

# Risk Reporting: An Analysis of the German Banking Industry

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## Executive summary

The recent financial crisis resulted in an increased attention on the risks of banks and their financial instruments. This article discusses the outcomes of a study on the quantity and quality of market, credit, and liquidity risk disclosures and the relationship 1) between the quantity and quality of disclosures, 2) between disclosures and bank size, 3) disclosures and bank profitability, and 4) disclosures and time. The 2005-2008 annual reports of a sample of German banks are studied and the disclosures are measured by using two disclosure index frameworks. The results provide a sound basis for future research like capital market research, event studies, and behavioral studies in relation to risk disclosures.

For the full text of this master thesis refer to the following webpage:  
<http://hdl.handle.net/2105/5413>.

## 1. Introduction

*'Banks are especially unpopular in two circumstances: first, when they are very profitable; and second, when they are very unprofitable (Sir Davies, LSE<sup>2</sup>).*

In 2007, and even more in 2008, the world got confronted with an international financial crisis, also called the credit crisis. One of the industries that is hit hard by this crisis is the German banking industry, that even needed support from the government to survive.

Since the existence of banks these are known to be major risk taking and risk management entities. According to Linsley and Shrivs (2005, 205) they are therefore "expected to release relevant risk-related information to the marketplace, as part of good corporate governance". The annual report is for many years used to communicate firm performance with share- and stakeholders and includes, in general, both mandatory and voluntary disclosures. Although some suggest that companies will disclose more bad news when their financial position is threatened (Darrough and Stoughton, 1999; Suijs, 2005), Linsley and

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<sup>2</sup> Sir Howard Davies, director of the London School of Economics in 'New banking rules: tread carefully', The Financial Times, September 30, 2008.

Shrives (2006, 279) state that banks might wish to keep discussion about their risk levels out of the public domain.

The discussion about risk disclosures was already going on for several years due to major corporate scandals, but it took the International Accounting Standards Board however until 2005 to publish an exposure draft to come to regulation to improve the disclosures about financial instruments and their risks. From 2007 specific disclosures are required by IFRS 7 *Financial Instruments - Disclosures*. Other risk disclosures are required by Basel II pillar 3 (2008) and for German banks already since 1998 by the Commercial Code and since 2001 by the German Accounting Standard 5-10. Comprehensive risk disclosures in the annual reports of German banks are therefore expected, even in the years before IFRS 7 and Basel II.

Since there are only a few empirical studies on risk disclosures by banks (Basel Committee, 2001, 2002, 2003; Linsley et al., 2006; Helbok and Wagner, 2006) and the interest in it has strongly increased recently, it is interesting and relevant to examine this topic. This study focuses on a recent time period and incorporates as one of the first the disclosure requirements of IFRS 7. Next to that, a different way of measuring the quality of information is developed, as opposed to other studies that use the quantity as a proxy for the quality of information.

The problem of this research is defined by the following main research question:

*How can differences in the quantity and quality of financial instrument risk disclosures in the annual reports of German banks be measured and explained?*

In conclusion, this article discusses research on the risk disclosures of financial instruments in the annual reports of German banks and analyzes some factors that might be of influence on the differences in disclosures over time and between banks. In section 2 some information on the background of risk and disclosures is provided, together with the discussion of prior literature. Section 3 hereafter provides information on the disclosure frameworks used, the developed hypotheses and the way the results are calculated. In section 4 the results and analysis are discussed and section 5 includes the limitations of this study and the conclusion.

## **2. Background and prior literature**

### **2.1. Background risk and risk disclosures**

Risk is driven by internal and external factors, and both the ASB and ICAEW view risk as the “*uncertainty as to the amount of benefits*” which “*includes both potential for gain and exposure to loss*” (ICAEW, 1998, 5). According to Beretta and Bozzolan (2004, 269) risk disclosures can as a consequence of this definition be defined as “*the communication of factors that have the potential to affect expected results*”.

Since this research focuses on risk disclosures of financial instruments it is useful to make clear what financial instruments are. According to the International Accounting Standards this is “*any contract that gives rise to a financial assets of one entity and a financial liability or equity instrument of another entity*” (IAS 32.11) and can be divided into primary (receivables, payables, and equity instruments) and derivative financial instruments (options, futures, forwards, and swaps). Although the goal of having financial instrument is to make a profit on them or prevent losses with it, there is always some uncertainty about whether this goal will be achieved. This uncertainty can be divided in three main categories: credit risk, liquidity risk, and market risk whereby the latter includes currency risk, interest rate risk, and other price risk.

The rationale behind risk reporting can be explained by the agency theory, the information asymmetry perspective, the information risk perspective, the Modern Portfolio Theory, the political cost perspective and the signalling perspective. Due to their position the information that banks and the users of their annual reports have differs. Disclosing part of this information will reduce the information asymmetry between the parties and might result in reduced costs of capital, better decision making by shareholders, less attention from supervisors like the Authority of Financial Markets (AFM) or central banks and the prevention of reputation damage. Managers might however be reluctant to release risk information since this might be commercially sensitive and can give competitors an advantage. Second, there is the issue of forward-looking information which is according to the ICAEW “unreliable and could leave directors open to potential claims from investors who have acted upon this information” (Linsley et al. 2006, 269).

Although risks in business have always existed, major corporate scandals in the past 30 years, the increasing complexity of business structures, a changing environment and technology, and the current crisis on the financial markets have increased the focus on risk and risk management. In the past years different reports gave considerable attention to this topic (Cadbury Report, 1992; AICPA, 1995; ICAEW, 1998; Turnbull Report, 1999; ICAEW, 1999; ICAEW, 2002) and the disclosures of risks have become less voluntary.

When it comes to comprehensive risk reporting, Germany was a forerunner by introducing the Law on Corporate Control and Transparency in 1998. This resulted in amendments of paragraphs 289 (1) and 315 (1) of the German Commercial Code, which required companies to report in their annual reports about risks, chances and expected future developments, including the assumptions for this (HGB § 289 (1) and § 315 (1)). Later on, in 2001, the German Accounting Standard Board adopted German Accounting Standard No.5. *Risk reporting*, with GAS 5-10 about risk reporting by banks. Another few years later the International Accounting Standards Board revised and enhanced the already existing regulation regarding the disclosures of financial instruments (IAS 32) due to the fact that “*the techniques used by entities for measuring and managing exposure to risks arising from financial instruments have evolved and new risk management concepts and approaches have gained acceptance*” (IASB, 2004, 3). From 2007 companies with financial instruments and that report in conformity with IFRS have to comply with IFRS 7, which requires specific risk disclosures in the annual report. For banks the requirements of Basel

II pillar 3 are added to this since 2008, although a part of these requirements are similar to those in IFRS 7. If incorporated into national laws, companies in the EU member states already had to report on risks and uncertainties however since 2005, due to a change in article 1(14)(a)<sup>3</sup>. This resulted in similar requirements by the EU as the requirements in the German Commercial Code since 1998.

## 2.2. Prior risk disclosure literature

The past 30 years many researchers have examined voluntary disclosures in annual reports from different perspectives, including the capital market and positive accounting perspective. Recent studies focus more specifically on the topic of risk reporting in annual reports (e.g. Kajüter and Winkler, 2003; Beretta and Bozzolan, 2004; Linsley and Shrivess, 2006; Abraham and Cox, 2007).

Most of the research on risk disclosures focuses on non-financial companies in a particular country and examine among others the relationship between the level of risk disclosures and company size. For instance Linsley and Shrivess (2006) who found, in accordance to a study by Beretta and Bozzolan (2004), that for a sample of 79 UK FTSE 100 listed firms there exists a positive relationship between the amount of risk disclosures and company size<sup>4</sup>.

A more specific stream of risk disclosure studies focuses on risk disclosures in relation to derivatives and other financial instruments by financial and non-financial companies (Adedji and Baker, 1999; Rajgopal, 1999; Jorion, 2002; Dunne et al., 2004). Dunne et al. (2004) and Dunne and Helliar (2003) thereby found that the implementation of FRS 13 *Derivatives and Other Financial Instruments - Disclosures* resulted in an increase in disclosures, but also a market reaction.

Studies on risk reporting by German, mostly non-financial firms are performed by Kajüter and Winkler (2003), Fischer and Vielmeyer (2004) and Kajüter and Esser (2007). For example, by examining the management reports of a sample of 83 German stock-listed companies and using content analysis, Kajüter and Winkler (2003, 219-228) found that the quantity of risk disclosures increased in the period 1999-2001, but that there was non-compliance with GAS 5 which became effective in 2001.

Literature on risk reporting by banks is still rather rare due to the limited amount of research on this topic. The literature that is available can be divided in two different streams: 'academic' research (Basel Committee, 1999, 2000, 2001; Linsley et al., 2006; Helbok and Wagner, 2000) and research by audit firms (e.g. PricewaterhouseCoopers, 2008; Ernst & Young, 2008; KPMG, 2008).

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<sup>3</sup> Modernisation Directive 2003/51/EC of June 18<sup>th</sup>, 2003

<sup>4</sup> Company size is measured by taking the natural logarithm of market value and the natural logarithm of turnover. The Pearson correlation for market value is 0.467 and for turnover 0.364, both significant at a 0.01 level.

The Basel Committee on Banking Supervision was the first to study this specific topic by analyzing the disclosure levels in the 1999, 2000 and 2001 annual reports of approximately 55 different banks from 13 countries all over the world. The findings were based on a survey of 104 questions in 12 categories about different types of risk in the annual reports and were filled in by the national banking supervisors with yes, no or not applicable. Conclusions by the Basel Committee were based on the comparison of disclosure ratings during the years. For the year 2000 for instance they concluded that the internal models for market risk are rather extensively disclosed, but that the disclosures of the results of stress tests should be improved (Basel Committee, 2002, 7).

Linsley et al. (2006) conducted one of the first studies using content-analysis by counting sentences in the 2002 annual reports of a sample of in total 18 British and Canadian banks, divided into two groups of 9 banks selected from the database *The Banker*. By conducting this research they examined whether the size, profitability, risk level, and quantity of risk definitions of the bank have a positive relationship with the total quantity of disclosure levels (Linsley et al., 2006, 274). Hereby they made use of the disclosure model as used by Linsley and Shrivess (2006) and Kajüter (2001).

In accordance with the studies by Linsley and Shrivess (2006) and Beretta and Bozzolan (2004) of non-financial companies, Linsley et al. (2006) also found a positive relationship between bank size, as measured by the natural logarithm of total assets and the natural logarithm of market capitalization, and the total quantity of risk disclosures of banks<sup>5</sup>. No association was found between the amount of risk disclosures and bank profitability, and the amount of risk disclosures and risk level. Although there was not found a statistically different level of risk disclosures between Canadian and UK banks, further research is useful before more general statements about risk disclosures by banks can be made.

Apart from the academic studies, audit firms also study the topic of risk reporting and IFRS 7. For instance KPMG (2008) examined a sample of 25 European banks and 14 insurance companies and their 2007 annual reports by using a disclosure index framework. This framework consists of 6 types of risk and in total 160 items, which are based on regulatory requirements, recommendations, emerging ideas, and best practices (KPMG, 2008, 12). One of their results is that credit risk turns out to be the risk area in which disclosures are the most developed and another result is that requirements by regulation are in general less developed than the best practices by banks.

### **3. Hypotheses development and research design**

#### **3.1. Risk disclosure frameworks**

The objective of this research is to examine the risk disclosures of banks and to analyze the possible differences in disclosures. In many prior researches this is done by using content

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<sup>5</sup> The results show a Pearson-correlation of 0.734 and significance of 0.001 for total assets, and a Pearson-correlation of 0.615 and significance of 0.015 for market capitalization. For total assets the correlation is significant at the 0.01 level and for market capitalization at the 0.05 level (Linsley et al., 2006, 279)

analysis (e.g. Kajüter and Winkler, 2003; Beretta and Bozzolan, 2004; Linsley and Shrivess, 2006, Linsley et al., 2006; Abraham and Cox, 2007; Amran et al., 2009). This is according to Babbie (2007, 319) “the study of recorded human communication” and can be classified as unobtrusive research in which social behaviour is studied but not affected.

One of the approaches of content analysis is the disclosure index study “that specifies ex ante a list of items and scrutinise the text for presence, ignoring sections of the text that do not relate to this list” (Beattie et al., 2004, 208). For this study this research method is used.

In order to measure both the quantity and quality of risk disclosures, two disclosures frameworks are developed. One to measure the quantity of disclosures and one to measure the quality of disclosures. Since other research does not make use of comparable frameworks, for instance Linsley et al. (2006) count the sentences in the annual reports about specific risks, new indexes are constructed. The items included in the quantity framework are based on IFRS 7.31-42, which correspond to the requirements of Basel II pillar 3 and the German Commercial Code. The items in the quality framework are based on the qualitative characteristics of information<sup>6</sup> as defined by the conceptual frameworks of the IASB (2001) and The Basel Committee (1998). The two frameworks are included in appendix A and appendix B.

The frameworks are cross-country and in different industries applicable since they are based on worldwide adopted accounting standards and characteristics of information. For banks the risk disclosures are however much more important and therefore expected to be more comprehensive. In this study the frameworks are not intended to be used as a compliance study and no statements about whether a particular bank complies with the regulation will be made. The focus will be on a single industry and a single country. More research is therefore necessary to examine the differences between industries and countries.

For every disclosed item an annual report can score one point. Based on the number of items in the framework that are applicable to the annual report of a bank a maximum amount of points can be scored<sup>7</sup>. The quantity and quality of disclosures can be measured by calculating a score for every annual report according to the following formula:

$$DSCORE_{BY} = \frac{1}{MAX_{BY}} \sum_{i=1}^N SCORE_{iBY}$$

By dividing the sum of the scores of all items of bank *B* by the maximum score of bank *B*, the result will be a disclosure score between 0 and 1. If for example the number of items in the framework is 30 and the maximum score as well, and in the annual report 25 items

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<sup>6</sup> Relevance, comparability, reliability and understandability.

<sup>7</sup> The maximum score for an annual report can differ since not all the items in the frameworks have to be relevant for every bank and every year. Therefore not all the items should always be taken into account.

are disclosed, the disclosure score is  $25/30 = 0,833$ . After calculating all the scores these can be compared with each other since the scores are scaled.

### 3.2. Sample size and selection of years

The sample of this study consists of 32 annual reports of the period 2005-2008 of the 8 German banks as included in table 1. The rationale behind selecting those years is due to the fact that from January 1, 2007 the requirements of IFRS 7 are mandatory. Two years before and two years after the introduction are therefore selected since an increase in disclosures is expected to be shown in the annual reports.

**Table 1 Banks included in sample**

Commerzbank*	Hypovereinsbank
DekaBank Deutsche Girozentrale	KfW Bankengruppe
Deutsche Bank*	LandesBank Berlin Holding*
Deutsche Postbank*	WestLB

\* stock-listed in Germany and/or abroad

### 3.3. Hypotheses

A limited amount of hypotheses is developed in order to find explanations for possible differences in disclosure scores. These hypotheses will be described in short below.

#### Quantity versus quality

Since researchers and their studies do not agree on whether quantity is a good proxy for quality, two disclosure frameworks are developed to measure both quantity and quality aside from each other. Since there is no clear theoretical background for the expectation that banks that disclose a lot of information also provide qualitative better information the following hypothesis is drawn up:

**H1:** Banks with high quantity scores do not have high scores on the quality items.

#### Risk disclosures and bank size

In general, larger companies attract more attention from share- and stakeholders than smaller companies. According to the Political Cost Theory this might lead to higher political costs and one way of reducing these costs is to disclose more information. Also the problems of information asymmetry, agency costs and higher demand of returns for shareholders will be higher for larger companies. In accordance with Diamond and Verrechia (1991, 1325) larger companies and banks are therefore expected to disclose more risk information. The following hypothesis is based on this:

**H2a:** *There is a significant positive relationship between the quantity of risk disclosures in the annual reports of German banks and bank size in the period 2005-2006.*

Since the disclosure requirements are equal for all banks in the period 2007-2008 the following hypothesis is drawn up for this period:

**H2b:** *There is no significant positive relationship between the quantity of risk disclosures in the annual reports of German banks and bank size in the period 2007-2008.*

Larger banks are expected to produce qualitative better annual reports since they have more political exposure and in general more stakeholders that make use of the annual reports. The following hypotheses are therefore drawn up:

**H2c:** *There is a significant positive relationship between the quality of risk disclosures in the annual reports of German banks and bank size in the period 2005-2006.*

**H2d:** *There is a significant positive relationship between the quality of risk disclosures in the annual reports of German banks and bank size in the period 2007-2008.*

#### Risk disclosures and profitability

According to Helbok and Wagner (2006a, 11) banks that are more profitable will be early adopters of risk disclosures since they want to distinguish themselves from the other, less profitable banks. Next to that, the political cost theory gives rise to the expectation that more profitable banks will disclose more risk information, although in general mixed results are found<sup>8</sup>. In accordance with the theory and expectations the following hypotheses are drawn up, taking into account that from 2007 the risk disclosures are mandatory:

**H3a:** *There is a significant positive relationship between the quantity of risk disclosures in the annual reports of German banks and the relative profitability of the banks in the period 2005-2006.*

**H3b:** *There is no significant positive relationship between the quantity of risk disclosures in the annual reports of German banks and the relative profitability of the banks in the period 2007-2008.*

**H3c:** *There is a significant positive relationship between the quality of risk disclosures in the annual reports of German banks and the relative profitability of the banks in the period 2005-2006.*

**H3d:** *There is a significant positive relationship between the quality of risk disclosures in the annual report of German banks and the relative profitability of the banks in the period 2007-2008.*

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<sup>8</sup> See Ahmed and Courtis. 1999. Associations between corporate disclosure characteristics and disclosure levels in annual reports: A meta-analysis, *British Accounting Review* 31: 35-61.



### Risk disclosures and time

In previous research by Kajüter and Winkler (2003) a positive relationship between the quality of risk disclosures in the German annual reports of 1999-2001 of non-financial stock listed companies and time was found. This result is consistent with the increase in demand of risk disclosures and the general trend that is observed in the disclosures of banks (Linsley and Shrives, 2005, 210). Next to that the disclosure scores of the German banks in tables 2 and 3 also show at first sight an increase in the quantity and quality of disclosures and therefore the following hypotheses are drawn up:

**H4a:** *The quantity of risk disclosures in the annual reports of German banks has increased significantly between the period 2005-2006 and 2007-2008.*

**H4b:** *The quality of risk disclosures in the annual reports of German banks has increased significantly in the period 2005-2006 and 2007-2008.*

### 3.4. Variable measurement and statistical methods

In order to calculate the correlation between bank size, profitability and disclosure scores, the measurement of the variables have to be determined. Since not all banks in the sample are stock-listed, bank size is not measured by market value of equity but by total assets, and in order to prevent heteroscedasticity by taking the *natural logarithm of total assets*. The relative profitability is measured by the financial ratios Return on (Average) Total Assets (ROA) and Return on (Average) Equity (ROE).

Due to the normal distribution of the variables (by excluding possible outliers) parametric tests can be applied to all the hypotheses. For hypotheses 1-3 Pearson correlation coefficients are calculated at a 95 % confidence interval. For the fourth hypotheses a paired samples t-test is used. The average disclosure score of the years 2005-2006 and 2007-2008 for every bank is calculated and these results are pair-wise compared to each other.

## 4. Results and analysis

Applying the disclosure frameworks and statistical analysis as explained in sections 3.1. and 3.4. shows the results as presented in tables 2, 3 and 4.

**Table 2 Disclosure scores quantity**

	2005	2006	2007	2008
<b>Mean</b>	0,62	0,66	0,83	0,87
<b>Min</b>	0,29	0,41	0,75	0,81
<b>Max</b>	0,78	0,81	0,95	0,95
<b>Stand.dev.</b>	0,16	0,13	0,07	0,05

**Table 3 Disclosure scores quality**

	2005	2006	2007	2008
<b>Mean</b>	0,75	0,78	0,89	0,90
<b>Min</b>	0,50	0,67	0,85	0,85
<b>Max</b>	0,92	0,83	1,00	1,00
<b>Stand.dev.</b>	0,12	0,06	0,07	0,05

As opposed to the expectation of no significant correlation between the quantity and quality the results show a significant positive relationship (at a confidence level of 99%). This can be interpreted as banks that disclosure more items based on the quantity

framework apparently also provide information of higher quality, for instance by disclosing information in a specific way (e.g. including graphs and tables, comparable figure of previous years). Since most of the banks score high on quality is it possible that banks imitate each other.

No significant positive relationship between the quantity of disclosures and bank size was found for the years 2005-2006, which might be explained by the influence of the German disclosure requirements of GAS 5-10. Since these disclosures have been mandatory for banks for several years before the introduction of IFRS 7 the disclosures of banks have apparently become more similar. Institutional isomorphism or the influence of a large, dominant bank might be an explanation but cannot be tested with the obtained results. The surprising positive relationship in the period 2007-2008 might be explained by the influence of the financial crisis on bank sizes. No unambiguous conclusion can be drawn on whether the size of a bank is of significant influence on the risk disclosures in annual reports.

**Table 4 Pearson correlation coefficients**

		<i>Quantity</i> <i>All</i>	<i>Quality</i> <i>All</i>	<i>LnTA</i> <i>05-06</i>	<i>LnTA</i> <i>07-08</i>	<i>ROAA</i> <i>05-06</i>	<i>ROAA</i> <i>07-08</i>	<i>ROAE</i> <i>05-06</i>	<i>ROAE</i> <i>07-08</i>
<b>Quantity</b> <b>All</b>	<i>Pearson</i> <i>Correlation</i>	1	0.820**						
	<i>Sig. (2- tailed)</i>		0.000						
	<i>N</i>	32	32						
<b>Quality</b> <b>All</b>	<i>Pearson</i> <i>Correlation</i>	0.820**	1						
	<i>Sig. (2- tailed)</i>	0.000							
	<i>N</i>	32	32						
<b>Quantity</b> <b>05-06</b>	<i>Pearson</i> <i>Correlation</i>			0.097		0.078		0.231	
	<i>Sig. (2- tailed)</i>			0.720		0.773		0.390	
	<i>N</i>			16		16		16	
<b>Quantity</b> <b>07-08</b>	<i>Pearson</i> <i>Correlation</i>				0.548*		-0.422		-0.343
	<i>Sig. (2- tailed)</i>				0.028		0.117		0.211
	<i>N</i>				16		15		15
<b>Quality</b> <b>05-06</b>	<i>Pearson</i> <i>Correlation</i>			0.144		0.209		0.305	
	<i>Sig. (2- tailed)</i>			0.596		0.437		0.251	
	<i>N</i>			16		16		16	
<b>Quality</b> <b>07-08</b>	<i>Pearson</i> <i>Correlation</i>				0.567*		0.106		0.142
	<i>Sig. (2- tailed)</i>				0.022		0.708		0.613
	<i>N</i>				16		15		15

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

As explained above, GAS 5-10 might be of influence on the disclosure levels of banks in the period 2005-2006. For profitability there is therefore no significant positive relationship shown either in the period 2005-2006. The fact that risk information is commercially sensitive and involves a lot of uncertainty might also cause larger and more profitable banks not to show significantly more risk information. The non-significant negative results for the period 2007-2008 should be interpreted with care and in general no strong statements about the relationship with profitability can be made based on these results.

The most interesting result is the significant increase in the quantity and quality of disclosure between the periods 2005-2006 and 2007-2008. The paired samples t-test shows results of -3,757 and -3,603, with significance levels of 0,007 and 0,0009 for quantity and quality. This was already expected since the demand for disclosures has increased and due to the introduction of IFRS 7. The financial crisis on the other hand might also be of great influence since the focus of banks and their risk has increased greatly. By disclosing more information banks might want to avoid discussions and prevent reputation damage. Even though according to Linsley et al. (2006, 279) banks rather do not discuss their risk levels publicly, the introduction of IFRS 7 is expected to be the main driver behind the significant increase. Previous research has also shown that accounting standards are of important influence on risk disclosures.

## **5. Limitations and conclusion**

Limitations of this research are subjectivity, a limited amount of selected items in the frameworks and the lack of scientific evidence that support the items in the quality framework. Next to that, due to the limitation of time only a sample of German banks is examined which makes it impossible to make statements about the whole (German) banking industry.

Based on this research a number of other studies are however possible. For instance whether the capital market becomes more efficient and the cost of capital declines due to increased risk disclosures. Also a behavioural study can be done to examine whether increased risk disclosures will lead to better decision making and judgements of the users of the annual reports, and an event study on the introduction of IFRS 7 and the financial crisis. In conclusion, this research is relevant for future research since it provides evidence about the development of risk disclosures in the banking sector which might be explained by a number of other factors and/or have an effect on the decision making of users of the annual reports.

In conclusion, this research has mainly showed that the demand and supply of risk disclosures has increased over the years. For the German banking sector the presence of regulation (GAS 5-10, IFRS 7) is however the expected main driver for the increased supply, and not the size and profitability of a bank.

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## Appendix A Quantity framework

<i>Market risk - Interest rate risk</i>			
<i>Item</i>	<i>Disclosure requirement</i>	<i>Source</i>	<i>Disclosure score</i>
1	Exposure to risk and how they arise	IFRS 7.33a IFRS 7.IG15	
2	Objectives, policies and processes for managing the risk and the methods used to measure the risk	IFRS 7.33b IFRS 7.IG15	
3	Changes in exposure to risk, measurement of risk, and objectives, policies and processes to manage the risk from the previous period	IFRS 7.33c IFRS 7.IG17	
3a	<ul style="list-style-type: none"> <li>Disclosure of changes</li> </ul>		
3b	<ul style="list-style-type: none"> <li>Explanation for changes</li> </ul>		
4	Summary quantitative data about is exposure to risk at the reporting date	IFRS 7.34a	
5	Interest rate sensitivity analysis showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date	IFRS 7.40a	
6	Methods and assumptions used in preparing the sensitivity analysis	IFRS 7.40b	
6a	<ul style="list-style-type: none"> <li>Method sensitivity analysis</li> </ul>		
6b	<ul style="list-style-type: none"> <li>Model used for analysis</li> </ul>		
6c	<ul style="list-style-type: none"> <li>Assumptions used</li> </ul>		
6d	<ul style="list-style-type: none"> <li>Explanation of on what the parameters are based</li> </ul>		
7	Concentration of interest rate risk if not apparent from summary quantitative data and sensitivity analysis	IFRS 7.34c	
<i>Market risk - Currency risk</i>			
<i>Item</i>	<i>Disclosure requirement</i>	<i>Source</i>	
8	Exposure to risk and how they arise	IFRS 7.33a IFRS 7.IG15	
9	Objectives, policies and processes for managing the risk and the methods used to measure the risk	IFRS 7.33b IFRS 7.IG15	
10	Changes in exposure to risk, measurement of risk, and objectives, policies and processes to manage the risk from the previous period	IFRS 7.33c IFRS 7.IG17	
10a	<ul style="list-style-type: none"> <li>Disclosure of changes</li> </ul>		
10b	<ul style="list-style-type: none"> <li>Explanation for changes</li> </ul>		

11	Summary quantitative data about is exposure to risk at the reporting date	IFRS 7.34a
12	Currency risk sensitivity analysis showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date	IFRS 7.40a
13	Methods and assumptions used in preparing the sensitivity analysis	IFRS 7.40b
13a	<ul style="list-style-type: none"> <li>• Method sensitivity analysis</li> </ul>	
13b	<ul style="list-style-type: none"> <li>• Model used for analysis</li> </ul>	
13c	<ul style="list-style-type: none"> <li>• Assumptions used</li> </ul>	
13d	<ul style="list-style-type: none"> <li>• Explanation of on what the parameters are based</li> </ul>	
14	Concentration of currency risk if not apparent from summary quantitative data and sensitivity analysis	IFRS 7.34c
<b>Market risk - other price risk</b>		
<i>Item</i>	<i>Disclosure requirement</i>	<i>Source</i>
15	Exposure to risk and how they arise	IFRS 7.33a IFRS 7.IG15
16	Objectives, policies and processes for managing the risk and the methods used to measure the risk	IFRS 7.33b IFRS 7.IG15
17	Changes in exposure to risk, measurement of risk, and objectives, policies and processes to manage the risk from the previous period	IFRS 7.33c IFRS 7.IG17
17a	<ul style="list-style-type: none"> <li>• Disclosure of changes</li> </ul>	
17b	<ul style="list-style-type: none"> <li>• Explanation for changes</li> </ul>	
18	Summary quantitative data about is exposure to risk at the reporting date	IFRS 7.34a
19	Other price risk sensitivity analysis showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date	IFRS 7.40a
20	Methods and assumptions used in preparing the sensitivity analysis	IFRS 7.40b
20a	<ul style="list-style-type: none"> <li>• Method sensitivity analysis</li> </ul>	
20b	<ul style="list-style-type: none"> <li>• Model used for analysis</li> </ul>	
20c	<ul style="list-style-type: none"> <li>• Assumptions used</li> </ul>	
20d	<ul style="list-style-type: none"> <li>• Explanation of on what the parameters are based</li> </ul>	
21	Concentration of other price risk if not apparent from summary quantitative data and sensitivity	IFRS 7.34c



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analysis

Credit risk

<i>Item</i>	<i>Disclosure requirement</i>	<i>Source</i>
22	Exposure to risk and how they arise	IFRS 7.33a IFRS 7.IG15
23	Objectives, policies and processes for managing the risk and the methods used to measure the risk	IFRS 7.33b IFRS 7.IG15
23a	<ul style="list-style-type: none"><li>• Objectives, policies and processes for managing the risk</li></ul>	
23b	<ul style="list-style-type: none"><li>• Methods used to measure the risk</li></ul>	
24	Changes in exposure to risk, measurement of risk, and objectives, policies and processes to manage the risk from the previous period	IFRS 7.33c IFRS 7.IG17
24a	<ul style="list-style-type: none"><li>• Disclosure of changes</li></ul>	
24b	<ul style="list-style-type: none"><li>• Explanation for changes</li></ul>	
25	Summary quantitative data about is exposure to risk at the reporting date	IFRS 7.34a
26	Concentrations of credit risk if not apparent from summary quantitative data and sensitivity analysis	IFRS 7.34c
27	Amount of maximum exposure to credit risk (before deducting value collateral)	IFRS 7.36a
28	Description of collateral held as security and other credit enhancements	IFRS 7.36b
29	Information about the credit quality of financial assets with credit risk that are neither past due nor impaired	IFRS 7.36c IFRS 7.IG23
29a	<ul style="list-style-type: none"><li>• Information about credit quality</li></ul>	
29b	<ul style="list-style-type: none"><li>• Explanation rating system</li></ul>	IFRS 7.36c
30	The carrying amount of financial assets that would otherwise be past due or impaired whose terms have been renegotiated	IFRS 7.IG24 IFRS 7.IG25 IFRS 7.36a
31	By class of financial assets an analysis of the age of financial assets that are past due as at the reporting date but not impaired	IFRS 7.37a
32	By class of financial assets an analysis of financial assets that are individually determined to be impaired at the reporting date,	IFRS 7.37b IFRS 7.IG29

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	including the factors the entity considered in determining that they are impaired	
32a	<ul style="list-style-type: none"> <li>• Disclosure of factors the entity considered in the impairment</li> </ul>	
32b	<ul style="list-style-type: none"> <li>• Carrying amount of impaired financial assets</li> </ul>	
32c	<ul style="list-style-type: none"> <li>• Amount of impairment loss</li> </ul>	
33	Description of collateral held by the entity as security and other credit enhancements for the amounts as disclosed in IFRS 7.37a and b and, unless impracticable, an estimate of their fair value	IFRS 7.37c
34	Nature and carrying amount of assets obtained by taking possession of collateral it holds as security or called on other credit enhancements, and such assets meet the recognition criteria on other standards	IFRS 7.38a
35	Policies for disposing assets or use of it in its operations when the assets are not readily convertible into cash	IFRS 7.38b
	<b>Liquidity risk</b>	
<i>Item</i>	<i>Disclosure requirement</i>	<i>Source</i>
36	Exposure to risk and how they arise	IFRS 7.33a IFRS 7.IG15
37	Objectives, policies and processes for managing the risk and the methods used to measure the risk	IFRS 7.33b IFRS 7.IG15
37a	<ul style="list-style-type: none"> <li>• Objectives, policies and processes for managing the risk</li> </ul>	
37b	<ul style="list-style-type: none"> <li>• Methods used to measure the risk</li> </ul>	
38	Changes in exposure to risk, measurement of risk, and objectives, policies and processes to manage the risk from the previous period	IFRS 7.33c IFRS 7.IG17
38a	<ul style="list-style-type: none"> <li>• Disclosure of changes</li> </ul>	
38b	<ul style="list-style-type: none"> <li>• Explanation for changes</li> </ul>	
39	Maturity analysis for financial liabilities that show the remaining contractual maturities	IFRS 7.39a

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Other disclosures	
<i>Item</i>	<i>Disclosure requirement</i>
40	Information on subprime exposure and financial crisis

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## Appendix B Quality framework

Item	Qualitative characteristic	Quality item	Disclosure score
1	<i>Relevance</i>	Disclosure of information on stress scenarios	
2*		Disclosure of the expected future impact of the financial crisis on the bank and its results	
3		Disclosure of information of risk management of credit, liquidity and market risk	
4		Disclosure of whether VaR estimates and limits have been exceeded in the year	
5	<i>Comparability</i>	Comparability of the presentation of information of a specific bank over the years	
6		Comparable figures of previous years disclosed	
7		Comparable measurement methods used or explanation for changes given by a specific bank over the years	
8		Accounting standards for (risk) disclosures mentioned	
9		Mentioned whether or not the risk information in the management report is audited	
10	<i>Understandability</i>	Use of tables and graphs to support the text	
11		Definitions of types of risk	
12		Definition of measurement methods used	
13		Explanation of limitations of measurement methods used	

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\* Only applicable in the years 2007 and 2008