed on other SE or have material ownership by foreign investors, already report under US or UK GAAP. Now they will be required to issue another set of FS. What is the solution and how do clients deal with this? Are there considerable restatement of figures difficulties? *Ref:* reporting also individual companies’ FS under IFRS?

9. Bearing in mind subjectivity of materiality estimate and individual approach for each company, in general, are adjustments according to IFRS frequently considered material for consolidated FS?
10. Uncertainties with implementation of IAS 39, carve-outs by EC of some paragraphs: how does it affect reporting as of 31/12/04 by banks and financial institutions, as well as other companies which make extensive use of financial instruments.
11. Accounting for goodwill and in particular negative goodwill (IFRS 3 vs RR1): write-down on annual basis in IFRS, judgmental approach; depreciation of goodwill in RR. Negative goodwill: income immediately in IAS where NG is in excess of the fair values of acquired assets vs gradual recognition in RR. Will these differences have a material impact on groups, which keep goodwill in parent company's BS, and how will this conflict between parent's FS and group (according to IFRS) expected to be resolved?
12. From your professional perspective as an auditor, what challenges on the way of implementation IFRS in Sweden now and in the future do you see?
13. How will full implementation of IFRS influence the audit profession in Sweden? Is it possible that because of large diversity of reporting standards, auditors will have to specialize (e.g. small companies, listed groups, competence in other standards e.g. US GAAP)?
14. Do you think IFRS provide improved transparency in reporting by Swedish business entities compared to RR recommendations? Based on overall cost-benefit evaluation, is transition at all feasible for Sweden (assuming later also individual companies will be likely to report under IFRS)?

10.4 Pre-study results

In general, replies of interviewees were consistent with each other, which eases the comparison and proves that specific issues pointed out by interviewees are common to a large share of company groups in Sweden.

Numbers in parenthesis link answers to corresponding questions within pre-study questionnaire, which is presented above.

Table 6 Summary of pre-study results

Area of discussion	Respondents' comments
Problems that companies in transition face (Q 1, 2, 4, 5)	<ul style="list-style-type: none"> • Too little time allotted to implementation • Constant ongoing changes to standards themselves, making them a confusing “moving target” • Transition seriousness underestimated by companies, leading to poor preparation at YE2004 • Costs involved, especially for financial institutions (IAS 39). Not all respondents consider this an issue since companies have included the costs in budget anyway • Lack of human resources, especially for small clients • Subsidiaries lack competence (HQ usually aware of IFRS requirements) • Fear of novelty of standards themselves, fear of potential negative impact on figures (as said by one respondent)
Most problematic standards and reasons (Q 3, 10, 11)	<ul style="list-style-type: none"> • IAS 16 – Property, plant and equipment; difficulty in separating fixed assets for purposes of component depreciation • IAS 19 – Employee benefits; accounting for pensions (although very similar to RR 29) • IAS 39 – Financial instruments; hedge accounting issues • IAS 40 (revised) – Investment Property; fair value adjustments • IFRS 2 – Share-based payment; standard not comparable to RR • IFRS 3 – Business combinations; complicated if acquisitions made recently. <p style="text-align: center;">IAS 39 seen as the biggest problem of all.</p>
Industries that are likely to be most impacted (Q 6)	<ul style="list-style-type: none"> • Financial institutions (due to IAS 39) • Real estate development sector (due to IAS 40)

(Table 6 continued)

Area of discussion	Respondents' comments
Differences in competence between HQ and subsidiaries (Q 7)	<ul style="list-style-type: none"> Subsidiaries lack competence, HQ usually aware of IFRS requirements. Need to share competence across entire group to ensure accurate consolidated reporting in the end
Reporting difficulties when US GAAP has and is being used along with IFRS (Q 8)	<ul style="list-style-type: none"> More trouble for companies, but respondents did not have much experience with such cases
Materiality of adjustments: impact on IS and/or BS (Q 9)	<ul style="list-style-type: none"> Very individual among companies. If financial instruments are extensively used or investment property is on balance sheet, might be material. Otherwise, usually not.
Future of IFRS and reporting requirements in general in Sweden (Q 12, 14)	<ul style="list-style-type: none"> Not likely to see individual companies reporting due to still strong link between accounting and taxation (transition to IFRS would greatly influence taxable income figures) Not likely to expect smaller, non-listed companies to adopt IFRS, namely because the standards are too complicated and cost-inefficient to implement for smaller firms Swedish GAAP is likely to borrow more from IFRS in future, but so far tax-accounting link is too strong
Impact of IFRS on audit profession in Sweden (Q 13)	<ul style="list-style-type: none"> Further specialization of audit firms expected, but it is already the case (listed companies, family-held firms, and similar). Auditors will have to find balance between consulting their clients on IFRS implementation and audit (segregation of duties principle).
Additional interesting comments by respondents (none, respondents' initiative)	<ul style="list-style-type: none"> Smaller unlisted companies striving to get listed will find transition most difficult, as BFN standards are considerably different to IFRS. Swedish reporting tradition has been to disclose as little sensitive information in FS as possible. Now, with extensive IFRS disclosure requirements, it is difficult for companies to preserve internal information. Balance must be found between appropriate disclosure and "not saying too much". As of YE2004, consolidated reports of the companies that now report under RR will still be issued and audited in full compliance with RR, but with section devoted to transition that quantifies adjustments and explains them

10.5 List of respondents: main study

- *FSB*: Mr. Henrik Bonde, Accounting specialist, Group accounts division; involved in IFRS implementation issues. Over telephone, 2005-05-04, 14:00, 45 minutes
- *Handelsbanken*: Mr. Mikael Ström, Senior Vice-president in accounting. Over telephone, 2005-05-06, 10:00, 50 minutes
- *Nordea*: Mrs. Gunilla Domeij-Hallros, Senior Vice-president. Over telephone, 2005-05-09, 13:00, 1 hour
- *SEB*: Mrs. Kristina Ottoson, Senior accounting specialist; involved in IFRS implementation issues. Over telephone, 2005-05-04, 11:00, 45 minutes
- *Financial Supervisory Authority*: Mrs. Eva Sterner and Mr. Richard Carlsson, Accounting experts. Over telephone, 2005-05-11, 10:00, 45 minutes

10.6 Questionnaire for the main study

SECTION 1 – COMMON

1. Introduction of new reporting framework for financial instruments. Major challenges with recognition and measurement according to new standard, and whether the bank is ready to adopt those.
2. Role of auditors as consultants on IAS 39 implementation issues; decision power of auditors on FI-related accounting policy issues of the bank.
3. Since individual companies are not likely to report under IFRS in near future in Sweden, how will consistency in reporting FI be achieved between accounting policies for *individual bank* and *group*, for purpose of consolidation?
4. Main usage of IRS – satisfying own maturity matching needs (assets vs liabilities) or hedging risk stemming from clients' contracts? In dealing with clients' interest rate risk exposure, does the bank usually act as a dealer (assumes risk itself with later hedging) or broker (immediately finds counterparty)?
5. What are the criteria for deciding whether to report IRS on-BS or off-BS (*exception: FSB, no off-BS IRS*)? Will these criteria change with transition to IAS 39 for consolidated reporting? Are valuation principles for off-BS IRS are the same as for on-BS ones?
6. IRS in hedging applications: decision to choose between CFH and FVH – how does (*will*) it work in practice?

7. What do you think of ability of CFH to reduce volatility in earnings? May it happen so that the option to select between the two types of hedges will potentially cause abuse, attempt to classify as many hedges as possible under CFH heading? In your professional opinion, what are the mechanisms to guard against such abuse?
8. For CFH, methods utilized to evaluate effectiveness of hedge. Moreover, benchmarks to evaluate soundness of methods themselves (commonly accepted practice among Swedish banks, maybe? Stress-tested mathematical pricing models? Other?)
9. With deviations in value of effective part of CFH booked to equity account (unrealized gains position in equity), how frequently re-measurements are made and account adjusted? Any recommendations from FSA on this issue? Are unrealized losses on hedges reported in the same equity account, or rather carried directly to income statement?

SECTION 2 – INDIVIDUAL

FSB

1. What are the figures of interest income and interest expense from the derivatives subject to hedge accounting? (not clear from Notes to income statement). How large share of that is related to IRS as hedges?
2. Note 35: Book value of IRS and market value is reasonably close, but not equal (mkt value is usually higher). Does that imply that some IRS are carried at historical cost? How is market value usually obtained by FSB for IRS?
3. Of all IRS, what is the share (in absolute terms, book value) of the ones used as hedging instruments?
4. Large difference between fair value and book value of swaps used as hedges (Note 55). What is the share of those swaps attributable to interest rate risk hedging, namely IRS? In numerical terms, what is the difference between market value and book value (as of 31.12.04, both sides of BS) of IRS?

Handelsbanken

1. Is equity line called “Reserve for unrealized profits” used (will be used) for reporting both unrealized losses and gains on CFH positions?
2. Recognition of profits and losses from derivatives subject to hedge accounting: total interest income (both in SEK and other currencies) is -5 MSEK, and total expense is -1 786 MSEK. Please, if possible, explain meaning of these figures, and why income figure is negative. How big share of that results from IRS used as hedges? To which specific positions in BS are these income statement figures should be linked directly?

3. Of all IRS, what is the share (in absolute terms, book value, both balance sheet sides) of the ones used as hedging instruments?

Nordea

1. What are the figures of interest income and interest expense from the derivatives subject to hedge accounting? (not clear from Notes to income statement). How large share of that is related to IRS as hedges?
2. Note 47 on Derivatives does not state market values for derivatives, e.g. IRS. Is it assumed that market values are the same as book values?
3. Of all IRS, what is the share (in absolute terms, book value, both balance sheet sides) of the ones used as hedging instruments?
4. In Note 48, we noticed that 86% of the group “Other assets, banking” is recognized as fixed financial assets, rather than current ones. Is this an indication that vast majority of derivatives are used in hedging of the items that are held to maturity?

SEB

1. What are the figures of interest income and interest expense from the derivatives subject to hedge accounting? (not clear from Notes to income statement). How large share of that is related to IRS as hedges?
2. Are nominal values of IRS contracts included in the group of “Guarantee commitments, other” covered under Note 46 or somewhere else?
3. Book value of IRS and market value is reasonably close, but not equal (mkt value is usually higher). Does that imply that some IRS are carried at historical cost? How is market value usually obtained by SEB for IRS?
4. Of all IRS, what is the share (in absolute terms, book value, both balance sheet sides) of the ones used as hedging instruments?