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IFRS 7: Disclosure of Financial Instruments  
Do European banks comply with the new standard in terms of credit risk and risk management?  

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Abstract

With the increasing complexity of banking operations, the demand for extensive disclosure has advanced over the years. In 2007, the International Accounting Standards Board (IASB) has consolidated and expanded disclosure requirements related to financial instruments in IFRS7. Arguably, the adoption of IFRS7 in Europe was met with substantial differences in implementation among countries. Moreover, IFRS7 was launched a few months before the global financial crisis hit Europe.

This study examines the level of disclosure according to IFRS7 of 12 banks spread across Europe using their annual accounts from 2007-2010. The banks were chosen on the basis of their market capitalization by the end of 2007. A disclosure index based on IFRS7 was created for this study to evaluate the level of disclosure of the banks. After examining the disclosure level, this paper analyzes if there is a correlation between compliance on disclosure index and bank performance as measured by the Total Shareholder Return. This study aims to find out if a high compliance significantly affects performance in terms of TSR and if it helped banks weather the global financial crisis.

The background part provides a broad perspective on disclosure, financial reporting, accounting standards, and IFRS7. It also provides a situation on bank run, and on the recent financial crisis. With the use of secondary data from published accounts of banks, the empirical study presents the disclosure level of banks and TSR performance. The findings suggest that most banks have a selective compliance and moderate fulfillment on disclosure obligations. Inadequacy is particularly seen in areas where additional disclosure is required by using the implementation guidance of IFRS7. The correlation between compliance and performance is seen to be very minimal which suggests that a high disclosure during a financial crisis does not help prevent huge financial losses.

Keywords: Disclosure, Financial Reporting, IFRS7, Investor Confidence, Total Shareholder Return
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1. INTRODUCTION

A significant development in the conduct of monetary policy over recent years has been the shift to more transparency through disclosure by different banks. As time passed, financial reporting has evolved with many changes introduced since the first financial statements were published in 1930’s (Ramanathan 2009). It has now become a practice by many companies to secure information related to performances, bank objectives, operating procedures, and decision making processes. For Healy and Palepu (2001), the popularity of disclosure on the performance of entities has grown in recent years although Thomas et. al (2006) thinks that it remains elusive and that progress has been slow in some countries. According to Kieso et. al (2003), a full disclosure principle requires financial reporting of information that is deemed useful for the judgment of informed users. It makes important data on financial matters available to academics and policy makers (Thomas et. al 2006). James and Lawler (2010) echo this view that an increased transparency is likely to be beneficial. Over the years, disclosure has become an indispensable part of the financial statements and the requirements continue to increase. It could be seen that much of European Financial Regulation is based on the disclosure model.

The launch of IFRS7 in Europe has significantly expanded the disclosure of entities; particularly users of financial instruments. Bischof (2009) supported this view in his research on the first time adoption of IFRS7 in Europe. Many academics like Tang (2010) Thomas et. al (2006), and Bischof (2009) agree that IFRS7 is a logical step towards increased transparency in the banking industry. With this, it is interesting to pursue a study on the performance of banks in achieving this objective. Using published reports from financial years 2007 to 2010, this paper will examine the disclosure quality of 12 selected banks in Europe using established criteria.
2. THEORETICAL FRAMEWORK

2.1 Disclosure

It could be seen that requirements in disclosing information has increased over the years. According to Kieso et. al (2003), the reasons for this increase in disclosure requirements are varied. It includes complexity of business environment. Increasing complexity of operations resulted to an increase in reliance on financial statements to explain transactions and its effects. Another reason presented by Kieso et. al (2003) is the necessity for timely information. They argued that users of financial information demands more current and predictive information. Another reason presented is to increase control and monitoring of company activities. Kieso et. al (2003) shared two problems though in implementing a full disclosure principle. One is cost of disclosure and another is information overload. For instance, an increase in disclosure could result to an increase in accounting staff for some companies. In addition, some disclosure requirements could be very detailed to the point that users have difficulty processing the information (Kieso et. al 2003).

The process of continuously increasing the disclosure requirements has been never-ending as evidenced by the launches of new financial reporting standards by the International Accounting Standards Board (IASB). The IASB was said to be patterned after the US GAAP but has even went further with their requirements (Elliot et. al 2006).

2.2 Financial Reporting

Despite the existence of different financial reporting models for communicating the performance of a company, it was deemed inadequate in terms of its capability to meet the growing information needs of users. In addition, there were perceived differences in the financial reporting of different countries which made it difficult to compare reports internationally. History attests that establishing a financial reporting standard for Europe was difficult because of the different accounting philosophies existing within member states (EUCE 2009). Previous research conducted by Tang (2010) revealed that different banks have varying levels of disclosure. Tang (2010) argues that better-performing banks are less likely to disclose accurate information because a detailed disclosure could be used against them by their industry counterparts or competitors.

According to Elliot et. all (2006), the reasons for the differences in financial reporting include:

- Character of the national legal system
• Way of industry financing
• Relationship between the tax and reporting systems
• Influence and status of accounting profession
• Magnitude to which accounting theory is developed
• Accidents of history
• Language

Elliot et. al (2006) argues that national legal system could contribute to the differences in the regulation of financial reporting due to the level of flexibility it allows in reporting. Those legal systems based on Roman law for instance tend to be less flexible than that of those based on common law. This makes countries vary in terms of compliance and completeness of information. The way the industry is financed is one of the considerations according to Elliot et. al (2006) because the information needs of the financier varies. For instance, the information needs of equity investors vary from that of loan creditors. The financial reporting therefore could vary in terms of how most companies operating in a country are funded. Although Ketz (2008) thinks that information that is crucial to capital providers may also be useful to other users of financial reporting, Elliot et. al (2006) believes that the predominant provider of capital in a country influences the financial reporting of a country. Relationship between the tax and reporting systems could also influence the differences in financial reporting because of the differences in rules for computing for tax and computing for profit for financial reporting systems (Jenkins 2011). In UK and Netherlands for instance, legislation for tax purposes is usually more prescriptive but their financial reporting environment is less prescriptive (Elliot et. al 2006). The advancement of accounting profession who produces relevant and reliable reports has also influenced the development of accounting regulations and reporting of a country. Many countries require companies to prepare annual accounts while in some countries where the level of need for market-sensitive information is lower, accountants usually just perform bookkeeping tasks. According to Russell (2011), accounting theory creates a framework for accounting practices. Elliot et. al (2006) supports this by arguing that accounting theory has an influence on accounting practice. The extent to which accounting theory is developed is one of the reasons identified why there are differences in financial reporting. Some theories that are the basis of accounting practices were developed at academic level while the others at professional level. History of failures has also contributed to the differences in financial reporting of countries. Following the global financial crisis that broke in 2007, many countries adopted new rules to disclose information (Bentley 2010). Certain scandals that broke from company failures affected financial reporting in some countries (Elliot et. al 2006). According to Bentley (2010), after what happened to the US for instance, the Security and Exchange Commission wants to have additional transparency among companies so that investors could make more informed decisions. A popular cause of difference among countries is language. Some countries are known for
exclusively using their own language, which has prevented them from gaining from the wisdom of other countries (Elliot et. al 2006)

2.3 Accounting Standards

Triggered by the economic consequences of having different accounting practices (Elliot et. al 2006), many academics and professionals were aligned calling for the regulation and increase in consistency of financial reporting. In addition, there were also recommendations to widen the scope of reporting as opposed to just increasing the frequency of the reporting. In early 2000, the European Commission moved to propose the creation of unified international accounting standards for companies in EU to harmonize financial reporting (EUCE 2009).

Elliot et al (2006) outlined the arguments in favor of having a single set of standards for companies. It was summarized into four arguments namely: comparability, credibility, influence, and discipline. First, it argued that to allow users of financial statements make a legitimate comparison of performance, relevant and reliable data must be standardized. It is deemed useless to make comparisons if companies were allowed to select accounting policies that are convenient or favorable for them, with the purpose of disguising or withholding performance news. Second, this selection of accounting policies could result to a lost of credibility. Elliot et. al (2006) expounded that if companies under similar situations disclose significantly different reports as a result of their freedom to choose accounting policies, credibility of reports will be lost. Elliot et. al (2006) added that having a uniform standard is essential if financial reports will disclose an accurate view. Third, the establishment of standards has promoted an evaluation of proposed policies for individual reporting problems and stimulated accounting thought and development of a conceptual framework. Fourth, Elliot et. al (2006) assumes that even in the absence of standards, companies will eventually be disciplined by the financial market. Imposing a mandatory standard therefore could promote an active regulation that could prevent a major loss to a company and to other investment decision makers.

2.4 IFRS Adoption

The first time adoption of IFRS entailed major changes in accounting policy and disclosures. With this, many companies had to transition their financial statements from GAAP to IFRS and this required the restatement of accounts (Elliot et. al 2006). Coming with this transition is a disclosure requirement on the effect of the transition on the company’s cash flow, financial performance, and
financial position (Elliot et. al 2006). Starting 2005, listed companies in countries belonging to the European Union were required to report consolidated financial statements that follows the provisions of IFRS (Ball 2006). The adoption of IFRS in many countries, including all of Europe, is deemed helpful for investors and users of financial statements because it improves the quality of information and reduces the cost of comparing different investments.

Ball (2006) outlined the advantages of IFRS for investors in his report on IFRS Pros and Cons.

- It is also helpful for companies as investors, provided with a more accurate, comprehensive, and timely financial statement information, could lower the risk involved with a more-informed valuation in the equity markets.

- For small investors, IFRS provides a better playing field against big investors as they get the same financial statement information. IFRS reduces the risk that small investors take when they are dealing with more-informed professionals.

- By standardizing reporting formats and accounting standards, IFRS eliminated many international differences. This has resulted to a decrease in cost of processing financial information.

- As a result of the reduced cost, there is an increase in efficiency with which the stock market incorporates. An increase in market efficiency is expected to benefit most investors.

- To some extent, the decrease in differences in accounting standards among countries helps in removing barriers to cross-border acquisitions and divestitures. Investors therefore are expected to enjoy better takeover premiums.

Ball (2006) further adds that IFRS brings about other indirect advantages for the investors. He argued that an increased in transparency for instance makes managers uphold the interest of shareholders. For example, a timely recognition of loss in the financial statement increases the incentives of managers to focus on loss-contributing investments and engage in fewer new investments with negative net present value. Ball (2006) therefore concludes that having a better transparency and loss recognition increases efficiency between firms and their managers and improves corporate governance.
2.5 Establishment of IFRS 7

In an attempt to constantly improve standards, the IASB has integrated existing and new disclosure requirements related to financial instruments in IFRS7. The new requirements are meant to improve the information on financial instruments that is provided in company’s financial statements (IASB 2005). In its press release in 2005, IASB announced that IFRS 7 is replacing IAS32 Disclosures in the Financial Statements of Banks and Similar Financial Institutions and some of the requirements in IAS 32 Financial Instruments: Disclosure and Presentation. According to Tweetdie (2005), IASB Chairman, “IFRS7 leads to greater transparency about the risks that entities run and provides better information for investors and other users of financial statements to make informed decisions about risks and returns.”

For perspective, IFRS7, described by PWC (2007) as an expanded replacement of IAS32, complements the principles for recognizing, measuring and presenting financial assets and financial liabilities in IAS 32 Financial Instruments: Presentation and IAS 39 Financial Instruments: Recognition and Measurement (IASC 2009). It consolidates and expands several disclosure requirements and introduced new disclosures that are deemed as both significant and challenging (PWC 2007). In general, the level of disclosure required by IFRS7 is higher than preceding standards. This explains why a number of requirements of IFRS7 are similar to IAS32. The quantitative and qualitative market risk disclosures are just some of the new addition to the new disclosure standard that is IFRS7. According to Epstein and Jermakowicz (2008), the qualitative disclosures details the management’s objectives, policies and processes for managing risks while the quantitative disclosures describe the scope to which the entity is exposed to risk, based on the information it provides internally to the entity's key management personnel. When combined, both disclosures provide an overview of the entity's use of financial instruments and the exposures to risks they create (Epstein and Jermakowicz, 2008). The addition of more disclosure requirements in IFRS7 is part of IASB’s long term project with regard to financial instruments (Bischof 2009).

IFRS7 was implemented for financial years beginning after December 31, 2006 (PWC 2007). Unlike IAS 30, IFRS7, as a regulation, is not limited to banks, instead it is for use by all entities using financial instruments. While it required all companies engaged in financial instruments to follow (IASC 2010), the new standard has a particularly strong effect on the banking industry, where financial instruments significantly account for its total assets and liabilities.

In his report on the effect of IFRS7 on bank disclosure on Europe, Bischof (2009) distinguished the two different types of disclosure in IFRS 7:
The standard demands for the disclosure of the significance of measurement categories used in compliance with IAS 32 and of governing accounting policies. For example, assumptions made in determining values.

It is required to disclose both qualitative and quantitative information about credit risk exposures, market risk exposures, and liquidity risks exposures. Credit risk is said to be a function of customer’s credit quality because it is the risk of defaults in payments to be given to customers. A maturity gap in a company’s asset and liability management that arises when obligations to be serviced exceed the entity’s current liquidity results to a liquidity risk. An entity’s exposure to fluctuations in market prices gives rise to market risks.

With the implementation of IFRS7, there has been cross country differences in the change of disclosure quality. Ball et. al (2003) argued that institutional environment that rewards preparers with incentives for disclosure rather than content of accounting standards, influenced accounting quality. Bischof (2009) added that since bank supervision is not yet fully harmonized in Europe, supervising authorities is responsible for creating the imperative features of the accounting environment at the local level. Bischof (2009) believes that these differences in accounting environment per country could partially explain the heterogeneity in the compliance of IFRS7.

2.6 Banking Regulations Issued by the Basel Committee on Banking Supervision

With the resolution of the financial crisis, there was a wide range of proposals aimed at addressing the various regulatory shortcomings that have allowed banks to take excessive risk taking. MAS (2006) argued that financial institutions such as banks should regulate the level of credit risk that it can bear and that it should establish a strategy for risk management that is aligned with its credit risk tolerance. It further adds that credit risk management should be part of an integrated approach to the management of all financial risks. This involves having a framework that adequately identifies, measures, monitors and controls credit risk. The Enhancing Bank Transparency Report (1998) of Bank for International Settlements communicated the importance of transparency in banking activities and in the risks inherent in those activities such as credit risk. Having more transparency through an improvement in public disclosure of banks strengthens the safety and soundness of the banking system.

Several bank failures manifested in the 1980’s, a period usually called as a loan and savings crisis period (Zaher 2006). During this period, banks granted loans
extensively while the external indebtedness of countries was burgeoning to an unsustainable level. A bankruptcy scenario of major bank players grew as an aftermath of low security. In order to prevent the looming bankruptcy, the Basel Committee on Banking Supervision drafted a standard called Basel 1 Capital Accord that sets the minimum amount of capital that banks should hold (Zaher 2006). This standard was also called the minimum-risk based capital adequacy. It was aimed at assessing capital in relation to credit risk, or the risk that a loss will be experienced if one of the parties fails to fulfill its obligations (IFRS 2008). The purpose was to promote the stability of the international banking system and to set up a fair system that will minimize the competitive inequality among banks. Basel 2, an extension of Basel 1 and implemented in 2007, is a comprehensive framework that determines regulatory capital requirements and measures risk (BIS 2011). While the Basel Committee does not possess an authority to enforce regulations, most member countries usually implement the committee’s agreements.

The beginning of the financial crisis which occurred in 2007-2009 was a credit boom that transpired in extremely indebted economies with investors having a high appetite for risks (Zaher 2006). During the crisis, there was a major confidence loss in bank’s capital standards. The fallout of the crisis led to calls for more reforms in regulation. As a result, the Basel Committee formed a new regulatory standard on bank capital management and liquidity. The new global standard called Basel 3 was developed because the recent financial crisis revealed deficiencies in financial regulation and existing standards (BIS 2010). Aside from strengthening bank capital requirements, Basel 3 integrates new regulatory requirements on bank liquidity and leverage. In response to the financial crisis, the Basel Committee wants to promote a more resilient banking sector by improving the banking sector’s ability to handle financial and economic shocks (BIS 2009). Basel 3 was drafted to prevent the financial system from suffering from the same type of meltdown and economic slowdown which occurred between 2007 and 2009. Hirtle (2011) argues that one way to prevent a bank failure is to require banks to hold more capital. The new standard now includes having capital buffer requirements and having a higher quality of capital than what Basel 2 requires (Moody’s 2011). This buffer will help banks to maintain capital levels during a major downturn and that they will have fewer concerns in exhausting capital buffers by way of dividend payments. Hirtle (2011) narrates that the financial crisis, the current and historical ones includes, has provided information to help determine the capital conservation buffer since we can measure how the capital positions of banks were affected during the period of turbulence.
2.7 Financial Crisis

The financial crisis came on the heels of the implementation of an expanded disclosure standard known as IFRS7 in Europe. IFRS7 was launched a few months before the financial crisis. The European economy was plagued by a series of financial crisis that broke in the late summer of 2007 (Nemeth 2010). Similar to previous financial crisis in other markets, the recent financial crisis in Europe was preceded by a long period of rapid credit growth, abundant availability of liquidity, rising asset prices, low risk premiums, strong leveraging and development of bubbles in the real estate sector (EU Commission 2009). During the financial crisis, many investors withdrew from securities markets and placed their funds on safer assets. The financial crisis had a pervasive impact on European banks and its operations. Banks were the focal point of the financial crisis in 2007-2009. The financial crisis revealed several loopholes in the banking industry. According to EU Commission (2009), when the crisis started to surface, banks became dubious about the credit worthiness of their counterparts as heavy investments were made on various financial products that are deemed as highly complex and overpriced. This has resulted to the closure of interbank market and skyrocketing of risk premiums on interbank loans. In addition, banks had to deal with serious liquidity problems which came as a result of their failure to rollover short-term debts. The financial system meltdown grew in scope, with banks restraining and cutting down credit, sudden drop of economic activity, and deterioration of loan books. The threat made investors, as described by EU commission (2009), rush for the few safe havens that were remaining such as sovereign bonds. It could be seen that financial instability may decrease investor confidence and could prolong recovery following a crisis.

Mora (2010) compared the financial crisis of 2007-2009 with previous financial crises. She argued that the 2007-2009 crisis had a similarity in terms of the need for liquidity by businesses and households and this was unmet by market-based sources of funding. It was difficult or even impossible to borrow in securities market. The difference is that the banking system was significantly affected by credit losses and uncertainty surrounding the losses compared to previous crises. Mora (2010) added that beliefs about risks or uncertainty in the economy may have influenced the investors who supplied market funds. This resulted to a shift of funds to low risk assets.

Freixas (2010) argues that the financial crisis that started in 2007 has affected the banking industry and banking regulations. The financial crisis almost spared no banks but some banks have been more vulnerable than others, showing major differences in financial positions and shareholder value. This paper is therefore seeking to find out the correlation between the level of bank disclosure and movement of shareholder value.
2.8 Investor Confidence, Market Discipline, Risks

According to Elliot et al. (2006), the dynamism of international financial markets brought the influx of different kinds of financial instruments and these could potentially contribute to the risks that an entity faces. There are many kinds of instruments that are considered versatile and it is this versatility that could cause problems due to the risks it entail (Hull 2007). The operation of many European banks have become increasingly intricate and this has resulted to a difficulty in managing their risk controlling behaviors. Hull (2007) argues that operations of banks are prone to many risks and that trading operation gives rise to these risks. For Masschelein and De Ceuster (2003), the risk sharing and monitoring services that banks make, paves the way for distinct contract situations. For this reason, international agreements on how banks should be regulated have now been established. Although there are existing regulations for corporations, Masschelein and De Ceuster (2003) argued that special regulations for bank failures are justified due to the unique nature of banks. Banks and financial institutions in many countries are regulated to check and control their liquidity and risks. Banks are now required to sustain for the risks they are holding and that this does not significantly vary from other regions. As an example of the requirements, regulators are tasked to ensure that the total capital of a bank is sufficiently high that the probability of a bank failure is kept low (Hull 2007). There are many countries now the implemented a guaranty program to protect small depositors from losing in the incidence of bank failures (Hull 2007).

The Bank for International Settlements (2001) recognizes that market discipline has the capacity to strengthen capital regulation and supervisory tasks aimed at promoting safety and soundness in banks and financial systems. It further adds that market discipline offers strong incentives for banks to operate in a safe, sound and efficient manner. Notwithstanding the incentives, there could be different reasons why a growing reliance on bank supervision on market discipline through disclosure standards such as IFRS7, could run against the objective of enhancing competitive image (BIS 2001).

On investor confidence, the premise was investors could make optimal decisions in relation to resource allocations, and wealth maximization if they are provided with sufficient information which could be found in financial disclosures. Executives and academics from different fields support this view. Cohen and Hathaway (2003) share the view that financial disclosure is the beginning of a decision and for investors to make good decisions, they have to gain access to truth. NEF (2006) supports this by saying that transparency is a starting point of greater openness and shared information that can promote working partnerships among banks, lenders, and investors. Garton (2003) believes that the integrity of the society is weakened if the disclosure is not accurate or is misrepresented; otherwise, there could be a non-functioning market. Mora (2010) explained that
banks suffered during a financial crisis due to the panic arising from the lack of information and loss of confidence. Uncertainty of exposures made it difficult for counter-parties to gauge each other’s soundness. Having no access to information could make policies and programs implemented from partial studies and incomplete analyses. Norris (2003) thinks that bad financial disclosure has risen over the years due to the desire of companies to get stock prices up. This is supported by a study conducted by Kothari et. al (2005) on the timeliness of public disclosure of good news and bad news. The study revealed that if companies leak and reveal good news to investors but delays and accumulates disclosure of bad news, the impact of the negative stock price reaction to the accumulated negative news is bigger than the impact of the positive stock price reaction to the positive news.

According to Elliot (2006), for financial information to be useful, it has to be relevant and reliable. To help investors secure markets, information from financial instruments should enter public domain in any given area of financial market activity. With the aid of available information, market actors would customize strategies and investment decisions to what the information is telling thereby resulting to monitoring bank’s risk profiles and influencing bank’s management decisions.

### 2.9 Bank Run

The theoretical issue behind this standard is built upon the premise that there is a confidence problem existing between investors and banks. Having a legal authority and duty to make financial decisions, institutional investors carry both a fiduciary responsibility and an economic interest in ensuring that the management goals of an entity are fully synchronized with their interests. Diamond and Dybvig (1983) share the view that even banks that are considered healthy could also fail and cause the recall of loans and cancellation of investments. According to Ng (2009), previous research conducted by MIT Sloan School of Management supports the view that investors do not easily believe the values being reported by financial institutions. In addition, even if banks claim that it is performing relatively well, investors continue to cast doubts about it. Kothari et. al (2005) added that in an efficient market, investors know that only parts of good news are disclosed to the public and that they normally supplement the remaining good news from the disclosed portion.

To amplify, this paper will discuss the models of Diamond/Dybvig (1983) and Calomiris/Kahn (1991) which have analyzed a possible consequence of the confidence problem, the bank run, and which also point out instruments to prevent it.
Financial intermediaries such as banks are commissioned to create liquid deposits. It is also engaged in monitoring borrowers and enforcing loan covenants. The model of Diamond/Dybvig (1983) which has been used to understand bank runs, analyzes the demand for banks’ liquidity and transformation performances. They outline the pivotal role of the banks in providing liquidity for consumers and in transforming short-term borrowed capital of depositors in long-term loans for companies. They regard the deposit guarantee by the state as the optimal solution to prevent a bank run.

Diamond and Dybvig (1983) first argued that banks should be able to create liquidity via offering deposits that are more liquid than assets being held by entities. There is an investors’ demand for liquidity because the need to consume could be unpredictable. Because of this, investors prefer to know the value of liquidating their assets at several periodic dates as opposed to a having a single date (Diamond & Dybvig 1983). Having deposits that are more liquid than the assets being held by banks could be interpreted as a guarantee set up that puts depositors at a risk of liquidating an asset at a loss. Offering these demand deposits makes the banks more vulnerable to bank runs if many depositors decide to pull out. Diamond and Dybvig (1983) argued that a loss of confidence in the banking system could lead to depositors demanding withdrawal of their funds. The financial crisis that broke in the late summer of 2007 saw sporadic bank runs crippling different parts of the world. According to Diamond and Dybvig (1983), bank runs occur as a result of depositors withdrawing money due to fear of a bank failure. The abrupt withdrawals pressures the banks to liquidate many of its assets regardless of its value or even if it is at a loss. Diamond and Dybvig (1983) further adds that these bank failures cause a disruption in the monetary system and reduction in production. Reduction in production happens during a bank run because banks are pressured to call in loans early.

Having a diversified source of funding could help protect the bank from runs if diversified means that there is no single source of information observable to a large number of depositors. When there is a bank run, it is important that banks are able to convince depositors that it is going to stop soon. Having no dominant news or information shared by depositors makes panic and bank runs baseless.

The model of Calomiris/Kahn (1991) focuses on the moral hazard that exists between the bank and investors. They assume that the banks have the incentives to take high risk without paying attention whether they can pay off their depositors. In doing so, they regard the possibility of investors to demand their deposits back in the short-term as a mean to prevent the management of the bank to take inappropriate risks. Regarding to their opinion, this measure may prevent a bank run finally. Moreover, we will discuss other possible solutions in respect to the confidence problem, namely the self-regulation and the co-regulation. In this context, self-regulation means that the state delegates the authority to the private sector which has to develop appropriate risk management strategies and to
monitor their compliance and finally to improve them. In doing so it is assumed that the banks know the danger of a possible bank run and therefore, they try to solve the confidence problem independently. Another possible way to increase the disclosure of decision-relevant information is the co-regulation which is also called “mandated self-regulation”. It means that a private-sector organization is appointed by the state to formulate and enforce rules on self-regulation within a legal framework.

The International Accounting Standards Board dealing with the European accounting also pursues this approach of a co-regulation. The IASB is entitled by the European Union to develop international accounting standards (IFRS) which are finally enforced by the EU.
3. EMPIRICAL STUDY

3.1 Disclosure Requirements According to IFRS 7

In the following chapter, the disclosure requirements for financial instruments according to IFRS 7 are described. After giving a short insight into the scope, the objectives and the disclosure obligations on the balance sheet and in the income statement the analysis is concentrating on the risk reporting according to IFRS 7. In doing so, the focus is on the disclosure requirements in terms of the credit risk and the risk management as the following empirical examination is concentrating on both these areas.

The reporting obligations of financial instruments have been bundled into one standard since the establishment of IFRS 7. This standard which was passed by the IASB on 18.8.2005 supersedes the bank-specific standard IAS 30 (IFRS 7.45) and the disclosure requirements according to IAS 32.54-95. It is mandatory to apply IFRS 7 to annual periods beginning on or after 1.1.2007, but an earlier application is encouraged (IFRS 7.43). The standard contains the paragraphs 1 to 45 and the appendixes A and B. Appendix A includes definitions of terms which are used within the standard, such as “credit risk”, “market risk” and “liquidity risk”. Appendix B provides explanatory information about the interpretation of the single paragraphs. Additionally, the Implementation Guidance (IFRS 7.IG) and the Basis for conclusions (IFRS 7.BC) can be used; however these explanations do not have to be applied on a mandatory basis.

3.2 Scope and Definitions

The definition of a financial instrument is adopted from IAS 32. A financial instrument is according to IAS 32.11 “any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity”. Based on this definition IFRS 7 shall be applied to all kinds of financial instruments by all companies. This means that the companies are required to provide detailed information about on- and off-balance sheet financial instruments (IFRS 7.4). Thus, the scope of IFRS 7 is more encompassing than IAS 39 (PwC; 2008). However, the following financial instruments are excluded from the application of IFRS 7:

- interests in subsidiaries and joint ventures (IAS 27),
- interests in associates (IAS 28),
- assets and liabilities from employee benefit plans (IAS 19),
- insurance contracts (IFRS 4),
- financial instruments having a share-based payment (IFRS 2),
• contracts of the acquirer for contingent consideration in a business combination (IFRS 3) (IFRS 7.3).

3.3 Objective of IFRS 7

The objective of IFRS 7 can be divided in two parts. On the one hand IFRS 7 obliges companies to disclose detailed statements about the possessed financial instruments in order to provide the users of financial reports with appropriate information with which they are capable to estimate the importance of financial instruments for the financial situation and the performance of the company (IFRS 7.1.(a)).

On the other hand the provided information shall enable the users to evaluate “the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the reporting date” (IFRS 7.1(b)). Additionally, it is mentioned that this objective complement the principles of IAS 32 and IAS 39 (IFRS 7.2). This goal setting documents the purpose of the IASB to create a framework resulting in an efficiently operating market discipline.

3.4 Disclosure Requirements in the Balance Sheet and Income Statement

At different places within IFRS 7 the standard requires companies to disclose information about previously classified categories of financial instruments. According to IFRS 7.6 financial instruments shall be split up into categories, however, the nature of the allocation is mainly left to the company itself. Only the distinction between financial instruments measured at amortized cost and those measured at fair value is mandatory (IFRS 7.B2).

The balance sheet related disclosure requirements are covered by IFRS 7.8-19. According to IFRS 7.8 the carrying amounts of each category of financial instruments, as defined in IAS 39.9, “shall be disclosed either on the face of the balance sheet or in the notes”. Furthermore, IFRS 7.9-11 rules the disclosure requirements of financial assets and liabilities at fair value through profit or loss. Moreover, IFRS 7.12 contains the reclassification of financial instruments in other categories during the reporting period and prescribes that the amount reclassified and the reason for this reclassification shall be disclosed. IFRS 7.13 rules the cases where a financial asset is transferred in such a way that the criteria of derecognition are not completely fulfilled according to IAS 39.15-37 and therefore, the company bears part of the risks and rewards of the ownership
anymore. Furthermore, IFRS 7.14-15 requires the disclosure of the carrying amounts of the provided collateral. In case of a sale of the collateral, without the default by the owner of the collateral, the fair value of the collateral held, the fair value of the sold or repledged collateral and the contract conditions shall be disclosed. When financial assets of the company are reduced by credit losses and records this impairment in a separate account, instead of reducing directly the carrying amount of the asset, the company has to disclose the reconciliation of the changes according to IFRS 7.16. Besides, IFRS 7.17 is concerned with the disclosure requirements of issued financial instruments containing a liability as well as an equity component with multiple embedded derivatives. IFRS 7.18-19 requires companies to provide detailed information about financial instruments with defaults or breaches of loan agreement terms.

The disclosure requirements in the income statement are bundled in IFRS 7.20. The following items can be shown either on the face of the income statement or in the notes. According to IFRS 7.20 (a) net gains or net losses shall be disclosed on

- financial assets or financial liabilities at fair value through profit or loss;
- available-for-sale financial assets;
- held-to-maturity investments;
- loans and receivables;
- financial liabilities measured at amortized cost;

Furthermore, information in terms of the total interest income and total interest expense (IFRS 7.20 (b)), fee income and expense (IFRS 7.20 (c)), interest income on impaired financial assets (IFRS 7.20 (d)) and about the amount of any impairment loss for each class of financial asset (IFRS 7.20 (e)). These presented disclosure requirements were valid at the balance sheet date 31.12.2007. In the course of financial market crisis and the establishment of the IFRS 9 there were modifications within this standard in terms of the disclosure requirements in the balance sheet and of the liquidity risk. However, the thesis is not affected by these changes and therefore, these modifications are not taken into account.

The paragraphs IFRS 7.21 to 7.30 cover further disclosure requirements, such as a description of accounting policies of financial instruments or annotations about hedge accounting. However, these disclosure obligations are not analyzed anymore as the focus of this thesis is only on the credit risk.
3.5 Risk Reporting According to IFRS 7

3.5.1 Basics

IFRS 7.31-42 prescribes a detailed risk reporting of financial instruments. This shall enable the users of financial statements “to evaluate the nature and extent of risks arising from financial instruments to which the entity is exposed at the reporting date” (IFRS 7.31). The scope and the level of detail of the risk reporting shall be oriented on the company’s use of financial instruments (IASCF (2009): IFRS 7.BC40 (b)). Thus, a bank - due to its intensive use of financial instruments – has the highest disclosure requirements. In doing so, the transmitted data shall originate directly from the internal risk management (“Management Approach”) (PwC; 2008). The information can be shown either in the IFRS financial statement or by the means of a cross-reference in another report, however, a summarized presentation is recommended, for instance a description in the risk report (IFRS 7.B6).

The risk reporting in IFRS 7 is divided into qualitative and quantitative disclosure requirements. The qualitative disclosure obligations are composed of three items which shall be disclosed for each type of risk including the credit risk (The credit risk is defined in IFRS 7.A as “the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation”), the market risk (The market risk is regarded in IFRS 7.A as the risk that “the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices”) and the liquidity risk (The liquidity risk is defined in IFRS 7.A as “the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities”). In particular:

First, a description of the exposures to risk and how they arise has to be made for each risk type. Secondly, it is required to make a statement about the objectives, policies and processes of the risk management and about the methods used to measure the risk. This area of the qualitative disclosure requirements will be presented more in detail in the next chapter under the heading “risk management”. Thirdly, any changes in terms of the risk extent, risk management and risk measurement compared with the previous period shall be disclosed (IFRS 7.33).

The quantitative disclosure requirements require according to IFRS 7.34 (a) a summarizing quantitative presentation of the risks assumed for each individual risk type. Additionally, further disclosures in terms of the credit, market and liquidity risk have to be made in compliance with IFRS 7.36-42 unless these disclosures are already made according to IFRS 7.34 (a) (IFRS 7.34 (b)). If there are further concentrations of risk which do not arise from the disclosures requirements of IFRS 7.34 (a) and (b), further statements about the risk concentration are required (IFRS 7.34 (c)). Apart from the supplementary
information about the credit risk which is explained in detail in the following chapter information about the market and liquidity risk are required.

In terms of the market risk IFRS 7 requires a sensitivity analysis for each type of market risk (IFRS 7.40 (a)). The standard divides the market risk in the currency risk, interest rate risk and other price risks (IFRS 7.Appendix A). In addition to the sensitivity analysis IFRS 7.40 (b) and (c) require the company to disclose “the methods and assumptions used in preparing the sensitivity analysis” and the corporation shall inform the users of the financial statements if the assumptions and methods were changed compared to the previous period. Instead of a sensitivity analysis a value-at-risk analysis can be carried out alternatively. For an alternative application the following conditions have to be met: First, the method with which the value-at-risk analysis is performed has to be explained and the main parameters and assumptions underlying the data provided have to be described (IFRS 7.41 (a)). Secondly, the objectives of the applied method and its possible limitations in terms of the reproduction of the fair value of the financial assets and liabilities involved have to be disclosed (IFRS 7.41 (b)).

In terms of the liquidity risk the company preparing the financial statements has to disclose a maturity analysis about the remaining lives of all financial liabilities and all derivative financial instruments (IFRS 7.39 (a)-(b)). The standard suggests as possible time bands “up to one month”, “one to three months”, “later than three months and not later than one year” and “between one and five years”, however, the corporation uses its judgment to determine an appropriate number of time periods (IFRS 7.B11 (a)-(d)). Furthermore, the company has to describe with which methods they manage their liquidity risks.

However, the Master’s Thesis is focused on the analysis of the quantity in terms of the disclosures about the credit risk and the risk management. In the following, therefore, the disclosure requirements in terms of these items are presented in more detail as the empirical analysis in chapter 4 refers to the year 2007 and the regulations according to IFRS 7 which have been effective since 2007.

### 3.5.2 Disclosure Requirements in terms of Credit Risk and Risk Management

The disclosure requirements about the credit risk are ruled in IFRS 7.36-38 and are supported by the “Basis for Conclusions” (IFRS 7.BC 49-50) and by the “Implementation Guidance” (IFRS 7.IG.21-29). Hence, the “Basis for Conclusions” and the “Implementation Guidance” are recommendations for the implementation of the regulations in IFRS 7.36-38, however, it is not mandatory to apply these supporting guidelines. The minimum disclosures of the credit risk
in IFRS 7 are divided into the categories “financial instruments which are neither in default (past due) nor impaired”, “financial instruments which are in default (past due)” and “impaired financial instruments”.

The following illustration presents the minimum disclosures for these categories:

<table>
<thead>
<tr>
<th>financial instruments which are neither in default (past due) nor impaired</th>
<th>financial instruments which are in default (past due)</th>
<th>impaired financial instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>carrying amount / maximum exposure to credit risk of each class (IFRS 7.36 (a))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>description of collateral held as security of each class (IFRS 7.36 (b))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>credit quality by class (IFRS 7.36 (c))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>restructured financial instruments by class (IFRS 7.36 (d))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>maturity analysis by class (IFRS 7.37 (a))</td>
<td>analysis of individually impaired financial assets (IFRS 7.37 (b))</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>fair value of the collateral held by class (IFRS 7.37 (c))</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reconciliation of the item &quot;provision for credit risks&quot; (IFRS 7.16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assets taken possession within the realization of the collateral (IFRS 7.38)</td>
</tr>
</tbody>
</table>

*Illustration 1: Minimum disclosure in terms of the credit risk (PwC; 2008)*

As illustration 1 shows the company is required to disclose the maximum exposure of risk for each class of financial instruments according to IFRS 7.36 (a). This exposure includes the gross carrying amount less the netting out in accordance with IAS 32 and less previous impairment losses in accordance with IAS 39 (IFRS 7.9).

Furthermore, IFRS 7.36 (b) requires the company to publish statements about those financial instruments which are held as collateral for financial instruments being afflicted with default. This information shall include different aspects. At first, a description of the methods and processes for the evaluation and management of securities held as collateral has to be made and the most important kinds of collateral received have to be shown. Moreover, the most important counterparties providing the collateral shall be mentioned in the financial statements in combination with their respective creditworthiness. Finally, the
company shall provide information about the risk concentration which arises from the collateral received (IASCF (2009): IFRS 7.IG22).

For financial instruments which are neither in default (past due) nor impaired the creditworthiness of the contracting partners of each class of financial assets has to be shown according to IFRS 7.36 (c). A possible implementation of this disclosure requirement is explained in IFRS 7.IG23-25. IFRS 7.IG23 suggests splitting the credit risks into different credit rating classes by the use of internal or external ratings. Moreover, this presentation shall include information about the nature of the counterparties and their historical default rates. Finally, the company shall disclose any other information which could be helpful to assess the creditworthiness of the contracting partners (IASCF (2009): IFRS 7.IG23).

Furthermore, the “Implementation Guidance” recommends specific statements in terms of the external and internal ratings. If an external rating is applied, the maximum risk exposure of each rating class shall be stated. Furthermore, the corresponding rating agency, whose data are used by the company, shall be named according to IFRS 7.IG24. Besides that, respectively the ratio between financial instruments with and without rating and the relation between internal and external rating shall be disclosed (IASCF (2009): IFRS 7.IG24). In case of using an internal rating, IFRS 7.IG25 advises to publish information about the internal rating process, about the amount of the risk exposure of each credit rating class and in terms of the relation between external and internal ratings.

Furthermore, according to IFRS 7.36 (d) “the carrying amount of financial assets that would otherwise be past due or impaired whose terms have been renegotiated” shall be disclosed.

For financial instruments which are classified as past due (according to IFRS 7.A a financial instrument is regarded as past due „when a counterparty has failed to make a payment when contractually due“), but not impaired, an analysis of the age of the financial assets has to be carried out according to IFRS 7.37 (a). Here, a maturity analysis means the information on how long a financial instrument has already been in default (PwC; 2008). The possible time bands of delay which are proposed by the IASCF are “less than 3 months”, “3 to 6 months”, “6 to 12 months” and “more than 12 months” (IASCF (2009): IFRS 7.IG28).

Moreover, according to IFRS 7.37 (b) an analysis of the impaired financial instruments shall be carried out, however, this is not put in concrete terms within the standard. Therefore, you should refer to the explanation of IFRS 7.IG29. Here, the comment suggests disclosing the carrying amount before allowance, the nature and the amount of impairment and the fair value of the collateral held for this kind of financial instruments (IASCF (2009): IFRS 7.IG29).
To enable the user of financial statements to assess the risks resulting from financial instruments which are past due or impaired, IFRS 7.37 (c) requires a description of the collateral held by the company which are related to just depicted financial instruments. Furthermore, the fair values of the collateral shall be assessed if possible and the estimated amounts shall be disclosed (IFRS 7.37 (c)).

If a company takes possession of financial and non-financial assets within the realization of the collateral and these can be recognized as assets according to IFRS, the nature and carrying amount of these assets obtained have to be disclosed according to IFRS 7.38 (a). In case the assets cannot be sold immediately IFRS 7.38 (b) requires the company to describe in which way the company plans to dispose of the assets or how the securities can be possibly used in the company’s operation.

In terms of risk management the company is basically required to disclose its objectives and policies as well as processes with which the risks are measured and managed according to IFRS 7.33 (b). Additionally, the guidelines of IFRS 7.IG15 (b) can be used in terms of strategies and processes for identification, measurement and management of risks. Here, the risk management’s structure and the organization shall be shown and the area of application and the nature of the risk reporting shall be described in more detail. Furthermore, the methods for hedging and reducing of risks shall be explained and the processes which are employed for the supervision of the effectiveness of the applied methods shall be stated (IASCF (2009): IFRS 7.IG15 (b)).

### 3.6 Empirical Evidence about the Disclosure of Information in terms of Credit Risk

Until now, only a few studies have dealt with the disclosure of information in terms of credit risk. These have examined the statements about the credit risk primarily as part of the risk reporting (Bischof (2009): IFRS 7 Adoption and Linsley et al. (2006): Risk disclosure).

One of these studies was carried out by Bischof (2009). Thereby, he analyzed the effect of the implementation of IFRS 7 on the quality of the disclosure in the balance sheet and the risk report of European banks. In one section of his analysis he elaborated on the quantity and the quality of the published information about the credit risk. In doing so, he considered the number of published pages as an indicator for the shift in the quantity of disclosed information. Bischof has detected that the number of pages about the credit risk within the examined annual reports has increased significantly from 2006 to 2007 by the adoption of IFRS 7,
namely from 4.6 to 8.3 pages. Moreover, according to the author, the quality of the published information about the credit risk has also enhanced as after the enforcement of IFRS 7 considerably more banks have released information about ratings and financial assets which are past due. Finally, Bischof also states that as a result of the adoption of IFRS 7 now the emphasis is more on the information about credit risks and the previously preferred market risk attracts less attention in terms of the disclosed information than before.

A study with a similar approach was carried out by Linsley et al. (2006). The authors analyzed the degree of disclosure of information about the risk reporting of banks from Great Britain and Canada by counting those sentences in the annual reports whose content was concerned with the areas “risk” and “risk management”. These sentences were initially grouped by risk types, such as “credit risk”, and then divided into different categories. Each class includes combinations of the following characteristics: quantitative/qualitative information, good/poor information and information from the past or the future. The authors found that first, most sentences were placed in the area “credit risk” and secondly, the counted sentences contained rather qualitative information and statements from the past.

However, both research methods can be considered as questionable. Although, page numbers can be regarded definitely as an indicator for the quantity of disclosed information within an annual report, however, such a number does not reveal anything about the quality of the disclosed statements. This also includes the counting of sentences and their later classification in certain risk categories as just the allocation of sentences to the defined categories requires subjective assessments which can vary among the testing persons.

This short literature overview shows that the disclosure of information about the credit risk was analyzed only marginally and not enough in detail so far. Therefore, the following examination chooses another approach. It shall be explored to which extent European banks have fulfilled the current disclosure requirements in terms of credit risk and risk management after the implementation of IFRS 7. This fulfillment is of great importance against the background of a sufficient information provision ensuring an efficient market disciplining as market participants can evaluate the risk positions of banks reasonably and demand adequate risk premiums only if they have enough information about the banks’ risk structure available.
4. RESEARCH METHODOLOGY

The following empirical examination shall answer the question to which extent European banks have fulfilled the disclosure requirements for the credit risk and risk management after commencement of IFRS 7 to determine whether banks which complied better with the standard in 2007 were also coping better with the recent financial crisis. If this is the case you can state that the appropriate prerequisites are created to ensure an efficiently operating market discipline. In doing so, it is also examined in which areas of these disclosure obligations the analyzed banks have concentrated during the financial year, 2007. Both of these aspects are of great importance as in a case of optimal information provision for the market players, the created efficient market discipline could reduce the confidence problem between investors and bank.

To answer this research question, first, the annual reports of 12 European banks are analyzed for the financial year 2007 by the means of a designed disclosure index and the quantity of the disclosed information it detected. This disclosure index is based on the disclosure obligations of IFRS 7 for the credit risk and the risk management so that an assessment in terms of the fulfillment of the disclosure requirements can be made.

4.1 Data Basis and Research Design

For the empirical analysis of this Master’s Thesis, first, the 9 most important countries in the banking sector within the EU11 plus Suisse are selected. These are: Great Britain, France, Germany, Spain, Suisse, Italy, Belgium, Netherlands and Sweden. This broad inclusion of European banks shall prevent a bias towards the larger countries with their bigger banks. However, to take the relative importance of countries and their banking sector into account two banks of the three most important countries Great Britain, France and Germany and only one bank from the remaining countries are included in the data basis.

In doing so, the biggest banks of each country are selected on the basis of the market capitalization in the end of 2007 before the financial crisis had started. To ensure unbiased results the chosen banks have to meet the following two criteria. First, the annual reports of the financial year 2007 have to be prepared according to IFRS and secondly, the corresponding annual report has to be available online. These criteria were checked for each bank according its amount of market capitalization. The 12 banks listed below fulfilled these conditions and therefore were included in the sample.

To be able to quantify the individual degree of disclosure of information about the credit risk and risk management a disclosure index for the financial year 2007 was
designed based on the requirements of IFRS 7. A disclosure index created on the basis of certain criteria within the IFRS 7 enable the user to quantify the extent of disclosure of picked issues by the allocation of points. In doing so, in the following it is assumed that the requirements of IFRS 7 guarantee the information the market player needs to evaluate the risk position of banks.

The methodology to determine the quantity of information by the means of a disclosure index is popular in the English technical literature (Perignon/Smith (2010); Lopes/Rodrigues (2007); Chalmers/Godfrey (2004) and Bryant/Street (2000)) so that this method can be applied in the following analysis, too. In the following, the preparation of the disclosure index 2007 is described.

The requirements of IFRS 7.36-38 and the Implementation Guidance IFRS 7.IG 22-25 and IG.28-29 are taken as a basis for the disclosure index in terms of the credit risk. Furthermore, the disclosure requirements of IFRS 7.33 (b) about the risk management were taken into account and these were complemented by the guidelines of IFRS IG.15 (b). Thus, in the following, it is assumed that the guidelines of the Implementation Guidance recommended by the IASB shall be used for an optimal fulfillment of the disclosure requirements of IFRS 7. The criteria of IFRS 7.38 (b) were not included in the index as a description about the use of the assets taken possession with the realization that collateral has just to be made if these assets were not sold immediately.

Altogether, the disclosure index comprises nine criteria which correspond with the partial disclosure obligations of the single paragraphs. The criteria are:

1. maximum credit exposure ( 1 point )
2. collateral ( 4 points )
3. creditworthiness of the counterparty ( 7 points )
4. renegotiation of the payment terms ( 1 point )
5. financial instruments being in default ( 1 point )
6. impaired financial instruments ( 3 points )
7. collateral for financial instruments from the classes (5) and (6) ( 2 points )
8. assets taken possession within the realization of the collateral ( 2 points )
9. risk management ( 7 points )
Criteria:

Credit risk:

1. Disclosure by class of financial instruments about the maximum exposure to credit risk
   - Disclosure of:
     • gross value less allowance and netting out (1 point)
   - IFRS 7.36 (a)

2. Collaterals which reduce the exposure to credit risk
   • description of the methods and processes for the evaluation and management of the collaterals received and other risk mitigating arrangements (1 point)
   • description of the most important types of securities held as collateral (1 point)
   • disclosure of the most important counterparties providing the collaterals and an assessment of the creditworthiness of the collateral provider (1 point)
   • information about concentration of risk which are associated with collaterals held or credit enhancements (1 point)
   - IFRS 7.1G22

3. Credit quality of financial assets which are neither past due nor impaired
   • graphical representation of the division of the credit risks in credit rating classes by using of an internal or external rating (1 point)
   • information about the counterparties (1 point)
   • information about historical default rates of the contractual partners (1 point)
   • additional information for assessing the creditworthiness (1 point)
   - IFRS 7.1G23

   in case of an external rating:
   • the amount of risk exposure for each external rating class (1 point)
   • the rating agencies whose data are used (1 point)
   • the relation between internal and external rating (1 point)
   - IFRS 7.1G24

   in case of an internal rating:
   • information about the internal rating process (1 point)
   • the amount of risk exposure for each internal rating class (1 point)
   • the relation between internal and external rating (1 point)
   - IFRS 7.1G25

4. Financial instruments whose terms have been renegotiated and thereby the default in payment could be deferred
   • disclosure of the carrying amounts by class (1 point)
   - IFRS 7.36 (d)

5. Financial instruments which are in default (past due)
   • presentation of a mature analysis by classification in several time bands (for instance, up to 3 months, 3 to 6 months, 6 to 12 months, more than 12 months to default) (1 point)
   - IFRS 7.1G28

6. Individually impaired financial instruments
   • carrying amount before allowance (1 point)
   • amount of the allowance (1 point)
   • description of the factors the bank considered in determining that the financial instruments are impaired (1 point)
   - 7.1G29

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Illustration 2: Constructed disclosure index based on the requirements in IFRS 7

Illustration 2 shows the constructed disclosure index 2007. By the means of this index the annual reports of the 12 selected banks were analyzed and the degree of the quantity of the disclosure in terms of the credit risk and the risk management of each bank were determined. When the bank disclosed information about the issues depicted in the index then one point was awarded for each fulfilled requirement. A special case is the category “creditworthiness of the counterparty”. In this case the IASB gives the companies the choice to publish information about internal or external ratings for this kind of financial instruments. Therefore, within the evaluation of the annual reports, points were just awarded for supplement information either about an internal or an external rating. Furthermore, the obligation to disclose the amount of the credit risk divided in financial instruments which have a rating and which do not have one were not taken into consideration preparing the index to ensure that in both cases a maximum of 3 points can be reached. Thus, no bank is discriminated against. In case a bank has disclosed information about internal as well as external ratings the highest score of the both criteria were counted for the index score. Totally, a maximum of 28
points could be achieved. Moreover, the index was standardized at 100 so that the index figure is calculated as follows:

\[ DI_{2007} = \left( \frac{m}{M} \right) \times 100 \]

with \( m \) = achieved score, \( M \) = maximum score and \( DI_{2007} \) = index score.

With this, the results of the disclosure index reflect the percentage fulfillment of the disclosure requirements of IFRS 7.

### 4.2 Reliability and Validity of the Research Methods

To evaluate the measure of the compliance with IFRS 7 by a disclosure index the scientific terms reliability and validity have to be considered.

According to Bryman and Bell (2007) “reliability refers to the consistency of the measure of a concept”. Whether or not a measure is reliable can be answered by the following three factors. First, the measure is supposed to be stable over time which means that the results gained today from a specific sample are supposed to be the same as the results which can be obtained from the same sample some time later. This prerequisite is fulfilled by the disclosure index as the specific criteria in the disclosure index and the used annual reports do not vary over the time. Secondly, the internal reliability is dealing with the question whether or not the indicators which constitute the index are consistent. Thereby, it is asked whether the single indicators are related to each other and are able to explain the characteristic of the index. This requirement is also met as the main items in the disclosure index come from an accounting book (PwC; 2008) specialized on this issue and the designed sub-criteria are based on the standard IFRS 7 and the corresponding “Implementation Guidance”. Thirdly, the inter-observer consistency is threatened when a bunch of subjective judgments are involved in the measure process, for instance the recording of observations or the translation of data into categories. If the results of this measure vary between the researchers there will be a lack of consistency and hence, the study cannot be replicated by other researchers. This condition might represent a problem as a few subjective assessments have to be made while checking whether the specific requirements of the disclosure index are met by the present information from the annual reports.

In terms of the validity there are two main characteristics according to Bryman and Bell (2007). First, the measurement validity refers to the issue of whether or not an indicator that is devised to gauge a concept really measures that concept. This covers the face validity which is supposed to ensure that the measure reflects
the content of the research question and also the question of possible errors in the implementation of the measure. The latter shall ensure that the researcher follows exactly the instructions whilst carrying out the research method over the entire evaluation period. Both prerequisites are met while constructing the disclosure index and analyzing the annual reports as it is paid attention that the analytical process is in all cases the same and when designing the disclosure index it was referred to a professional accounting book (PwC; 2008).

Secondly, there is also the external validity which describes the degree of generalization of the findings. External validity represents a problem for this carried out research study as the size of the sample might be not big enough to generate valid statements about the disclosure of banks in terms of the analyzed aspects.

The reliability and validity in terms of the correlation between the compliance with the disclosure index and the firm performance is solved by a statistical program. First, this program calculates the Pearson’s correlation coefficient which can be applied to examine the relationship between two interval variables (Bryman and Bell (2007)). The coefficient can lie between 0 (no relationship between the two variables) and 1 (a perfect relationship) which means that the figures indicates the strength of the relationship. Besides, the coefficient can be either positive or negative which indicates the direction of the relationship.

Secondly, the statistical program calculates the statistical significance and this is concerned with the question whether or not the findings will be generalizable to the population from which the sample was drawn (Bryman and Bell (2007)). If there are any sampling errors the sample will be unrepresentative of the wider population and therefore the empirical results will be invalid. With regard to the relationship between two variables the statistical significance makes a statement about the risk of concluding that there is a relationship in the population when in fact no such relationship exists (Bryman and Bell (2007)).

To test the significance of the findings, first, a null hypothesis is set up. This claims that the two variables are not related in the population. Secondly, an acceptable level of statistical significance is established. This is a measure of the degree of risk that the null hypothesis is rejected implying that there is a relationship in the population when the null hypothesis should be supported implying that there is no relationship in the population (Bryman and Bell (2007)). Among business researchers the convention is that a level of statistical significance of 5 percent is acceptable. After determining the statistical significance of the findings, then the researcher is able to make a reliable and valid statement about the calculated correlation coefficient by either confirming or rejecting the null hypothesis.
To carry out these calculations SPSS is applied as it automatically produces information regarding statistical significance when the correlation coefficient is calculated.
5. FINDINGS OF THE EMPIRICAL STUDY

In the following, the annual reports of the 12 selected banks are examined according the constructed disclosure index for the financial year 2007. The results of this analysis for all the banks are summarized and shown in the illustration 3.

In the further course of this work the individual examination results of the observed banks are compared in more detail.

First, it has to be mentioned that UBS achieved the best result among the selected banks and fulfilled 78 percent of the analyzed requirements. In doing so, this bank even kept predominantly to the designation of the IFRS 7 standard which facilitates the user of the financial report to recognize the required disclosures. This was the reason why this bank was taken to illustrate the procedure and the findings of one example which is shown in the appendix. Additionally, UBS met 5 out of 9 criteria completely and this bank also disclosed the most information in terms of the criteria “creditworthiness of the contractual partner” and “risk management”. Finally, UBS was one of the few banks which published information about financial assets which have been taken possession within the realization of the collateral. UBS failed to make a disclosure only in the area “renegotiation of the conditions of payment to defer the default in payment of these financial instruments”. In contrast, Banco Santander met the fewest requirements with a quote of 21 percent.

The amount of the maximum credit exposure by class of financial instruments was released by 11 out of the 12 selected banks. Only the ING Group did not publish this figure.

In terms of the disclosure requirements about the collateral which reduce the exposure to credit risk the examined banks have had difficulties to comply with these. Therefore, in the best case just half of the disclosure obligations were met. In case information was available mainly the most important types of securities held as collateral were described. For instance, Barclays disclosed the used collateral for each sector where a credit risk exists. Just in very few cases the nature of the counterparties providing the collateral and the information about the risk concentration were published. A description of the methods and processes for the evaluation and management of the collateral received were just given by UBS and Barclays. Therefore, in these areas there is also a potential for improvement.

Deutsche Bank and UBS fulfilled with 71 percent the most requirements in terms of the disclosure of the creditworthiness of counterparties. These banks distinguish themselves by dividing the credit risks arisen from financial instruments in rating categories as well as by disclosing the nature and the historical default rates of the contractual partners. Furthermore, they published information about the internal rating process and about the exposure to credit risk for each individual internal rating class. The other banks often met these
disclosure obligations in terms of the nature of the counterparties just by showing a sector overview of the contractual partners. Moreover, in many cases they provided detailed information about the internal rating process. However, weak points were also detected, especially the disclosure of additional information for assessing the creditworthiness and the release about the relation between internal and external ratings.

The carrying amount of the financial assets whose terms were renegotiated was disclosed only by four banks. Therefore, you can see that there are still a lot of accumulated needs in this field.

However, a mature analysis for financial instruments being past due was presented by the majority of the banks. Thereby, the used time bands about the default of the financial assets differ significantly yet. So, for instance, the time periods of default applied by Barclays are “up to one month”, “one to two months”, “two to three months”, “three to six months” and “more than six months”. However, BNP Paribas discloses time bands with “up to 90 days”, “between 90 and 180 days”, “between 180 days and 1 year” and “more than one year”.

The disclosure requirements in terms of impaired financial instruments were completely fulfilled only by UBS, Barclays, Deutsche Bank and Royal Bank of Scotland. These banks have stood out from the others also by a detailed description of the factors the bank considered in determining that the financial instruments are impaired. Furthermore, these banks also published the carrying amount and the amount of the allowance in terms of impaired financial instruments. In contrast, 6 banks did not provide any disclosure about impaired financial instruments. Thus, there is still a need for improvement in terms of this.
<table>
<thead>
<tr>
<th>rank</th>
<th>name of the bank</th>
<th>country</th>
<th>1. maximum credit exposure</th>
<th>2. collaterals</th>
<th>3. creditworthiness of the counterparty</th>
<th>4. renegotiation of the conditions of payment</th>
<th>5. financial instruments being in default</th>
<th>6. impaired financial instruments</th>
<th>7. collaterals for the financial instruments from class (S) and (G)</th>
<th>8. assets taken possession within the realisation of the collateral</th>
<th>9. risk management</th>
<th>index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UBS</td>
<td>Suisse</td>
<td>100</td>
<td>50</td>
<td>71</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>85</td>
<td>78.6</td>
</tr>
<tr>
<td>2</td>
<td>Deutsche Bank</td>
<td>Germany</td>
<td>100</td>
<td>25</td>
<td>71</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>68.7</td>
</tr>
<tr>
<td>3</td>
<td>Barclays</td>
<td>UK</td>
<td>100</td>
<td>50</td>
<td>57</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>0</td>
<td>57</td>
<td>68.3</td>
</tr>
<tr>
<td>4</td>
<td>Dexia</td>
<td>Belgium</td>
<td>100</td>
<td>25</td>
<td>43</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>29</td>
<td>55.2</td>
</tr>
<tr>
<td>5</td>
<td>Société Générale</td>
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<td>100</td>
<td>50</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>67</td>
<td>50</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>6</td>
<td>UniCredit</td>
<td>Italy</td>
<td>100</td>
<td>50</td>
<td>57</td>
<td>0</td>
<td>100</td>
<td>67</td>
<td>0</td>
<td>0</td>
<td>71</td>
<td>49.5</td>
</tr>
<tr>
<td>7</td>
<td>BNP Paribas</td>
<td>France</td>
<td>100</td>
<td>25</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>67</td>
<td>50</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>8</td>
<td>ING Group</td>
<td>Netherlands</td>
<td>0</td>
<td>25</td>
<td>43</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>38.5</td>
</tr>
<tr>
<td>9</td>
<td>Royal Bank of Scotland</td>
<td>UK</td>
<td>100</td>
<td>0</td>
<td>43</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>37.7</td>
</tr>
<tr>
<td>10</td>
<td>Nordea</td>
<td>Sweden</td>
<td>100</td>
<td>25</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>31.3</td>
</tr>
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<td>11</td>
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<td>0</td>
<td>43</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>28.4</td>
</tr>
<tr>
<td>12</td>
<td>Banco Santander</td>
<td>Spain</td>
<td>100</td>
<td>0</td>
<td>43</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20.6</td>
</tr>
</tbody>
</table>

*Illustration 3: Evaluation of the disclosure index 2007*
Also the disclosure requirements about collateral held for financial instruments being past due or impaired were neglected completely by almost the half of the observed banks. Only 7 banks published information about these securities at all, whereby UBS and Dexia were the only ones which provided a description of their collateral held and also disclosed their corresponding fair value.

The picture was still worse in case of the disclosure about financial assets which were taken possession within the realization of the collateral. Only UBS, Deutsche Bank and Nordea Bank made a statement about this. But these three banks even completely met the requirements by disclosing the nature and the carrying amount of the financial assets. In the case of UBS real estate is such a kind of asset.

However, the disclosure obligations in terms of the risk management were fulfilled frequently. Thereby, again UBS made the most disclosures with 86 percent in terms of the requirements of this category. It could fulfill all the requirements except the mentioning of the processes which shall check the continuous effectiveness of the methods applied to hedge and reduce the risks. In contrast, Dexia, Banco Santander and BNP Paribas could only meet 29 and 34 percent respectively of the disclosures. The results of the analysis in terms of the risk management show that the statement about the policies and processes of the risk management is a standard disclosure in most cases. This is also true when it comes to structure and the organization of the risk management and to the methods for hedging and reducing of risks. To achieve a better general result in this field the banks should disclose more information about the risk management’s objectives, the risk measurement methods and about the processes which supervise the effectiveness of the methods applied to hedge and reduce the risks.

In summary, it can be stated that the disclosure requirements about the maximum credit exposure, financial instruments being past due and about the risk management were fulfilled in an above-average degree. Regarding the other criteria it has become clear that there is partly significant need for improvement at the selected banks. Only UBS, Deutsche Bank and Barclays fulfilled the requirements satisfactorily.
6. EVALUATION AND ANALYSIS

6.1 Evaluation of the Empirical Findings

The findings of the analysis of the disclosure index have shown that the disclosure obligations of financial instruments according to IFRS 7 were fulfilled by the observed banks only to a moderate extent in the year 2007. In the following, the findings are assessed and it is tried to make a judgment about the impact of these results for the market participants.

The outcomes point out that the European banks have had difficulties with the implementation of the IFRS 7 standard in the first year after the establishment as on average the banks have achieved a level of compliance in terms of the criteria of the disclosure index of just 46 percent which is actually too little. However, it has to be taken into account that the mandatory regulations about the disclosure in terms of the credit risk according to IFRS 7.36-38 are devised in a less detailed manner. Just by using the Implementation Guidance (IFRS 7.IG) the disclosure obligations become more concrete and more decision-relevant information for the user of financial statements has to be provided. However, these implementation directives are not obligatory. Therefore, when banks just refer to the IFRS 7 standard as a guideline for their disclosure obligations it is within the law, but at the same time it opens many possible implementation strategies. This fact might be the reason why the observed banks have not disclosed that much information in terms of the criteria “collateral”, “creditworthiness of the counterparty”, “collateral held for financial instruments being impaired or past due” and “assets taken possession within the realization of the collateral”. Especially in the area “collateral”, the banks should not only publish which types of collateral (for instance, credit derivatives or guarantees) they hold but also which contractual partners providing them and information about their specific creditworthiness. This information is of great importance for the user of the annual report as provided collateral cannot meet its aim if the collateral provider is not able to compensate the capital losses in case of a credit default because of its low solvency.

Also, there is still potential for improvement in terms of the disclosure about the creditworthiness of counterparties. The historical default rates of the contractual partners and the maximum exposure to credit risk by rating class were published by an insufficient number of banks. But just the historical default rates of the counterparties are very important for the investors as this information enables them to make a first impression about their solvency. Moreover, the disclosure about the maximum exposure to credit risk each credit rating class provides an overview of the profile of the contractual partners.

However, the high level of disclosure about the maximum exposure to credit risk each class of financial instruments has to be positively evaluated. As already
mentioned this information might be of great importance for investors as it provides an adequate overview about the credit risk. But this high degree of compliance is not surprising as this information already had to be disclosed in 2006 according to IAS 32. Another positive outcome is that more than half of the examined banks have carried out a mature analysis of their financial instruments being past due. This finding is particular to stress as the information about a maturity analysis represents a new disclosure requirement. By means of such a mature analysis about the default of financial instruments an investor is able to evaluate which part of the financial instruments being past due could result in a capital loss in the future.

Likewise, the disclosure requirements about the risk management were met on average in satisfactory degree. However, it has to be mentioned that the disclosure obligations were only analyzed on quantitative terms within this thesis and qualitative aspects were not taken into account. However, it has to be mentioned that the information about the risk management was rather general and these disclosures hardly reveal an insight in the internal risk management. Hence, it can be stated that the observed banks could fulfill the disclosure requirements according to IFRS 7 in terms of the credit risk and risk management only to a moderate proportion. Therefore, the new endorsed standard IFRS 7 has not been able to create the prerequisites for a better disciplining of the banks by market participants.

### 6.2 Correlation of Disclosure and Firm Performance

In the following, the total shareholder return (TSR) is used as the measure of the firm performance. The TSR is comprised of the capital gain based on the annual stock development and the dividend the bank distributes within one year.

This measure is used more and more by investors because this figure is an objective indicator about the success of the company which is not vulnerable for earning distortion by the management accounting. The importance of the total shareholder return for the evaluation of company success is emphasized by the fact that the US supervisory authority Securities and Exchange Commission (SEC) has obliged the publicly traded companies in the US to include the TSR in their 10K-filings (Edwards; 1994). According to the SEC´s directives the total shareholder return is defined as follows:

“Total shareholder return on a class of common stock (...) as measured by dividing (i) the sum of (A) the cumulative amount of dividends for the measurement period, assuming dividend reinvestment, and (B) the difference between the registrant’s share price at the end and the beginning of the measurement period;
by (ii) share price at the beginning of the measurement period (...)” (Securities and Exchange Commission (SEC); 2011).

This market driven measure of firm performance is used particularly because the new IFRS 7 standard is essentially a means for the banks providing their investors with relevant information about their current risk exposure and introduced risk management in terms of their financial instruments. These disclosures are mainly aimed at investors who are usually just looking for the highest yields on their investments. Moreover, a good compliance with a disclosure index might be reflected more in current market-based performance measures such as TSR ratio than in accounting-based measures for two reasons. First, investors will demand a lower risk premium if they get enough decision-relevant information about the bank’s risk position to reduce the uncertainty resulting from the bank’s business practices. This diminished uncertainty leads to a rising share price of the bank. Secondly, it is assumed that the bank performs a more adequate and reasonable risk management and takes lower risks which results in higher earnings on average, at least in the long run. As a result of this investors get higher annual dividend payments and besides, investors like payouts which are not subject to high fluctuations and thus, are easy to anticipate which, in turns, leads to a higher share price.

Due to these reasons the TSR measure was applied to evaluate the firm performance. In doing so, the total shareholder return was calculated for each bank over the time period ranging from the 31.12.2006 to the 31.12.2010. The data for the calculation came from Bloomberg’s database.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Bank of Scotland</td>
<td>-18,22%</td>
<td>-86,43%</td>
<td>-37,25%</td>
<td>46,88%</td>
<td>-43,45%</td>
</tr>
<tr>
<td>Barclays</td>
<td>-32,18%</td>
<td>-70,96%</td>
<td>91,67%</td>
<td>8,05%</td>
<td>-20,08%</td>
</tr>
<tr>
<td>Société Générale</td>
<td>-19,83%</td>
<td>-63,83%</td>
<td>43,68%</td>
<td>-15,55%</td>
<td>-22,98%</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>-6,14%</td>
<td>-56,08%</td>
<td>92,61%</td>
<td>-10,30%</td>
<td>-8,14%</td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>-7,84%</td>
<td>-63,84%</td>
<td>79,37%</td>
<td>-19,36%</td>
<td>-16,67%</td>
</tr>
<tr>
<td>Commerzbank</td>
<td>-6,38%</td>
<td>-70,91%</td>
<td>-11,75%</td>
<td>-5,29%</td>
<td>-30,92%</td>
</tr>
<tr>
<td>UBS</td>
<td>-27,44%</td>
<td>-67,52%</td>
<td>9,23%</td>
<td>14,95%</td>
<td>-26,25%</td>
</tr>
<tr>
<td>Banco Santander</td>
<td>8,96%</td>
<td>-50,38%</td>
<td>86,24%</td>
<td>-26,71%</td>
<td>-7,32%</td>
</tr>
<tr>
<td>UniCredit</td>
<td>-9,85%</td>
<td>-62,97%</td>
<td>114,05%</td>
<td>-29,61%</td>
<td>-15,79%</td>
</tr>
<tr>
<td>Nordea</td>
<td>-2,36%</td>
<td>-48,47%</td>
<td>40,31%</td>
<td>16,88%</td>
<td>-4,69%</td>
</tr>
<tr>
<td>Dexia</td>
<td>-9,82%</td>
<td>-77,53%</td>
<td>50,85%</td>
<td>-41,18%</td>
<td>-34,88%</td>
</tr>
<tr>
<td>ING Group</td>
<td>-16,25%</td>
<td>-67,91%</td>
<td>-1,56%</td>
<td>4,93%</td>
<td>-27,42%</td>
</tr>
</tbody>
</table>

Illustration 4: Results of the TSR calculation

As can be seen from illustration 4 the yearly average TSR of each bank during the time period ranging from 31.12.2006 to 31.12.2010 has been substantially negative. There are only three banks which had a higher average return than minus ten percent on an annual basis. Royal Bank of Scotland has achieved the worst firm performance over this period and its investors would have sustained a loss of more than 43 percent each year from its investment if they had invested in the bank at the end of 2006 and held this investment until the end of 2010.
Obviously, the recent financial crisis hit all the banks in a high degree. But this tremendous downturn in the financial markets in 2007 and especially in 2008 after the collapse of Lehman Brothers also resulted in very differing TSRs over the period 2007-2010. In 2007, only Banco Santander achieved a positive TSR and the in 2008 the bank’s TSR scores ranged from minus 48 percent to minus 86 percent. In the following year, in contrast, the most of the banks have performed very well with exceptional high returns except of three banks still providing negative returns. These calculated figures reflect the substantial recovery of the markets in the year 2009 leading to a substantial rise in the TSR for this year. In 2010, the TSR values vary strongly. Some banks achieved positive returns and some banks provided negative results which seem to be normal, however the variance of these returns were extraordinarily high.

In order to make a statement about the correlation between the compliance with the disclosure index and the total shareholder return, the statistical program SPSS was applied. The output below shows that there is a negative but highly insignificant correlation between the degree of disclosure and the TSR. The 2-tailed significance level \( \alpha \) is 0.66 which means that the probability of error, that the null hypothesis (\( H_0: \text{correlation} = 0 \)) is rejected although it is in fact true, is about 66 percent. Usually, the significance level is chosen to be 0.05 (or equivalently, 5%), therefore it is not possible to make a robust statement about the Pearson correlation coefficient.

There might be two reasons for this highly insignificant value. First, probably the sample of 12 observed banks is not big enough to provide valid and reliable results. However, within this thesis a more extensive examination of the bank’s financial reports was not possible. Secondly, obviously the recent financial crisis occurred during this period has had a huge impact on the TSR of all banks. It seems as if investors punished all banks by selling their shares and did not pay that much attention to the individual performance of each bank. But these are just guesses and however, it is also possible that there is no correlation even in normal financial times.

<table>
<thead>
<tr>
<th></th>
<th>TSR</th>
<th>disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR Pearson Correlation</td>
<td>1</td>
<td>-.141</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.661</td>
</tr>
<tr>
<td>N</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>disclosure Pearson Correlation</td>
<td>-.141</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.661</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

**SPSS output: Correlation**

As there is no significant correlation between the high of the index score and the TSR in terms of our data sample a linear regression model is carried out with four
other variables which may affect firm performance. The data on these variables have been obtained from the annual statements of the financial year 2006 as the measurement period of the TSR begun on the 31.12.2006.

With these obtained data a linear regression model was carried out by means of SPSS. In doing so, it is assumed that the total shareholder return is the dependent variable which will be influenced by the other four exogenous variables.

The findings below show that all coefficients have very high significance levels which means that the null hypothesis, beta coefficient = 0, could not be rejected. Hence, the result of our sample states that none of the six regressors is able to explain or predict the value of the TSR. This outcome is also confirmed by the coefficient of determination (R²) of the linear regression model which lies about 31 percent.

<table>
<thead>
<tr>
<th>Company</th>
<th>Market capitalisation in million Euro</th>
<th>Price earnings ratio</th>
<th>Debt to equity (market value) ratio</th>
<th>Market to book (equity) ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>UBS</td>
<td>91.989</td>
<td>11.9</td>
<td>16.41</td>
<td>3.14</td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>53.183</td>
<td>7.6</td>
<td>20.50</td>
<td>1.62</td>
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<tr>
<td>Barclays</td>
<td>71.885</td>
<td>10.1</td>
<td>19.83</td>
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<td>Dexia</td>
<td>23.090</td>
<td>8.1</td>
<td>23.75</td>
<td>1.25</td>
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<td>Société Générale</td>
<td>59.797</td>
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<td>15.44</td>
<td>2.04</td>
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<tr>
<td>UniCredit</td>
<td>68.574</td>
<td>12.5</td>
<td>11.54</td>
<td>2.46</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>77.232</td>
<td>10.3</td>
<td>18.00</td>
<td>1.55</td>
</tr>
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<td>ING Group</td>
<td>74.220</td>
<td>9.4</td>
<td>16.03</td>
<td>1.94</td>
</tr>
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<td>Royal Bank of Scotland</td>
<td>93.445</td>
<td>10.2</td>
<td>13.08</td>
<td>1.56</td>
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<td>30.703</td>
<td>9.7</td>
<td>10.80</td>
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<td>18.960</td>
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<td>Banco Santander</td>
<td>85.867</td>
<td>11.7</td>
<td>9.20</td>
<td>2.11</td>
</tr>
</tbody>
</table>

Illustration 5: Calculation of investment ratios

These four exogenous variables were selected as Fama/French (1993) have detected a significant relation between these financial ratios and the average return in univariate tests over an observation period of 50 years. The main
findings of their scientific paper which attracted a lot of attention in the scientific world were the following:

- The market capitalization shows a negative relation which means the higher the market capitalization the lower the return is. The result of the 12 observed banks also indicates a negative relation, but with a probability of error of 41 percent. In the scientific world an error probability of 5 percent is usually accepted and hence, this correlation is very insignificant.

- The market-to-book ratio of the equity indicates also a negative relation which means the higher the equity is traded at the stock exchange the lower the yield is in the future. In contrast, the SPSS output shows a positive relation, but also highly insignificant.

- The price-to-earnings ratio also shows a negative relation which means the more it is paid for current corporate earnings at the stock exchange the lower the future average return is. Likewise, the outcome of the selected sample indicates this negative correlation, but highly insignificant again.

- The leverage at market value indicates a positive relation which means the higher the debt compared to the equity of a company is the higher the expected future return is. The findings form the sample in terms of the impact of leverage on the TSR are not confirmed by the outcomes of Fama/French in their study as the SPSS output shows a negative relation, however with a high probability of error.

All these findings show that the sample of the selected 12 banks is not able to generate meaningful statements about the impact of the four exogenous on the endogenous variable TSR. First, in all cases insignificant results were produced and secondly, the determined trend of the influence is also just partly confirmed by the previous research results by Fama/French.

Consequently, and that is the interesting fact, the size of the sample and the selected time period seems not to be able to provide any meaningful information about the relation between the compliance with the disclosure index and the total shareholder return. Therefore, a detected result of a negative and insignificant influence might change by increasing the size of the sample to a more appropriate scale and expanding the examined time period.
7. CONCLUSION

Against the background of an optimal information provision for disciplining market players, the main goal of this present thesis was to analysis to which extent European banks have fulfilled the disclosure requirements in terms of the credit risk and risk management of financial instruments after the endorsement of IFRS 7. Additionally, the work tried to examine whether there is a correlation between the compliance with the disclosure index and the firm performance measured by the total shareholder return (TSR). For this purpose, a disclosure index based on the requirements of IFRS 7 were constructed and the annual report for the financial year 2007 of twelve big European banks were evaluated by means of this index.

Generally, it can be stated that the requirement of the created disclosure index was fulfilled only on a small scale by the analyzed banks. This implies that market participants had too little information available to evaluate the risk exposure of the examined banks and as a result of this the efficient disciplining of banks by the market is threatened.

However, there were also positive outcomes. The disclosure by class of financial instruments about the maximum exposure to credit risk was made by all examined banks with one exception. This disclosure is very important because this information facilitates the investors to make an assessment about the overall credit exposure and which classes bear the most risks. This should be maintained in the future.

The most deficits were detected in those areas where additional disclosure information was required by using the Implementation Guidance of IFRS 7, for instance “collateral” or “creditworthiness of the counterparties”. Although, the banks are not obliged to apply the Implementation Guidance, the disclosure requirements of IFRS 7 provide just sufficient decision-relevant information if they are supplemented by the disclosure obligations of the Implementation Guidance. Therefore, in the future a more extensive application of the Implementation Guidance should be demanded to ensure a better information provision for investors. Here, UBS could be considered as an example for other European banks as it have fulfilled the implementation directives best.

By the means of the carried out statistical analysis a significant correlation between the degree of compliance with the constructed disclosure index and the total shareholder return could not be detected. But this finding does not state that there is no possible relationship because it is to assume that the size of the sample and the selected time period is not appropriate to generate valid and reliable predictions. In particular, the financial crisis occurred during the observed time period suggest that investors perceived the performance of all banks a kind of the same and did not pay that much attention on different performances among the banks.
However, this detected negative relation, although highly insignificant, could indicate that even an appropriate risk disclosure and risk management is not able to prevent huge financial losses if the overall market is in a big turmoil as seen in the recent years.
References

Annual reports for the financial year 2006 and 2007: UBS, Deutsche Bank, Barclays, Dexia, Société Générale, UniCredit, BNP Parisbas, ING Group, Royal Bank of Scotland, Nordea, Commerzbank, Banco Santander


Bloomberg´s database


Appendix

The list below is an example how the analysis of the disclosure index was carried out in case of UBS which had the highest compliance with the criteria in the disclosure index. However, it has to be mentioned that this list does not reflect all the disclosures the bank made in terms of the criteria, but it shall provide a general insight in the empirical study.

Criteria:

Credit risk:

1. Disclosure by class of financial instruments about the maximum exposure to credit risk
   Disclosure of
   • gross value less allowance and netting out ( 1 point )

2. Collaterals which reduce the exposure to credit risk
   • description of the methods and processes for the evaluation and management of the collaterals received and other risk mitigating arrangements ( 1 point )
   and
   • description of the most important types of securities held as collateral ( 1 point )
Risk mitigation

UBS employs risk mitigation techniques for most of its credit portfolios, typically by taking security in the form of financial collateral (cash or marketable securities) or other assets, or through risk transfers or the purchase of credit protection.

Taking security is the most common form of risk mitigation. Valuation standards are applied in assessing the mitigating effect of security in lending to affluent private clients (ombian lending) the pledge of securities or cash is required. The Investment Bank also takes financial collateral in the form of marketable securities in much of its over-the-counter (OTC) derivatives activity and in its securities financing (securities lending/borrowing and repurchase/reverse repurchase) business. Where financial collateral is taken, discounts (“haircuts”) are generally applied to the market value, reflecting the quality, liquidity, volatility – and in some cases complexity – of the individual instruments. Exposures and collateral positions are continuously monitored, and margin calls and close-out procedures are enforced when the market value of collateral falls below predefined levels relative to the exposure. Collateral concentrations within individual client portfolios and across clients are also monitored where relevant and may affect the discount applied to specific collateral. For property financing, a mortgage over the relevant property is taken to secure the claim, considering the ability of the borrower to service the debt from income, and in accordance with UBS’s policy on loan to value ratios.

OTC derivatives business is conducted almost without exception under bilateral master agreements, which generally allow for the close out and netting of all transactions in the event of default by the other party. UBS has also entered into two-way collateral agreements with market participants, under which either party can be required to provide collateral in the form of cash or marketable securities when exposure exceeds a pre-defined level. The OTC derivatives business with lower-rated counterparties is generally conducted under one-way collateral agreements where the counterparty provides collateral to UBS. Under these agreements, only cash or very liquid collateral is accepted. UBS has standards for netting and collateral agreements, including assurance that contracts are legally enforceable in insolvent or solvency in the relevant jurisdictions.

UBS has also made use of credit hedging, in the form of risk transfers, securitizations and purchase of credit protection, as part of its active management of credit risk to reduce concentrated exposures to individual names or sectors or in specific portfolios. Most of this credit hedging is achieved by transferring underlying credit risk to high-grade market counterparties using single name credit default swaps, executed under bilateral netting agreements and generally also under collateral agreements. Credit-pooling vehicles are also used to transfer risk to outside investors via credit-linked notes. In the internal risk reporting pro-

The effectiveness of credit protection bought from a counterparty depends on the ability of the counterparty to meet any claim. Exposure to credit protection providers is monitored as part of overall credit exposure. Where there is significant correlation between the counterparty and the hedge provider (so-called “wrong-way risk”) UBS’s policy is not to recognize any benefit in credit risk measures.
14) Derivative instruments and hedge accounting

All derivative instruments are carried at fair value on the balance sheet and are reported as positive replacement values or negative replacement values. Where the Group enters into derivatives for trading purposes, realized and unrealized gains and losses are recognized in Net trading income.

Credit losses incurred on over-the-counter (OTC) derivatives are also reported in Net trading income.

Hedge accounting

The Group also uses derivative instruments as part of its asset and liability management activities to manage exposures to interest rate, foreign currency and credit risks, including exposures arising from forecast transactions. The Group applies either fair value or cash flow hedge accounting when transactions meet the specified criteria to obtain hedge accounting treatment.

At the time a financial instrument is designated as a hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship. Accordingly, the Group assesses, both at the inception of the hedge and on an ongoing basis, whether the hedging derivatives have been "highly effective" in offsetting changes in fair value or cash flows of the hedged items. UBS regards a hedge as highly effective only if the following criteria are met: a) at inception of the hedge and throughout its life, the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk, and b) actual results of the hedge are within a range of 80% to 125%. In the case of hedging a forecast transaction, the transaction must have a high probability of occurring and must present an exposure to variations in cash flows that could ultimately affect the reported net profit or loss. The Group discontinues hedge accounting when it determines that a derivative

is not, or has ceased to be, highly effective as a hedge; when the derivative expires or is sold, terminated or exercised; when the hedged item matures, is sold or repaid, or when a forecast transaction is no longer deemed highly probable.

Hedge ineffectiveness represents the amount by which the changes in the fair value of the hedging derivative differ from changes in the fair value of the hedged item or the amount by which changes in the present value of cash flows of the hedging derivative differ from changes (or expected changes) in the present value of cash flows of the hedged item. Such ineffectiveness is recorded in current period earnings in Net trading income, as are gains and losses on components of a hedging derivative that are excluded from assessing hedge effectiveness.

Fair value hedges

For qualifying fair value hedges, the change in fair value of the hedging derivative is recognized in the income statement. Those changes in fair value of the hedged item that are attributable to the risks hedged with the derivative instrument are reflected in an adjustment to the carrying value of the hedged item, which is also recognized in the income statement. The fair value change of the hedged item in a portfolio hedge of interest rate risks is reported separately from the hedged portfolio in Other assets or Other liabilities as appropriate. If the hedge relationship is terminated for reasons other than the derecognition of the hedged item, the difference between the carrying value of the hedged item at that point and the value at which it would have been carried had the hedge never existed (the "unamortized fair value adjustment") is, in the case of interest-bearing instruments, amortized to the income statement over the remaining term of the original hedge, while for non-interest-bearing instruments that amount is immediately recognized in earnings. If the hedged item is derecognized, e.g. due to sale or repayment, the unamortized fair value adjustment is recognized immediately in the income statement.

Cash flow hedges

A fair value gain or loss associated with the effective portion of a derivative designated as a cash flow hedge is recognized initially in Equity. When the cash flows that the derivative is hedging materialize, resulting in income or expense, then the associated gain or loss on the hedging derivative is simultaneously transferred from Equity to the corresponding income or expense line item.

If a cash flow hedge for a forecast transaction is deemed to be no longer effective, or if the hedge relationship is terminated, the cumulative gain or loss on the hedging derivative previously reported in Equity remains there until the committed or forecast transaction occurs or is no longer expected to occur, at which point it is transferred to the income statement.
Economic hedges which do not qualify for hedge accounting

Derivative instruments which are transacted as economic hedges but do not qualify for hedge accounting are treated in the same way as derivative instruments used for trading purposes, i.e. realized and unrealized gains and losses are recognized in Net trading income except that, in certain cases, the forward points on short duration foreign exchange contracts are reported in Net interest income. Additionally, the Group has entered into economic hedges of credit risk within the loan portfolio using credit default swaps to which it cannot apply hedge accounting. In the event that the Group recognizes an impairment on a loan that is economically hedged in this way, the impairment is recognized in Credit loss expense, whereas any gain on the credit default swap is recorded in Net trading income. See Note 23 for additional information. Where UBS designates an economically hedged item at fair value through profit or loss, all fair value changes, including impairments, on both the hedged item and the hedging instrument are reflected in Net trading income (refer to part 7). Credit losses incurred on over-the-counter (OTC) derivatives are reported in Net trading income.

Embedded derivatives

A derivative may be embedded in a "host contract". Such combinations are known as hybrid instruments and arise predominantly from the issuance of certain structured debt instruments. If the host contract is not carried at fair value with changes in fair value reported in the income statement, the embedded derivative is generally required to be separated from the host contract and accounted for as a standalone derivative instrument at fair value through profit or loss if the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract and the embedded derivative actually meets the definition of a derivative. Bifurcated embedded derivatives are presented on the same balance sheet line as the host contract, and are shown in Note 28 in the "Held for trading" category, reflecting the measurement and recognition principles applied.

Typically, UBS applies the fair value option to hybrid instruments (see part 7), in which case bifurcation of an embedded derivative component is not required.
disclosure of the most important counterparties providing the collaterals and an assessment of the creditworthiness of the collateral provider (1 point)

No disclosure

information about concentration of risk which are associated with collaterals held or credit enhancements (1 point)

No disclosure
3. Credit quality of financial assets which are neither past due nor impaired
   - graphical representation of the division of the credit risks in credit rating classes by using of an internal or external rating (1 point)

<table>
<thead>
<tr>
<th>Gross credit exposure by UBS internal ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>UBS internal rating</td>
</tr>
<tr>
<td>C–D</td>
</tr>
<tr>
<td>E–F</td>
</tr>
<tr>
<td>G–H</td>
</tr>
<tr>
<td>I–J</td>
</tr>
<tr>
<td>K–L</td>
</tr>
<tr>
<td>Total C–L (test of past due)</td>
</tr>
<tr>
<td>Impaired assets</td>
</tr>
<tr>
<td>Past due but not impaired</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

- information about the counterparties (1 point)

Global Wealth Management & Business Banking's gross lending portfolio (Due from banks and Loans) on 31 December 2007 amounted to CHF 249 billion, of which CHF 142 billion (57%) was secured by real estate and CHF 78 billion (31%) by marketable securities. The pie chart above shows that exposure to real estate is well diversified with 38% of the gross lending portfolio being secured on single family homes and apartments which, historically, have exhibited a low risk profile. The 11% of exposure secured by residential multi-family homes consists of rented apartment buildings. Loans and other credit engagements with individual clients, excluding mortgages, amounted to CHF 99 billion and are predominantly extended against the pledge of marketable securities. The volume of collateralized lending to private individuals rose by CHF 15 billion or 24% from the previous year. The increasing demand for this product, as in 2006, reflects the continuing low interest rate environment.

Global Wealth Management & Business Banking: composition of lending portfolio, gross

As of 31.12.07

<table>
<thead>
<tr>
<th>Investment Bank</th>
</tr>
</thead>
</table>
| A substantial majority of the Investment Bank's gross credit exposure falls into the investment grade category (internal counterparty rating classes 0 to 5), both for gross banking products (69%) and for traded products (94%). The counterparties are primarily banks and financial institutions, multinational corporate clients and sovereigns.

Business Banking Switzerland: lending portfolio, gross (excluding mortgages) by industry sector

As a % of Business Banking Switzerland lending portfolio, gross (excluding mortgages)
• information about historical default rates of the contractual partners (1 point)
  
  No disclosure

• additional information for assessing the creditworthiness (1 point)
  
  No disclosure
in case of an internal rating:
  - information about the internal rating process (1 point)

Rating system design and estimation of credit risk parameters

Probability of default
UBS assesses the likelihood of default of individual counterparties using rating tools tailored to the various counterparty segments. Probability of default is summarised in a common Masterscale, shown below, which segments clients into 15 rating classes, two being reserved for cases of impairment or default. The UBS Masterscale reflects not only an ordinal ranking of counterparties, but also the range of default probabilities defined for each rating class, and in order to ensure consistency in determining default probabilities, all rating tools must be calibrated to the common Masterscale. This approach means that clients migrate between rating classes as UBS’s assessment of their probability of default changes. The performance of rating tools, including their predictive power with regard to default events, is regularly validated and model parameters are adjusted as necessary.

External ratings, where available, are used to benchmark UBS’s internal default risk assessment. The ratings of the major rating agencies shown in the table are linked to the internal rating classes based on the long-term average 1-year default rates for each external grade. Observed defaults per agency rating category vary year-on-year, especially over an economic cycle, and therefore UBS does not expect the actual number of defaults in its equivalent rating band in any given period to equal the rating agency average. UBS monitors the long-term average default rates associated with external rating classes. If these long-term averages were observed to have changed in a material and permanent way, their mapping to the Masterscale would be adjusted.

At the Investment Bank, rating tools are differentiated by broad segments. Current segments include banks, sovereigns, corporates, funds, hedge funds, commercial real estate and a number of more specialized businesses. The design of these tools follows a common approach. The selection and combination of relevant criteria (financial ratios and qualitative factors) is determined through a structured analysis by credit officers with expert knowledge of each segment, supported by statistical modeling techniques where sufficient data is available.

The Swiss banking portfolio includes exposures to a range of enterprises, both large and small- to medium-sized (“SMEs”) and the rating tools vary accordingly. For segments where sufficient default data is available, rating tool development is primarily based on statistical models. Typically, these “score cards” consist of eight to twelve criteria combining financial ratios with qualitative and behavioral factors which have proven good indicators of default in the past, are accepted by credit officers and are easy to apply. For smaller risk segments with few observed defaults a more expert-based approach is chosen, similar to that applied at the Investment Bank. For the Swiss commercial real estate segment and for Lombard lending, which is part of the retail segment, the probability of default is derived from simulation of potential changes in the value of the collateral and the probability that it will fall below the loan amount.

Default expectations for the Swiss residential mortgage segment are based on the internal default and loss history, where the major differentiating factor is the loan to value ratio — the amount of the outstanding obligation expressed as a percentage of the value of the collateral.

Loss given default
Loss given default or loss severity represents UBS’s expectation of the extent of loss on a claim should default occur. It is expressed as percentage loss per unit of exposure and typically varies by type of counterparty, type and seniority of claim, and availability of collateral or other credit mitigation. Loss given default estimates cover loss of principal, interest and other amounts due (including work-out costs), and also consider the costs of carrying the impaired position during the work-out process.

At the Investment Bank, where defaults are rare events, loss given default estimates are based on expert assessment of the risk drivers (country, industry, legal structure, collateral and seniority), supported by empirical evidence from internal loss data and external benchmark information where available. In the Swiss portfolio, loss given default differs by counterparty and collateral type and is statistically estimated using internal loss data. For the residential mortgage portfolio, a further differentiation is derived by statistical simulation based on loan to value ratios.

Exposure at default
Exposure at default represents the amounts UBS expects to be owed at the time of default.

For outstanding loans, the exposure at default is the drawn amount or face value. For loan commitments and for contingent liabilities, it includes any amount already drawn plus the further amount which is expected to be drawn at the time of default, should it occur. This calculation is based on a "credit conversion factor", a fixed percentage per product type derived from historical experience of drawings under commitments by counterparties within the year prior to their default.
For all traded products, the exposure at default is derived from the same Monte Carlo simulation of potential market moves in all relevant risk factors, such as interest rates and exchange rates, based on estimated correlations between the risk factors. This ensures a scenario-consistent estimation of exposure at default across all traded products at counterparty and portfolio level. The randomly simulated sets of risk factors are then used as inputs to produce specific valuation models to generate valuation paths, taking into account the impact of maturing contracts and changing collateral values, including the ability to call additional collateral.

- the amount of risk exposure for each internal rating class (1 point)
4. Financial instruments whose terms have been renegotiated and thereby the default in payment could be deferred
   - disclosure of the carrying amounts by class (1 point)

   **No disclosure**
5. Financial instruments which are in default (past due)
   - presentation of a mature analysis by class classification in several time bands (for instance, up to 3 months, 3 to 6 months, 6 to 12 months, more than 12 months to default) (1 point)

<table>
<thead>
<tr>
<th>Past due but not impaired loans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Perf. 10 days</td>
</tr>
<tr>
<td>11 to 30 days</td>
</tr>
<tr>
<td>31 to 60 days</td>
</tr>
<tr>
<td>61 to 90 days</td>
</tr>
<tr>
<td>&gt; 90 days</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

6. Individually impaired financial instruments
   - carrying amount before allowance (1 point)
   - amount of the allowance (1 point)

<table>
<thead>
<tr>
<th>CHF million</th>
<th>31.12.07</th>
<th>31.12.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total gross impaired due from banks and loans</td>
<td>2,392</td>
<td>2,628</td>
</tr>
<tr>
<td>Allowance for impaired due from banks</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Allowance for impaired loans</td>
<td>969</td>
<td>1,105</td>
</tr>
<tr>
<td>Total allowances for credit losses related to impaired due from banks and loans</td>
<td>997</td>
<td>1,218</td>
</tr>
<tr>
<td>Average total gross impaired due from banks and loans</td>
<td>2,483</td>
<td>3,003</td>
</tr>
</tbody>
</table>

Note 9c: Impaired Due from Banks and Loans

<table>
<thead>
<tr>
<th>CHF million</th>
<th>31.12.07</th>
<th>31.12.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total gross impaired due from banks and loans</td>
<td>2,392</td>
<td>2,628</td>
</tr>
<tr>
<td>Estimated liquidation proceeds of collateral</td>
<td>(1,104)</td>
<td>(1,059)</td>
</tr>
<tr>
<td>Net impaired due from banks and loans</td>
<td>1,288</td>
<td>1,569</td>
</tr>
<tr>
<td>Total allowances for credit losses related to impaired due from banks and loans</td>
<td>997</td>
<td>1,218</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHF million</th>
<th>31.12.07</th>
<th>31.12.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 31.12.07</td>
<td>3,408</td>
<td>(1,104)</td>
</tr>
<tr>
<td>Total 31.12.06</td>
<td>2,870</td>
<td>(1,059)</td>
</tr>
</tbody>
</table>

The gross impaired lending portfolio decreased to CHF 2,392 million on 31 December 2007 from CHF 2,628 million on 31 December 2006.
## Allowances and provisions for credit losses

<table>
<thead>
<tr>
<th>CHF million</th>
<th>Global Wealth Management &amp; Business Banking</th>
<th>Investment Bank(^1)</th>
<th>Other(^2)</th>
<th>UBS(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due from banks</td>
<td>8,237</td>
<td>6,245</td>
<td>51,184</td>
<td>43,812</td>
</tr>
<tr>
<td>Loans</td>
<td>240,641</td>
<td>222,776</td>
<td>95,760</td>
<td>76,188</td>
</tr>
<tr>
<td>Total lending portfolio, gross</td>
<td>248,878</td>
<td>225,021</td>
<td>147,924</td>
<td>119,800</td>
</tr>
<tr>
<td>Allowances for credit losses</td>
<td>(908)</td>
<td>(1,158)</td>
<td>(123)</td>
<td>(97)</td>
</tr>
<tr>
<td>Total lending portfolio, net</td>
<td>247,970</td>
<td>223,862</td>
<td>147,801</td>
<td>119,903</td>
</tr>
<tr>
<td>Impaired lending portfolio, gross</td>
<td>1,623</td>
<td>2,527</td>
<td>572</td>
<td>121</td>
</tr>
<tr>
<td>Estimated liquidation proceeds of collateral for impaired loans</td>
<td>(170)</td>
<td>(1,024)</td>
<td>(354)</td>
<td>(23)</td>
</tr>
<tr>
<td>Impaired lending portfolio, net of collateral</td>
<td>1,686</td>
<td>1,473</td>
<td>206</td>
<td>96</td>
</tr>
<tr>
<td>Allocated allowances for impaired lending portfolio</td>
<td>874</td>
<td>1,211</td>
<td>123</td>
<td>97</td>
</tr>
<tr>
<td>Other allowances and provisions</td>
<td>94</td>
<td>110</td>
<td>73</td>
<td>4</td>
</tr>
<tr>
<td>Total allowances and provisions for credit losses</td>
<td>1,768</td>
<td>1,593</td>
<td>136</td>
<td>101</td>
</tr>
<tr>
<td>Of which collective loan loss provisions and allowances</td>
<td>34</td>
<td>38</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Ratios

- Allowances and provisions as a % of total lending portfolio, gross: 0.4%
- Impaired lending portfolio as a % of total lending portfolio, gross: 0.7%
- Allocated allowances as a % of impaired lending portfolio, gross: 48.0%
- Allocated allowances as a % of impaired lending portfolio, net of collateral: 80.9%

\(^1\) Figures reflect International Financial Reporting Standards (IFRS) reported values and for 31 December 2006, the reclassification of prime brokerage as explained in Financial Statements 2007. \(^2\) Includes Global Asset Management and Corporate Center. \(^3\) Excludes CHF 27 million and CHF 98 million gross basis from industrial holdings for the years ended 31 December 2007 and 31 December 2006.

In 2007, UBS experienced a net credit loss expense of CHF 238 million, compared with a net credit loss recovery of CHF 156 million in 2006.

The Investment Bank recorded a net credit loss expense of CHF 266 million for 2007, compared with a net credit loss recovery of CHF 47 million in 2006. The main component was valuation adjustments of CHF 131 million taken during fourth quarter 2007, reflecting spread widening (as opposed to credit impairment) on US commercial mortgages that had been carried at amortized cost and were securitized or sold at less than their carrying value.

Global Wealth Management & Business Banking reported a net credit loss recovery of CHF 28 million for 2007, compared with a CHF 109 million net credit loss recovery for 2006. The reduced level of net credit loss recovery was a consequence of the continued reduction in the impaired lending portfolio and related allowances to a level such that recoveries realized from work-outs continue to trend lower and no longer compensate for the ongoing need to establish new allowances. The US mortgage market dislocation had no impact on Global Wealth Management & Business Banking figures.
● description of the factors the bank considered in determining that the financial instruments are impaired (1 point)

7. Collateral held for the financial instruments from category (5) and (6)
   ● description of the collateral which are held for the financial instruments of the categories (5) and (6) (1 point)
   and
   ● estimate of the fair values (1 point)
### Impaired assets by type of financial instrument

<table>
<thead>
<tr>
<th>CHF million</th>
<th>Implied exposure</th>
<th>Estimated liquidation proceeds of collateral</th>
<th>Allocated allowances, provisions and credit valuation adjustments</th>
<th>Net implied exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impaired loans</td>
<td>2,392</td>
<td>(1,104)</td>
<td>(597)</td>
<td>29</td>
</tr>
<tr>
<td>Impaired contingent claims</td>
<td>41</td>
<td>0</td>
<td>(93)</td>
<td>20</td>
</tr>
<tr>
<td>Defaulted derivative contracts</td>
<td>905</td>
<td>0</td>
<td>(241)</td>
<td>91</td>
</tr>
<tr>
<td>Defaulted securities financing transactions</td>
<td>70</td>
<td>0</td>
<td>(70)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total 31.12.07</strong></td>
<td><strong>3,408</strong></td>
<td><strong>(1,104)</strong></td>
<td><strong>(1,141)</strong></td>
<td><strong>390</strong></td>
</tr>
<tr>
<td><strong>Total 31.12.06</strong></td>
<td><strong>2,870</strong></td>
<td><strong>(1,059)</strong></td>
<td><strong>(1,390)</strong></td>
<td><strong>412</strong></td>
</tr>
</tbody>
</table>

### Impaired assets by region and time elapsed since impairment

<table>
<thead>
<tr>
<th>CHF million</th>
<th>Time elapsed since impairment</th>
<th>0–90 days</th>
<th>91–180 days</th>
<th>181 days–1 year</th>
<th>1 year–3 years</th>
<th>&gt; 3 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switzerland</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>135</td>
<td>41</td>
<td>89</td>
<td>326</td>
<td>1,306</td>
<td>1,097</td>
</tr>
<tr>
<td><strong>Europe</strong></td>
<td></td>
<td>23</td>
<td>11</td>
<td>2</td>
<td>22</td>
<td>80</td>
<td>148</td>
</tr>
<tr>
<td><strong>North America / Caribbean</strong></td>
<td></td>
<td>1,221</td>
<td>4</td>
<td>17</td>
<td>1</td>
<td>35</td>
<td>1,278</td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
<td></td>
<td>12</td>
<td>22</td>
<td>0</td>
<td>14</td>
<td>3</td>
<td>51</td>
</tr>
<tr>
<td><strong>Asia Pacific</strong></td>
<td></td>
<td>12</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td><strong>Middle East / Africa</strong></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total 31.12.07</strong></td>
<td></td>
<td><strong>1,401</strong></td>
<td><strong>83</strong></td>
<td><strong>168</strong></td>
<td><strong>364</strong></td>
<td><strong>1,452</strong></td>
<td><strong>3,408</strong></td>
</tr>
</tbody>
</table>

If impaired assets include loans, defaulted derivative contracts, defaulted securities financing transactions and impaired contingent claims

### Note 9a Due from Banks and Loans (Held at Amortized Cost)

#### By type of exposure

<table>
<thead>
<tr>
<th>CHF million</th>
<th>31.12.07</th>
<th>31.12.06</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Banks</strong></td>
<td>60,935</td>
<td>50,156</td>
</tr>
<tr>
<td><strong>Allowance for credit losses</strong></td>
<td>(21)</td>
<td>(30)</td>
</tr>
<tr>
<td><strong>Net due from banks</strong></td>
<td>60,914</td>
<td>50,126</td>
</tr>
<tr>
<td><strong>Loans</strong></td>
<td>122,435</td>
<td>124,248</td>
</tr>
<tr>
<td><strong>Residential mortgages</strong></td>
<td>21,084</td>
<td>19,399</td>
</tr>
<tr>
<td><strong>Commercial mortgages</strong></td>
<td>163,937</td>
<td>164,531</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>336,867</td>
<td>329,068</td>
</tr>
<tr>
<td><strong>Allowance for credit losses</strong></td>
<td>(1,003)</td>
<td>(1,226)</td>
</tr>
<tr>
<td><strong>Net loans</strong></td>
<td>335,864</td>
<td>327,842</td>
</tr>
<tr>
<td><strong>Net due from banks and loans (held at amortized cost)</strong></td>
<td>396,771</td>
<td>348,326</td>
</tr>
</tbody>
</table>

If includes due from banks and loans from industrial holdings in the amount of CHF 27 million and CHF 33 million for 2007 and 2006, respectively.

#### By type of collateral

<table>
<thead>
<tr>
<th>CHF million</th>
<th>31.12.07</th>
<th>31.12.06</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secured by real estate</strong></td>
<td>145,927</td>
<td>146,518</td>
</tr>
<tr>
<td><strong>Collateralized by securities</strong></td>
<td>123,912</td>
<td>85,200</td>
</tr>
<tr>
<td><strong>Guarantees and other collaterals</strong></td>
<td>42,390</td>
<td>27,000</td>
</tr>
<tr>
<td><strong>Unsecured</strong></td>
<td>79,749</td>
<td>93,038</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>401,918</td>
<td>351,776</td>
</tr>
<tr>
<td><strong>Allowance for credit losses</strong></td>
<td>(1,031)</td>
<td>(1,259)</td>
</tr>
<tr>
<td><strong>Net due from banks, loans (held at amortized cost) and loans designated at fair value</strong></td>
<td>400,887</td>
<td>350,517</td>
</tr>
</tbody>
</table>
8. **Assets taken possession within the realization of the collateral**

Disclosure about

- nature of the assets obtained (properties, buildings etc.) (1 point)
  
  and

- carrying amount of the assets obtained (1 point)

---

Collateral held against the impaired loans portfolio consists in most cases of real estate. It is UBS policy to dispose of foreclosed real estate as soon as practicable. The carrying amount of foreclosed property recorded in the balance sheet under Other assets at the end of 2007 and 2006 amounted to CHF 122 million and CHF 248 million respectively.

UBS seeks to liquidate collateral in the form of financial assets in the most expeditious manner, at prices considered fair. This may require that it purchases assets for its own account, where permitted by law, pending orderly liquidation.

**Property held for sale**

Non-current property formerly owned or leased to third parties under an operating lease or equipment the Group has decided to sell are classified as non-current assets held for sale and recorded in Other assets. Upon classification as held for sale, they are no longer depreciated and are carried at the lower of book value or fair value less costs to sell. Foreclosed properties and other properties classified as current assets are included in Properties held for sale and recorded in Other assets. They are carried at the lower of cost and net realizable value.

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**Note 17 Other Assets**

<table>
<thead>
<tr>
<th>CHF million</th>
<th>Note</th>
<th>31.12.07</th>
<th>31.12.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred tax assets</td>
<td>22</td>
<td>3,031</td>
<td>3,686</td>
</tr>
<tr>
<td>Settlement and clearing accounts</td>
<td>10</td>
<td>6,370</td>
<td>2,159</td>
</tr>
<tr>
<td>VAT and other tax receivables</td>
<td>24</td>
<td>454</td>
<td>318</td>
</tr>
<tr>
<td>Prepaid pension costs</td>
<td>886</td>
<td>814</td>
<td></td>
</tr>
<tr>
<td>Properties held for sale</td>
<td>1,143</td>
<td>1,234</td>
<td></td>
</tr>
<tr>
<td>Accounts receivable trade</td>
<td>28</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Inventory - industrial holdings</td>
<td>44</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Other receivables</td>
<td>6,042</td>
<td>7,856</td>
<td></td>
</tr>
<tr>
<td>Total other assets</td>
<td>18,000</td>
<td>17,249</td>
<td></td>
</tr>
</tbody>
</table>
Risk management:

9. Disclosure in terms of
   - objectives (1 point)

   Taking, managing and controlling risk is core to UBS's business. The aim is not, therefore, to eliminate all risks but to achieve an appropriate balance between risk and return. UBS's approach to risk management and control is based on five principles:
   - business management throughout the firm is accountable for all the risks assumed or incurred by their business operations and is responsible for the continuous and active management of risk exposures to ensure that risk and return are balanced;
   - an independent control process is an integral part of the firm's structure – its goal is to provide an objective check on risk-taking activities and to support senior management in achieving appropriate alignment of the interests of all stakeholders including shareholders, clients and employees;
   - comprehensive, transparent and objective risk disclosure to senior management, the Board of Directors (BoD), shareholders, regulators, rating agencies and other stakeholders is an essential component of the risk control process;
   - earnings protection is based on limiting the scope for adverse variations in earnings and exposure to stress events – controls are applied at the level of individual exposures and portfolios in each business and to risk in aggregate, across all businesses and major risk types, relative to the firm's risk capacity (the level of risk UBS is capable of absorbing, based on its anticipated earnings power); and
   - protection of UBS's reputation ultimately depends on the effective management and control of the risks incurred in the course of business.

   Credit risk control

   Limits and controls

   The primary objective of quantitative controls is to avoid, as far as possible, undue credit risk concentrations. Concentrations of credit risk exist if clients are engaged in similar activities, or are located in the same geographical region or have comparable economic characteristics such that their ability to meet contractual obligations would be similarly affected by changes in economic, political or other conditions. UBS has established limits to constrain exposure to individual counterparties and counterparty groups and at portfolio and sub-portfolio levels, wherever risk concentrations are identified, including exposure to specific industries and countries, where appropriate.

   - policies (1 point)

The risk control process

There are five key elements in the independent risk control process:
   - risk policies to implement the risk principles, reflecting UBS's risk capacity and risk appetite, and consistent with evolving business requirements and international best practice. UBS's risk policies are principle-based, specifying minimum requirements, high-level controls and standards, and broad authorities and responsibilities – they are never a substitute for the exercise of sound business judgment but, rather, guide and determine actions and decisions;
   - risk identification through continuous monitoring of portfolios, assessment of risks in new businesses and complex or unusual transactions, and ongoing review of the risk profile in the light of market developments and external events;
   - risk measurement using methodologies and modes which are independently verified and approved;
   - risk control by monitoring and enforcing compliance with risk principles, policies and limits, and with regulatory requirements; and
   - transparent risk reporting to stakeholders, and to management at all levels, on all relevant aspects of the approved risk control framework, including limits.
Quantitative controls

In principle, for risks that are quantifiable, UBS measures potential loss at three levels – expected loss, statistical loss and stress loss.

**Expected loss** is the loss that is expected to arise on average over time in connection with an activity. It is an inherent cost of such activity, and must be factored into business plans. For financial instruments carried at fair value, expected loss is reflected in valuations and deducted directly from revenues.

**Statistical loss** measures such as Value at Risk ("VaR"), estimate the amount by which actual loss in a portfolio can exceed expected loss over a specified time horizon, measured to a specified level of confidence (probability).

**Stress loss** is the loss that could arise from extreme events, typically beyond the confidence level of the statistical loss estimate, and is normally a scenario-based measure.

Qualitative controls

Although measurement of risk is clearly important, quantification does not always tell the whole story, and not all risks are quantifiable. Due diligence, sound judgment, common sense and an appreciation of a wide range of potential outcomes – including a willingness to challenge assumptions – are key components of a strong risk culture for both risk management and risk control. UBS’s risk measures did not adequately identify risks in the US residential mortgage markets in 2007, and qualitative assessments equally did not fully appreciate the range of potential outcomes and the deep tail risk in the portfolio. UBS will learn from this experience and will strive to strengthen its risk culture accordingly.

“Earnings-at-risk” and “Capital-at-risk”

To complement the day-to-day operating controls, UBS has developed two concepts – “Earnings-at-risk” and “Capital-at-risk” – to assess aggregate risk exposure across risk types and businesses against its financial resources. These measures assess UBS’s ability to absorb the potential loss inherent in its business in the current economic cycle, across all business lines, and from all major sources, including primary risks, operational risks and business risks.

Earnings-at-risk focuses on UBS’s ability to absorb losses from current earnings, while capital-at-risk considers more extreme losses and their potential to lead to a breach of minimum regulatory capital requirements or, ultimately, to insolvency. Capital-at-risk is an input to the capital management process.

**Earnings-at-risk** has been an integral part of the risk control process since 2004 and is monitored by the GEB and Chairman’s Office as part of the regular quarterly risk reporting cycle. The concept reflects UBS’s long-held view that the first and primary resource to absorb losses is a firm’s earnings stream. Earnings-at-risk has three elements – risk capacity, risk exposure and risk appetite.

For managing the risk.
A verbal description should be carried out in terms of the following aspects:

- structure and organization of the risk management with reference to its independence and responsibility (1 point)

**Risk management and control responsibilities**

The BoD has a strategic and supervisory function. It is responsible for the firm's fundamental approach to risk, for approving the risk principles and for determining risk capacity and risk appetite.

The Chairman's Office acts as the Risk Council of the BoD. In this capacity, it oversees the risk profile of the firm on behalf of the BoD and oversees implementation by the Group Executive Board (GEB) of the risk management and control principles.

The GEB, together with its Risk Sub-Committee, is responsible for implementing the risk principles, including approval of core risk policies, and for managing the risk profile of UBS as a whole.

The Group Chief Risk Officer (Group CRO) has overall responsibility for the development, implementation and enforcement of UBS's risk principles. The role is supported by the Group Chief Credit Officer (Group CCO), the Group Head of Market Risk and the Group Head of Operational Risk. Together they establish risk control frameworks, formulate risk policies and determine methodologies for measurement and assessment of risk. They are responsible for monitoring UBS's risks and its risk/return profile, and have the authority to mandate risk reductions in the light of market conditions and UBS's financial resources.

- area of application and nature of the risk reporting or of the methods of risk measurement (1 point)

**Concentration controls complement portfolio risk measures.** Controls are generally applied where UBS identifies that positions in different financial instruments or different portfolios are affected by changes in the same risk factor or group of correlated factors and there is the potential for significant loss in the event of extreme but plausible adverse developments. UBS's concentration controls include credit limits for individual clients, counterparties and counterparty groups, ceilings on exposure to all but the best-rated countries, limits on potential loss from changes in general market risk factors, and thresholds on single name exposures in the trading portfolio.

The primary day-to-day quantitative controls are intended to govern normal periodic adverse results and prevent severe losses as a result of stress events. The identification of stress events and scenarios to which UBS is vulnerable and an assessment of their potential impact – in particular the danger of aggregated losses from a single event through concentrated exposures – is a critical component of the risk control process. Risk measures and controls rely on a combination of past experience, available external data, and judgments about likely future developments. Each new stress event is in some way unique, and thus no risk measure can provide complete protection against every possible scenario. Equally, each stress event offers new insights into ways of enhancing risk measures and controls, whether specific to an individual portfolio or risk type or, as is the case with the experience of 2007, a more generic extension from a particular experience, applying the lessons learned more broadly.
Sources of credit risk

Credit risk is inherent in traditional banking products – loans, commitments to lend and contingent liabilities, such as letters of credit – and in “traded products” – derivative contracts such as forwards, swaps and options, repurchase agreements (repos and reverse repos), and securities borrowing and lending transactions. The risk control processes applied to these products are fundamentally the same, although the accounting treatment varies – they can be carried at amortized cost or fair value, depending on the type of instrument and, in some cases, the nature of the exposure.

- methods for hedging and reducing of risks including the regulations and procedures in terms of the inclusion of collaterals (1 point)

Risk mitigation

UBS employs risk mitigation techniques for most of its credit portfolios, typically by taking security in the form of financial collateral (cash or marketable securities) or other assets, or through risk transfers or the purchase of credit protection.

Taking security is the most common form of risk mitigation. Valuation standards are applied in assessing the mitigating effect of security. In lending to affiliated private clients (lombard lending) the pledge of securities or cash is required. The Investment Bank also takes financial collateral in the form of marketable securities in much of its over-the-counter (OTC) derivatives activity and in its securities financing (securities lending/borrowing and repurchase/reverse repurchase) business. Where financial collateral is taken, discounts (“haircuts”) are generally applied to the market value, reflecting the quality, liquidity, volatility – and in some cases complexity – of the individual instruments. Exposures and collateral positions are continuously monitored, and margin calls and close-out procedures are enforced when the market value of collateral falls below predefined levels relative to the exposure. Collateral concentrations within individual client portfolios and across clients are also monitored where relevant and may affect the discount applied to specific collateral. For property financing, a mortgage over the relevant property is taken to secure the claim, considering the ability of the borrower to service the debt from income, and in accordance with UBS’s policy on loan to value ratios.

OTC derivatives business is conducted almost without exception under bilateral master agreements, which generally allow for the close out and netting of all transactions in the event of default by the other party. UBS has also entered into two-way collateral agreements with market participants, under which either party can be required to provide collateral in the form of cash or marketable securities when exposure exceeds a pre-defined level. The OTC derivatives business with lower-rated counterparties is generally conducted under one-way collateral agreements where the counterparty provides collateral to UBS. Under these agreements, only cash or very liquid collateral is accepted. UBS has standards for netting and collateral agreements, including assurance that contracts are legally enforceable in insolvency in the relevant jurisdictions.

UBS has also made use of credit hedging, in the form of risk transfers, securitizations and purchase of credit protection, as part of its active management of credit risk to reduce concentrated exposures to individual names or sectors or in specific portfolios. Most of this credit hedging is achieved by transferring underlying credit risk to high-grade market counterparties using single name credit default swaps, executed under bilateral netting agreements and generally also under collateral agreements. Credit-pooling vehicles are also used to transfer risk to outside investors via credit-linked notes. In the internal risk reporting processes, the gross exposure before hedging as well as net exposure is tracked. The benefit of credit hedges is only recognized in credit risk measures if they cover future exposure increases to a high level of confidence, and offer protection against a wide range of credit events, including failure to pay, bankruptcy and insolvency, restructuring and repudiation, and moratorium. Proxy hedges (credit protection on a different but correlated name) and index or macro hedges are not recognized.

The effectiveness of credit protection bought from a counterparty depends on the ability of the counterparty to meet any claim. Exposure to credit protection providers is monitored as part of overall credit exposure. Where there is significant correlation between the counterparty and the hedge provider (so-called “wrong-way risk”) UBS’s policy is not to recognize any benefit in credit risk measures.

- processes which are used for supervising the continuous effectiveness of the methods which are responsible for hedging and reducing of risks (1 point)

No disclosure

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