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# The effects on adoption of international financial reporting standards (IFRS), challenges and reporting implications in the case of Middle Eastern countries and Greece as well as in the context of the European banking industry

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# The effects on adoption of international financial reporting standards (IFRS), challenges and reporting implications in the case of Middle Eastern countries and Greece as well as in the context of the European banking industry.


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# Abstract

This research work examined the impact of International Financial Reporting Standard (IFRS) adoption on Banks performance. The study is based on the appraisal of IFRS compliance and Adoption. Both primary and secondary data were used in this study. The primary data would be sourced via a administered in a survey conducted on examining the convergence to IFRS in Banks, as a case study while the secondary data collected from Annual Report of Access European Banks as well as journals, textbooks and newspapers. The result of the analysis showed that at there is significant relationship adoption of IFRS and financial reporting of banks in European as well as in the Islamic accounting world, of Middle Eastern countries. However, comprehensive implementation of the standard to its totality by firms in the country, and the regulatory authorities should monitor strict compliance.

In addition this study provides an analysis of the disclosures made in the first year of mandatory adoption of IFRS 7 Financial Instruments: Disclosures, by the 24 largest European banks and summarizes areas of specific interest: disclosures relating to the use of fair values and to the credit crisis. Next it provides an analysis of the quantitative risk disclosures, followed by other types of disclosure.

The global financial crisis has been the pro-cyclical amplification of financial shocks through the banking system, financial markets and the broader economy.

The provisions of IAS 39-Financial Instruments-Recognition and Measurement issued by the International Accounting Standards Board (IASB), establishes the principles for recognizing and measuring financial assets and financial liabilities. This standard is of particular importance to the banking sector and NBFCs which deal primarily in financial instruments. IAS 39 includes provisions about classification of financial instruments, their ongoing measurement (including when impairment is required) and derecognition. The provisions of IAS 39 are currently applicable globally in respect of financial instruments.

Following the crisis, there was widespread criticism that the accounting standards, more so, fair value accounting significantly contributed to the financial crisis or at the very least exacerbated the severity of the crisis, in view of its failure to deal with illiquid markets and distressed sales.

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| | | |
|---|---|---|
| AAOIFI | - | Accounting and Auditing Organization for Islamic Financial Institutions |
| AGCC | - | Arab Gulf Cooperation Council |
| CBS | - | Core Banking Solutions |
| ESM | - | European Stability Mechanism |
| EU | - | European Union |
| FSF | - | Financial Stability Forum |
| FVTPL | - | Fair value through profit and loss |
| GAAP | - | Generally Accepted Accounting Principles |
| GDP | - | Gross Domestic Product |
| IAS 16 | - | Property, plant and equipment |
| IAS 21 | - | The Effects of Changes in Foreign Exchange Rates |
| IAS 32 | - | Financial Instruments: Presentation |
| IAS 36 | - | Impairment of assets |
| IAS 39 | - | Financial Instruments-Recognition and Measurement |
| IAS 7 | - | Statement of Cash Flows |
| IAS | - | International Accounting Standards |
| IAS1 | - | Presentation of financial statements |
| IASB | - | International Accounting Standards Board |
| IASC | - | International Accounting Standards Committee |
| IASCF | - | International Accounting Standards Committee Foundation |
| IFAC | - | International Federation of Accountants |
| IFRIC | - | International Financial Reporting Interpretations Committee |
| IFRS 12 | - | Disclosures of interest in other entities |
| IFRS 7 | - | Financial instruments: Disclosures |
| IFRS 9 | - | Financial Instruments (Replacement by IAS 39) |
| IFRS | - | International Financial Reporting Standards |
| IFSB | - | Islamic services Board |
| IMF | - | International Monetary Fund |
| IOSCO | - | International Organization of Securities Commissions |
| IRB | - | Internal Ratings Based |
| IT | - | Information Technology |
| LGD | - | Loss Given Default |
| LLP | - | Loans Loss Provisions |
| Local GAAP | - | Generally accepted accounting principles |
| MCA | - | Ministry of Corporate Affairs |
| MEC | - | Middle Eastern countries |
| MIS | - | Management Information System |
| SAC | - | Standard Advisory Council |
| SEC | - | Security Exchange Commission |
| SFAS | - | Statement of Financial Accounting Standards |
| SIVs | - | Structured investment vehicles |
| SMEs | - | Small and medium-sized entities |
| VaR | - | Value at Risk |
| WTO | - | World Trade Organization |

# Chapter 1: Introduction and Methodology research

## Introduction

### The vision of global accounting standard

The vision of global accounting standards is shared by almost every country in the world. More than 100 countries require the use of International Financial Reporting Standards (IFRS), while most other jurisdictions permit the use of IFRS in at least some circumstances. We are not yet at the point in which IFRS adoption is total and complete. But if you consider that just 15 years ago very few jurisdictions even permitted IFRS, we have come a very long way in a short period of time.

The International Accounting Standards Board (IASB) has no power to mandate the use of IFRS in any country. Before adopting IFRS, legislators or regulators must assess the public benefit of providing high quality and transparent information to capital providers who make investment, lending and credit decisions. In most cases, that assessment has resulted in adoption of IFRS in full and without modification.

### The IASB

IFRS is developed by the IASB, which is the standard-setting body of the IFRS Foundation, an independent, private sector, not-for-profit organisation. The IASB was formed in 2001 as the successor organisation to the International Accounting Standards Committee (IASC), which had been setting International Accounting Standards (IAS) since 1973. Both bodies have been London-based since their inception, but they have a global mission.

The IASB is committed to developing, in the public interest, a single set of high quality global accounting standards that provide high quality, transparent and comparable information in general-purpose financial statements. The vision in 2000: a single set of global accounting standards. The founders of the IASB set out the fundamental objective of the IASB and the IFRS Foundation under which it operates in a Constitution adopted in early 2000:

To develop, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the world's capital markets and other users make economic decisions. That vision has been publicly supported by many international organisations, including the G20, World Bank, the International Monetary Fund (IMF), Basel Committee, International Organization of Securities Commissions (IOSCO) and the International Federation of Accountants (IFAC).

That vision is consistent with the objective of the IASB's predecessor standard-setting body, the IASC, which developed IAS from 1973 to 2000. The vision has not changed since 2000. In February 2012, the Trustees of the IFRS Foundation completed a Strategy Review and published their report. They reaffirmed their commitment to achieving the vision of global accounting standards. The Trustees' report on their review said that they remain committed to the belief that a single set of IFRS is in the best interests of the global economy, and that any divergence from a single set of standards, once transition to IFRS is complete, can undermine confidence in financial reporting.

**What is IFRS?**

IFRS is a globally recognised set of Standards for the preparation of financial statements by business entities. Those Standards prescribe:

the items that should be recognised as assets, liabilities, income and expense;

- how to measure those items;
- how to present them in a set of financial statements; and
- related disclosures about those items.

**The Conceptual Framework for Financial Reporting**

The *Conceptual Framework* sets out the concepts that underlie the preparation and presentation of financial statements for external users. The *Conceptual Framework* deals with:

- the objective of financial reporting (which is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity);
- the qualitative characteristics of useful financial information;
- the definition, recognition and measurement of the elements from which financial statements are constructed; and
- concepts of capital and capital maintenance.

**Introduction of International Financial Reporting Standards (IFRS) - issues and challenges**

**Reading financial statements**

Let me begin by talking about the most elementary and fundamental area of commerce and accountancy which is "How to read a Financial Statement". To a lay man, financial statements comprise the Balance Sheet and Profit and Loss Account. However, the numbers given in these alone do not give the correct picture to the reader unless one carefully goes through the notes to accounts, cash flow statements and qualifications, if any, in the Auditor's Report and also appreciates the accounting policies followed by the enterprise.

In some cases, ratio analysis, trend analysis and an industry peer comparison can be done to obtain a better perspective. A thorough study of all these aspects is required before a user can make an informed decision.

The objective of financial statements is to provide information about the financial position, performance and cash flows of an enterprise that is useful to a wide range of users in making economic decisions. Corporate financial statements with the notes and narratives surrounding them, are intended to enable investors to predict cash flows, determine returns generated on capital invested, assess the business liquidity, and evaluate management's performance. Financial statements are prepared by drawing an artificial line of cut-off at the year end, even though the business continues as a going concern.

In many transactions, one leg of a transaction may be completed, while the other, leg may still have to take place.

For instance, questions arise on several issues such as to whether unsold goods at the end of the accounting period can be valued at cost or realizable value and the applicable cost formula, alternative method for evaluating depreciated/amortized value of fixed assets, how to ascertain the value of a number of assets/liabilities, claims

and counter-claims and the correct treatment of uncertainties involved in evaluating a particular transaction. Therefore, there is an imperative need for evolving appropriate accounting policies and accounting standards to deal with these questions.

**Importance of accounting standards**

Accounting as a "Language of Business" communicates the financial results and health of an enterprise to various interested parties by means of periodical financial statements. Like any other language accounting should have its grammar and these sets of rules are Accounting Standards. The objective of Accounting Standards is three fold. Firstly, they help to standardize the diverse accounting policies and eliminate the incomparability of financial

**International financial reporting standards**

Globalization of financial markets has meant an increased focus on international standards in accounting and has intensified efforts towards a single set of high quality, globally acceptable set of accounting standards. Financial statements prepared in different countries according to different set of rules, mean numerous national sets of standards, each with its own set of interpretation about a similar transaction, making it difficult to compare, analyse and interpret financial statements across nations.

A financial reporting system supported by strong governance, high quality standards, and firm regulatory framework is the key to economic development. Indeed, sound financial reporting standards underline the trust that investors place in financial reporting information and thus play an important role in contributing to the economic development of a country. Needless to mention, internationally accepted accounting standards play a major role in this entire process.

It is in this context that the role of an independent, global standard-setting body such as the International Accounting Standards Board (IASB) is of critical importance. The principal objectives of the IASB are:

a. to develop a single set of high quality, understandable, enforceable and globally accepted international financial reporting standards (IFRSs) through its standard-setting body, the IASB;

b. to promote the use and rigorous application of those standards;

c. to take account of the financial reporting needs of emerging economies and small and medium-sized entities (SMEs); and

d. to bring about convergence of national accounting standards and IFRSs to high quality solutions.

Converging to global accounting standards i.e. IFRS facilitates comparability between enterprises operating in different jurisdictions. Thus, global accounting standards would remove a frictional element to capital flows and lead to wider and deeper investment in markets. Convergence with IFRS is also in the interest of the industry since compliance with them would be able to create greater confidence in the mind of investors and reduce the cost of raising foreign capital. It is also burdensome and costly for enterprises operating across several countries to comply with a multitude of national accounting standards and convert them to a single standard for group reporting purposes. Convergence would thus help reduce both the cost of capital and cost of compliance for industry.

In pursuit of its objectives, the IASB works in close cooperation with stakeholders around the world, including investors, national standard-setters, regulators, auditors, academics, and others who have an interest in the development of high-quality global standards. Progress toward this goal has been steady. All major economies

have established time lines to converge with or adopt IFRSs in the near future and more than hundred countries require or permit the use of IFRSs.

**Lessons from the financial crisis – review of standards for financial instruments**

One of the most destabilizing elements of the global financial crisis has been the pro-cyclical amplification of financial shocks through the banking system, financial markets and the broader economy.

The tendency of the market participants to behave in a pro-cyclical manner has been amplified through a variety of channels, including through accounting standards for both mark-to-market assets and held-to-maturity loans, margining practices and through the build up and release of leverage among the financial institutions, firms and consumers. Failure to capture major on-and off-balance sheet risks as well as derivative related exposures, was also a key destabilising factor.

The provisions of IAS 39-Financial Instruments-Recognition and Measurement issued by the International Accounting Standards Board (IASB), establishes the principles for recognizing and measuring financial assets and financial liabilities. This standard is of particular importance to the banking sector and NBFCs which deal primarily in financial instruments. IAS 39 includes provisions about classification of financial instruments, their ongoing measurement (including when impairment is required) and derecognition. The provisions of IAS 39 are currently applicable globally in respect of financial instruments.

Following the crisis, there was widespread criticism that the accounting standards, more so, fair value accounting significantly contributed to the financial crisis or at the very least exacerbated the severity of the crisis, in view of its failure to deal with illiquid markets and distressed sales.

The G 20 Working Group on "Enhancing Sound Regulation and Strengthening Transparency" recommended that accounting standard setters should strengthen accounting recognition of loan loss provisions by considering alternative approaches for recognizing and measuring loan losses that incorporate a broader range of available credit information. The G 20 Working Group also recommended that the International Accounting Standards Board (IASB) should enhance its efforts to facilitate the global convergence towards a single set of high-quality accounting standards by sharing the experience of countries that have completed this process and by providing technical assistance. Another significant recommendation was that accounting standard setters should accelerate efforts to reduce the complexity of accounting standards for financial instruments and enhance presentation standards to allow the users of financial statements to better assess the uncertainty surrounding the valuation of financial instruments.

In April 2009, in response to the input received on its work responding to financial crisis, and following the conclusions of the G 20 leaders and the recommendations of international bodies such as the Financial Stability Board, the IASB announced an accelerated timetable for replacing the principal standard for recognition and measurement of financial instruments-IAS 39. IAS 39 is sought to be replaced by IFRS 9 in three phases. The first phase was completed with the issue of the portion of IFRS 9 which deals with the classification and measurement of financial assets and financial liabilities. The second and third phases are in the area of Hedge Accounting and Impairment, where currently work is underway. It is expected that IFRS 9 will replace IAS 39 in its entirety by June 2011.

**Challenges for banks and non-banking financial companies**

In respect of banks and NBFCs, in view of the special issues involved (finalisation of IFRS 9 in the middle of 2011), a separate road map was prepared in March 2010 for convergence with IFRS for the banking industry

and NBFCs. The convergence process would be from period beginning April 1, 2013, with a phased approach for urban banks and NBFCs. This gives the banking system some time to adopt to the standards in a smooth and non-disruptive manner.

It has to be noted, however, that banks will be significantly affected by the IAS 39 replacement project and a number of other accounting developments including those relating to financial instruments, fair value measurement, financial statement presentation and consolidation. Some of the major changes pertain to certain critical areas such as classification and measurement of financial assets, classification and valuation of liabilities, impairment provisions and fair value measurement. One area of concern has been the drawback of the incurred loss model of IAS 39 and the need to introduce more forward looking provisioning.

The IFRS convergence process will involve significant challenges for the banking system in general. Banks would need to upgrade their infrastructure, including IT and human resources, to face the complexities and challenges of IFRS.

Some major technical issues arising for banks during the convergence process would be differences between the IFRS and current regulatory guidelines on classification and measurement of financial assets, focus in the standard on the business model followed by banks and the challenges for management in this area, application of fair values for transactions where not much guidance is available in India in terms of market practices or benchmarks, and expected changes in impairment rules.

**Key non-accounting issues**

Let me now draw your attention towards certain key non-accounting issues which are equally crucial in the IFRS convergence process. The desired results will not come if non-accounting issues are not addressed along with the accounting issues. The first challenge is integrity of data and information. Most Scheduled Commercial Banks in India have either already migrated or are in the process of migrating to Core Banking Solutions (CBS). In this context, data integrity and data validity would be of critical importance especially due to data intensive requirements of IFRS converged standards. The present system of compilation and submission of data which forms the backbone of preparation of financial statements compromises on data quality.

The scope of erroneous data entry of even malicious wrong reporting cannot be ruled out. Lack of adequate data results in absence of information on "returns" at activity level and segmental reporting in a granular manner. Incorporating suitable capability in CBS for enabling automated data flow/generation of MIS would be a facilitator in accurate reporting and financial statements prepared from such data as the basis would reflect a "true and fair" picture of the financial position of the entity. RBI has set up a group to work on this area. Preparatory work in this regard would enable us to counter a basic challenge in our effort towards IFRS convergence.

Secondly, we come to the issue of "Ethical Standards" which are of critical importance in the field of accountancy where users rely heavily on the statements made by accounting professionals. Maintaining ethical standards and values is a key part of financial reporting. Without a strong code of ethics and adherence to those ethics, financial reporting would fail to inspire and ensure public and investor confidence in entities. Thus, along with high levels of technical competence, accounting professionals also need to have unquestionable and impeccable professional integrity. Therefore, professional bodies have codes of ethics for their members and disciplinary procedures for those who infringe upon these rules. However, one of the causes of the recent financial crisis was also the poor adherence to ethics by some accounting professionals who exploited "form over substance", rather than "substance over form" to hide weaknesses in their financial position and misstate profits.

Thirdly, adaptability and compatibility of existing IT solutions used by banks to the new requirements imposed by IFRS convergence is also a major challenge. Software which has been written keeping in mind Indian GAAP requirements may have to be modified substantially to incorporate features of IFRS requirements. Similarly, compatibility between software and hardware would have to be addressed to take care of the new requirement.

RBI has always believed in the fact that accounting standards and the integrity of its implementation has a very important role to play in the financial system as reflected in the Report of the Committee on Financial Sector Assessment, wherein the importance of the convergence process of Indian accounting standards with IFRSs has been emphasized. RBI has set up a Working Group to address Implementation Issues in IFRS for non-disruptive migration of the Indian banking system with members from ICAI, IBA and the regulatory and supervisory departments of RBI.

**Discussion**

Training, education and skill development is one of the cornerstones of a successful IFRS implementation. All the stakeholders including investors, accountants, auditors, customers, software and hardware vendors, rating agencies, analysts, audit committees, actuaries, valuation experts and other specialists would need to develop and understanding of IFRS provisions to varying degrees and what they need to do. Educational institutions need to play a pro-active role and students must also strive to develop a strong conceptual understanding of the new framework and academic institutions should include it in their curriculum. It is not only the accounting issues but how we address the non-accounting issues that will determine how successfully we make a transition to IFRS. It is in this backdrop, and considering the ongoing changes in the standards both globally and in the Indian context as well as the amount of work involved in the convergence process, that this National Seminar on IFRS assumes importance. I wish the deliberations in this Seminar all success.

## The Methodology

Our paper aims to provide an updated description of the process of IFRS adoption in the E.U. and worldwide, pointing out its effects on the information presented in financial statements, on the markets efficiency and on the accounting harmonization. The research methodology used to develop the article contains qualitative methods.

The documentation (literature review) and comparative analysis are completed in our approach with inductive and deductive reasoning. We have analyzed academic articles, published, and indexed in international databases, such as Science Direct, Emerald and ProQuest. Also, we have tried a classification of these papers according to the country analyzed in each of them, making a comparative analysis between the IFRS adoption effects in Code and Common Law countries.

The method used in this study is multiple case-studies. The reason is that by having samples from the countries it is possible to receive more robust evidence about the reporting practices compared to a situation where only one country would have been analyzed. However, it would not be feasible to conduct a statistical analysis with a large sample of different countries as the research topic is qualitative by nature.

According to Yin (2003, 47), the logic of using multiple-case studies is to expect either similar results or contrasting results for predictable reasons. In this case, it is expected that the EU countries have chosen similar approaches. In contrast, the results between companies in similar industries in different countries are expected to be contradicting because of cultural differences in accounting. It should not be forgotten that all of these countries use exactly the same financial reporting standards, IFRS.

The necessary information and documentation of this study was obtained thorough research on literature was needed. This includes books, publications, journals and documentation that covered and analyzed several aspects on the subject matter.

**The chapters**

The chapters in which this thesis is divided are set out below:

Chapter 1: A brief overview of the vision of global accounting standard, the IASB, what is IFRS, the Conceptual Framework for Financial Reporting, introduction of International Financial Reporting Standards (IFRS) - issues and challenges, the importance of accounting standard, the International financial reporting, lessons from the financial crisis – review of standards for financial instrument and the challenges for banks and non-banking financial companies.

Chapter 2: A review of the relevant literature used included in this chapter together with the authors' experiences. An effort to indicate the outcomes that several authors concluded regarding this issue is attempted.

Chapter 3: IFRS in Focus- the Greek debt crisis: Financial reporting implications for 30 June 2015, the Financial reporting consequences at glance General disclosures, an impairment review will be required of the assets of Greek businesses and balances due from Greek entities at 30 June 2015 and also entities that have significant exposure to the Greek economy will need to assess whether they can continue to prepare their financial statements on a going concern basis, direct consequences and the broader economic considerations.

Chapter 4: Challenges of international financial reporting standards (IFRS) in the Islamic accounting world, in the case of Middle Eastern countries, Islam and emergence of Islamic finance, the relationship of the MEC with Islamic financial institutions, the effect of culture on accounting standard setting process, economic significance of MEC countries, the business environment in the MEC and finally the Challenges of complying fully with the IASB.

Chapter 5: This chapter provides an analysis of the disclosures made in the first year of mandatory adoption of IFRS 7 Financial Instruments: Disclosures, by the 24 largest European banks. We set out examples of the disclosures given and comment on the practical difficulties involved in preparing and interpreting this information. This chapter also summarizes areas of specific interest: disclosures relating to the use of fair values and to the credit crisis. Next it provides an analysis of the quantitative risk disclosures, followed by other types of disclosure.

Chapter 6: The effects of IFRS adoption on the financial reporting quality of European banks. This chapter provides first empirical evidence on the accounting quality implications of the mandatory application of IFRS within the banking industry.

Chapter 7: The final chapter of this thesis includes conclusions and recommendations of the study are listed and discussed. Furthermore, limitations of the study and recommendations for future research are covered.

# Chapter 2: Literature Review

## Definition

International Financial Reporting Standards (IFRS) is a set of accounting standards developed by an independent, not-for-profit organization called the International Accounting Standards Board (IASB).

The goal of IFRS is to provide a global framework for how public companies prepare and disclose their financial statements. IFRS provides general guidance for the preparation of financial statements, rather than setting rules for industry-specific reporting.

Having an international standard is especially important for large companies that have subsidiaries in different countries. Adopting a single set of world-wide standards will simplify accounting procedures by allowing a company to use one reporting language throughout. A single standard will also provide investors and auditors with a cohesive view of finances.

Currently, over 100 countries permit or require IFRS for public companies, with more countries expected to transition to IFRS by 2015. Proponents of IFRS as an international standard maintain that the cost of implementing IFRS could be offset by the potential for compliance to improve credit ratings.

IFRS is sometimes confused with IAS (International Accounting Standards), which are older standards that IFRS has replaced.

**Literature Review on IFRS**

The IASB conceptual framework considers relevance as a fundamental quality of accounting information. The related literature considers relevant information as very useful for decision making. Several contributions examined the value relevance of accounting numbers.

The major interest was for the analysis of earnings considered as the most important information used by capital providers and for Beaver (1989) "No other figure in the financial statements receives more attention by the investment community than earnings per share. This relationship between accounting earnings and security prices is probably the single most important relationship in security analysis, and its prominence is reflected in the attention given to price–earnings ratios".

Earnings information is considered as relevant if it is useful to firm valuation. This field of research in accounting started by the seminal work of Ball and Brown (1968) and followed by many others: Lev (1989), Livnat and Zarowin (1990), Chan and Seow (1996).

Association studies had been also used in order to assess the value relevance of accounting information prepared under IFRS. The first empirical studies were interested on the voluntary adoption of IFRS by companies. The subsequent studies examined their value relevance for samples of firms after the mandatory adoption. Dumontier and Raffournier (1998) identified the motivations of Swiss listed companies to voluntarily comply with IAS for financial reporting.

The results show that firms which comply with IAS are larger, more internationally diversified, less capital intensive and have a more diffuse ownership. Cuijpers and Buijink (2005) studied the economic consequences of voluntary adoption of IFRS or US GAAP for a sample of European companies. Findings indicate that there is no evidence of a lower cost of capital for non-local GAAP adopters. Using a sample of companies that voluntarily adopt IAS from 1999 to 2002 in 29 countries, the study of Covrig et al. (2007) is testing whether foreign investors are differentially attracted to companies that voluntarily adopt IAS. The authors used foreign mutual fund ownership as a proxy for foreign investor preferences.

Results indicate that foreign mutual fund ownership is higher among firms using IAS compared to firms using local accounting standards. Furthermore the findings indicate that companies in poorer information environments and with

lower visibility have higher levels of foreign investment voluntarily comply with IAS in order to provide more relevant information to foreign investors.

More recently Şenyiğit (2014) analyzed the determinants of voluntary IFRS adoption by a sample of listed companies in Turkey during the transition period: 2003. Results are consistent with those from previous studies: firm size, international exposure, and type of auditor are important drivers of the voluntary IFRS adoption.

Accounting research has examined the value relevance of accounting information for companies for which the reference to IFRS in financial reporting is mandatory. The first papers had been conducted for samples of companies listed in European Union (EU) stock markets. In fact, since January 2005 all listed companies in the EU have been required to prepare their consolidated financial statements in accordance to IFRS. Overall the findings indicate an improvement in the quality of accounting numbers prepared under IFRS.

Armstrong et al. (2010) and Li (2010) indicate that using IFRS contribute in decreasing the information asymmetry and cost of capital. The study of Bartov et al. (2005) analyzes a sample of German firms. Their findings support the improvement of accounting information quality for firms switching to IFRS. Several studies examining the effect of mandatory IFRS on earnings quality provide similar conclusions.

Using a sample of UK firms, Latridis (2010) shows that the introduction of IFRS decreased the level of earnings management and improved the relevance of accounting figures. Similar results are shown in papers examining samples of French firms: Lenormand and Touchais (2009) and Italian companies: Paglietti (2009) and Cameron et al. (2014). Agostino et al. (2011) examined a sample of European banks.

They analyzed the market valuation of certain accounting figures, earnings and equity, before and after the adoption of IFRS. Results indicate that the transition to IFRS improved the information content of both earnings and book value for more transparent banks.

The use of IFRS by companies throughout the word has considerably increased during the last 10 years. Since 2001, almost 120 countries have required or permitted the use of IFRS: IASB (2014). The purpose in the adoption of IFRS is to improve the comparability and transparency of the financial information disclosed.

Thereby, the models allowing examining the value relevance of accounting information prepared under IFRS have been tested empirically in different countries.

Examining a sample of EU countries investigate the effect of IFRS adoption on financial activities. The results show that financial indicators have been significantly affected by the adoption of IFRS. Capital markets research indicates that the quality of earnings, significantly improved with the adoption of IFRS. In addition they support the decrease in earnings smoothing. Similar results are shown in capital markets research done.

On average there is a positive impact of IFRS adoption: Morris et al. (2014). Moreover, research on the application of IFRS for SMEs reveals that there are technical issues such as fair value measurements: Uyar and Gungormus (2013) and Albu et al. (2013).

Kang and Gray (2013) analyzed the incremental effect of the application of a specific IFRS: operating segments. Results show that the number of reportable segments and the extent of disclosure have increased after the adoption of the new standard. Analyzing a sample of Russian firms Kim (2013) concluded that the mandatory IFRS adoption in Russia is likely to result in improved information quality.

Previous studies examined the value relevance of accounting information for banking industry in EU. The author analyzed the explanatory power of accounting numbers in per and post-periods of IFRS adoption.

The results reveal that accounting information is value relevant in EU. However, the comparison of the results for the periods before and after their adoption indicates a decrease in value relevance of accounting information during the post-period.

In addition the study reveals that the value relevance of accounting information prepared under IFRS has increased.

## Chapter 3: IFRS in Focus - The Greek debt crisis: Financial reporting implications for 30 June 2015

On 13 July 2015 Europe's leaders agreed in principle that they are ready to start negotiations on a European Stability Mechanism (ESM) financial assistance programmme for Greece, which means the EU intends to continue to provide financial support to Greece by means of a third bailout. That agreement does not, however, signal the end of the Greek debt crisis. It is only an agreement in principle and has several preconditions.

Before formal negotiations on an ESM programme can even begin several national parliaments, as the creditors, must approve the plan. For its part, the Greek Parliament must endorse all of the commitments included in the text of the Euro Summit on Greece. Additionally, Greece must legally implement several economic reforms within a defined timetable and formally request the IMF to provide support beyond March 2016. On 15 July, the Greek Parliament approved the plan and passed legislation to reform pensions, increase taxes and establish a debt repayment fund.

A positive outcome of the agreement reached is that it will reduce the uncertainty in the markets about the ability of the Greek Government and Greek businesses to continue to operate, and to meet their ongoing commitments. Nevertheless, risks remain and there will still be some uncertainty about how the package of reforms will affect individual businesses. The costs of the reforms will be borne by many parties, including tourists and consumers.

Many entities will be preparing financial reports for the period to 30 June 2015 – for most entities these will be interim reports, but some will be preparing annual reports. The on‑going financial reporting implications of the Greek debt crisis will need to be considered when those reports are prepared, including that Greece leaving the Eurozone still remains a possibility. Following previous publications on the consequences of the Eurozone crisis, including a Greek exit from the euro1, many of the financial reporting implications will already have been factored into financial reports.

The purpose of this publication is to remind preparers of the main issues that they will need to think about as entities prepare their IFRS financial statements as at 30 June 2015.

**Financial reporting consequences at glance General disclosures**

For 30 June reporting periods, the 13 July decision, and its consequences, will be a non‑adjusting event after the reporting period. The Greek referendum on 5 July, the revised proposal from Greece on 9 July and the agreement on 13 July and its endorsement by the Greek parliament on 15 July were all conditions arising after 30 June. Entities will need to consider whether there are any matters about the agreement relevant to them that should be disclosed.

How the on-going Greek crisis affects a particular entity will depend on its facts and circumstances. It remains important that an entity's financial report includes information to help investors assess how the crisis is affecting the entity. For annual reports this will include:

- Information about credit risk, liquidity risk, market risk and concentrations of risk (IFRS 7); restrictions on the use of assets within a group (IFRS 12); restrictions on the use (for example, on repatriation) of cash (IAS 7); and other specific requirements on impairment (IAS 36), temporarily idle property, plant and equipment (IAS 16), etc.
- Depending on the extent of an entity's exposure to the Greek economy it could be particularly important to ensure that related disclosures are presented together, rather than distributed throughout the report.
- The disclosures should be specific to the entity, rather than boiler-plate statements about the current state of Greece, and proportionate to the exposure of an entity to the Greek economy. Greater exposure to Greece is likely to warrant more extensive explanations of how the entity is affected. For interim financial statements, the disclosures are likely to be less extensive, because the notes should focus on highlighting changes that are significant to an understanding of the changes in financial position and performance of the entity since the end of the last annual reporting period, but should still be sufficient to provide users with an understanding of the effect of recent developments on the entity. Again, these need to be specific to the entity and proportionate.
- In addition to the requirements of IFRSs, many local laws or regulations require disclosure of the risks facing an entity. Entities with an exposure to the Greek economy that are subject to such requirements should consider whether recent developments have led to new risks or in previously disclosed risks becoming more significant.

**Impairment ( IAS36)**

Given the ongoing crisis in Greece, it should be assumed that an impairment review will be required of the assets of Greek businesses and balances due from Greek entities at 30 June 2015. That impairment assessment for 30 June must reflect the facts and circumstances that existed at that date and not be influenced by subsequent non-adjusting events such as the decisions made by the Greek government and its creditors in July 2015.

The likelihood that assets in Greece are impaired beyond the assessment made at 30 June should be reduced by the agreement. However, it does not eliminate this risk and preparers should continue to monitor the assets affected. It is also unlikely that the agreement would provide any basis for reversing any impairments already recognised.

Depending on the asset being assessed, impairment issues might arise in different ways. For example: impairment of a receivable reflects the current condition of the counterparty. The likelihood of recovery of any amounts due from the Greek government will need to be considered carefully; impairment of goodwill or of deferred tax assets results from a deterioration in expected future trading performance; and impairment of inventory reflects the current estimated selling price that can be achieved.

Impairment of other financial assets is governed by the specific rules of IAS 39 (or, when applied, IFRS 9).

**Going concern**

Entities that have significant exposure to the Greek economy will need to assess whether they can continue to prepare their financial statements on a going concern basis. Although the agreement should reduce that risk in the immediate term, the question remains one that needs to be asked. Also, it is not just for entities with direct dealings in Greece as, for example, suppliers to businesses trading in Greece might also be adversely affected.

Even though the danger of an immediate exit from the Eurozone appears to have been averted, it is not completely off the table. The Greek Government must still implement the reforms, which will require a lot of political will.

The sentiment expressed by voters in the referendum on 5 July against many of the measures set out in the text of the Euro Summit on Greece, and a coalition Government with a slim majority, mean that implementation of the commitments will not be straightforward. In any case, this is just the first step towards a third bailout – a formal Memorandum of Understanding still needs to be negotiated. It is possible that once that process begins further decisions on continuation of the bailout plan will need to be made by Greece's creditors.

The financial situation can change quickly. Entities will need to continue to monitor developments, including continuing to consider the consequences of Greece leaving the Eurozone

The Greek Government must still implement the reforms, which will require a lot of political will.

Exiting the Eurozone – keeping the consequences in mind

The discussion that follows is intended to be indicative as the mechanism by which a Greek exit from the Eurozone would be enacted is currently unclear. If such an event becomes more likely we will issue more comprehensive and specific advice.

**Direct consequences**

An exit from the Eurozone would require Greece to introduce a new currency. That step would likely to be accompanied by legislation specifying that contracts that are governed by Greek law be redenominated from the euro to the new currency. The redenomination of contracts from the euro to a new currency will inevitably come with some legal uncertainties about enforceability. Although the courts will resolve these uncertainties over time, until they do financial reports will need to capture or convey those uncertainties.

The imposition of exchange and other controls is also expected, to manage the currency and limit capital flight. Among the main financial reporting matters we would need to consider are:

Determination of an entity's functional currency as a new currency could affect that assessment.

Changing the currency of a financial instrument raises questions about whether it becomes a new instrument as a consequence of changes to the rights or risks changing. If this is the case the replaced instrument would be derecognized, with a potential gain or loss. In a similar manner, changing the currency could change the classification of the instrument as a liability or as equity.

Hedge relationships could be upset by a change in currency, with the consequence that a hedging relationship becomes ineffective.

Exchange controls and the possibility of grey markets developing could mean that identification of the rates required by IAS 21 The Effects of Changes in Foreign Exchange Rates to retranslate Greek activities requires the use of judgment and warrants additional explanation and disclosure. Government action following an exit from the Eurozone might affect control and joint control assessments. The

reference point for assessing high quality corporate bonds for measuring pension liabilities could change.A new currency could change the assessment of operating segments.

**Broader economic considerations**

The economic consequences of a new currency are broad and potentially far reaching. A Eurozone exit might coincide with Greece defaulting on its sovereign debt obligations – the direct consequences for businesses are not likely to be as significant as the Greek Sovereign Debt problems experienced in 2012, because most Greek Sovereign Debt is now held by governments rather than in the private sector.

If a new Greek currency was severely discounted relative to the euro and other currencies, the ability of the Government, corporations and individuals in Greece to meet financial obligations denominated in foreign currencies (including the euro) would be severely hampered.

Most of the broader consequences relate to impairment issues, which would put a greater spotlight on going concern and the other matters highlighted in the first part of this publication. It would also carry the risk of contagion, whereby other economies within the Eurozone could be at greater risk of experiencing economic difficulties.

# Chapter 4: Challenges of international financial reporting standards (IFRS) in the Islamic accounting world, case of Middle Eastern countries

## Introduction

While 15 out of the 21 Middle Eastern Countries – which information is available- require or allow companies under their financial authorities to use the globally known international financial reporting standards (IFRS), only three countries – out of the 21 countries - have developed their national generally accepted accounting principles (GAAP), are still asking companies under their financial authorities to follow them, and are not allowing any company to use other standards.

In addition, 2/3 of the Arab countries are members of the international federation of accountants.

**Table 1- IFRS in MEC**

| Country | Membership of IFAC | Accounting principles used | Notes |
|---|---|---|---|
| Morocco | Yes | National GAAP | IFRS are permitted |
| Tunisia | Yes | National GAAP | IFRS are permitted |
| Algeria | No | National GAAP | IFRS are permitted |
| Libya | Yes | National GAAP | IFRS are permitted |
| Egypt | Yes | IFRS | |
| Jordon | Yes | IFRS | |
| Israel | Yes | National GAAP | IFRS are not permitted |
| Lebanon | Yes | IFRS | |
| West Bank and Gaza | No | IFRS | |
| Syria | Yes | National GAAP | IFRS are not permitted |
| Iraq | Yes | No Information | |
| Saudi Arabia | Yes | IFRS | |
| Oman | No | IFRS | |
| Yemen | No | No Information | |
| UAE | No | IFRS | |

| | | | |
|---|---|---|---|
| Qatar | No | IFRS | |
| Bahrain | Yes | IFRS | |
| Kuwait | Yes | IFRS | |
| Iran | Yes | IFRS | IFRS are not permitted |

In spite the positive relationship between IASB and the Middle Eastern countries, they still don't have any role or present or special consideration as any other country or region, within the agenda and the timetable of the IASB as well as during any standard setting process engaged by it. The current regional representatives are mainly from EU, NA, Japan, Australia and South Africa.

The Middle Eastern countries heading that, their region should take more concern in order to achieve better convergence while understanding and enforcing accounting standards around the globe.

According to the Chairman of the IFRIC, Robert Garnett "with oil revenues being directed into large investments, the region is increasingly being seen as a potential partner".

Taking into consideration the rule the middle east countries play over the whole world policy, investments, capital market which shows how important for IFRS to adapt because the totally different environmental factors that are considered by the IASB while setting IFRS. The decision of which standards to choose, for a nation, usually depends on the culture (Askary, 2006), legal system, taxation, business organizations and ownership, as well as on the accounting profession within a country or a region. Previous researches have proved that all these factors are indeed significantly different between the Middle East countries and the whole other world. Thus, if the IASB is talking about global convergence of accounting standards, it needs to understand that there are vibrant and evolving markets in other parts of the world, other than Europe and North America, which have special features which need to be addressed.

IASB main duties are preparing, generating, reviewing and exposing IAS and IFRS. The goal of IASB is attached to the idea of globalization and is simply a hope that the whole business world will follow one set of accounting standards. It is also important to notice that each standard must be approved by at least 8 members of the IASB, out of the IASB 14's members, in order to be considered for issuance.

The accounting professionals and experts of the MEC (Middle Eastern Countries) can point to various cultural factors as well as to key interests at stake and international concerns while discussing their right of being represented on the IASB.

**Cultural factors**

**Islam and emergence of Islamic finance**

First, Islam's role in the world is becoming much more influential.1.6 billion people, currently representing 25% of the world total population, are Muslims(According to CIA fact sheet and www.islamicpopulation.com). Second, among the 18 oil producing countries, ten are Muslims countries and provide 40% of the aggregate world oil production. Third, in addition to the role of Muslims countries in the international trade, Islamic Finance is emerging as a major force in the banking and investment world and is still in its growth stage. The Islamic bank of Britain, Amana Mutual Funds Trust, American Finance House- LARIBA Bank, MSI financial services corporation and Manzail are just few examples of the various finance institutions that are engaged in this field of finance. Furthermore, MEC are members of the World Bank, UN, WTO, and most other international organizations. These organizations are giving special attention in their periodic reports to Islam as a religion and to it followers needs and demands because of their belief about their current and prospective potential, However, we find that MEC was represented by 2 members only in the Standard Advisory Council (SAC) from 2001 till 2005, among 49 members of the SAC of the IASB, recently the MEC are not represented at all by any member.

In 2001 there were two members representing the middle East, Mr Adir Inbar (Israel) and Mr. Rifaat Ahmed Abdel Karim ( Bahrain) taking into consideration that Israel don't represent any of the Muslim population

and the fact that all the Arab countries-except two- don't have any direct connections with Israel, which means one of the two members representing middle east.

**Relationship of the MEC with Islamic financial institutions**

Currently, Islamic financial institutions are represented on the SAC by an Islamic services Board (IFSB) member, without any consideration for the MEC and the accounting and Auditing organizations for Islamic financial institutions (AAOIFI).

Both of them – the AAOIFI and the IFSB- should be represented, this is because, in reality, while the IFSB is concerned with finance issues related to Islamic financial institutions, the AAOIFI deals with the accounting standards issues related to these institutions. As long as most of the members of IFSB and AAOIFI are from the ME countries, Thus, IASB should consider the accounting polices, practices, and concerns of the MEC while reviewing, merging and interpreting the previously issued IAS or establishing the new (updated) one.

## Effect of culture on accounting standard setting process

Accounting standards-IFRS or any National GAAP- are influenced by the surrounding culture to a great extent, after 1972, the main concern of the accounting world's professionals has been to reduce the differences between the different accounting principles among the different countries. The IASCF and IASB were created for this purpose.

MEC and any other country , regardless of its representation status on the IASB, should have the right to bring up its concerns and discuss them with one of the IASB affiliates ( mainly IASCF, IFRIC, and SAC). Definitely, the IASB will remain the only body, and final decision maker, that decide which financial reporting standard to issue and recognize. This opinion is being mentioned because the MEC are facing many significant regulatory difficulties in the current situation. They consider they can bring these difficulties to the attention of IASB in case they are represented.

These difficulties may include the IAS 24 that requires all the transactions with "close family members of a related party" to be disclosed. Differences in cultures and type of family bonds make it more challenging for MEC accountants to adopt such standards. This fact is not fact is not very obvious to the current IASB team of representatives because close family ties and similar levels are not the same in all the world, they differ from region to another. At the same time, the IASB does not consider these facts because no one can, or will, bring this type of concerns to their agenda if those who are influenced by them and concerned are not represented, following up, or attending the IASB meetings on a regular basis. A presentation of this type of

cultural differences by MEC accountants professionals, will leas IASB to be more convinced with the idea of inviting a MEC representative to its structure because such action will enhance the degree of understanding of new standards and make them more relevant to the interested users.

## Economic factors

## Economic significance of MEC countries

The MEC region is known for its economic diversity, it has recourse-rich and resource scarce countries. In aggregate, all of them- as a group- are doing well. Internationally, Growth in the Middle East and North Africa was robust in 2006, with real GDP rising 6.3% (2007). This extraordinary growth- the strongest in more than 10 years-occurred despite the difficult conditions affected many countries, particularly the conflict-affected areas of Iraq, Lebanon ad the west bank and Gaza. Strong oil revenues and the ongoing European recovery provided the momentum for growth, allowing per capita GDP to rise 4.2 % despite large increase in the population.

According to the World Bank annual report real GDP of Middle east and North Africa reach 5.3%, depending on the oil revenues, the region is enjoying large trade and current account surpluses. The current account surpluses as a share of GDP rose from 9.1 % in 2004 to 16.8 % in 2006. This all means

that the region is within the range of the economic expectations, regarding the increase in the rate of population- which fell from 2.5 % annual to 2 %, still higher than the international rate 0.5 %. Unemployment dropped from more than 15 percent in 2000 to 11 percent in 2007. This is all allows the MEC members and accounting experts to be represented in order to bring up their geographic diversity of professional backgrounds, present and protect their interests at stake and provide their advice to the IASB.

## Business environment in the MEC

If the IASB would like to base the representation criteria on the percentage of global participation, then again the MEC will not do badly. The business environment is attracting more investors day after day. With the establishment of new industrial cities and new property holding laws, according to a survey made by CONNECT-World CEO, the middle east will lead the world out of the current economic slowdown, according to 76 % of business leaders, almost two third of respondents say they are very optimistic about the long term prospect for their company in the middle east, with another 33 % optimistic.

Regarding the stock market which is getting bigger having Saudi Arabia the largest listed foreign stock in the MEC region, reaching more than $ 26.5 billion followed by Egypt $ 14.5 billion. Despite the financial crisis which affect the whole world market especially the stock market the level of profits that is being made in the region along with the successful strategies that are being set are launching partnerships of the MEC region with the rest of the world and are attracting new entrepreneurs to the MEC. Thus, it will be much better if MEC is represented on the IASB the same as each interested global business player, respecting their corporate laws, corporate acts and code of corporate governance.

## MEC key interests

## Foreign investment concerns

Planning is the 1st step for any international company before investing in any other country or region all over the world, one step of this planning is making a study of the accounting system in the country they are interested in investing at it.

Due to the location of the MEC between the East and west, it is an important location for most of the international companies. Which they are faced by the accounting system in the MEC countries which use various accounting system

It needs to satisfy the foreign investors' interests by using set of financial reporting standards (and not one set in each country) because this will reduce confusion, as well as error and fraud, which will lead to an increase in the degree of governance and trust. This transparency and trust can lead to better corporate governance that cannot be underestimated by investors who are targeted for providing foreign capital flows that cause growth, which is main concern for the region.

Thus, it is an advantage for the MEC to follow IFRS and not to establish their own set of united reporting standards, however, the importance of transmitting the concerns of its countries to the IASB should be understood. That is why inviting a MEC representative to the IASB structure will solve the adaptation problem, ensure that the IFRS will not harm it – but will only help it- and will serve the global accounting harmonization movement at the same time, instead of establishing new regional sets of IFRS.

## Accounting standard differences between IASB, AAOIFI and MEC

The accounting and auditing standards that are adopted by Islamic financial institutions are an obvious reflection of the different financial instruments, contracts, insurance and interest laws, ethical standards, and types of business organization that are used by them. These standards, which slightly differ from those set by the IASB, are set by the AAOIFI which currently has 115 members from 27 countries. Specifically, they differ in five issues that are related to leases, restricted contracts, and specialty investment account (where the investors bear part of the business risk).

Having a representative from the MEC in the IASB will facilitate a lot of issues as he will understand these differences and MEC nation's common sources of finance, accounting regulations and framework, level of

industrial development, as well as many other factors that are relevant, according to his experience and exposure.

### Challenges of complying fully with the IASB

IASB requires each organization to comply fully with IFRS in order to be considered as following IAS. Full compliance with each IFRS by the MEC is a real challenge at the current moment. First, complying with the IFRS mean that the MEC are ready to abandon their particularities, replace their business reporting culture, lose the control process of standard setting, and use the one that is accepted by the IASB. The second challenge is the current unavailability of high qualified IFRS auditors and accounting staff in the MEC countries in the same level as in the western regions of the world. Third, until now the IFRS are not proving to be workable within the MEC context of national standards and that is why many standards have not yet been adopted in many countries.

### Discussion

In conclusion, the above observations show that on the basis of any representation criteria (geographical location, GDP level or population) MEC will be capable of gaining a seat on the IASB structure as it is doing in other reputable international financial organizations such as the world bank and international monetary fund.

If the world want to apply one accounting standards, IASB should recognize the importance of the Middle East countries in their structure, having a representative in the IASB will allow the MEC to apply IFRS in all the countries and allow the IASB to apply the IFRS in a very important region of the world, because otherwise the MEC will be supporting the current available ideas of establishing the Association of Gulf Cooperation Council (AGCC) accounting system or MEC accounting system. Finally, it can be said that IASB and MEC have to recognize and respect each other because of the simple fact that each of them creates a benefit for the other. Definitely this can be appreciated and considered more after acknowledging the number of Middle Easter countries that are currently complying with IFRS and also after concentrating more on the idea of perfect harmonization.

## Chapter 5: IFRS7 Financial Instruments: Disclosures, by the 24 largest European banks

### Introduction

This publication provides an analysis of the disclosures made in the first year of mandatory adoption of IFRS 7

Financial Instruments: Disclosures, by the 24 largest European banks. We set out examples of the disclosures given and comment on the practical difficulties involved in preparing and interpreting this information.

IFRS 7 seeks to provide information to communicate the significance of financial instruments to an entity's financial position, performance and cash flows, the risks associated with those financial instruments and how an entity manages those risks. It incorporates the disclosure requirements relating to financial instruments which were previously set out in IAS 32 Financial Instruments: Disclosure and Presentation and replaces IAS 30 Disclosures in the Financial Statements of Banks and Similar Financial Institutions, so that all financial instruments' disclosure requirements, for all companies, are located in a single standard. Although the IFRS 7 disclosure requirements are less prescriptive than those of IAS 30, and there are no longer any bank-specific requirements, the number of items to be disclosed has increased considerably.

Compared with the previous disclosure requirements, IFRS 7 introduces the need for:

- enhanced balance sheet and income statement details 'by category' and 'by class'
- disclosure of the ineffectiveness recognized in profit or loss for cash flow hedges and net investment hedges
- details of 'day one' profits deferred
- information about provisions against impaired assets
- information relating to the credit quality of financial assets that are neither past due nor impaired (e.g., a rating analysis)
- market risk sensitivity
- the processes that the company uses to manage and measure its risks.

The recent credit crisis has coincided with the first year of the mandatory application of IFRS 7. This has provided an opportunity to 'stress test' the new Standard which has, in turn, increased the need for transparency in financial reporting. This is especially true of exposures to instruments that the market now considers to be high risk, including asset-backed securities, and exposures to special purpose entities and financial guarantors. In response, many financial institutions have enhanced their disclosures in respect of such instruments. In this publication, we examine the disclosures made by banks in the light of the credit crisis. Figure 1 contains a list of the banks selected for the analysis. The information has been extracted from the audited disclosures included in the annual report, unless otherwise mentioned.

This publication first summarizes areas of specific interest: disclosures relating to the use of fair values and to the credit crisis. Next it provides an analysis of the quantitative risk disclosures, followed by other types of disclosure.

Figure 1: Banks selected for the analysis

| | | | | | |
|---|---|---|---|---|---|
| ABN AMRO Holding N.V. (ABN AMRO) | Allied Irish Banks, p.l.c (AIB) | Banco Bilbao Vizcaya Argentaria S.A | Banco Santander SA (Santander) | Barclays plc (Barclays) | BNP Paribas S.A. (BNP) |
| Commerzbank AG (Commerzbank) | Crédit Agricole S.A. (Crédit Agricole) | Danske Bank Group (Danske | Deutsche Bank AG (Deutsche Bank) | Dexia (Dexia) | Fortis AG (Fortis) |
| HBOS plc (HBOS) | HSBC Holdings plc (HSBC) | ING Groep N.V. (ING) | Intesa Sanpaolo S.p.A (Intesa) | KBC Group N.V. (KBC) | Lloyds TSB Group plc (Lloyds |
| Nordea Bank AB (Nordea) | Royal Bank of Scotland | Standard Charter | Société Générale S.A. | UBS AG (UBS) | Unicredit S.p.A |

The key findings outlined in this publication are:

- As reflected in the various observations below, there is a conflict in IFRS 7 between the Standard's stated objective, to require information to be disclosed as seen 'through the eyes of management' and certain minimum disclosure requirements that are set out in the Standard. The minimum requirements of IFRS 7 are sometimes unhelpful and can divert effort away from the provision of more meaningful information.

- There is also a tension between allowing preparers to apply their discretion using their own risk management information and the user's desire to be able to make comparisons between the information disclosed by the different banks. In some of the areas we highlight later in this publication, it would be helpful for the banks to agree common interpretations of the disclosure requirement and to adopt common parameters, where feasible, in order to help improve comparability.

- Although IFRS 7 does not explicitly require a quantitative analysis of the sources of fair value of financial instruments, half of the banks have chosen to provide this information, which we consider to be useful. However, we suspect that banks may have analysed their instruments in different ways, making it difficult to compare between banks. Where banks have provided the information, there has been a marked increase, compared with 2006, in the extent to which instruments have been valued using models whose inputs are not observable in the market.

- IFRS 7 requires entities to disclose the effect on recorded fair values of using 'reasonably possible alternative assumptions', where the valuation techniques used include inputs that are not observable in the market. Some of the disclosed valuation sensitivities were large at the end of 2007 — the biggest being €2 billion, considerably higher than a year before. However, the term 'reasonably possible' is open to different interpretations and most banks do not give further information to enable a meaningful comparison between the valuation uncertainties faced by the banks.

- The disclosures made by the banks in the light of the credit crisis varied significantly, reflecting, in part, their varying degrees of exposure. Some banks provided very detailed information on asset quality, such as their sub-prime exposures.

- Market risk information is presented in a variety of different ways, using different assumptions, which makes it difficult to compare the level of risks taken on by the banks. Most banks do not provide quantitative data relating to losses that would be experienced in stress conditions (even though this would, arguably, be relevant to the reader), as this is not required by IFRS 7. Basel II Pillar 3 will require banks to publish details of their stress testing in the next year. Banks will have the choice of how to report this information, e.g., whether to incorporate it in their financial statements or to display it on their websites.

- The liquidity risk disclosure required by IFRS 7 is not suited to the liquidity risks faced by banks. The banks have applied and adapted the requirements of the Standard in various different ways.

- IFRS 7 requires entities to disclose the fair value of collateral they hold against loan exposures, 'if practical' to do so. It can be difficult to present meaningful aggregate numbers without concealing the levels of over- or under-collateralisation of individual loans. More than half of the banks have disclosed the aggregate fair value of collateral held. However, most banks have not provided information on the extent of over-or under-collateralisation.

- A number of the IFRS 7 disclosure requirements are unclear or not very useful and, we believe, should be clarified or deleted.

The most relevant disclosures will inevitably change with developing market circumstances. The Financial Stability Forum (FSF) in its recent publication, *Enhancing Market and Institutional Resilience*, has called for investors, regulators, financial statements preparers and auditors to meet twice a year to work together to identify the relevant risk disclosures. We believe this would be a helpful mechanism to strengthen the banks' disclosures and make them more consistent in the future.

**Fair value**

Valuation techniques used to assess fair value. IFRS 7 retains the IAS 32 disclosure requirements relating to the methods and significant assumptions used to determine fair value and require disclosure of:

- whether fair values are based on quoted prices or valuation techniques
- whether fair values are based on valuation techniques that include assumptions that are not supported by market prices or rates, and, if so, the amount of the change in fair value recognized in profit or loss that arises from the use of the valuation technique
- for financial instruments valued using valuation techniques that include inputs not supported by market prices or quotes, the effect of using reasonably possible alternative assumptions.

The key elements of these requirements are discussed below:

**Methodology and significant assumptions used**

All the banks in our survey have described the valuation techniques used. However, the length of the description varied by bank. An example is shown in Extract 1.

*Extract 1: Example of description of the valuation techniques used from Lloyds TSB's Annual Report 2007, (Note extracts for only 2 categories of financial instruments have been included)*

**Fair values of financial assets and liabilities**

Financial instruments include financial assets, financial liabilities and derivatives. The fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

Wherever possible, fair values have been estimated using market prices for instruments held by the Group. Where market prices are not available, fair values have been estimated using quoted values for instruments with characteristics either identical or similar to those of the instruments held by the Group. These estimation techniques are necessarily subjective in nature and involve several assumptions.

The fair values presented in the following table are at a specific date and may be significantly different from the amounts which will actually be paid or received on the maturity or settlement date.

Because a variety of estimation techniques are employed and significant estimates made, comparisons of fair values between financial institutions may not be meaningful. Readers of these financial statements are thus advised to use caution when using this data to evaluate the Group's financial position.

Fair value information is not provided for items that do not meet the definition of a financial instrument. These items include intangible assets, such as the value of the Group's branch network, the long-term relationships with depositors and credit card relationships; premises and equipment; and shareholders' equity. These items are material and accordingly the Group believes that the fair value information presented does not represent the underlying value of the Group.

The valuation technique for each major category of financial instrument is discussed below.

**Trading and other financial assets at fair value through profit or loss**

The fair values of financial instruments quoted in active markets are based on quoted prices. The fair values of financial instruments that are not quoted in active markets are determined using valuation techniques including cash flow models which, to the extent practical, use observable market inputs such as interest rate yield curves, equities and commodities prices, option volatilities and currency rates that are either directly observable or are implied from instrument prices.

**Derivative financial instruments**

All derivatives are recognised at their fair value. Fair values are obtained from quoted market prices in active markets, including recent market transactions, and using valuation techniques, including discounted cash flow and options pricing models, as appropriate. Derivatives are carried in the balance sheet as assets when their fair value is positive and as liabilities when their fair value is negative.

In addition, seven banks disclosed which significant inputs to their valuation techniques were not observable, such as prepayment rates and credit spreads (see Extract 2 for an example). However, three banks included some discussion of the actual assumptions used in the valuation models, an example of which is illustrated in Extract 6 for the valuation of 'sub prime' assets.

In practice, there is considerable difficulty in providing enough information for users of the financial statements to understand the valuation processes adequately, without overburdening the reader with too much detail. In general, we would encourage the banks to provide more information on how they value their more complex financial instruments.

*Extract 2: Example of disclosure of inputs subject to assumptions used in valuation techniques from Fortis' Annual Report 2007*

The fair value (FV) calculation of financial instruments not actively traded on financial markets can be summarised as follows:

| Instrument Type | Fortis Products | FV Calculation |
|---|---|---|
| Instruments with no stated maturity | Current accounts, saving accounts, etc. | Nominal value. |
| Instruments without optional features | Straight loans, deposits, etc. | Discounted cash flow methodology; discounting yield curve is the swap curve plus spread (assets) or the swap curve minus spread (liabilities); spread is based on commercial margin computed based on the average on new production during last 3 months. |
| Instruments with optional features | Mortgage loans and other instruments with option features | Product is split and linear (non-optional) component is valued using a discounted cash flow methodology and option component valued based on option pricing model. |
| Subordinated loans | Subordinated loans | Discounted cash flow methodology in which spread is based on subordination cost for Fortis based on market quotations. |
| Private equity | Private equity and non-quoted participations investments | In general based on the European Venture Capital Association valuation guidelines, using amongst others Enterprise Value/EBITDA, Price/Cash flow and Price/Earnings. |
| Preference shares (non-quotes) | Preference shares | If the share is characterised as a debt instrument, a discounted cash flow model is used. |

Fortis has a policy in place aimed at quantifying and monitoring pricing uncertainties related to the calculation of fair values using valuation techniques and internal models. Related uncertainties are a feature of the 'model risk' concept.

Model risk arises when the product pricing requires valuation techniques which are not yet standardised or for which input data cannot be directly observed in the market, leading to assumptions on the input data themselves.

The development of new, sophisticated products in the market has resulted in the development of mathematical models to price them. These models in turn depend on assumptions regarding the stochastic behaviour of underlying variables, numerical algorithms and other possible approximations needed to replicate the complexity of the financial instruments.

Furthermore, the underlying hypotheses of a model depend on the general market conditions (e.g. specific interest rates, volatilities) prevailing at the time it is developed. There is no guarantee that the model will continue to yield adequate results should market conditions change drastically.

Any related model uncertainty is quantified as accurately as possible and is the basis in adjusting the fair value calculated by the valuation techniques and internal models.

**Valuation techniques**

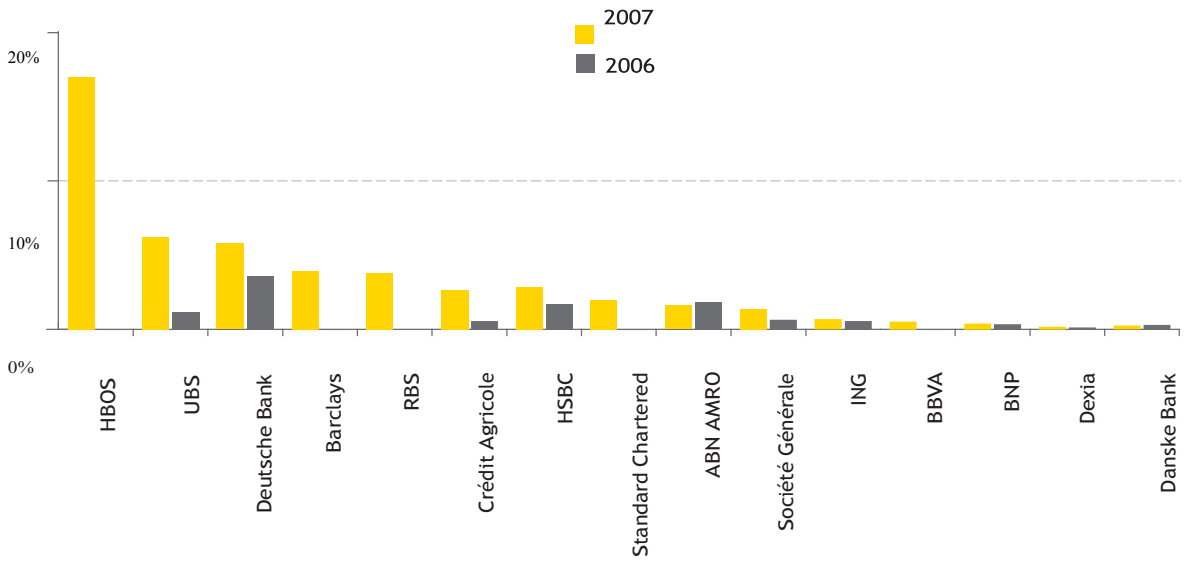
IFRS 7 requires entities to disclose whether fair values are based on quoted prices or valuation techniques and whether the inputs to these techniques are observable. This wording could be read to require only a qualitative description. However, 11 of the 24 banks in our survey provided a quantitative analysis of the fair value of financial assets or liabilities showing those valued by reference to quoted prices (level 1), those valued using valuation models based on observable market data (level 2), and those valued using valuation models based on non-observable market data (level 3). Another two banks disclosed the fair value of level 3 assets and liabilities and a further two banks disclosed the fair value of level 3 assets only. One bank (which is not included in Figures 2 and 3 below) disclosed the fair value of financial instruments calculated using internal models, without quantifying the proportion valued using non observable market data, although they stated that in most cases the data used were

observable. Extract 3 contains an illustration of the disclosure.

Figure 2 shows the proportion of financial assets recorded at fair value which was classified as level 3 and Figure 3 provides a similar analysis for financial liabilities.

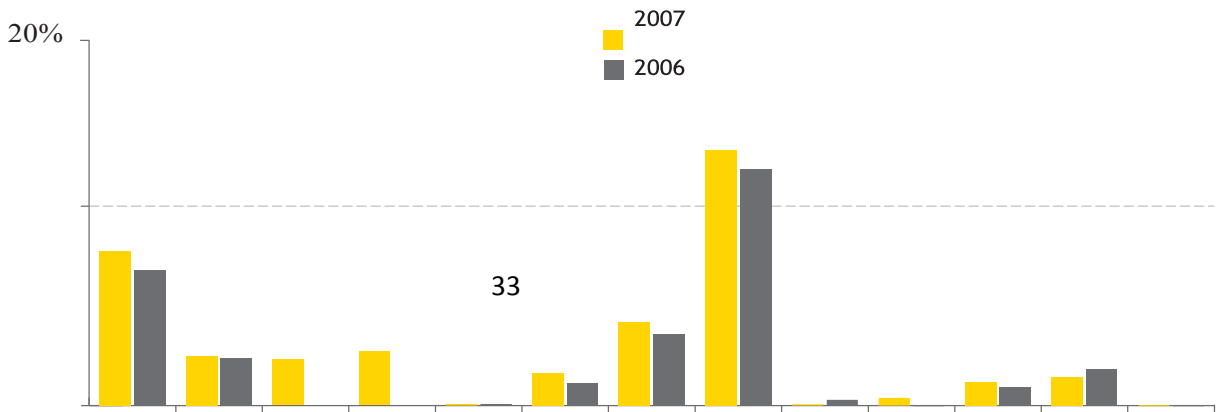
As would be expected, the proportion of financial instruments classified as level 3 varies by bank and has increased in 2007 with the loss of market liquidity. However, what is meant by 'observable market data' is not clear and so the banks are likely to have interpreted it in different ways.

*Figure 2: Proportion of financial assets recorded at fair value, whose fair value has been determined using non-observable market data*




*Levels 1, 2 and 3 are not referred to in IFRS 7, but are the categories used in the US Statement of Financial Accounting Standards ('SFAS') 157, which requires a quantitative analysis of an entity's financial instruments, by level, based on the source of fair value. Note that, while some banks believe the SFAS 157 levels to be equivalent to those in IFRS, the definitions of the levels in SFAS 157 are not exactly the same as the sources of fair values set out in IAS 39 and IFRS 7*

*Figure 3: Proportion of financial liabilities recorded at fair value, whose fair value has been determined using non-observable market*




*Extract 3: Example of quantitative analysis of valuation techniques from Dexia's Annual Report*

| | Dec. 31, 2007 | | | |
|---|---|---|---|---|
| | Quoted market price | Model (with observable market prices and rates) | Model (no observable market prices and rates)(1) | Total |
| Loans and advances due from banks | 605 | 54,154 | 0 | 54,759 |
| Loans and advances to customers | 7,171 | 237,018 | 0 | 244,189 |
| Financial assets held for trading | 25,967 | 4,444 | 0 | 30,411 |
| Financial assets designated at fair value | 6,453 | 701 | 0 | 7,154 |
| Available-for-sale financial assets | 146,257 | 71,637 | 481 | 218,375 |
| Held to maturity investments | 14,75 | 614 | 0 | 2,089 |
| Derivatives | 172 | 28,407 | 639 | 29,218 |
| Fair value revaluation of portfolio hedge | 0 | (185) | 0 | (185) |
| **TOTAL** | **188,100** | **396,790** | **1,120** | **586,010** |

*(1) The sensitivity of assets and liabilities for which fair value is calculated using a model without observable market prices and rates is very limited, as most of products are hedged on back-to-back basis. The only major not hedged elements are the CDS of FSA, for which the sensitivity is reported in note 12.5.*

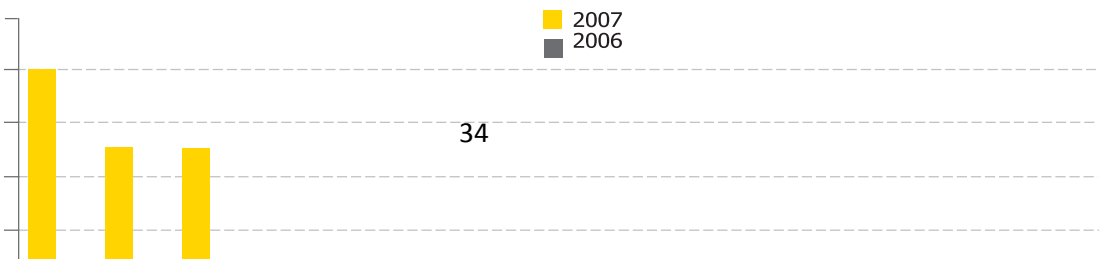
**The effect of reasonably possible alternative assumptions**

To the extent that financial instruments are classified as level 3, IFRS 7 requires disclosure of the effect on the recorded fair value of the use of reasonably possible alternative assumptions. It does not distinguish between changes which would affect profit or loss and those which would only affect equity (i.e., due to the revaluation of AFS securities).

Six banks specifically disclosed the effect on profit or loss and eight banks disclosed the effect of changes in non-observable variables, but have not specifically disclosed the extent of the effect on profit or loss/or equity.

The effect disclosed by the 14 banks is shown in Figure 4. The sensitivities disclosed by HBOS, BBVA and Standard Chartered were small in absolute terms. A further two banks stated that the potential effect was not significant. In addition, two of the 14 banks specifically disclosed the effect on equity due to the revaluation of AFS investments. Seven banks also disclosed, separately, the sensitivity of fair values to possible positive and negative assumptions. Four banks did not disclose the effect for the comparative year, 2006, while one bank stated that it was nil.

*Figure 4: Effects of reasonably possible changes in significant non-observable assumptions*



The disclosed effect of using alternative valuation assumptions is, in some cases, large, and implies that the profitability of the bank could be higher or lower by this amount. The increase in the figures for 2007 compared with 2006 correlates with the higher proportion of financial instruments measured using unobservable inputs and reflects greater illiquidity and more uncertainty in their valuation.

The phrase 'reasonably possibly alternative assumptions' is, of course, open to different interpretations.

As such, these will almost certainly have been determined on a different basis by the various banks. As a result, the disclosed numbers are not directly comparable and may be of limited value in this analysis, except to show the change in the level of valuation uncertainty from one year to the next. Also, disclosure of one aggregate number depends on unspecified assumptions concerning the effect of correlation between the different assumptions. We would encourage the banks to give sufficient commentary to help the reader understand the basis of this calculation.

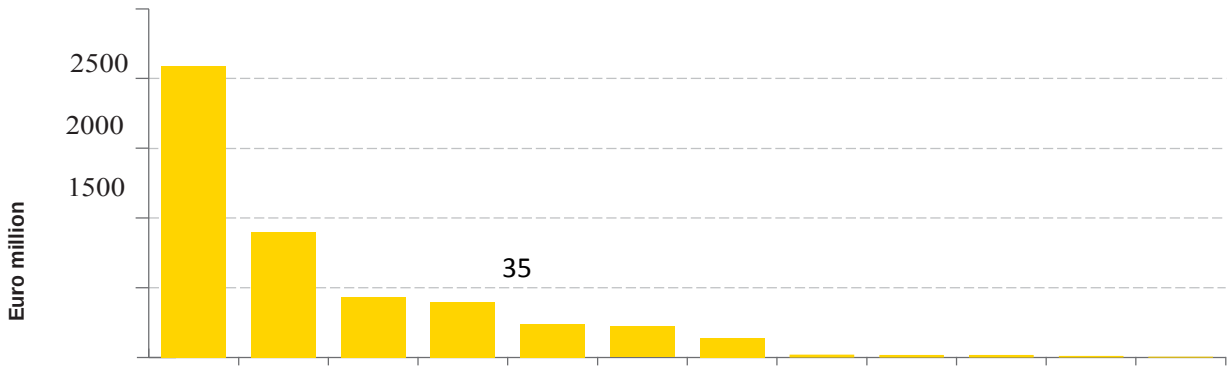
**Financial liabilities at fair value through profit and loss**

IFRS 7 retains the requirement in IAS 32 to disclose the change in the fair value of loans, receivables and financial liabilities designated at fair value that is attributable to changes in the credit risk of that asset or liability, both during the period and cumulatively.

Sixteen banks disclosed the changes in the fair value of their financial liabilities due to changes in own credit risk, of which four disclosed the change to be 'nil'. The other eight banks did not disclose the change in fair value of their liabilities due to changes in own credit risk. The amounts disclosed are shown in Figure 5.

IFRS 7 requires entities to disclose the method used to determine the amount of gain or loss on the remeasurement of liabilities recorded at fair value that is attributable to changes in the instruments' credit risk. The default method set out in the Standard assumes that this is any gain or loss not attributable to movements in the risk free rate. However, most banks calculate the effect of own credit risk by examining the credit spreads implied by the values of their bonds or by credit derivatives traded in the market since, for most of the banks, such market data are available (see Extract 4).

Figure 5: Changes in fair value of financial liabilities due to own




***Extract 4: Example of a method used to determine the change in fair value due to credit risk from UBS' Annual Report 20***

> For the year ended 31 December 2007, the Group recorded a gain of CHF 659 million in Net trading income from changes in the fair value of financial liabilities designated at fair value attributable to changes in the Group's own credit risk. The change applies to those financial liabilities designated at fair value where the Group's own credit risk would be considered by market participants and excludes fully collateralized transactions and other instruments for which it is established market practice not to include an entity-specific adjustment for own credit. It was calculated based on a yield curve generated from observed external pricing for funding associated with new senior debt issued by the Group.

'Day one' profits

'Day one' profit is the immediate margin arising from the difference between the price charged to a customer and prices available to the dealer in the wholesale markets. If a financial instrument is not traded in an active market, IAS 39 requires that the fair value should be determined by reference to a valuation technique such as a model. However, if the inputs to the valuation technique are not all observable in the market, then the initial fair value is deemed to be the contract price. Hence, any 'day one' profit calculated by using the model must be deferred.

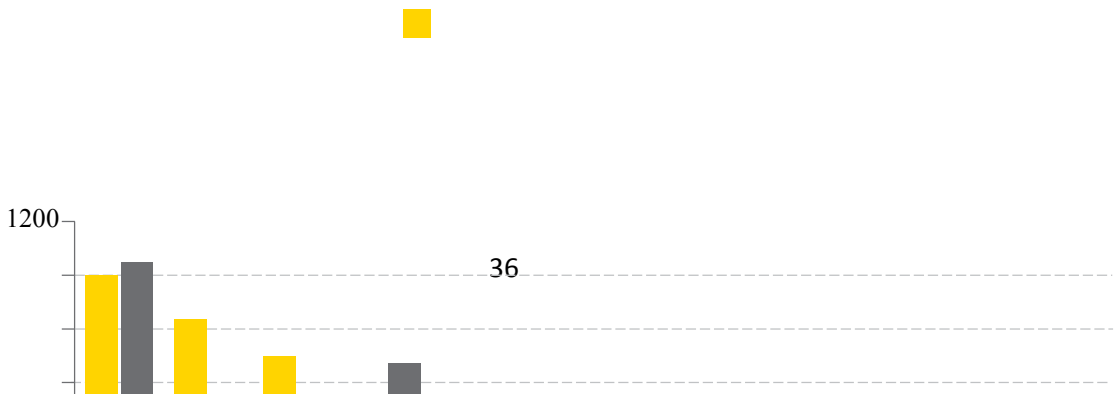
IFRS 7 requires, by class of financial instrument, disclosure of:

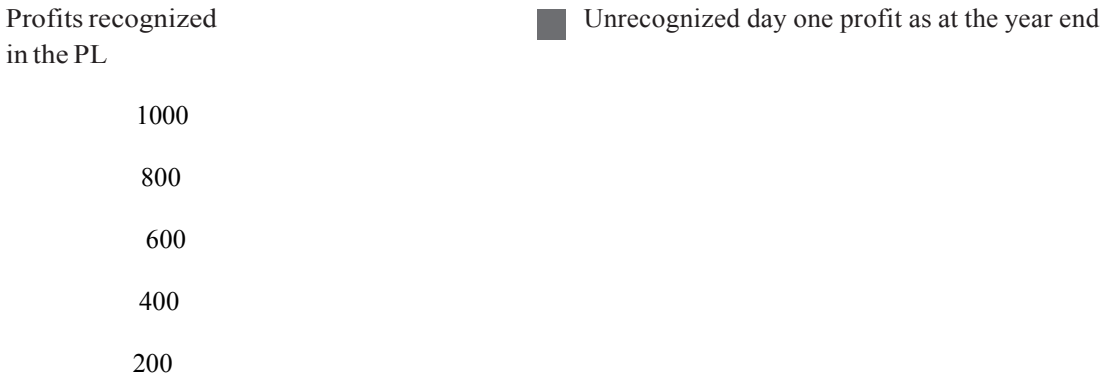
-the accounting policy on the deferral and subsequent recognition of 'day one' profit; and

-the aggregate amount yet to be recognized in profit or loss at the beginning and end of the period and a reconciliation of changes in this amount.

Figure 6 shows that 12 out of 24 banks provide 'day one' profit disclosures. Of the remaining 12 banks, one stated that deferred 'day one' profit was immaterial, while 11 were silent on the issue. Extract 5 is an illustration of the 'day one' profit disclosure.

***Figure 6: Analysis of 'day one' profit recognized in the income statement and deferred at the year-end 2007***




Profits recognized in the PL
1000
800
600
400
200
Unrecognized day one profit as at the year end

*Extract 5: Example of 'day one' profit recognition from ABN AMRO's Annual Report 2007*

Where model inputs are considered unobservable and have more than an insignificant impact on the valuation, any gains on initial recognition are deferred on the balance sheet, as a Day 1 Profit and Loss Reserve, and amortised over the life of the instruments. The table below shows the movement in the reserve:

| | 2007 | 2006 |
|---|---|---|
| Unamortised balance at 1 January | **310** | 300 |
| Deferral of profit on new transactions | **170** | 314 |
| *Recognised in the income statement during the period:* | | |
| Subsequent to observability | **(73)** | (80) |
| Amortisation | **(94)** | (97) |
| Maturity or termination | **(114)** | (127) |
| Exchange differences | **(8)** | – |
| **Unamortised balance at 31 December** | **191** | 310 |

## Credit crisis

The introduction of IFRS 7 has coincided with the biggest crisis faced by the banking industry for many years. This section describes what was disclosed by the banks. Some of these disclosures are required by IFRS 7, including concentration of exposures to market risk, but many go beyond the IFRS 7 requirements, driven by the needs of users of the financial statements, and not all are audited.

Figure 7 shows the disclosed impact of the credit crisis on the banks' profits for 2007, together with the reported profit before tax. However, the disclosed impact for only 10 of the 24 banks shown in Figure 7 was audited.

Figure 8 shows the impact on equity for 2007, due to the revaluation of available for sale securities, where this has been highlighted by the banks. This information was audited for only four of the 10 banks

Figure 7: Losses recognized in the 2007 income statementt

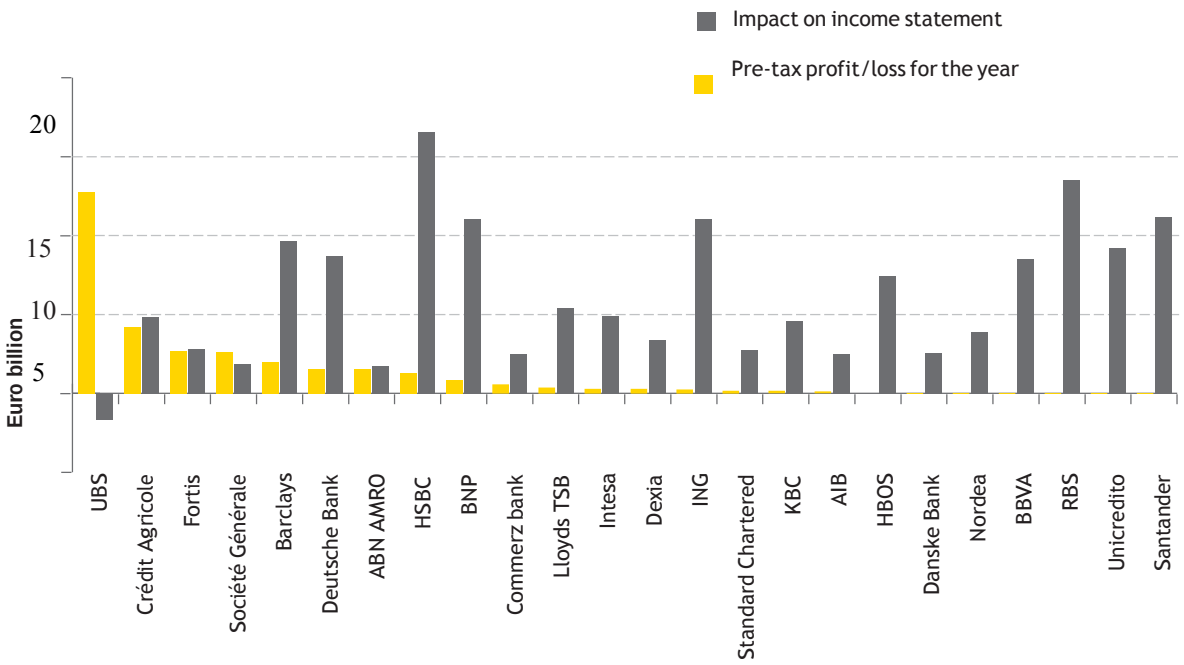
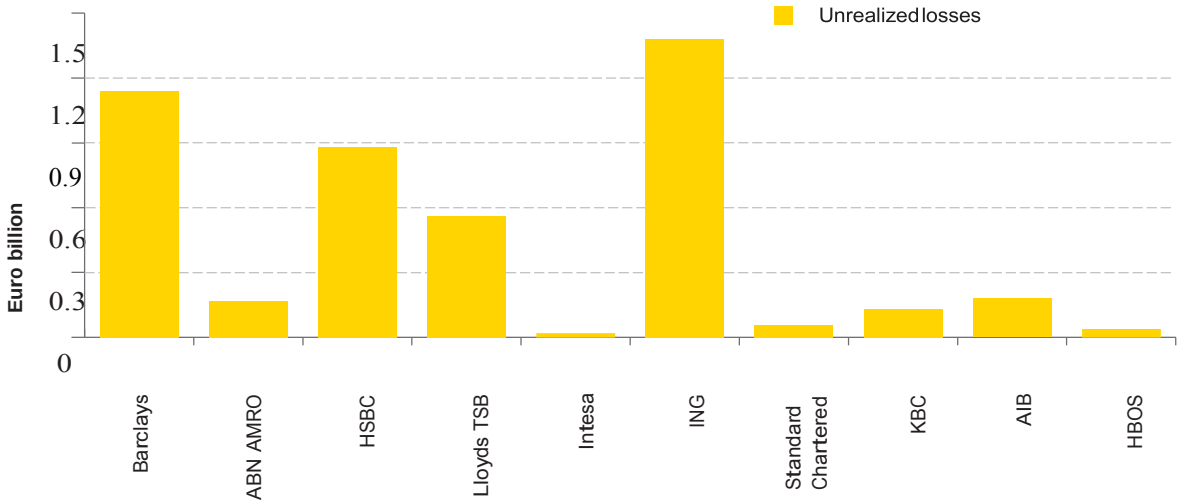


Figure 8: Unrealized losses on available for sale securities in 2007 due to credit crisis




With respect to Figure 7, the impact for two banks was too small to be noticeable in the graph and four banks stated that they had no significant exposure to the credit crisis. One bank disclosed its exposure to the credit crisis, but stated that the impact on the income statement was not significant.

The banks have grouped different items in their reported impact of the credit crisis, so that the numbers cannot easily be compared. For the most part, they exclude loan losses, although some banks have included losses on syndicated loans. The major components, therefore, are fair value losses on mortgage-backed securities and counterparty provisions, including those made against monoline insurers.

Twenty banks quantified their exposures to the credit crisis (Extracts 6 and 7 illustrate this). Seven banks analysed their credit crisis exposures separately for their trading portfolios and available-for-sale portfolios, (See also Extracts 8 and 9).

Fourteen of the 20 banks which quantified details of their credit crisis exposures have given the disclosures outside their financial statements. Three banks have disclosed this information only in the notes to the financial statements and a further three banks have provided the disclosures in a mixture of the notes and outside the financial statements.

**Extract 6: Example of quantitative disclosure of losses on CDO sub-prime assets and sensitivity analysis from Société Générale's Annual Report 2007**

### 2.2. CDO *(COLLATERALIZED DEBT OBLIGATIONS)* TRANCHES OF RMBS

The valuation of super senior CDO tranches of RMBS was not based on observable transactions but was carried out using parameters that were neither observable nor listed on an active market.

Societe Generale's approach focuses on the valuation of individual mortgage pools underlying structured bonds to estimate the fundamental value of RMBS bonds, and consequently of CDO tranches, using a credit stress testing prospective scenario, as opposed to a mark-to-market approach.

Four key variables are used to value mortgage pools: the probability of default, the loss in given default, the pre-payment speed and the timing of default. These key variables were adjusted over the fourth quarter of 2007 to reflect changes in the economic environment, such as the delinquency and default rates home price appreciation, and observed losses experience.

The calculation's compliance to the so-defined methodology was reviewed by Group's General Inspection department.

To complete the valuation of CDO tranches, all non-RMBS positions were written down as follows: 100% for junior CDO tranches and 30% for other non-CDO assets. All losses calculated using this methodology were all taken upfront. The input of this calculation was then compared to the implied write-downs from the ABX index.

Additional write downs were taken so as to reflect the illiquidity of the relevant tranches.

On the whole, the valuations obtained at December 31, 2007 were consistent with the valuation levels of benchmark ABX indices for this type of exposure where the comparison was appropriate (2006 and 2007 subprime vintage).

On December 31, 2007, the gross exposure to AAA super senior CDO tranches amounted to EUR 4.85 billion. Concerning this position, write-downs recorded in 2007 amounted to EUR -1.25 billion and negatively affected bonds and other debt instruments at fair value through profit and loss booked on the assets side of the consolidated balance sheet. On December 31, 2007, the net exposure to CDO tranches was EUR 3.6 billion.

**CUMULATIVE LOSSES ON CDO SUBPRIME ASSETS AND SENSITIVITY ANALYSIS**

| | 2005 | 2006 | 2007 | Impact on NBI |
|---|---|---|---|---|
| Assumptions on cumulative losses for Q3 07 | 9.1% | 14.6% | 14.5% | EUR -167 m for 9M 2007 |
| Assumptions on cumulative losses for Q4 07 | 9.0% | 23.0% | 25.0% | EUR -1,250 m for FY 2007 |

| Sensitivity | Impact on NBI |
|---|---|
| +10% cumulative losses for each year of production | EUR -431 m (1) |

*(1) Impact at average Q4 07 exchange rate.*

Total US residential real estate loss assumptions : approximately USD 350bn

**Extract 7: Example of US sub-prime exposure in funded ABS, funded CDO and unfunded super senior CDOs from Intesa Sanpaolo's Annual Report 2007**

| Product | Position as at 31/12/07 | | 2007 income statement | | | |
|---|---|---|---|---|---|---|
| | Nominal value | Risk exposure (*) (including write-downs and write-backs) | Realised gains/losses | Profits (Losses) on trading Write-downs and write-backs | Total whole year | *of which 4Q* |
| Funded ABS | 28 | 9 | -51 | -19 | -70 | *-46* |
| Funded CDO | 26 | 7 | - | -19 | -19 | *-16* |
| Unfunded super senior CDOs [2] | 205 | 48 | - | -157 | -157 | *-104* |
| Other [3] | 10 | 9 | - | - | - | - |
| **"Long" positions** | **269** | **73** | **-51** | **-195** | **-246** | ***-166*** |
| Mezzanine short position | - | - | 14 | - | 14 | *7* |
| ABX hedges | 220 | 122 | -30 [4] | 99 | 69 | *46* |
| **"Short" positions** | **220** | **122** | **-16** | **99** | **83** | ***53*** |
| | **"long"** | **"short"** | | | | |
| **Net position** | **49** | **49** | **-67** | **-96** | **-163** | ***-113*** |

(*) The column "Risk exposure" sets out, for securities, fair value; for derivatives, the nominal value of the contract, net of write-downs and write-backs recorded at year-end. Such amounts correspond, for "long" positions, to the maximum potential loss (in the event of a 100% default and a recovery rate of 0). For "short" positions, viceversa, they indicate the maximum potential gain (in the same scenario in terms of default and recovery levels).

(1) With Mezzanine collateral. Including a position with underlying made up for approximately one third of subprime mortgages. This table includes the sole portion represented by subprime mortgages, whereas the residual exposure is reported in the "contagion" area.

(2) Risk position of the Romulus vehicle (fully consolidated entity), classified in securities available for sale. The relevant fair value decrease was recorded in the specific reserve under shareholders' equity.

Romulus is an asset-backed commercial paper conduit vehicle, set up to offer customers an alternative financing channel via access to the international commercial paper market. At the end of 2007, the portfolio of investments included 317 million euro of financial assets available for sale and 757 million euro of loans to customers. Of the 317 million euro of securities, 10 million euro were attributable to the US subprime segment, 28 million euro to the "contagion" area (See Table Multisector CDOs and Alt-A), 279 to other structured credit products. Negative fair value changes recorded on securities available for sale totaled 19 million euro and were recorded in the specific reserve under shareholders' equity, of which 1 million euro recorded on positions included in the subprime segment (See table US subprime exposure), 2 million euro on positions attributed to the so-called "contagion" area (See Table Multisector CDOs), 16 million euro on securities which fall under other structured credit products; in addition to these, losses of 8 million euro were recorded in the income statement, in Caption 130 (a) – Net losses/recoveries on impairment on loans.

(3) Including 36 million euro paid up-front on "short" positions outstanding as at 31 December 2007.

**Extract 8: Example of US sub-prime exposures shown separately for the trading and banking books from HBOS's Annual Report**

We have little direct exposure to the sub-prime US residential real estate sector, as shown above. Even after taking into account ABS CDOs with exposure to that market the Group's total exposure to US sub-prime investments is less than 0.1% of the Group balance sheet, at £434m, as shown in the table below. In our trading book, the £20m of US sub-prime are all pre-2006 RMBS and fair value adjustments of less than £0.5m were made to reported full year profit. In our banking book, the £414m of investments that contain US sub-prime exposure required a negative post-tax fair value adjustment to equity of £29m.

There have been no credit impairments to any of the above US sub-prime exposures in either the trading or banking books. The table below sets out our US sub-prime exposures with credit rating information.

| Asset Class | Banking Book Grampian £m | Banking Book Other £m | Trading Book £m | Total £m | Weighted Average External Credit Rating |
|---|---|---|---|---|---|
| ABS CDO with Sub-prime Collateral [1] | 300 | 29 | | **329** | **1.19** |
| Sub-prime RMBS [2] | 76 | 9 | 20 | **105** | **1.00** |
| **Total US Sub-prime** | **376** | **38** | **20** | **434** | **1.14** |

[1] Includes £106m of bonds that are monoline wrapped.
[2] 1997-2005 vintages.

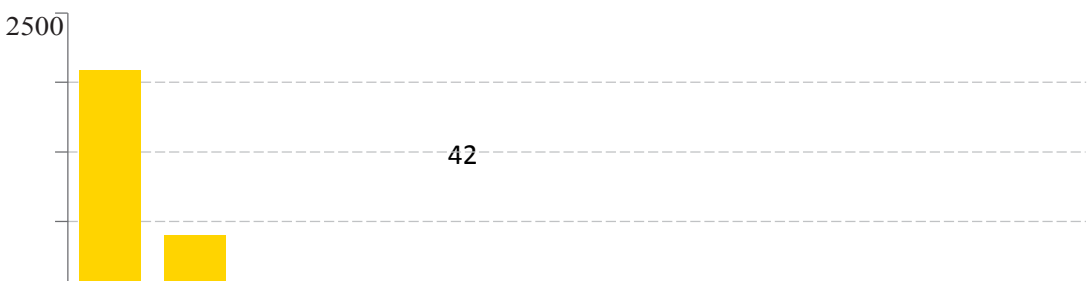
**Extract 9: Example of exposures to US residential mortgage related business from ABN AMRO's Annual Report 2007**

### US residential mortgage related exposures

The Group is involved in investing in financial instruments, including asset-backed securities (ABSs) and other structured investments, backed by US residential mortgages and other collateral with exposure to the current US credit environment. Please refer to paragraph 'Risk factors' on page 60.

The following table provides an overview of the main US residential mortgage related exposures at 31 December 2007 in the trading book:

| *(in millions of euros)* | Exposure | Fair value adjustment through income | Net exposure |
|---|---|---|---|
| ***Retained Asset-Backed Securities CDOs:*** | | | |
| Super Senior Tranches | 2,487 | 499 | 1,988 |
| Equity / Mezzanine Tranches | 290 | 290 | – |
| ***Asset-Backed Securities Trading Inventory:*** | | | |
| Prime RMBS | 280 | 56 | 224 |
| Sub-Prime RMBS | 98 | 48 | 50 |
| ABS CDOs | 68 | 62 | 6 |
| **Total** | 3,223 | 955 | 2,268 |




In addition, five banks disclosed their exposures to monoline insurers and two banks disclosed their exposures to financial guarantors (an example is shown in Extract 10).

**Extract 10: Example of exposures to monoline insurers — extract from HSBC's Annual Report 2007**

*HSBC's exposure to derivative transactions entered into directly with monoline insurers*
*(Audited)*

| | Net exposure before credit risk adjustment[1] US$m | Credit risk adjustment[2] US$m | Net exposure after credit risk adjustment US$m |
|---|---|---|---|
| **At 31 December 2007** | | | |
| Derivative transactions with monoline counterparties: | | | |
| – Monoline – investment grade | **1,342** | **(133)** | **1,209** |
| – Monoline – below investment grade | **214** | **(214)** | **–** |
| | **1,556** | **(347)** | **1,209** |
| At 31 December 2006 | | | |
| Derivative transactions with monoline counterparties: | | | |
| – Monoline – investment grade | 9 | – | 9 |

1 *Net exposure after legal netting and any other relevant credit mitigation prior to deduction of credit risk adjustment.*
2 *Fair value adjustment recorded against over-the-counter derivative counterparty exposures to reflect the credit worthiness of the counterparty.*

Three banks quantified their exposure to structured investment vehicles (SIVs), an example of which is illustrated in Extract 11.

Extract 11: Example of exposures to specific SIVs under committed liquidity facilities from HSBC's Annual Report

Eight banks also disclosed the future uncertainty due to the credit crisis, an example of which is illustrated in Extract 12.

***Extract 12: Example of disclosure of future uncertainty due to the credit crisis from RBS' annual report***

The Group's future earnings could be affected by market illiquidity Financial markets are sometimes subject to significant stress conditions where steep falls in perceived or actual asset values are accompanied by severe reduction in market liquidity, such as recent events in the U.S. sub-prime residential mortgage market. In dislocated markets, hedging and other risk management strategies may not be as effective as they are in normal market conditions. Severe market events are difficult to foresee and, if they occur, could result in the Group incurring significant losses. In 2007, the Group recorded significant write-downs on its credit market positions, principally on its US sub-prime exposures. The Group continues to have exposure to this market and as market conditions change the fair value of the Group's instruments could fall further. Furthermore, recent market volatility and illiquidity has made it difficult to value certain of the Group's financial instruments. Valuations in future periods, reflecting prevailing market conditions, may result in significant changes in the fair values of these instruments. In addition, the value ultimately realised by the Group will depend on the market price at that time and may be materially lower than current fair value. Any of these factors could require the Group to recognise further write-downs which may adversely affect the Group's future results.

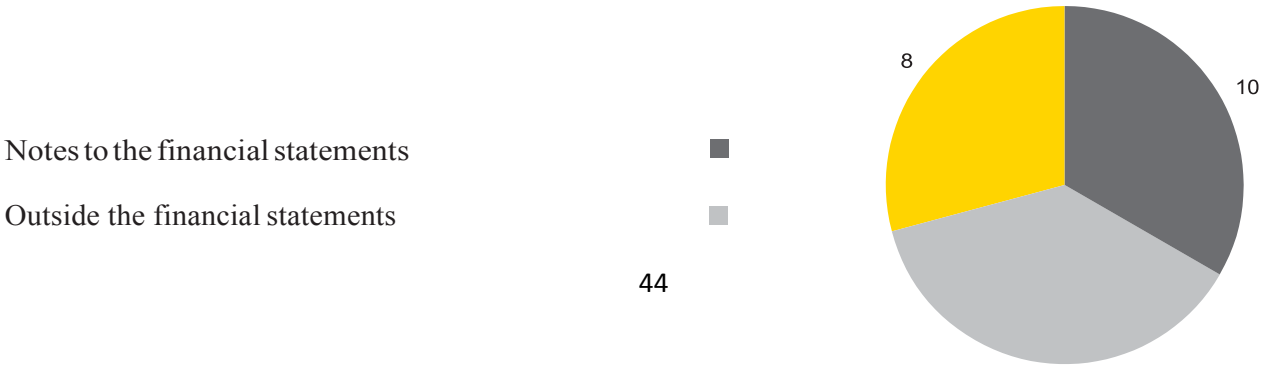
## Disclosures

Presentation of audited risk management disclosures

IFRS 7 requires an entity to make both qualitative and quantitative disclosures of the risks arising from its financial instruments. The qualitative disclosures include the types of risk to which the entity is exposed and how they arise, the entity's objectives, policies and processes for managing the risks, the methods used to measure the risks, and any changes from the previous period. The quantitative disclosures include summary data about the exposure to risk as at the reporting date. These disclosures must be given either in the financial statements or incorporated by cross-reference from the financial statements to other disclosed information, such as a management documentary or risk report, that is available to users of the financial statements on the same terms as the financial statements and at the same time.

Ten of the 24 banks included the audited IFRS 7 risk disclosures in the notes to the audited financial statements, six presented them outside of the financial statements (with narrative to explain which information was audited) and the other banks included the risk disclosures in a mixture of the notes to the financial statements and outside the financial statements (Refer to Figure 9).

Figure 9: Presentation of audited IFRS 7 risk management disclosures



6

Some banks provided additional risk management disclosures which were unaudited. For example, Danske Bank issued a special risk book published simultaneously with the annual report, which supplements the risk disclosures in their annual report.

The number of pages of audited risk management disclosures provided by the banks ranges from five to 55, except for three banks that were significant outliers. These three banks provided over 80 pages of audited risk management information, two of which did so due to local regulatory requirements.

The Standard requires that the qualitative data is presented 'through the eyes of management' using, where possible, information provided to management. However, there are also minimum disclosure requirements set out in the Standard. It is fair to say that this twin approach has not been totally successful. In some cases,

the minimum disclosure requirements of IFRS 7 appear to conflict with the requirement to present information from a management perspective, most notably in the case of the liquidity disclosures — see 'liquidity risk' below. Also, there is intrinsic difficulty in presenting management risk information if it is not based on IFRS financial measures, given that it must be audited and (where relevant) subjected to *Sarbanes Oxley Act* or local attestation requirements.

**Credit risk**

Maximum exposure

IFRS 7 requires disclosure of the amount that reports the maximum exposure to credit risk at the reporting date, before taking account of collateral or netting arrangements. Most of the exposure to credit risk will already be apparent from the balance sheet so the requirement is superfluous. We believe this analysis would be more useful if it were required only for 'off balance sheet' credit risk exposures such as commitments and guarantees to the extent that they are not already disclosed elsewhere.

**Credit quality**

IFRS 7 requires information about the credit quality of financial assets with credit risk that are neither pas due nor impaired. An internal or external credit grading system can be used for this analysis. Those bank using internal ratings are encouraged by the Standard to disclose the rating process and the relationship between internal ratings and external ratings.

All of the banks provided a credit rating analysis for at least a portion of their credit risk. Nine banks analysed the credit quality of their credit exposures for both retail banking and commercial banking, twelve banks gave this information only for their loan portfolio and three provided a rating analysis for their wholesale/corporate loans only. We assume that this is due, in part, to some of the banks not having a single bank-wide rating system.

The number of credit grades disclosed also varies from 4 to 18 and, since the banks' internal grading systems differ, it is not easy to make comparisons between the risk profiles of the banks.

UBS provided an analysis of ratings for both its banking products and traded products, as shown in Extract 13 below.

***Extract 13: Example of an analysis of credit exposure by internal ratings for banking products and tradedproducts from UBS' Annual Report 2007***

Audited

**Gross credit exposure by UBS internal ratings**

| *CHF million* | Banking products | | Traded products | | Total exposure | |
|---|---|---|---|---|---|---|
| UBS internal rating | **31.12.07** | 31.12.06 | **31.12.07** | 31.12.06 | **31.12.07** | 31.12.06 |
| 0–1 | **30,540** | 5,265 | **42,852** | 34,148 | **73,392** | 39,413 |
| 2–3 | **164,476** | 135,149 | **98,454** | 95,449 | **262,930** | 230,598 |
| 4–5 | **113,955** | 119,926 | **15,210** | 19,973 | **129,165** | 139,899 |
| 6–8 | **76,601** | 94,278 | **7,566** | 8,084 | **84,167** | 102,362 |
| 9–12 | **38,875** | 44,711 | **915** | 760 | **39,790** | 45,471 |
| Total 0–12 (net of past due) | **424,447** | 399,329 | **164,997** | 158,414 | **589,444** | 557,743 |
| Impaired assets | **2,433** | 2,682 | **975** | 188 | **3,408** | 2,870 |
| Past due but not impaired | **2,268** | 3,370 | | | **2,268** | 3,370 |
| Total | **429,148** | 405,381 | **165,972** | 158,602 | **595,120** | 563,983 |

IFRS 7 requires analysis of the age of loans that are past due but not impaired. As the requirement is worded, the whole of a loan needs to be shown as past due even if it is only a single interest payment that is one day late. Instead of a presented requirement, it would be more useful for IFRS 7 to ask for a 'through the eyes of management' approach — using the ageing analysis that the banks prepare for management reporting purposes. This often only captures loans that are overdue by a certain number of days and so filters out minor arrears.

A further requirement of IFRS 7 is to disclose the carrying amount of financial assets which would otherwise be past due or impaired, whose terms have been renegotiated. In practice, many loans are renegotiated for reasons unconnected with impairment, whereas, if a loan is impaired, it is difficult to see how renegotiation would allow an impairment charge to be avoided. As the purpose of the requirement is unclear, we believe it should be deleted.

**Collateral and other credit enhancements**

IFRS 7 requires the disclosure of the fair value of collateral held against past-due or impaired loans, unless it is 'impractical' to do so. This exemption was included because it can be difficult to provide information which is not misleading. If fair values are disclosed in aggregate, individual loans may be over- or under-collateralized and so the bank's true exposure would not be apparent[3].

In our survey, 13 banks disclosed the fair value of collateral held either for their entire loan portfolio, loans which were past-due but not impaired, or loans which were past-due and impaired. Five of these disclosed separately the fair value of collateral for loans which were past-due but not impaired and for impaired loans. One bank disclosed the fair value of collateral for its retail mortgages.

One bank specifically mentioned that it had not disclosed the fair value of collateral as it was not practical to do so.

Of the 14 banks that disclosed the fair value of collateral held, one bank disclosed the fair value of collateral held in excess of its credit exposures, calculated as the aggregate surplus of security received on an individual contract basis. In addition, four banks that disclosed the fair value of collateral held stated that the value was capped at the loan amount outstanding. Another bank said that it capped the value to the extent that it was obliged to repay the surplus to the customer. None of the other banks gave further information on the extent of over- or under-collateralisation within the portfolio. In our view, the Standard should be amended to require entities to disclose the basis on which collateral fair values are presented.

IFRS 7 also requires disclosure of assets that the bank has obtained by taking possession of collateral. It is not clear whether this refers to all collateral taken during the year or just that held at year-end. Given that banks do not often take possession of collateral and, presumably, it should be recognised as a different type of asset in the balance sheet if possession is taken, the purpose of this disclosure is unclear. We believe that this requirement of IFRS 7 should be either clarified or deleted by the IASB.

**Concentrations of risk**

IFRS 7 requires disclosure of concentrations of credit risk that arise, for instance, from exposures to an industry sector or geographical area. See Extract 14 for an illustration. The banks have provided these disclosures in different ways and levels of detail.

Twenty banks analysed their credit exposures by industry concentration. Of these:

- One bank gave the analysis for each category of financial instrument, including off balance sheet exposures;
- Nine banks gave an analysis only for loans and receivables; and
- Six banks gave it for loans and receivables and commitments.

One of the six banks additionally provided an industry analysis for the fair value of derivative instruments. Four banks disclosed this information only in total for 'on balance sheet exposures', two of which included trading book exposures within these totals.

The remaining banks were silent on the concentration of credit exposures by industry. Eighteen banks analysed their credit risk by geography. Of these:

- One bank gave the geographical analysis for each category of financial instrument, including 'off balance sheet' exposures;
- One bank provided the analysis for loans and commitments to both entities and to 'credit entities',derivatives and repos and both sovereign and other non-trading book securities;
- One bank provided a geographical analysis for each of their trading book and loans and receivables
- Five banks analysed the geographical concentration only for their loans and receivables;
- Six banks provided a geographical analysis for loans and receivables and commitments; and
- banks disclosed this information only in total, two of which included the trading book within the data. The remaining banks were silent on the geographical concentration of credit exposures.

***Extract 14: Example of risk concentration from ING's Annual Report 2007***

**Risk concentration: ING Bank portfolio, by economic sector [1]**

| | Wholesale Banking | | Retail Banking | | ING Direct | | Total ING Bank | |
|---|---|---|---|---|---|---|---|---|
| | **2007** | 2006 | **2007** | 2006 | **2007** | 2006 | **2007** | 2006 |
| Construction, infrastructure and Real Estate | **13.3%** | 12.3% | **2.4%** | 2.0% | **0.8%** | 0.8% | **6.5%** | 5.8% |
| Financial Institutions | **41.2%** | 39.0% | **3.7%** | 3.3% | **53.8%** | 59.0% | **36.2%** | 37.0% |
| Natural Resources | **6.2%** | 4.7% | **0.2%** | 0.2% | | | **2.7%** | 2.0% |
| Private Individuals | **0.4%** | 0.3% | **83.7%** | 81.8% | **39.8%** | 31.4% | **33.9%** | 31.3% |
| Public Administration | **8.4%** | 11.2% | **1.5%** | 1.8% | **5.3%** | 7.5% | **5.7%** | 7.6% |
| Services | **4.7%** | 4.6% | **1.7%** | 1.6% | | | **2.4%** | 2.3% |
| Transportation and Logistics | **4.7%** | 4.7% | **0.5%** | 0.5% | | | **2.1%** | 2.0% |
| Other | **21.1%** | 23.2% | **6.3%** | 8.8% | **0.3%** | 1.3% | **10.5%** | 12.0% |
| | **100.0%** | 100.0% | **100.0%** | 100.0% | **100.0%** | 100.0% | **100.0%** | 100.0% |

[1] Based on the total amount of credit risk in the respective column using ING's internal credit risk measurement methodologies.

**Liquidity risk**

IFRS 7 requires a maturity analysis of financial liabilities that shows remaining contractual maturities, and a description of how the company manages liquidity risk. In the application guidance to the Standard, the maturity analysis is required to be set out:

- using undiscounted cash flows (with the effect that the disclosed numbers would differ from the amounts shown in the balance sheet); and
- showing gross cash flows payable on derivatives, such as foreign currency swaps, where the entity is required

to settle gross.

In practice, most entities manage liquidity risk-based not on contractual cash flows but on expected maturities. This is especially true for banks where a large proportion of current accounts that are, in theory, repayable on demand, can be expected to remain in place for a significant period of time. If this is the case, then the entity can provide a separate maturity analysis based on expected maturity dates, together with the limits or other measures it uses to manage its liquidity exposures. However, such an analysis does not remove the need to produce the contractual liability analysis required by the Standard.

The disclosure of gross, undiscounted contractual cash flows for derivatives is not easy to provide, nor do we believe that it is useful to the reader. Reporting the gross cash flows on derivatives often results in a massive increase in the apparent commitments of the bank, yet the exchange of one currency for another, for example, does not normally present a liquidity challenge and, if the bank or a counterparty were in financial difficulty, all such derivatives would be settled net. Moreover, if showing the gross amounts payable on derivatives that are recorded as liabilities is deemed useful, it would surely be necessary to require a similar disclosure for derivatives that are recorded as assets. Meanwhile, IFRS 7 (unlike its predecessor, IAS 30) does not require disclosure of the maturities of financial assets, without which the true liquidity position of a bank will not be apparent.

Given the difficulties involved, the banks implemented this disclosure requirement in different ways.

- For financial liabilities other than derivatives, eight banks presented undiscounted cash flows in the maturity analysis, ten banks disclosed discounted cash flows and two banks presented both. There is not enough information to determine the basis of the cash flows disclosed by four of the banks.
- For financial derivatives, five banks disclosed the gross contractual undiscounted amounts to be exchanged on derivatives as required by IFRS 7. Of those five banks, four disclosed these cash flows by contractual maturity (see Extract 15 for an illustration) and one disclosed them as 'On Demand'.
- Of the remaining 19 banks, which only disclosed the (net) fair values of their derivative instruments in the maturity analysis:
- Nine banks disclosed these by contractual maturity.
- One bank categorised the maturities as 'undetermined', in view of the short-term nature of the instruments.
- Three banks presented derivatives in the shortest maturity period.
- Four banks disclosed held for trading derivatives in the shortest maturity period and hedging derivatives by their contractual maturity.
- One bank did not include the fair value of trading derivatives in its maturity analysis, in view of the short-term nature of the instruments, but the fair value of hedging derivatives was analysed by contractual maturity.
- One bank provided the analysis only in aggregate for total liabilities.
- Twelve banks included guarantees and commitments for financial instruments in their maturity analysis, although one bank disclosed its guarantees and commitments as 'On Demand'. A further five banks analysed guarantees and commitments for financial instruments maturing both within one year and more than one year. Seven banks disclosed the total amount of guarantees and commitments for financial instruments in the 'contingent liabilities and commitments' note, but did not present a contractual maturity analysis.
- Sixteen banks exceeded the minimum requirements of IFRS 7 and disclosed the contractual maturity of their financial assets. UBS disclosed its financial instruments at fair value as 'On Demand' but, to help communicate their liquidity, separately disclosed those financial instruments measured at fair value based on market quotes or observable market data and those which were valued using non-observable inputs.

In addition, IAS 1 requires banks to analyse financial assets between those expected to be recovered or settled in

less than 12 months (current) and those expected to be recovered or settled in more than 12 months after the balance-sheet date (non-current). Twenty-two banks gave this analysis for all their financial assets. One bank presented this analysis only for financial investments (i.e., financial instruments categorised as held to maturity or available for sale), while one bank was silent on the subject.

***Extract 15: Example of the contractual maturity analysis, including the fair value of derivative instruments from HBOS' Annual Report 2007***

**45 Liquidity Risk continued**

| Group | Up to 1 month £m | 1 to 3 months £m | 3 to 12 months £m | 1 to 5 years £m | 2007 Over 5 years £m |
|---|---|---|---|---|---|
| **Liabilities** | | | | | |
| Deposits by banks | 23,563 | 12,413 | 4,369 | 629 | 673 |
| Customer accounts | 193,031 | 19,276 | 25,220 | 7,934 | 1,642 |
| Financial liabilities held for trading | 9,119 | 5,556 | 6,540 | 242 | |
| Derivative liabilities: | | | | | |
| Gross settled derivatives – outflows | 20,580 | 21,966 | 15,575 | 39,030 | 15,700 |
| Gross settled derivatives – inflows | (20,558) | (22,084) | (15,298) | (38,324) | (14,998) |
| Gross settled derivatives – net flows | 22 | (118) | 277 | 706 | 702 |
| Net settled derivative liabilities | 332 | 516 | 1,347 | 4,133 | (400) |
| | 354 | 398 | 1,624 | 4,839 | 302 |
| Insurance contract liabilities | 99 | 61 | 495 | 1,185 | 1,821 |
| Investment contract liabilities | 1 | 2 | 1,907 | 13 | 98 |
| Debt securities in issue | 26,990 | 48,086 | 42,900 | 75,693 | 36,843 |
| Other borrowed funds | 48 | 246 | 2,145 | 11,776 | 23,911 |
| Other financial liabilities | 914 | | | | |
| | 254,119 | 86,038 | 85,200 | 102,311 | 65,290 |

**Alternative liquidity management techniques**

Fourteen banks provided quantitative information on how they manage liquidity, using techniques other than a contractual maturity analysis. An illustration is shown in Extract 16.

***Extract 16: Example of alternative liquidity management technique from HSBC's Annual Report 2007***

## Ratio of net liquid assets to customer liabilities and net liquid assets

*(Audited)*

| | Year ended 31 December 2007 | | Year ended 31 December 2006 | |
|---|---|---|---|---|
| | **Ratio** | **Net liquid assets** | Ratio | Net liquid assets |
| | **%** | **US$bn** | % | US$bn |
| HSBC Bank (UK operations) | | | | |
| Year-end | **12.1** | **44.2** | 16.3 | 48.7 |
| Maximum | **21.5** | **80.6** | 19.1 | 50.1 |
| Minimum | **12.1** | **39.9** | 12.8 | 32.9 |
| Average | **15.6** | **52.4** | 15.1 | 40.1 |

## Market risk

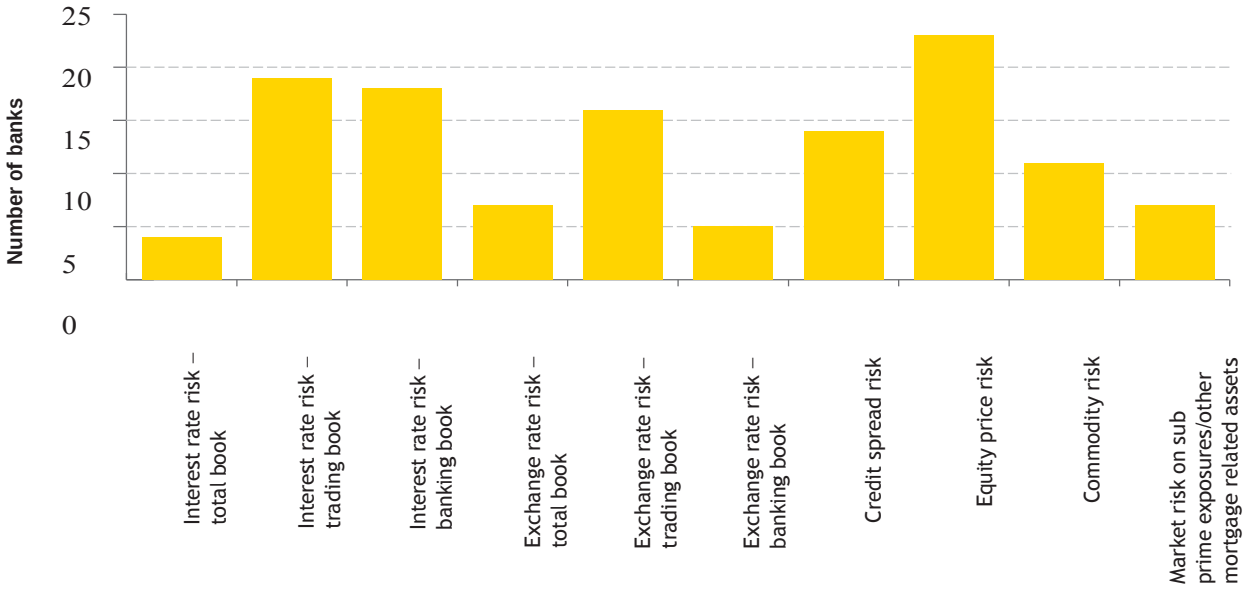
Market risk is defined as 'the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices'. It includes interest rate risk, foreign currency risk and 'other price risks', such as equity and commodity risk.

IFRS 7 allows two ways for market risk sensitivity to be disclosed:

- A separate sensitivity analysis of each type of market risk to which the company is exposed at the reporting date, based on changes in the market variable that are considered 'reasonably possible' at that date; or
- An analysis such as Value at Risk (VaR) that takes into account the interdependencies between market risk variables, if this method is used by the entity to manage its financial risks.

Figure 10 presents the types of market risks for which a sensitivity analysis has been provided by the banks.

***Figure 10: Types of market risk exposures***




In Figure 10:

- Interest rate risk for the trading book and in aggregate (i.e., where no distinction is made between the trading and banking books), equity price risk, exchange rate risk, credit spread risk and commodity risk were measured using VaR, with the exception of one bank, which used a sensitivity analysis other than VaR for the measurement of its credit spread risk.
- Eight banks disclosed VaR data for the interest rate risk on their banking books. The sensitivity analysis of interest rate risk on the banking book is discussed further in the section on *Sensitivity analysis* on page 29.
- Of the five banks that disclose exchange rate risk on their banking book, four used VaR and one presented a sensitivity analysis. Eight banks stated that they have limited exposure to exchange rate risk on their banking book and seven banks disclosed the VaR for exchange rate risk in aggregate. Five banks did not disclose VaR or any other sensitivity analysis of the exchange rate risk on their banking book.
- Two banks also separately disclosed VaR for the equity price risk in their banking book.

In addition to the information shown in Figure 10, some of the banks provided VaR analysis of the following specific concentrations of market risk:

- One bank disclosed vega and correlation risk.
- Two banks disclosed real estate risk, while one bank disclosed inflation risk.
- One bank disclosed its exposure to precious metals, while one bank disclosed hedge fund risk.

The required IFRS 7 market risk disclosures refer only to the effect on profit or loss and equity. Thus, they focus on accounting (as opposed to economic) sensitivity and, presumably, exclude interest rate risk arising on fixed rate financial assets held at amortised cost, such as loans and receivables. Entities may give disclosures about such items but, arguably, they would need to be shown separately.

**Value at Risk**

If the entity uses VaR, it must explain the method used and the parameters and assumptions underlying the data provided. These will usually include:

- the data collection period for historical price information;
- the period over which positions are expected to be held (and, so, the modelled losses incurred); and
- the confidence level at which the calculation is made, i.e., the percentage number of holding periods in which losses are expected to be less than the calculated VaR.

In our survey:

- Nineteen banks disclosed an information collection period ranging from one year to five years, while one bank calculated potential market movements by reference to data from the past ten years.
- End-of day exposures were used in the computation of the VaR and all intra-day exposures were ignored.

Figure 11 shows the confidence levels and holding periods used by the banks.

***Figure 11: Confidence level and holding periods used by the banks in their VaR analyses***

| | | Confidence interval | | | |
|---|---|---|---|---|---|
| | | 99% | 98% | 97.50% | 95% |
| Holding period | 1 | 14 | 1 | 2 | 2 |
| | 10 | 3 | 0 | 0 | 1 |
| | 1 | 1 | 0 | 0 | 0 |

In addition to the information presented in Figure 11,

- One bank used both a one day and one month holding period for its VaR analysis
- Two banks also disclosed a separate confidence level and holding period for the calculation of VaR for their banking book.

**Limitations of VaR**

If an entity prepares a sensitivity analysis such as VaR, IFRS 7 requires the entity to disclose the limitations of the technique. Extract 17 gives an illustration of the limitations of VaR. In our survey, 19 banks specifically identified limitations in their disclosure of the VaR calculation.

***Extract 17: Example of limitations in the use of the VaR from Credit Agricole's Annual report***

**LIMITATIONS OF THE HISTORICAL VaR CALCULATION**

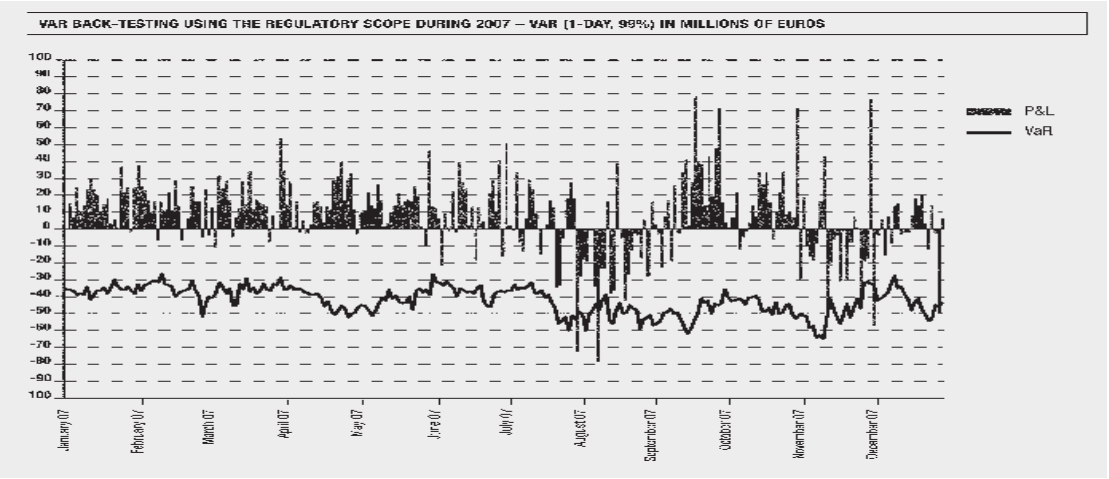
The main methodological limits relating to the VaR model are as follows:

- the use of one-day shocks assumes that all positions can be liquidated or covered in one day, which is not always the case for certain products and certain crisis situations,
- the use of a 99% confidence interval excludes losses that may occur outside of this interval: VaR is therefore an indicator of risk in normal market conditions, which does not take into account movements that are exceptional in scale,
- VaR does not give any information about exceptional loss amounts (outside the 99% confidence interval).

**Back testing**

Fifteen banks provided a (graphical) disclosure of their 'back-testing' of VaR, i.e., a comparison of actual daily gains and losses to the calculated VaR. An illustration is given in Extract 18.

***Extract 18: Example of back-testing results — Extract from Société Générale's Annual Report***




We noted that a number of the banks did not include in their back-testing graphs the losses incurred as a result of the credit crisis.

**Stress testing**

IFRS 7 does not require disclosure of sensitivity to stressed market conditions, even though this would, arguably, be of greater value to readers of the accounts than VaR. Most banks that use VaR make reference to their use of stress testing to help manage losses arising from lower frequency, higher magnitude movements in market prices than those modelled using VaR. However, as there is no requirement to disclose stress test sensitivities, most do not quantify the losses expected to arise in these circumstances. One bank disclosed that their daily losses experienced during 2007 were within the stress loss scenarios reported to senior management, but three banks (as shown in Extract 19 and 20) disclosed the actual results of the various stress testing performed and one bank disclosed the results of the stress testing performed for its credit-linked investments.

***Extract 19: Example of stress testing results from Danske Bank's Annual Report***

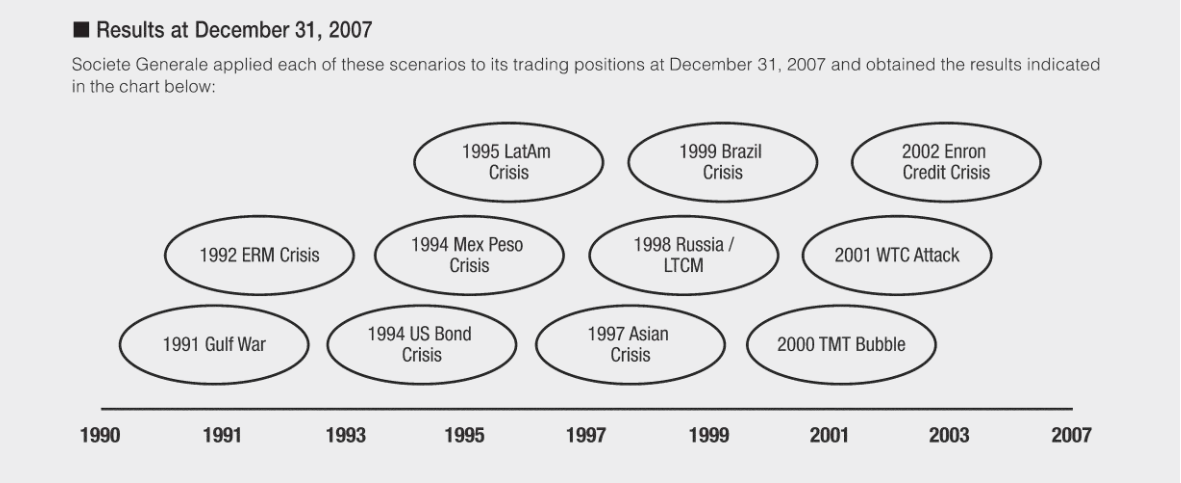
The Group conducts stress tests and scenario analyses to measure its risk of loss under unusual market conditions.

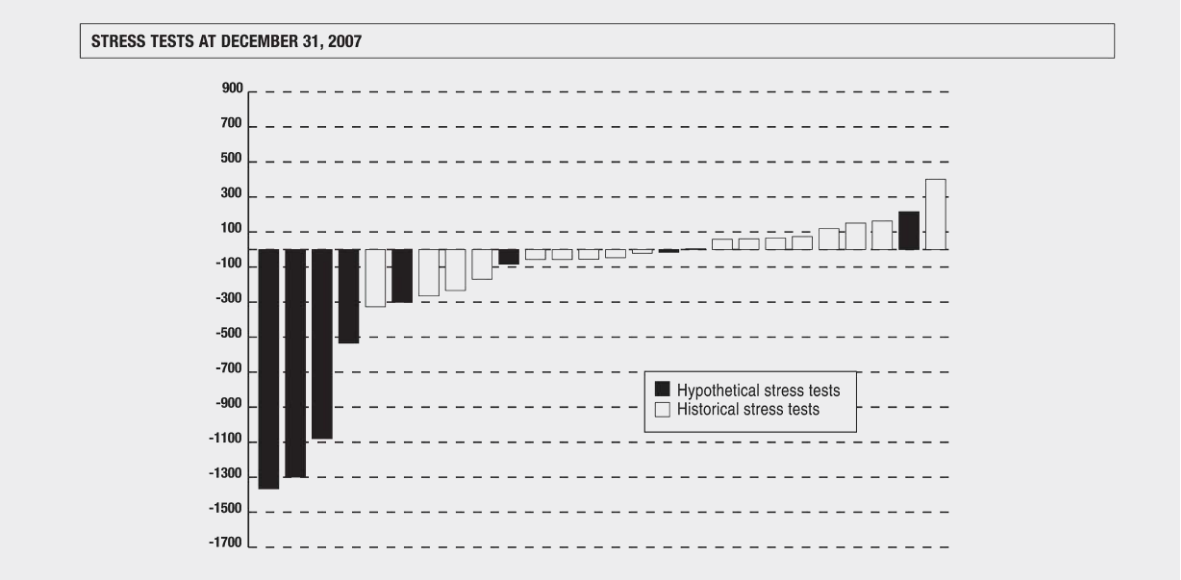
Stress tests based on worst-case scenarios usually involve a combination of historical events, whereas scenario analyses may reflect current or future events.

The table below shows the effect on profits of extreme, but not necessarily very likely, shocks to current positions. The analysis was conducted on the basis of a stress test with a change in interest rates of +/-2% as recommended by the Basel Committee. The Group combined this scenario with a fall in equity prices of 20% and changes in exchange rates of +/-10%.

| Risk category | Change | Maximum loss 2007 | Maximum loss 2006 |
|---|---|---|---|
| Equity market | + 20/- 20 % | 325 | 633 |
| Exchange rate | +10/-10 % | - | 76 |
| Interest rate | +2/-2 % | 4,885 | 462 |

*Extract 20: Example of stress testing results from Société Générale's Annual Report*




It should be noted that Basel II Pillar 3 will require banks to publish details of their stress testing in the next year. Banks will have the choice of how to report this information, e.g., whether to incorporate it into their financial statements or to display it on their websites. It is not required to be audited unless included in the financial statements.

However, it is easier to talk about meaningful stress test information than it is to prepare it. The level of market shifts that we have experienced in the last year would not have been foreseen in any stress test carried out before the credit crisis took place. Banks can only test the stress conditions that they can envisage and the banks did not view the current credit crisis as a potential scenario. There is a risk that the next market disruption will also be unforeseen.

**Sensitivity analysis**

IFRS 7 does not prescribe how a non-VaR sensitivity analysis should be presented. The implementation guidance

provides examples of two types of interest rate sensitivity. These are the effects of changes in interest rates on:

- Fixed rate financial instruments; and
- Variable rate financial instruments.

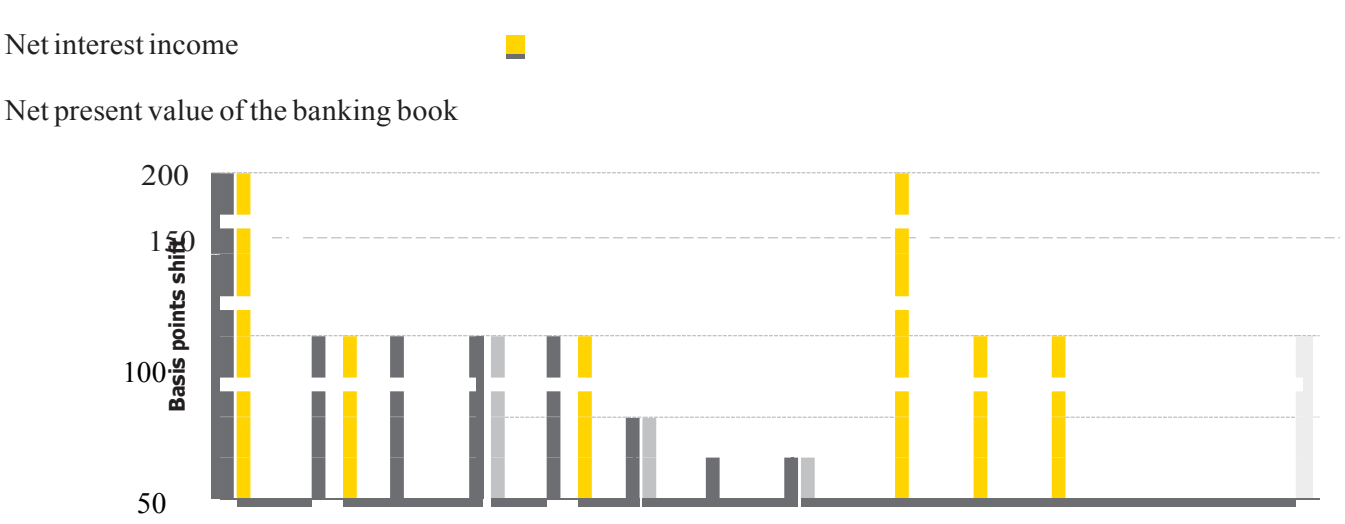
The first of these measures the impact on profit and loss or equity from a change in the fair value of fixed rate financial instruments that would arise from a reasonably possible change in interest rates at the balance-sheet date. The second of these measures the change in interest income and expense over the period of a year attributable to a reasonably possible change in interest rates, based on the floating rate assets and liabilities held at the balance sheet date.

Eight banks in the survey disclosed the sensitivity of net interest income for their banking book, of which four also measured the interest rate risk in their banking book using VaR, three also disclosed the sensitivity of the net present value of their banking book and four disclosed the sensitivity of reported reserves. Of the balance:

- Five banks disclosed the sensitivity of the net present value of the banking book
- One bank disclosed the effect on fair value of equity due to interest rate sensitivity
- Two banks disclosed that they test the sensitivity of net interest income but have not provided quantitative data
- Four banks have not disclosed either a sensitivity or VaR analysis of their non-trading interest rate risk, one of which specified that limited risk is retained within their banking book.

Banks currently use a wide range of assumptions for their non-VaR sensitivity analysis, varying from a one basis point (0.01%) to 200 basis points (2.00%) change. As the potential profit or loss impact of changing interest rates will not necessarily be 'linear', it is not possible for the reader to compare the levels of risk. All the banks apply just one rate for all currencies. Figure 12 indicates the varied assumptions used by the banks, excluding the sensitivities reported for their insurance subsidiaries. See Extract 21 for an illustration of the disclosure.

***Figure 12: Types of sensitivity analysis and basis point shifts used by the bank***




***Extract 21: Example of non-trading interest rate risk from Barclays' Annual Report 2007***

## 46 Market risk (continued)

**Non-trading interest rate risk**

**Asset and liability market risk**

Interest rate risk arises from the provision of retail and wholesale (non-trading) banking products and services, as well as foreign currency translational exposures within the Group's balance sheet.

The Group's approach is to transfer risk from the businesses either into local treasuries or to Group Treasury using an internal transfer price or interest rate swap. The methodology used to transfer this risk depends on whether the product contains yield curve risk, basis risk or customer optionality. Limits exist to ensure there is no material risk retained within any business or product area.

**Sensitivity analysis**

Set out below are the impacts on net interest income and equity of a reasonably possible change in market rates of interest, based on the AEaR model described above.

**(a) Impact on net interest income**

The sensitivity of the income statement is the effect of the assumed changes in interest rates on the net interest income for one year, based on the non-trading financial assets and financial liabilities held at 31st December 2007, including the effect of hedging instruments.

The effect on net interest income, and therefore profit before tax, of a 50 basis points change would be as follows:

| | +50 basis points 2007 £m | –50 basis points 2007 £m | +50 basis points 2006 £m | –50 basis points 2006 £m |
|---|---|---|---|---|
| GBP | 19 | (19) | 11 | (11) |
| USD | (1) | 1 | (4) | 4 |
| EUR | (11) | 11 | (9) | 9 |
| ZAR | 9 | (9) | 12 | (12) |
| Others | 2 | (2) | 1 | (1) |
| **Total** | 18 | (18) | 11 | (11) |
| **As percentage of net interest income** | 0.19% | (0.19%) | 0.12% | (0.12%) |

Note: This table excludes exposures held or issued by Barclays Capital as these are measured and managed using DVaR.

**(b) Impact on equity**

Interest rate changes affect equity in the following three ways:

– Higher or lower profit after tax resulting from higher or lower net interest income

– Higher or lower available for sale reserves reflecting higher or lower fair values of available for sale financial instruments

– Higher or lower values of derivatives held in the cash flow hedging reserves

The sensitivities of equity shown below are based on scenarios constructed from actual exposures and consider the impact on the cash flow hedging reserve and the available for sale reserve only. They are calculated by revaluing fixed rate available-for-sale financial assets, including the effect of any associated hedges, and derivatives designated as cash flow hedges, for the effect of the assumed changes in interest rates. They are based on the assumption that there are parallel shifts in the yield curve. The effects of taxation have been estimated using the Group's effective tax rate of 28% (2006: 27%).

| | +50 basis points 2007 £m | –50 basis points 2007 £m | +50 basis points 2006 £m | –50 basis points 2006 £m |
|---|---|---|---|---|
| Net interest income | 18 | (18) | 11 | (11) |
| Taxation effects on the above | (5) | 5 | (3) | 3 |
| **Effect on profit for the year** | 13 | (13) | 8 | (8) |
| **As percentage of net profit after tax** | 0.26% | (0.26%) | 0.15% | (0.15%) |
| Effect on profit for year (per above) | 13 | (13) | 8 | (8) |
| Available for sale reserve | (150) | 150 | (185) | 185 |
| Cashflow hedging reserve | (225) | 225 | (304) | 304 |
| Taxation effects on the above | 105 | (105) | 132 | (132) |
| **Effect on equity** | (257) | 257 | (349) | 349 |
| **As a percentage of equity** | (0.79%) | 0.79% | (1.28%) | 1.28% |

## Insurance risk

Twenty banks in our survey state that they are exposed to insurance risk, including life insurance risk, underwriting and pricing risk and reinsurance risk. These banks have provided a qualitative description of the risk and the methodologies used to measure it. In addition, nine banks disclosed quantitative information of their sensitivity to changes in insurance risk assumptions — see Figure 13.

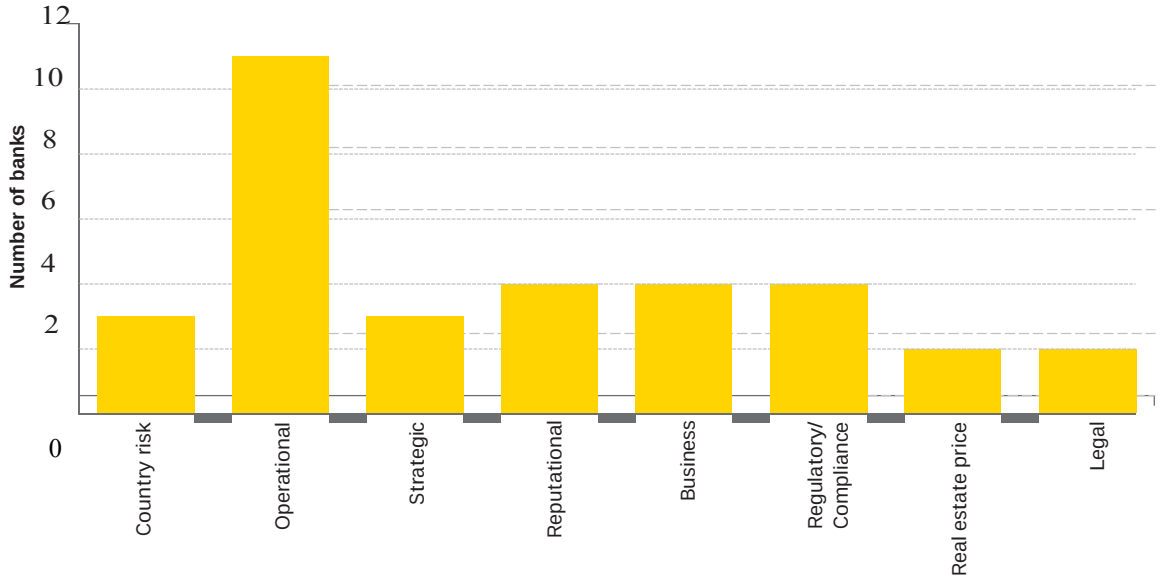
***Figure 13: Table of disclosed sensitivities to changes in insurance assumptions***

| Factor | Banks | Change in assumptions | Effect on: |
|---|---|---|---|
| Claim costs | HSBC | 20% | Profit and net assets |
| Mortality/M | HSBC | 10% | Profit and net assets |
| | RBS | 5% | Profit and equity |
| Mortality | Barclays | 10% | Net profit after tax |
| | Deutsche Bank | 10% | Net profit after tax and equity |
| | Danske Bank | 10% | Collective bonus |
| | Fortis | 5% | Embedded value |
| | Nordea | Increased/decreased living of 1 year | Policy holders and equity |
| | KBC | 10% | Embedded value |
| Annuitant | RBS | 5% | Profit and equity |
| Lapse rates | HSBC | 50% | Profit and net assets |
| | Fortis | 10% | Pre-tax profit |
| | KBC | 10% | Embedded value |
| Disability | Nordea | 10% | Equity and policy |
| | Danske Bank | 10% | Collective bonus |
| Expense | HSBC | 10% | Profit and net assets |
| | RBS | 10% | Profit and equity |
| | Fortis | 10% | Embedded value |
| | KBC | 10% | Embedded value |
| Incurred | Fortis | 5% | Pre-tax profit |
| Claims | Barclays | 10% | Net profit after tax |
| Base renewal | Barclays | 20% | Net profit after tax |
| Renewal expense | Deutsche Bank | 10% | Net profit after tax and equity |
| Expense | Barclays | 10% | Net profit after tax |

**Types of risk**

Other than market, liquidity, credit and insurance risk, 11 banks specified other risks to which they are exposed, in their audited qualitative risk disclosures, refer Figure 14.

*Figure 14: Disclosure of other risks*




Strategic risk is the risk of not achieving the bank's strategic goals. Country risk is the risk that the entity may suffer a loss in a given country due to macroeconomic or political conditions.

In addition to the information shown in Figure 14:

- One bank disclosed outsourcing and personal risk. Outsourcing risk is the risk of outsourcing activities integral to the bank. Personal risk relates to employees of this bank and includes aptitude risk, motivation, departure and 'bottleneck' risk.
- One bank disclosed 'financial soundness' risk which arises from liquidity, capital and prudential reporting including tax risk.
- One bank disclosed capital risk and financial crime risk due to internet fraud.

**Other issues**

Categories and classes of financial instruments and level of disclosure

IFRS 7 requires the carrying amounts of financial assets to be disclosed by category (i.e., recorded at fair value through profit or loss, held-to-maturity, loan and receivables, available-for-sale and other financial liabilities as defined in IAS 39), either on the face of the balance sheet or in the notes to the financial statements. Nearly two-thirds of the banks have presented the categories on the face of the balance sheet and others, in part, in the notes to the accounts.

IFRS 7 also requires many of its disclosures to be given by 'class' of financial instrument, which is defined as a

level of detail that is appropriate to the nature of the information disclosed and the characteristics of the instruments. A class is a lower level of aggregation than a category.

The banks vary in the number and types of classes into which they have subdivided their loans and advances, so that it is not always clear what is regarded as a class. Figures 15 and 16 below illustrate the number of classes used in the banks' loan impairment allowance reconciliation and their analysis of credit quality, both of which are required to be presented 'by class'. In 12 cases, the reconciliation of the impairment allowance is presented in total, rather than analysed by class, and 11 banks have disclosed the credit quality of their loans in total.

An example of the reconciliation of impairment allowances as one class is shown in Extract 22.

As an example, Lloyds TSB uses four classes to reconcile its impairment allowances: Retail Mortgages, Retail — Other, Wholesale Loans and Loans and Advances to Banks. HSBC, meanwhile, presents the reconciliation for seven categories of loans and advances to customers, plus loans to governments and banks, and gives all this information for each of five geographical regions (refer to Extract 23). In contrast, Nordea reconciles two classes: Credit Institutions and Loans to the Public. However, in the risk information set out in its financial review (which is audited), it sub-divides these classes to give separate aggregate numbers for its corporate and personal customers. It also analyses corporate customers by industry and geography and provides further geographical analysis for its two major industries.

The varied approach to disclosure by class suggests that the banks do not all interpret the item in the same way. However, as with a number of other disclosures, we expect that the banks will learn from each other and the level of diversity will decrease in future.

Figure 15: Number of classes used in the banks' reconciliations of loan impairment allowances

Figure 16: Number of classes used in the banks' analyses of loan credit quality


**Extract 22: Example of use of one class in the reconciliation ofloan impairment from BBVA's Annual Report 2007**

| | Millions of euros | | |
|---|---|---|---|
| | **2007** | 2006 | 2005 |
| **Balance at beginning of year** | **2,492** | **2,346** | **2,202** |
| Additions | 4,568 | 2,710 | 1,940 |
| Recoveries | (2,398) | (1,805) | (1,527) |
| Transfers to write-off | (1,497) | (708) | (667) |
| Exchange differences and other | 193 | (51) | 398 |
| **Balance at end of year** | **3,358** | **2,492** | **2,346** |

***Extract 23: Example of use of a number of classes in the reconciliation of loan impairment from HSBC'sAnnual Report 2007***

*(Audited)*

| | 2007 | | | | | |
|---|---|---|---|---|---|---|
| | Europe US$m | Hong Kong US$m | Rest of Asia-Pacific US$m | North America US$m | Latin America US$m | Total US$m |
| Impairment allowances at 1 January | 3,683 | 365 | 901 | 7,247 | 1,389 | 13,585 |
| Amounts written off | (2,940) | (251) | (724) | (7,444) | (1,485) | (12,844) |
| Commercial, industrial and international trade | (371) | (57) | (94) | (122) | (253) | (897) |
| Real estate | (72) | (4) | (5) | (14) | (3) | (98) |
| Non-bank financial institutions | (5) | – | – | (5) | (1) | (11) |
| Other commercial | (90) | (10) | (10) | (30) | (28) | (168) |
| Residential mortgages | (7) | (8) | (16) | (878) | (21) | (930) |
| Other personal | (2,395) | (172) | (599) | (6,395) | (1,179) | (10,740) |
| Recoveries of amounts written off in previous years | 542 | 43 | 124 | 62 | 234 | 1,005 |
| Commercial, industrial and international trade | 14 | 5 | 10 | 21 | 24 | 74 |
| Real estate | 19 | 1 | 7 | 1 | 1 | 29 |
| Non-bank financial institutions | 8 | – | 1 | 2 | – | 11 |
| Other commercial | 33 | 1 | 6 | 9 | 5 | 54 |
| Residential mortgages | – | 6 | 3 | 1 | 9 | 19 |
| Other personal | 468 | 30 | 97 | 28 | 195 | 818 |
| Charge to income statement[1] | 2,543 | 212 | 614 | 12,111 | 1,697 | 17,177 |
| Banks | – | – | – | – | – | – |
| Commercial, industrial and international trade | 353 | 57 | 82 | 125 | 280 | 897 |
| Real estate | 119 | (4) | (21) | 52 | 6 | 152 |
| Non-bank financial institutions | 12 | 2 | 1 | 21 | – | 36 |
| Governments | (3) | – | – | – | – | (3) |
| Other commercial | 27 | – | 2 | 59 | 39 | 127 |
| Residential mortgages | 7 | (14) | 16 | 1,784 | 47 | 1,840 |
| Other personal | 2,028 | 171 | 534 | 10,070 | 1,325 | 14,128 |
| Foreign exchange and other movements | 110 | 7 | 11 | 4 | 157 | 289 |
| Impairment allowances at 31 December | 3,938 | 376 | 926 | 11,980 | 1,992 | 19,212 |

**Items of income, expense, gains or losses- Treatment of interest**

IFRS allows an entity to choose how amounts shown on the face of the income statement are presented, although IFRS 7 requires that the entity discloses in its accounting policies how net gains or losses in each category of financial instrument are determined and reported. For example, interest earned on financial instruments at fair value through profit and loss might be included in either net gains or losses for the category, or in interest income, but the policy should make it clear where they are recorded.

Figure 17 below analyses how different banks have presented interest income or expense on various categories of financial instruments, as follows:

- Trading derivatives
- Assets and liabilities designated at fair value through profit and loss (FVTPL)
- Short trading positions
-

*Figure 17: Summary of the treatment of interest on financial instruments*

| Treatment of interest income/expense by number of banks | | | | |
|---|---|---|---|---|
| | Trading income/net gains or losses on financial | Interest income / expens | Other | Not applicable/ Not disclosed |
| Trading derivatives | 14 | 9 | 0 | 1 |
| Assets/liabilities designated at fair value through profit | 8 | 14 | 1 | 1 |
| Short positions | 6 | 7 | 3 | 8 |

**Treatment of interest on trading derivatives**

The banks are split, with 14 banks disclosing interest income on trading derivatives under either trading income or net gains and losses on financial instruments at fair value, and nine under interest income. One bank was silent on the treatment of interest on trading derivatives.

**Treatment of interest on assets and liabilities at fair value through profit and loss**

Fourteen of the banks stated that interest income on assets and liabilities designated at FVTPL using the fair value option is recorded in the interest income line, with eight presenting the interest income as part of net gains or losses on financial instruments at fair value and one under other operating income. For one bank, the treatment is unclear.

**Treatment of interest on short trading positions**

Sixteen of the banks specifically disclosed that they have liabilities arising from the short sale of financial instruments. Of the banks that disclosed short trading positions, seven recorded the interest expense under net interest income, six under trading income and three under 'gains or losses on financial assets and liabilities (net)'.

**Hedge accounting**

The primary approach to hedge accounting set out in IAS 39 is for individual hedging instruments to be designated as hedges of individual assets, liabilities or other risk exposures. However, banks and similar financial institutions typically manage their interest rate risk exposures on a portfolio (or 'macro') level.

Although some banks find the 'portfolio or macro hedging' accounting model set out in the implementation guidance to IAS 39 sufficiently flexible to obtain an adequate accounting presentation of their hedging activity, a significant number of banks do not. The European Commission's response to this was to endorse a version of

IAS 39 with certain parts of the Standard 'carved out', thereby allowing the use of hedge accounting in situations where the full version of IAS 39 would not allow it.

Of the 23 banks in the European Union, nine stated that they have used the carve-out provisions and three say they have not used them. Eleven banks are silent on this issue in their accounting policies, but three of the eleven state that they comply with IFRS as issued by the IASB and so, presumably, do not apply the carve-out.

**Treatment of ineffectiveness on cash flow hedges, net investment hedgesand changes in fair value of fair value hedges**

Thirteen banks record the ineffectiveness on cash flow and net investment hedges in trading income, three record it under 'fair value change in hedge accounting', one under valuation results on non-trading derivatives, one in interest income, and three in other operating income. The remaining banks are either silent on the presentation of their ineffectiveness or have stated that they do not have cash flow hedges or net investment hedges.

Ten banks disclosed the net ineffectiveness of fair value hedges and ten disclosed the fair value changes on the hedging instruments and the underlying hedged items separately. The remaining banks are either silent on the presentation of ineffectiveness or have stated that they do not have fair value hedges.

# Chapter 6: The effects of IFRS adoption on the financial reporting quality of European banks

## Introduction

The global financial crisis has recalled the importance of financial reporting in the banking industry. Yet, the recent public debate primarily focuses on one particular feature of bank accounting, namely fair value accounting. Fair value accounting is accused of having contributed to the crisis and exacerbating the effects of the financial meltdown. However, the current controversy around fair value accounting neglects the fact that the largest part of banks' balance sheets consists of loans which both under local GAAP and IFRS are measured on an amortized cost basis. Deterioration of credit quality of loans is recognized through loan loss provisions by applying the impairment rules of the respective accounting regimes. The introduction of IFRS represents a significant change in European banks' loan loss accounting as regards the recognition and measurement of credit risks. Unlike under the local GAAPs of EU countries, the incurred loss approach of IAS 39 requires banks to provide only for incurred losses, but not for future expected losses. Given the importance of loan loss provisions in determining reported earnings of banks (Nichols et al., 2009), we expect changes in these – by their nature highly discretionary – accruals to have significant aggregate effects on banks' earnings characteristics. Therefore, our paper examines how the mandatory transition to IFRS in European countries, and particularly the switch to the incurred loss approach which underlies the recognition of loan losses, impacts financial reporting quality of banks. We measure financial reporting quality in terms of income smoothing and the timeliness of (loan) loss recognition.

The introduction of the restrictive IFRS rules for impairment was pre-empted by a heavy debate about adequate loan loss accounting in the US in 1998 when the Securities and Exchange Commission (SEC) questioned the loan loss accounting practices of SunTrust Banks. In order to obtain approval for the registration statement, SunTrust had to restate prior years' financial statements and reduce its loan loss allowances significantly (Wall and Koch, 2000). Subsequently, the SEC and bank regulators issued joint interagency letters to provide banks with guidance about appropriate loan loss accounting. These letters stress that banks should have prudent but not excessive loan loss allowances. Also on the international level loan loss accounting moved into the centre of interest, as evidenced by the large number of recent policy proposals and changes in accounting standards. These include the proposals of the Joint Working Group of Standard Setters to introduce fair value accounting for all financial instruments (JWG 2000), the introduction of statistical provisioning in Spain (Fernandez et al. 2001) and the guidance issued by the Basel Committee on Banking Supervision on "Sound credit risk assessment and valuation for loans" (BCBS 2006). The most important event was the issuance of IAS 39 in 1998 which since then has been revised several times.

IAS 39 requires entities to provide only for losses from events identifiable at the balance sheet date. Losses from future events like the expected closedown of a factory or expected rating downgrades may not be included. The development of IAS 39 and specifically of itssubsequent amendments had the goal to eliminate or mitigate the differences to the equivalent US GAAP requirements (IAS 39.BC14). The respective US standards FAS 5 *Accounting for Loan Contingencies* and FAS 114 *Accounting by Creditors for Impairment of a Loan* stipulate that loan loss allowances should be established at a level that is adequate but not excessive to cover expected losses related to specifically identified loans as well as probable credit losses inherent in the remainder of the loan portfolio that have been incurred as of the balance sheet date. The strict limitation of standard setters to incurred losses has to be seen in the light of large anecdotal and empirical evidence that find loan loss accounting to be a favoured tool for earnings management.

However, critics of the incurred loss approach argue that it does not reflect the true credit risk in loan portfolios. One of the main issues is the requirement to identify a specific event that triggers impairment, which provides substantial discretion for management to determine such an event. Critics also maintain that the restriction to incurred losses prevented banks from reporting "known losses" that are inherent in loan portfolios. Regulators argue that while under the current regime fees and risk premia are incorporated in the interest rates charged to borrowers, the recognition of losses is postponed until the borrower actually defaults. This leads to higher earnings in early years (particularly during booms) and lower earnings in later

years (particularly during busts) and thus exacerbates the procyclicality in banks' earnings. Recently, loan loss accounting has captured significant attention due to the global financial crisis, particularly by bank regulators and standard setters. The IASB and FASB put loan loss accounting as a separate project on their agenda. In November 2009 the IASB issued an Exposure Draft "Financial Instruments: Amortized Cost and Impairment" which envisions a switch from the incurred loss approach to an expected loss approach.

Our study investigates the impact of the incurred loss approach – as currently implemented in IAS 39 – on two empirically testable measures of the accounting quality of European banks. Specifically, we analyze whether the change in accounting regime affects income smoothing behaviour and timely loss recognition.Our unique hand-collected dataset enables us to use well specified models for measuring banks' discretion in reporting their earnings that are usually employed in US literature (e.g. Ahmed et al., 1999; Liu and Ryan, 2006). Other international studies (e.g. Laeven and Majnoni, 2003; Fonseca and Gonzalez, 2007) are restricted to simpler models due to the data limitations of commercially available databases outside theUS.

Regarding income smoothing we find that the introduction of more restrictive impairment rules reduces discretion in loan loss provisioning. Thus, after IFRS adoption banks generally engage less in income

smoothing. This is consistent with the theoretical study by Ewert and Wagenhofer (2005) who find that tighter accounting rules reduce accounting earnings management. However, the reduction in discretion varies across supervisory/regulatory regimes and ownership structures. Banks still provide to some extent for expected losses during good times in supervisory regimes that prefer forward looking provisioning. Further, we document that widely held banks keep higher levels of loan loss provisions and/or smooth income even after the change in the accounting regime.

There are two alternative explanations for the latter result: First, it is consistent with Beatty et al. (2002) who find that publicly held banks engage more in earnings management than privately held banks to avoid earnings declines. Typically, the financial statement users of banks with dispersed ownership structures are small uninformed investors who rely on simple earnings heuristics in order to assess bank performance (Beatty et al., 2002). The absence of a controlling owner boosts incentives for managers to manage earnings in financial statements in order to conceal private control benefits and/or risk-taking behaviour. Alternatively, higher loan loss provisions might reflect bank managers' response to a greater demand for conservatism. Due to the high degree of separation of ownership and control there is a higher need for timely information, in particular, about potential losses.

In terms of conditional conservatism when analyzing the differential persistence of earnings components we find that banks recognize loan losses less timely after adopting IFRS. In contrast, we do not find a decrease in conservatism in aggregate earnings which might be due to the countervailing effect of incorporating fair value gains and losses in bank earnings. However, these results have to be interpreted cautiously because they might be influenced by one-time effects in the very short period of our analysis.

Taken together, our results for our European bank sample suggest that the application of the incurred loss approach has differential effects on the accounting quality metrics examined. On the one hand, the restrictive impairment rules limit management's opportunistic discretion suggesting generally improved accounting quality. However, on the other hand, banks recognize losses inherent in their loan portfolio on a less timely basis. In the light of the global financial market crisis it is questionable whether this is a desirable financial reporting outcome. By reducing discretionary behaviour IFRS rules also limit management's possibility to signal private information, particularly about future credit losses. Under the IFRS regime markets are informed only with a delay about deterioration in asset quality that is triggered by future events. Finally, the incurred loss approach might provide incentives for managers, particularly during boom times, to defer loan loss recognition to periods when the reduced cash flows underlying negative net present value investments are realized, allowing them to pass on the earnings consequences of their investment decisions to subsequent

generations of managers. This behaviour might further fuel the systemic pro cyclicality of bank earnings and exacerbate economic downturns.

We contribute to the literature in several ways. First, we are the first to provide empirical evidence on the accounting quality implications of the mandatory application of IFRS within the banking industry. Previous empirical studies analyzing the IFRS adoption effects on accounting quality investigate other sectors and specifically exclude the financial industry (e.g. Hung and Subramanyam, 2007; Barth et al., 2008; Christensen et al., 2008). Second, we extend prior banking literature that analyzes the impact of a change in bank regulation (Kim and Kross, 1998; Ahmed at al., 1999), in internal control regulation (Altamuro and Beatty, 2010) and in accounting rules (Perez et al., 2008) on accounting behaviour of banks. While these studies investigate a single country, our multi-country setting allows us to explore the accounting quality effect of a change in accounting regime interacted with institutional factors.

Specifically, we investigate how IFRS adoption interacted with stringency of bank supervision and regulation and ownership structure affect income smoothing behaviour. Unlike other international studies that face data limitations when analyzing the loan loss provisioning behaviour of banks, we can resort to more sophisticated models for measuring discretionary behaviour due to our unique hand-collected dataset. Further, in contrast to prior literature that analyzes the effect of ownership structure on the financial reporting of banks by differentiating between private and public status (e.g. Beatty et al., 2002; Nichols et al., 2009), we incorporate explicitly the country-level dispersion in public banks' shares in our analysis. Finally, we provide evidence for potentially unintended consequences of IFRS adoption (in an economic sense) by finding a decrease in timely loss recognition for banks. Our findings are relevant to bank regulators, standard setters and financial analysts in the current debate about adequate loan loss accounting.

The remainder of our paper is structured as follows. In section 2 we describe local GAAP and IFRS accounting rules for loan loss provisioning and differences in accounting practices across countries prior to IFRS which are crucial to understand the potential effects on banks' financial reporting quality. Section 3 puts loan loss accounting into a broader economic context. In section 4 we develop our hypotheses and section 5 presents sample selection and descriptive statistics. Section 6 describes our research design and summarizes our empirical results. Finally, section 7 concludes.

**Changes in the accounting rules for loan loss provisioning**

Loan loss provisioning in European countries before IFRS adoption. Although accounting rules of banks prior to IFRS adoption were based on the EU Bank Accounting Directive practices differed across EU countries. This diversity is caused by choices permitted by the Directive, differences in the accounting and tax treatment of loan loss provisions and differences in capital adequacy regulations. The national rules provide banks with considerable flexibility in their application. Basically the approaches to loan loss accounting differ over *when* deterioration in credit quality has to be recognized and *how* loan losses should be measured for accounting purposes. Table 1 provides a summary of the existing approaches and highlights the differences across key dimensions. We discuss each of the approaches below.

**Table 2: Approaches to loan loss accounting**

| | | **Local GAAPs in Europe** | **Dynamic provisioning** | **Fair value accounting** | **IAS 39 – Incurred loss approach** | **ED Amortized Cost & Impairment –** | **Basel II** |
|---|---|---|---|---|---|---|---|
| **Specific impairments of individually impaired loans** | Trigger | Objective evidence | No | No | Objective evidence; non-exclusive list | No | No |
| | Horizon | Residual maturity for impaired loans | Residual maturity for | Residual maturity for impaired loans | Residual maturity for impaired loans | Residual maturity for impaired | One year |
| | Write-down to | Market value or present value of expected future cash | No discounting | Market value or present value of expected future cash flows using the *market* | Write-down to present value of expected future cash flows using the *original* | Present value of expected future cash flows using the effective interest rate | EL=PD*LGD |
| **Latent risk in the loan** | General | Allowed | Required | Not necessary | Not allowed[2] | Not allowed | Recommended |
| **Future expected losses** | | Partially | Partially | Fully[3] | No | Fully | Over a one year horizon |

[1] However, accounting practice in some European countries indicates that banks use the sum of undiscounted cash flows in order to determine the measurement base for loan loss provisions.[2] IAS 39 requires provisions on a portfolio basis for loans that are not individually impaired (IAS 39.64). Further, a bank might provide an impairment loss for a group of loans for which historical experience indicates that default rate do not fluctuate from year to year ('incurred but not reported' losses).[3] Fair value accounting would also recognize losses arising from changes in market risk, i.e. changes that are not due to changes in default risk.

Under local GAAPs in most EU countries loans are recognized at their nominal value. Subsequently, loans are measured at lower of cost or market value so that deteriorations in the creditworthiness of the debtors are recognized by the loan loss provision. Typically loan loss provisions include specific impairments that cover losses expected from individually impaired loans. Most commonly specific impairments are based on some "objective factors" that trigger impairment. Impairment occurs either as depreciation to an observable market value or by discounting estimated future cash flows by the market interest rate. Given that market values and market interest rate include all future information, individual impairments according to local GAAPs already may also include expected losses for events to occur after the balance sheet date. However, accounting practice in several countries was to use undiscounted cash flows in order to determine the impairment amount

(Gebhardt, 2008).

In addition to specific impairments banks are supposed to provide general loan loss provisions for latent risks in the loan portfolio. General loan loss provisions refer also to ex ante losses expected to occur in future periods. However, there are several country specific tax and regulatory disincentives that have prevented banks from providing the maximum general provision. The Basel I capital adequacy framework accepted general loan loss provisions as part of Tier 2 regulatory capital. The implementation of this choice differs across European countries. For example, France and UK allowed general provisions as part of regulatory capital while Spain, Italy and the Netherlands did not.

Basel II, the new capital adequacy framework differs from Basel I in that it clarifies that the purpose of regulatory capital is to cover unexpected losses. Expected losses should be covered by individual and general loan loss provisions. According to Basel II expected losses are calculated for a time horizon of one year as the product of the probability of default (PD) and the loss given default (LGD). Under the internal ratings based (IRB) approach banks are required to fully cover expected losses (EL) with loan loss provisions (LLP). A shortfall (EL>LLP) is deducted to 50 % from Tier 1 and 50 % from Tier 2 capital. However, banks using the standardized approach have still the opportunity to include general loan loss provisions as part of their Tier 2 capital. Thus, for those banks that apply the standardized approach the new capital regulation does not change the regulatory treatment of loan loss provisions. Basel II has been implemented in the European Union in 2007 for banks that apply the standardized approach and in 2008 for banks using the IRB approach. Because our sample period ends in 2007 we do not expect Basel II to affect our results.

There are some countries that have specific local GAAP rules regarding loan loss provisioning which are discussed below.

***Denmark – Mark-to-market accounting***

The Danish rules required banks to make provisions for losses deemed to be unavoidable (so called B provisions) but also for foreseeable losses (A provisions). This rule is interpreted in the way that the loan balance, net of provisions, should approximate current market value (Bernard et al., 1995). From this it follows that loan loss provisions according to Danish GAAP included not only incurred losses but also losses expected from anticipated events over the whole maturity of the loan portfolio. The Danish model is the one closest to the fair value model as proposed by JWG (2000).

***Spain and Portugal – Dynamic provisioning***

Spain and similarly Portugal introduced the dynamic loan loss provisioning approach which requires banks to set aside reserves for every loan even when there is currently no evidence of impairment. In addition to specific and general loan loss provisions Spanish banks have to set up statistical provisions. The underlying philosophy is that credit risk is inherent in every loan from the moment of its origination. This approach implies that loan loss reserves are built up during periods of high economic growth, which then can be depleted during economic downswings. However, the loan loss provisions are determined on the basis of historical loss experience. Thus, dynamic loan loss provisioning is not an expected loss model (IASB 2009d). By definition, statistical provisions are relatively stable over time and economic cycles which leads to smoother earnings as compared to other provisioning regimes.

**Accounting for credit risks under IAS/IFRS**

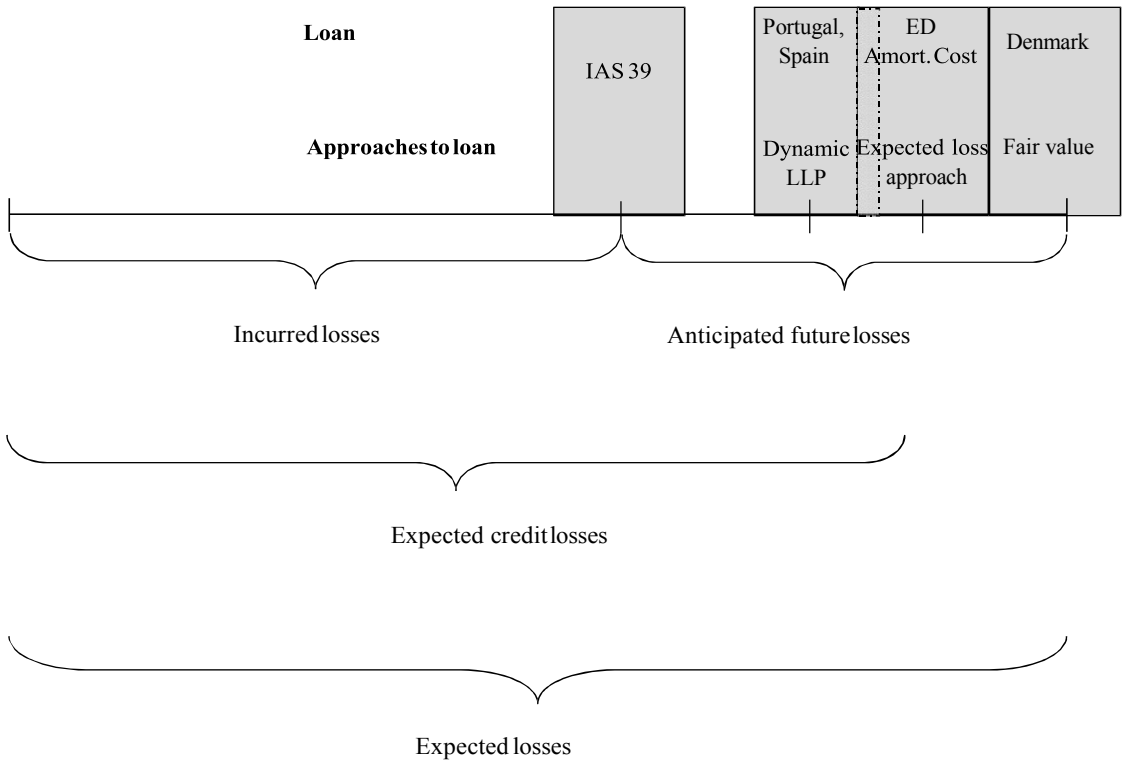
IAS/IFRS accounting for credit risk has undergone several changes during the past decades. The former IASC issued IAS 30 "Disclosures in financial statements of banks and similar financial institutions" in 1991 which introduced the requirement to disclose movements in the loan loss allowance. For the measurement of loan loss provisions banks could basically continue to use their domestic GAAP practices. However, IAS 30 removed the option to set up hidden reserves as allowed by Art. 37 of the EC Bank Account Directive. Furthermore, recognition of a special item for general banking risks affecting income (Art. 38 EC Bank Account Directive) was not allowed according to IAS 30.44. Until its deletion in the course of the IASB's improvement project IAS 30.45 was interpreted as allowing banks also to provide for potential (i.e. expected) losses in the form of general loan loss provisions. However, it required that general loan loss allowances had to be netted against loans, whereas it was common in some countries (e.g. Portugal, Spain, Italy, France) to present the general loan loss allowance on the right hand side of the balance sheet. IFRS 7 replaced IAS 30 as of January 1, 2007.

IAS 39 was issued in 1998 and since then revised several times. IAS 39.58-70 introduced that banks may only provide for credit risk when there is "objective evidence" that impairment occurred as of the balance sheet date. Expected losses as a result of events expected to occur after the balance sheet date may not be recognized. IAS 39.59 provides a non-exclusive list of "triggering events" that are indicators of impairment. Further, general loan loss provisioning for unspecified credit risks is not accepted under the IAS 39 rules. Specifically,

the Implementation Guidance to IAS 39 clarifies that "Amounts that an entity might want to set aside for additional possible impairment in financial assets, such as reserves that cannot be supported by objective evidence about impairment, are not recognised as impairment or bad debt losses under IAS 39" (IAS 39.IG.E.4.6). The amendments of IAS 39 during the IASB's improvement project had the purpose to eliminate or mitigate differences relative to the requirements in US GAAP (IAS 39.BC14). SFAS 5 stipulates that a loss should be recognised when based on the information available prior to issuance of the financial statements it is probable that an asset had been impaired as of the date of the financial statement and only if the loss can be reasonably estimated. SFAS 5.59 further clarifies that loan loss provisions should not anticipate future events. In the SEC's view, banks should not even account for known events that will affect loan losses if these events occur after the balance sheet date (Wall and Koch, 2000). When there is evidence of impairment IAS 39.63 requires that "the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate (i.e. the effective interest rate computed at initial recognition)". A bank has to assess whether impairment exists for loans that are individually significant. Loans that are not individually impaired have to be included in a group of loans with similar credit risk characteristics and collectively assessed for impairment (IAS 39.64). Impairment of such groups of loans is estimated on the basis of historical loss experience which is adjusted for changes in current conditions (IAS 39.AG89). However, banks may not recognise impairment losses that are expected to occur in a future periods (IAS 39.AG90).

Figure 18 illustrates the relation between incurred losses, expected losses and the approaches to loan loss accounting. From the range loss recognition the incurred loss approach of IAS 39 represents the lowest boundary. Dynamic loan loss provisioning as it is applied in Spain and Portugal extends beyond incurred losses. However, given that historical data are used, dynamic provisioning does not cover all expected credit losses. The expected loss model as it is outlined in the Exposure Draft D 'Amortized Cost and Impairment' does not require trigger events and uses an effective interest rate that is determined on the basis of initially expected cash flows reflecting expected credit losses. Any subsequent changes in the expected cash flows are recognized immediately. The Danish loan loss accounting model is close to the fair value model which recognizes not only expected losses resulting from changes in default risk, but also from changes in market risk.

**Figure 18: Alternative loan loss accounting approaches and regimes**


Loan
Approaches to loan
IAS 39
Portugal, Spain
ED Amort. Cost
Denmark
Dynamic LLP
Expected loss approach
Fair value
Incurred losses
Anticipated future losses
Expected credit losses
Expected losses

To sum up, the application of IAS 39 represents a switch from partial expected loss approaches under local GAAP to an incurred loss approach. The restriction to incurred losses triggers reversals of previous accruals for expected losses as a one-time effect of the transition to IFRS. In this study we analyse how the exclusion of expected losses from loan impairments affects overall bank accounting quality as measured by the level of income smoothing and conditional conservatism. It is important to note that "[a]s financial reporting criteria, quality and usefulness differ from economic efficiency because they do not address optimality". In particular, finding less income smoothing and/or less conditional conservatism in the banking industry might be desirable from a standard setting perspective. However, this result is not efficient from a financial stability perspective, because reducing discretion in loan loss provisioning prevents banks from building up "reserves" for expected credit risk during good times which they can draw upon during bad times. In order to make this point clear, in the next section, we put loan loss accounting into an economic perspective.

**Business cycles, loan growth and loan loss accounting**

Loan loss accounting has to be considered in the general context of business cycles and bank management's behaviour through the cycle. Specifically, accounting for loans and loan losses is closely linked to the cyclical lending behaviour of banks. Several theories in the economic literature attempt to explain why bank managers commit credit policy mistakes during expansionary economic conditions. Most prominent are the theories of herding behaviour and disaster myopia. The Rajan (1994) herding model assumes that bank management is rational but has short-term concerns. Besides maximizing the bank's earnings, bank managers seek to improve the stock price or labor market's perception of their abilities, i.e. their reputation. Further, management's reputation is sensitive to the current state of the economy. Specifically, market pressures to report similar profits as competitors during expansionary times and short term concerns force bank managers to loosen credit policy which results in an increase in problem loans (Rajan, 1994; Fernandez de Lis et al., 2001). Banks underperforming their industry benchmark during periods of large profits are penalised by the market while forgiving poor performance when all players in the sector have been hit by a systemic shock (Rajan, 1994). This informational externality yields interdependent bank credit policies.

Market disciplining forces are hampered by the fact that the composition and quality of the loan portfolio is not easily observable by market participants. Instead, the market relies on reported bank earnings. Therefore, bank management might be inclined to shape the market's perceptions by manipulating current earnings. It can do so by relaxing credit standards e.g. by extending lines of credit or lending money so that distressed (e.g. subprime) borrowers can repay their current interest and repayment obligations. Thus, a liberal credit policy helps short-sighted managers to boost current earnings. However, this behaviour leads to substantial costs when

the boom turns into a bust and latent risks built up during the expansionary phase turn into actual losses. Due to the fact that the whole sector is hit by the downturn and low profits are not unusual, banks tighten their credit policy (Rajan, 1994). This managerial behaviour involves a change in operating decisions that influence cash flows and has real economic costs.

The potential economic costs of this discretionary behaviour are exacerbated by current accounting rules. While in the global financial crisis fair value accounting has been accused of making bank earnings more procyclical, this is particularly true for the impairment rules for loans. During an upswing banks have rising profits, recognizing fees and risk premia but not the matching expenses for higher expected credit risk. As explained in section 2.2. above losses are not considered until they are incurred. Under good economic conditions (e.g. rising house prices) there is low probability of trigger events that might cause impairment under the current accounting rules. Thus, the current rules actually support management in delaying the recognition of losses for expected credit risk and presenting higher earnings and (regulatory) equity capital which allow the bank to extend more credit. In a downturn there is a culmination of trigger events with high default rates leading to increased loan loss provisions and lower (regulatory) equity capital. The contraction of capital and the increased riskiness of loans forces banks either to raise new equity capital or to cut lending in order to meet risk- based bank minimum capital requirements as set out in the Basel framework. As the issuance of new capital is deemed too costly during distressed periods banks may prefer to cut back their lending (Mishkin, 1999).

Hypothesis development

**The effect of IFRS adoption on income smoothing**

Accounting standard setters set rules with the aim of providing decision useful information for general-purpose users of financial statements, in particular investors. They recognize that managers may have incentives to use loan loss provisioning to manipulate reported numbers. In some periods they may have an incentive to understate expected losses to boost net income or capital; in other periods they may have incentives to overstate current loan loss provisions when earnings are high which allows them to understate losses in future periods with lower earnings (Benston and Wall, 2005). Standards setters are worried about biased estimates in either direction which explains their choice to restrict loan loss provisioning to incurred losses.

Earnings management through discretionary loan loss provisioning has been detected in several empirical studies, most of them analyzing US banks. The bulk of empirical studies tries to explain this behaviour by a

variety of incentives, in particular earnings and capital management. The results across studies are not conclusive which might be attributable to differences in time periods analyzed and differences in research designs. Beatty et al. (1995) find evidence that banks manage their regulatory capital through the loan loss provision, but do not engage in earnings management. In contrast, Collins et al. (1995) find no evidence for capital management, but report a positive correlation of earnings and loan loss provisions which is consistent with the income smoothing hypothesis. These papers analyze a period before the implementation of the Basel I framework. Kim and Kross (1998) compare the pre- Basel I period with the Basel I period and find that due to changes in incentives[22] banks with low capital ratios reduced their loan loss provisions after the implementation of Basel I. Similarly, Ahmed et al. (1999) revisit the above motivations for a more recent period after the change in capital adequacy regulations. They find evidence for capital management, but not for income smoothing. Altamuro and Beatty (2010) analyze the financial reporting effects of the Federal Depository Insurance Corporation Improvement Act internal control provisions. They find that the change in internal control improves loan loss provision validity and reduces earnings management.

Recent empirical studies analyzing countries outside the US find that the extent of discretionary behaviour depends on accounting regime (Perez et al., 2008), the economic cycle (Laeven and Majnoni, 2003), investor protection, regulatory regimes, financial structure and financial development (Shen and Chih, 2005; Fonseca and Gonzalez, 2007). Motivations for discretion in financial reporting are diverse and can be explained partly by the fact that many implicit and explicit contracts of the bank refer to accounting numbers. Violation of these contracts (e.g. non-compliance with regulatory capital requirements) can affect the economic value of the firm (Beaver and Engel, 1996).

The main purpose of our study is to extend on previous literature that analyzes the change in regulatory regimes (Kim and Kross, 1998; Ahmed et al., 1999), in internal control regulations (Altamuro and Beatty, 2010) and accounting rules (Perez et al., 2008) on loan loss provisioning behaviour of banks. Specifically, we test whether the adoption of IFRS and particularly the implementation of the incurred loss approach results in less discretionary loan loss provisioning, which is the main accrual in banks' balance sheets and a significant determinant of banks' accounting quality. We predict that the stricter IFRS impairment rules relative to the local GAAP requirements lead to less income smoothing. This is consistent with the theoretical findings of Ewert and Wagenhofer (2005) who argue that tighter accounting rules increase the disutility of managers from engaging in earnings management due to higher individual regulatory and litigation risks. Thus, tighter accounting rules limit opportunistic managerial discretion resulting in less accounting earnings management. Given the income smoothing behavior found in previous literature for a pre-IFRS period and the latter theoretical insights we posit the following hypothesis

$H_1$: After IFRS adoption banks exhibit less income smoothing behavior.

We should note here that the term income smoothing does not imply only a negative connotation. Income smoothing, as measured by a positive correlation between loan loss provisions and earnings, may reflect managers' attempt to conceal private control benefits and/or to mask firm performance. However, income smoothing may also result from incorporating expected losses into banks' earnings. Accordingly, HSBC notes in its Annual Report 2008, p. 276: "As expected losses are estimated on long-term estimates and incorporate through-the-cycle considerations, they are expected to be less volatile than actual loss experience."

**The implications of bank regulation on income smoothing**

Potential costs of higher earnings quality in terms of less income smoothing arise from the late recognition of loan losses. As outlined in section 3 above unrecognized credit risks accumulate during economic booms and turn into larger recognized losses in an economic downturn which then decreases financial stability. The incurred loss approach even supports the cyclical behaviour of managers which threatens financial stability.

Bank regulators are aware of the cyclical pattern of bank lending and provisioning, which explains why loan loss provisions are central to their concept of capital adequacy and play a distinct role from a regulatory perspective. From the regulator's point of view loan loss provisions should cover all expected losses while regulatory capital should protect banks from unexpected losses. Bank regulators advocate a forward looking provisioning regime, under which loan loss allowances are built up during good times and depleted during bad times in order to reduce the procyclicality of banks' regulatory capital. Therefore, we predict that the effect of IFRS adoption on provisioning behaviour of banks varies with the stringency and attitudes of regulatory regimes. Specifically, if loan loss provisions do not suffice to cover expected losses, the shortfall reduces banks' regulatory capital and thereby reduces their ability to withstand unexpected losses. Alternatively, regulators could act as enforcers of accounting standards and limit managerial discretion in loan loss provisioning. However, given the frequently expressed claim of bank regulators for a forward looking loan loss provisioning, particularly in the course of the current debate about appropriate loan loss provisioning we formulate the following hypothesis.

$H_2$: Banks in strict regulatory regimes reserve more from current period earnings, i.e. smooth income, during good times even after IFRS adoption.

This hypothesis is consistent with empirical findings by Ball et al. (2000), Leuz et al. (2003) and Fonseca and Gonzalez (2007) who suggest that financial reporting outcomes are not only the result of accounting standards but the application thereof. The application of accounting standards is determined by the managers' incentives

and institutional factors. For instance, Fonseca and Gonzalez (2007) find less income smoothing through the use of loan loss provisions in countries with stronger investor protection, a higher level of accounting disclosure, more restrictions on bank activities, and official and private supervision. Their results are consistent with Leuz et al. (2003) for an international sample of industrial firms.

**The implications of ownership structure on income smoothing**

There is no consensus in the literature on the effects of dispersion in ownership structure and earnings management. For example, Leuz et al. (2003) find that non-financial firms in countries with developed equity markets, dispersed ownership structures and strong investor protection rights engage less in earnings management. They argue that managers and controlling owners have incentives to conceal their private control benefits from outsiders by managing earnings.

In contrast, Fonseca and Gonzalez (2007) analyzing an international bank sample find that there is more income smoothing in market based (as opposed to bank based) financial systems and financially developed countries. They argue that banks in those countries generally have more dispersed ownership, which results in a greater number of financial statement users and consequently in a greater importance of accounting figures. However, they do not test this directly.

US based literature analyzing the effect of ownership structure on income smoothing behaviour in the context of banks generally focuses on the distinction between private and public ownership. Beatty and Harris (1999) examine the differences of securities gains and losses realizations between private and public banks. They find that earnings management is more prevalent in public banks and attribute this to a higher demand for reducing information asymmetry. Consistent with this argument, they find that managed current reported earnings are more reflective of future performance. Similarly, Beatty et al. (2002) find that publicly held banks engage more extensively in earnings management. The authors argue that investors in dispersed ownership structures rely on simple earnings heuristics. Specifically, small shareholders obtain only a small fraction of the benefits from monitoring firms' activities and thus refrain from processing all information available to assess financial performance. However, distinguishing just between private and public status does not recognize the fact that dispersion in the ownership varies substantially within the group of public banks.

We analyze whether the argument brought forward by Beattie et al. (2002) hold for our European bank sample. Specifically, we hypothesize that managers of widely held banks have more incentives to smooth income through loan loss provisions.

H3: Banks with widely held ownership structures have incentives to smooth reported income even after IFRS adoption.

However, a higher correlation between loan loss provisions (i.e. income smoothing) might reflect income-decreasing, i.e. conservative, accounting. In widely held banks there is a high degree of separation of ownership and control, and thus, high information asymmetry between managers and shareholders. The higher the dispersion in ownership structures the higher demand for conditional conservatism. Therefore, finding more extensive provisioning by widely held banks might simply reflect managers' response to the higher demand for conservatism (Nichols et al., 2009).

**Conservatism in banks' earnings**

In our final set of analyses we test how the exclusion of expected losses in the recognition of loan loss provisions affects the conditional conservatism of banks' earnings. Specifically, we examine timely loss recognition by analyzing the effect of IFRS adoption on the differential persistence of earnings. The early recognition of losses is particularly important for banks' financial statements due to their key role in financial intermediation and their exposure to significant risks pertaining to their business (e.g. credit risk, interest rate risk, liquidity risk).

Our analysis extends Barth et al. (2008) and Christensen et al. (2008) who examine accounting quality implications of IFRS adoption by non-financial firms. Barth et al. (2008) predict and find that firms exhibit more conditionally conservative earnings after IFRS. Christensen et al. (2008) find more conditional conservatism only for voluntary adopters, but not for mandatory adopters. However, these papers are vague in their hypotheses about why IFRS should lead to timelier loss recognition. Barth et al. (2008) argue that the characteristics income smoothing and timely loss recognition are closely linked in that smoothing of earnings do not allow for (frequent) large losses. Therefore, given that they predict less income smoothing after IFRS adoption this should also yield a higher frequency of reported large losses and thus more conditionally conservative earnings. Our specific banking setting allows us to be more specific on how IFRS adoption should affect banks' conditional conservatism by analyzing the changes in the rules that mostly affect bank accounts.

Given that almost the whole balance sheet of banks consists of financial instruments, banks face two major accounting changes due to IFRS adoption: First, the change in loan loss provisioning and second, fair value accounting. Loan loss provisions are the largest accrual in banks' accounts. Given that "conservatism operates through accruals", any change in the discretionary nature of this accrual imposed by the restrictive IFRS rules will also have an impact on the conservatism of banks' earnings. In fact, loan loss accounting under IFRS is asymmetric in the sense that gains are recognized earlier than losses. On one hand, fees and risk premia included in the interest rates on loans are recognized from the inception of the loan. On the other hand, the impairment rules of IAS 39 prohibit anticipation and recognition

of expected losses. Therefore, to the extent that banks recognized future expected losses under their respective local GAAP, IFRS adoption will lead to less timely loan loss recognition and thus to relatively less conservative

earnings.

The (potentially) wider use of fair values, and thus, recognition of fair value gains and losses might affect conservatism in bank earnings in the following way: Given that fair value accounting requires symmetric gain and loss recognition, a wider use of fair values would lead banks to recognize both gains and losses in a timely fashion. Under local GAAP banks can anticipate expected losses through the general loan loss provisions. However, the recognition of impairment on specific loans generally requires some objective factor in order to trigger impairment, thereby, reducing timeliness of loss recognition. Thus, when compared to local GAAP, positive earnings changes under IFRS will be less persistent and the recognition of economic losses will be timelier. If e.g. in a hypothetical case a bank switches from amortized cost accounting to full fair value accounting, then we should observe timelier loss recognition after IFRS adoption, and thus, relatively more conservative earnings. However, given recent empirical findings of surveys for European banks (and also for US banks) the portion of banks' assets/liabilities measured at fair value is rather limited on average (KPMG 2008; SEC 2008). Therefore, we expect the potential effect resulting from fair value accounting to be smaller in comparison to the impact of the change in loan loss accounting.

As a result, we have two potentially countervailing effects of the adoption of IFRS. Therefore, following Nichols et al. (2009) we first perform our analysis of earnings changes on aggregated earnings to study the overall effect of IFRS on bank earnings. Then, we examine disaggregated earnings (earnings before taxes and loan loss provisions and loan loss provisions) in order to analyze which earnings components drive changes in conditional conservatism around IFRS adoption. Our expectation is that the effect resulting from the different recognition of loan losses before and after IFRS adoption will be stronger than the effect stemming from potentially wider use of fair value implying less conditional conservatism.

H4: Banks' earnings exhibit less conservatism after IFRS adoption relative to pre-IFRS years.

**Sample selection and descriptive statistics**

Our sample selection starts out with all listed banks in the 15 "old" EU member states because local accounting rules within the EU area are based on the Fourth, Seventh and the Bank Accounting Directive suggesting some level of harmonization across these states. Furthermore, we assume enforcement mechanisms to be stronger than in the new EU member states. We exclude German and Austrian banks for the following reasons: First, almost all Austrian and German banks are voluntary adopters, mainly adopting from 1998 or after. As outlined above the relevant IAS/IFRS provisions for loan impairment changed several times since 1998. The incurred loss approach as it is implemented currently in IAS 39 only exists since 2005. In fact, a typical German/Austrian bank adopting in 1998 had to adopt different IAS 39 loan loss accounting rules in

the periods 1998-2000, 2001-2004 and from 2005 on. Second, based on observable accounting practice and discussions with bank accountants and auditors it appears that Austrian and German banks applied a step by step transition to IFRS, which makes it difficult to measure a one-time effect of IFRS adoption. Finally, the financial statements according to German/Austrian GAAP do not disclose important data on credit risk, particularly non-performing loans, which we need to control for in a well specified model.

Luxembourg drops out of our analysis given that it has only subsidiaries of banks included otherwise in our sample. In the remaining 12 EU countries we search for listed banks on the respective stock exchanges which yields a starting population of 118 banks. We lose 15 banks for which financial statements are not available or not available in English. Further, we exclude seven subsidiaries that operate in the same sector as their parent and six banks whose main business is not lending. Our final sample consists of 90 mandatory IFRS adopters.

We downloaded the financial statements from the banks' websites for a period starting from 2000 up to 2007. All data are hand-collected from the financial statements. Hand-collection is necessary as most of the key variables used in US-literature are not available for European banks in commercial databases like Bank scope. This relates especially to non-performing loans and loan loss allowances.

Table 3 presents descriptive statistics for the dependent and explanatory variables used in our multivariate analyses. We show the statistics for the pre- and the post-IFRS period, separately. The comparison of the two periods reveals that the time period is characterized by a boom phase. Specifically, banks experience a significant growth of their loan portfolio ($\Delta Loans_{it}$), on average, 16.65 % (median 14.77 %) during IFRS period as compared to 10.12 % (8.79 %) before IFRS adoption. Non-performing loans ($NPL_{it-1}$) remain relatively stable over the whole time period, and represent, on average, 3.44 % (median 2.21 %) of loans before and 3.19 % (median 1.99 %) after IFRS adoption. Regulatory capital ratios ($RegCap_{it}$) remain basically similar in both time periods. Earnings before taxes and loan loss provisions ($EBTLLP_{it}$) increase slightly, however, this increase is statistically not significant. Besides the impressive loan growth the most significant change between the two time periods relates to our dependent variable the level of loan loss provisions ($LLP_{it}$). $LLP_{it}$ decreases significantly from a mean of 0.72 % (median 0.54 %) to 0.49 % (median 0.32 %) after IFRS adoption. Taken together, descriptive analysis suggests that although expected credit risk in European banks' balance sheets increased in the IFRS period, as indicated by significantly higher loan growth, bank managers decreased their loan loss provisions.

**Table 3: Descriptive statistics of bank-specific variables (period 2000 – 2007)**

| Local GAAP | | | | | | | |
|---|---|---|---|---|---|---|---|
| M | 80400. | .007 | .0 | .001 | .10120 | .1 | .0144 |
| M | 8.39 | - | .0 | - | - | .0 | - |
| p | 6607.6 | .002 | .0 | - | .03582 | .1 | .0157 |
| p | 25182. | .005 | .0 | .000 | .08791 | .1 | .0206 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | p | 127789 | .008 | .0 | .003 | .14933 | .1 | .0273 |
| | M | 475451 | .132 | .4 | .166 | 1.0907 | .2 | .5584 |
| | S | 110719 | .009 | .0 | .017 | .14406 | .0 | .1754 |
| | N | 297 | 297 | 27 | 277 | 297 | 3 | 297 |
| IFRS | | | | | | | | |
| | M | **116947** | **.004** | .0 | .004 | **.16649** | .1 | .0257 |
| | M | 38.60 | - | .0 | - | - | .0 | - |
| | p | 8098.8 | .001 | .0 | - | .09273 | .0 | .0156 |
| | p | **36928.** | **.003** | .0 | .001 | **.14774** | .1 | .0210 |
| | p | 139776 | .005 | .0 | .004 | .22394 | .1 | .0271 |
| | M | 927673 | .094 | .3 | .290 | 1.9145 | .1 | .5804 |
| | S | 170775 | .010 | .0 | .027 | .17912 | .0 | .0381 |
| | N | 260 | 260 | 25 | 254 | 260 | 2 | 260 |

*Notes*: This table presents descriptive statistics for our bank-specific variables. All variables except *RegCap* are scaled by average loans. The statistical significance of the difference in medians is based on the Wilcoxon/Mann-Whitney test.

***, **, * … significant at the 1 %, 5 %, 10 % level.

*Variable definitions:*

*Loans*, average loans ([$Loans_{it}$ – $Loans_{it-1}$]/2); *LLP,* current year's loan loss provision; *NPL*, non-performing loans; Δ*NPL,* change in non-performing*;* Δ*Loans*, Loan growth ($Loans_{it}$ – $Loans_{it-1}$); *EBTLLP,* Earnings before taxes and loan loss provisions; *RegCap*, Ratio of banks' eligible regulatory capital over risk weighted assets. Variables (except *RegCap*) are scaled by average loans.

Table 4 presents the medians of the dependent and explanatory variables for each country included in our sample. Most European countries exhibit a significant decrease of the ratio of loan loss provisions to average loans, while the level of non-performing loans ($NPL_{it-1}$) relative to average loans and other economic determinants of $LLP_{it}$ remain generally unchanged. Interestingly, the level of loan loss provisions in Denmark turns negative during IFRS adoption period indicating that Danish banks reversed large portions of previous years' loan loss provisions which they built up during local GAAP times. Accordingly, the Danish National Bank states in its Financial Stability Report (2007, p. 76): "The new accounting rules have thus increased equity capital, and thereby the excess capital adequacy, by elements of the amounts that were previously reserved for provisions, without affecting the risk and risk profile." This statement and several other phrases from the financial statements of banks suggest that banks recognized significantly lower loan loss provisions for the same level of credit risk after IFRS adoption.

**Table 4: Descriptive statistics of bank-specific variables by country (period 2000 – 2007)**

| C<br>ou | M<br>e | M<br>e | M<br>e | M<br>e | M<br>e | M<br>e | M<br>ed |
|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| B | L | 1 | .0 | . | .0 | . | . | .0 |
| | IF | 2 | .0 | . | .0 | . | . | .0 |
| (3 | D | + | - | - | + | + | - | - |
| D | L | 2 | .0 | . | - | . | . | .0 |
| | IF | 4 | - | . | .0 | . | . | .0 |
| (7 | D | + | - | - | + | + | + | - |
| Fi | L | 4 | .0 | . | .0 | . | . | .0 |
| | IF | 4 | .0 | . | - | . | . | .0 |
| (2 | D | + | - | + | - | - | + | + |
| Fr | L | 1 | .0 | . | .0 | . | . | .0 |
| | IF | 2 | .0 | . | .0 | . | . | .0 |
| (9 | D | + | - | - | - | + | - | + |
| Gr | L | 1 | .0 | . | .0 | . | . | .0 |
| | IF | 1 | .0 | . | .0 | . | . | .0 |
| (7 | D | + | - | + | - | + | - | + |
| Ir | L | 2 | .0 | . | .0 | . | . | .0 |
| | IF | 7 | .0 | . | .0 | . | . | .0 |
| (4 | D | + | -* | - | + | + | + | -* |
| Ita | L | 8 | .0 | . | .0 | . | . | .0 |
| | IF | 1 | .0 | . | .0 | . | . | .0 |
| (2 | D | + | - | - | - | + | - | + |
| N | L | 3 | .0 | . | .0 | . | . | .0 |
| | IF | 1 | .0 | . | .0 | . | . | .0 |
| (6 | D | + | - | - | + | + | + | + |
| Po | L | 1 | .0 | . | .0 | . | . | .0 |
| | IF | 2 | .0 | . | .0 | . | . | .0 |
| (5 | D | + | - | - | - | + | + | - |
| Sp | L | 2 | .0 | . | .0 | . | . | .0 |
| | IF | 5 | .0 | . | .0 | . | . | .0 |
| (8 | D | + | - | - | + | + | * | - |
| S | L | 8 | .0 | . | - | . | . | .0 |
| | IF | 1 | - | . | - | . | . | .0 |
| (4 | D | + | - | - | + | + | - | +* |
| U | L | 2 | .0 | . | - | . | . | .0 |
| | IF | 1 | .0 | . | .0 | . | . | .0 |
| (1 | D | - | + | - | + | + | + | - |

*Notes*: This table presents descriptive statistics for our bank-specific variables. All variables except *RegCap* are scaled by average loans. The statistical significance of the difference in medians is based on the Wilcoxon/Mann-Whitney test. ***, **, * … significant at the 1 %, 5 %, 10 % level.

*Variable definitions:*

*Loans*, average loans ([$Loans_{it}$ – $Loans_{it-1}$]/2); *LLP,* current year's loan loss provision; *NPL*, non-performing loans;

$\Delta NPL$, change in non-performing; $\Delta Loans$, Loan growth ($Loans_{it} - Loans_{it-1}$); *EBTLLP,* Earnings before taxes and loan loss provisions; *RegCap*, Ratio of banks' eligible regulatory capital over risk weighted assets. Variables (except *RegCap*) are scaled by average loans.

Table 5 presents the institutional characteristics of our sample countries. The institutional variables are drawn from Caprio et al. (2007) who calculate the variables from the database generated by Barth et al. (2001, 2004, 2006). We include a variable OFFICIAL, which is an index of the power of the supervisory agency. OFFICIAL is an indicator variable (ranging from 0 to 14) that captures the power of supervisors to demand information and/or take legal action against auditors, to restructure or reorganize troubled banks, and particularly interesting for our study, to require banks to provision for potential losses. CAPITAL is an index of stringency of regulatory capital requirements (ranging from 0 to 6). It captures information on what is included in regulatory capital, e.g. whether unrealized losses in the securities portfolio and/or the market value of loan losses is deducted from reported accounting capital. CAPITAL also captures the minimum capital requirements. We further use Caprio et al. (2007) measure of dispersed ownership. Under their definition a bank is widely held, if no legal entity owns 10 percent or more of the voting rights. WIDELY measures what fraction of a country's ten largest banks is widely held, i.e. has no controlling owner.

The power of official supervisory authorities (OFFICIAL) is highest in Portugal and UK and lowest in Italy and Sweden. Regulations for regulatory capital (CAPITAL) are most restrictive in Spain, Italy and Finland and least restrictive in Ireland. Not surprisingly, UK and Irish banks have the most dispersed ownership (WIDELY). Ownership of banks is more concentrated in Finland, the Netherlands and Sweden.

**Table 5: Institutional characteristic of sample countries**

| | OFFICI | CAPITAL | WIDELY |
|---|---|---|---|
| Belgium | - 8 | - 2 | - 0.22 |
| Denmark | | | |
| Finland | 8 | 4 | 0.00 |
| France | 7 | 2 | 0.50 |
| Greece | 10 | 3 | 0.13 |
| Ireland | 9 | 1 | 1.00 |
| Italy | 6 | 4 | 0.33 |
| Netherlands | 8 | 3 | 0.00 |
| Portugal | 13 | 3 | 0.17 |
| Spain | 9 | 4 | 0.20 |
| Sweden | 6 | 3 | 0.00 |
| UK | 11 | 3 | 0.83 |
| | | | |
| Country | 8 | 3 | 0.20 |

*Notes*: OFFICIAL is an index ranging from 0 to 14 with higher values indicating more supervisory power. CAPITAL is a index of stringency of regulatory capital requirements. OFFICIAL and CAPITAL are calculated by Caprio et al. (2007) using the database from Barth et al. (2001, 2004, 2006). WIDELY is created by Caprio et al. (2007) and measures what fraction of a country's ten largest banks is widely held, i.e. has no controlling owner. A controlling owner is defined as a shareholder who controls over 10 percent of the votes.

Table 6 presents Spearman correlations among the loan loss provisions and the institutional characteristics. Loan loss provisions have a significant positive Spearman correlation coefficient with the supervisory oversight variable OFFICIAL. This is in line with the conjecture that banks in more powerful supervisory regimes recognize larger loan loss provisions. The significantly positive Spearman correlation coefficient between LLP and WIDELY suggests that banks from countries with more dispersed ownership structures have higher loan loss provisions. The correlation between LLP and CAPITAL is positive, but insignificant. CAPITAL and OFFICIAL correlate negatively indicating that official supervision and restrictive bank capital regulation are substitutes rather than complements in bank regulation and supervision. Countries with more dispersed ownership structures tend to have less restrictive capital regulation, as indicated by the negative and significant relationship between WIDELY and CAPITAL.

**Table 6: Spearman correlation coefficients between loan loss provisions and institutional characteristics**

| | L | OF | C | WI |
|---|---|---|---|---|
| L | 1. | | | |
| O | **0.** | 1.0 | | |
| F | **1** | 00 | | |
| W | **0.** | 0.0 | - | 1.0 |

*Notes*: This table presents Spearman correlation coefficients and significance levels between the loan loss provisions (LLP), official supervisory power (OFFICIAL), stringency of regulatory capital requirements (CAPITAL) and dispersion in ownership (WIDELY).

***, **, * … significant at the 1 %, 5 %, 10 % level.

## Discussion

The effects of IFRS adoption have been analyzed in several contexts for non-financial firms in prior literature. Our study provides first empirical evidence on the accounting quality implications of the mandatory application of IFRS within the banking industry. We predict and find that the application of stricter impairment rules reduces discretion in the main operating accrual in banks' accounts, the loan loss provision. Generally, banks exhibit significantly less income smoothing which is consistent with the theoretical argument of Ewert and Wagenhofer (2005) who show that tighter accounting rules result in less earnings management.

However, banks in stricter supervisory regimes provide to some extent for future expected losses even after the switch to the new accounting regime. Further, the IFRS adoption is attenuated in countries with highly dispersed ownership structures. There are two alternative explanations for this finding: First, the absence of a controlling owner who is monitoring banks' activities and small investors' reliance on simple earnings heuristics provide incentives for bank managers to smooth reported earnings and thereby to mask private control benefits. Alternatively, the higher demand for conservatism due to high degree of separation of ownership control might provide incentives for bank managers to provide more for potential losses.

# Chapter 7: Conclusion and suggestion for further research

**Limitations of the study**

An important limitation of the study relates to data availability. A large number of banks do not provide detailed information in their financial statements regarding vital variables in the analysis. For example, some European banks do not provide clear information regarding fair value disclosures. Other banks do not report non-performing loans and the notional amounts of derivatives. Data limitations resulted in losing something less than the fifty per cent of the population for the value relevance test. However, even with this sample the number of banks is comparable to the samples of other studies (Barth et al., 1996).

Another limitation of the value relevance tests is the measurement of some variables. For example, due to the fact that 'core deposits' (the CORE variable in the value relevance) are not observable, a proxy variable used which equals deposit liabilities with no stated maturities (i.e. demand deposits). Non-performing loans, NPL, which control for default risk, is another proxy variable. The fact that there is some measurement error in these proxy variables makes the interpretation of the findings of the value relevance part a more difficult task.

The anticipation problem, people act so as to anticipate future events. If researchers seek to measure the impact of an event purely by looking at what happens after it, they may therefore underestimate its effects, some of which may precede it. Strictly, of course, it is nonsense to speak of an event's effects preceding it. But the subjects of study in financial reporting research are sometimes chains of events over a period of time, ie, in the case of IFRS adoption, various events spread over a number of years that made mandatory adoption in the EU more or less likely or that affected the form that adoption would take, followed by actual adoption. In the period before actual adoption, some of the effects of adoption may be anticipated by the market, and so reflected in market prices, as adoption becomes more or less likely and as views on its likely costs and benefits change. It is difficult enough to be confident about the effects of a major event such as IFRS adoption even when research focuses on what follows it. Working out which of its effects preceded it, ie, were anticipated by the market, is even more difficult. None the less a number of studies have tackled this task. We review them in Chapter 5, 'The cost of capital', as they are particularly relevant to this issue.

The transition problem, even when IFRS adoption occurs, the change is not clear-cut. Firms may release information in advance of actual results so as to prepare the market for what is to come, they produce interim results before they produce full-year results, and investors use information from other firms to estimate what IFRS information from a firm in which they are interested might look like. Studies that treat pre-adoption and post-adoption periods as contiguous but separate therefore risk treating periods when there is in fact information available on a mixture of bases as though they belong clearly in one category or the other.

**Recommendations for future research**

This thesis deals only with some countries. However, IFRS have been adopted by over 100 countries around the world. An interesting study would be to extend the research to a worldwide sample including as many countries as possible. Furthermore, the analysis can be extended to more years to test whether the results sustain in the long-run. For, example a future study may examine whether fair values under the IFRS remained value relevant during the period of the financial crisis. Fair values have been accused of not reflecting the 'true' values of the financial assets when the markets are in disorder and sometimes inactive.

The results of this thesis apply only to banks. However, a future study can test whether the results apply to other industries of the economy such as insurance companies or mutual funds. These firms also hold a large number of financial assets and liabilities in their balance sheets recognised in fair values. Results can also be provided for the economic consequences of the mandatory adoption of IFRS on insurance companies.

The methodology of this thesis involved the use of empirical models to statistically test the hypotheses. However, an alternative research methodology could be a combination of quantitative and qualitative approach. For example, questionnaires could be sent to both banks' CFO and Analysts asking them to comment on the perceived relevance and reliability of fair values estimates, using for example Likert scales. Moreover, they could be asked for the perceived economic consequences of the mandatory adoption of IFRS on banks' cost of equity capital.

Finally, given that the book value of equity of banks incorporates a significant amount of fair values (e.g., financial assets at fair value through profit or loss), another avenue for future research is to examine indirectly the value relevance of fair values by developing a model that regresses market values on banks' book value of equity. Moreover, similar to this type of study can be extended to test the change in the value relevance of the book value of equity of banks from the pre-IFRS to the post-IFRS period.

**Conclusion**

The findings of this study contribute to our knowledge and understanding of the relevance and reliability of fair value accounting. A plethora of studies in the literature examined the value relevance of financial instruments' fair values. However, all these studies deal with US GAAP. The results indicate that fair value recognitions of derivatives are value relevant, whilst fair value disclosures are not.

Assuming that the results of the studies hold also for European banks and for different accounting standards may lead to incorrect conjectures. For example, US market is regarded as highly efficient, whereas many European markets, such as the Polish and the Portuguese, may be less efficient or even inefficient. Thus, this study extends the results of the US literature to European banks and the IFRS context. The findings support the value relevance of fair value disclosures (required under IAS 32) of loans and other debt over their amortized costs (required under IAS 39). In addition, findings also support the value relevance of the fair values of derivative recognition. For the first time, many European banks have recognized derivatives in the financial statements.

Given that the sample of this thesis is a cross-country product it is likely that the relevance and reliability of fair values is subject to the institutional differences of European countries. Thus, this study contributes also to international accounting literature that examines the impact of institutional differences between countries on the information content of accounting numbers. In particular, the scores provided are used to classify countries into strong enforcement rule and weak enforcement rule countries. It is argued that banks from weak enforcement countries have more freedom to manipulate fair values. This combined with low capital adequacy ratios and high earnings variability result in lower coefficients for the fair values of loans and trading derivatives, respectively.

This thesis also enhances our understanding of the risk management policies of European banks. Findings reveal that banks make wise use of hedging derivatives which is to hedge the maturity gap of financial assets and liabilities with maturities over a year. With respect to the economic consequence test, this thesis contributes to the literature in at least two ways. Three recent studies provided evidence on the economic consequences of the mandatory adoption of IFRS.

However, all of these studies examined a mixture of different industries. For example, examines firms from 18 EU countries including financial institutions as one more industry in the analysis. Exclude financial institutions from their analysis. In contrast, this thesis focuses in a single and important industry of the economy, that of commercial banking. It is possible that the economic consequences from the mandatory adoption of IFRS differ from sector to sector. Moreover, banks are a vital industry in an economy and a decrease in their cost of equity capital may leads to a reduction in interest rates with which they charge their customers, other things being equal.

Due to data availability at the time of the studies, cover only limited number of years after the mandatory adoption of IFRS. For example, cover 2001 – 2005 periods with just one year after the mandatory adoption. In contrast, this thesis covers a balanced period with three years before (2002 – 2004) and three years after (2005 – 2007) the mandatory adoption of IFRS. Covering more years in the post-IFRS period strengthens the findings of the study showing that the economic consequences sustain in the long-run.

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