“The impact of IFRS on the analysts’ information environment: The role of accounting policies and corporate disclosure”

by

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Volume I

Contents

Table 1. Contents	Page
Volume I	1 - 389
Table of Contents	2 - 6
Table of Contents: List Of Tables And Figures	6 - 13
Acknowledgements	14 - 15
Declaration Of Published Work	16
Summary	17
Chapter 1. Introduction	18 - 33
1.1. Introduction	18
1.2. The purpose and impact of IFRS	19 - 20
1.3. The analysts' forecasts as information asymmetry proxies	20 - 22
1.4. The aim and motivation of the thesis	22
1.4.1. The development of new approach to assess the association of corporate disclosure and analysts' forecasts	23
1.4.2. The research questions	23 - 25
1.4.3. The empirical chapter focussing on the adoption of IFRS	26 - 27
1.4.4. The empirical chapter focussing on the post-IFRS adoption era	27 - 29
1.5. The structure of the thesis	30
1.6. The contribution of the thesis	31 - 33
Chapter 2. IFRS, Global Harmonisation and Economic Outcomes	34 - 75
2.1 The theoretical framework	35 - 38
2.2. Global financial reporting convergence	39 - 52
2.2.1. International accounting harmonisation	39 - 45
2.2.2. Fair value, relevance and reliability	45 - 48
2.2.3. Convergence and potential IFRS adoption by the United States and the rest of the world	48 - 52
2.3. IFRS adoption: Economic effects and consequences	52 - 73
2.3.1. Comparability	52 - 56

Table 1. Contents (continued)	**Page**
2.3.2. Incentives and opportunities: comparability and directors' share dealings	57 - 58
2.3.3. Economic outcomes: Value relevance	59 - 62
2.3.4. Economic outcomes: Cost of capital	63 - 73
2.4. The potential effect of concurrent events	73 - 74
2.5. Summary	75
Chapter 3. IFRS, Accounting Quality and Analysts' Earnings Forecasts: An Overview	76 - 113
3.1. Incentives and opportunities: IFRS, earnings management and accounting quality	77 - 87
3.2. Analysts' forecasts	87 - 101
3.2.1. IFRS adoption and analysts' forecasts	91 - 101
3.2.2.1. Institutional factors and analysts' forecasts properties	91 - 92
3.2.1.2. Voluntary IFRS adoption	92 - 94
3.2.1.3. Mandatory IFRS adoption	94 - 101
3.3. Intangible assets and information quality	101 - 112
3.3.1. Intangible assets: Diverse treatment and effect	102 - 107
3.3.2. IFRS and intangible assets	107 - 112
3.4. Summary	112 - 113
Chapter 4. Corporate Disclosure: Determinants and Outcomes	114 - 142
4.1. Corporate disclosure policies and analysts' information environment	115 - 122
4.1.1. Studies using analyst disclosure index	115 - 120
4.1.2. Analysis of disclosure quality using quantitative models	120 - 122
4.2. Corporate disclosure and IFRS	123 - 133
4.2.1. IFRS disclosure evaluation using quantitative models	123 - 125
4.2.2 IFRS disclosure evaluation using manual techniques	125 - 133
4.2.2.1. IFRS, compliance and disclosure quality	125 - 128
4.2.2.2. IFRS disclosure and analysts' forecasts	129 - 133
4.3. Corporate Disclosure: Tone analysis using manual coding	133 - 134
4.4. Corporate disclosure: Content analysis using automated techniques	134 - 142
4.4.1. Content analysis and textual tone	134 - 137

Table 1. Contents (continued)	**Page**
4.4.2. Content analysis and usefulness of accounting information?	138 - 142
4.5. Summary	142
Chapter 5. Research Design and Methodology – Quantitative and Qualitative analysis	143 - 175
5.1.The gap in the literature	143 - 145
5.2 The regulatory background in the UK, France and Germany	145 - 149
5.3. Hypotheses development	150 - 164
5.3.1. Before and after IFRS adoption	150 - 154
5.3.2. The post IFRS adoption era	154 - 164
5.3.2.1. IFRS3 Business Combinations	155 - 157
5.3.2.2. IFRS7 Financial Instruments	157 - 161
5.3.2.3. IFRS8 Operating Segments	162 - 163
5.3.2.4. Intangible assets	163 - 164
5.4. Data and sample selection	164
5.5. Research design	165 - 175
5.5.1. Measures of the analysts' forecasts	165
5.5.2. Independent variables	165 - 167
5.5.3. Construction of the narrative disclosure measure	167 - 171
5.5.4. Accounting standards association with analysts' information environment	171 - 172
5.6. Multiple regression models	172 - 175
5.7. Summary	175
Chapter 6. IFRS Adoption, Corporate Disclosure and Analysts' Information Environment	176 - 251
6.1. Time series charts of the dependent variables	178 - 181
6.2. Time series charts of the corporate disclosure variables	181 - 183
6.3. Results	183 - 247
6.3.1. Empirical results and control variables	210 - 217
6.3.2. Empirical results and hypotheses testing	217 - 235
6.3.2.1. IFRS adoption and analysts' forecasts	217 - 220
6.3.2.2. Goodwill intensity	220 - 224

Table 1. Contents (continued)	**Page**
6.3.2.3. Goodwill impairments	225 - 227
6.3.2.4. Size of acquisitions	228 - 231
6.3.2.5. Intangible assets	231 - 235
6.3. Corporate disclosure analysis	236 - 247
6.4. Alternative tests	247 - 248
6.5. Consolidated results	249 - 250
6.6. Summary	251
Chapter 7. Accounting Standards and Disclosure Requirements: Changes in the Post IFRS era and their Impact on the Analysts' Information Environment	252 - 345
7.1. The adoption of IFRS3 (2008)	257 - 272
7.1.1. Hypotheses testing	268 - 272
7.2. The adoption of IFRS3 (2010)	273 - 287
7.3. The adoption of IFRS7 (2005)	288 - 305
7.4. The adoption of IFRS7 (2008)	306 - 319
7.5. The adoption of IFRS8 (2006)	320 - 336
7.6. Alternative tests	337
7.7. Consolidated results	338 - 343
7.8. Conclusion	344 - 345
Chapter 8. Conclusions	346 - 372
8.1. The Scope Of the Thesis	346
8.2.1. IFRS adoption, Corporate Disclosure and Analysts' Information Environment	347 - 353
8.2.2. Accounting Standards and Disclosure Requirements: Changes in the Post IFRS era and their Impact on the Analysts' Information Environment	354 - 361
8.3 Contributions to the literature	361 - 363
8.4. Limitations of the research project	363 - 366
8.5. Implications, suggestions for improvements and further research	367 - 372
References	373 - 389
Volume II - Appendix	390 - 490
Table of Contents - Appendix	390

Table 1. Contents (continued)	**Page**
Appendix 1. Correlation Matrix	391 - 395
Appendix 2. Winsorisation	396
Appendix 3. Beattie (2004) framework and Custom Dictionary	397 - 416
Appendix 4. Supplementary tests of Chapter 7.	417 - 477
Appendix 5. Alternative tests	478 - 490

Table 2. List of Tables and Figures	**Page**
Table 1.1 The structure of the thesis	30
Table 3.1 Studies of analysts' earnings forecasts	89 - 90
Figure 6.1 Monthly forecast error (Mean)	178
Figure 6.2 Monthly forecast accuracy (Mean)	179
Figure 6.3 Monthly forecast dispersion	180
Figure 6.4 Number of analyst estimations	180
Figure 6.5 UK, France and Germany	182
Figure 6.6 UK	182
Figure 6.7 France	182
Figure 6.8 Germany	183
Table 6.1 – Descriptive statistics for the whole sample	185
Table 6.2 – OLS regression results for UK companies for the whole period (2003-2011)	188 - 189
Table 6.3 – OLS regression results for UK companies reporting under UK GAAP (2003-2004)	190 - 191
Table 6.4 – OLS regression results for UK companies reporting under IFRS (2005-2011)	192 - 193
Table 6.5 – OLS regression results for French companies for the whole period (2003-2011)	194 - 195
Table 6.6 – OLS regression results for French companies reporting under French GAAP (2003-2004)	196 - 197
Table 6.7 – OLS regression results for French companies reporting under IFRS (2005-2011)	198 - 199

Table 2. List of Tables and Figures	**Page**
Table 6.8 – OLS regression results for German companies for the whole period (2003-2011)	200 - 201
Table 6.9 – OLS regression results for German mandatory adopters for the whole period (2003-2011)	202 - 203
Table 6.10 – OLS regression results for German voluntary adopters for the whole period (2003-2011)	204 - 205
Table 6.11 – OLS regression results for German mandatory adopters reporting under US GAAP and German GAAP (2003-2004)	206 - 207
Table 6.12 – OLS regression results for German mandatory adopters reporting under IFRS (2005-2011)	208 - 209
Table 6.13 Consolidated results for Monthly Forecast Accuracy	249
Table 6.14 Consolidated results for Monthly Forecast Dispersion	250
Table 6.15 Consolidated results for Number of Analyst Estimations	250
Table 7.1 – OLS regression results for UK companies before and after IFRS3 (2008)	257 - 259
Table 7.2 – OLS regression results for French companies before and after IFRS3 (2008)	260 - 261
Table 7.3 – OLS regression results for all German companies before and after IFRS3 (2008)	262 - 263
Table 7.4 – OLS regression results for German mandatory adopters before and after IFRS3 (2008)	264 - 265
Table 7.5 – OLS regression results for German voluntary adopters before and after IFRS3 (2008)	266 - 267
Table 7.6 – OLS regression results for UK companies before and after IFRS3 (2010)	273 - 275
Table 7.7 – OLS regression results for French companies before and after IFRS3 (2010)	276 - 277
Table 7.8 – OLS regression results for all German companies before and after IFRS3 (2010)	278 - 279

Table 2. List of Tables and Figures	Page
Table 7.9 – OLS regression results for German mandatory adopters before and after IFRS3 (2010)	280 - 281
Table 7.10 OLS regression results for German voluntary adopters before and after IFRS3 (2010)	282 - 283
Table 7.11 – OLS regression results for UK companies before and after IFRS7 (2005)	288 - 290
Table 7.12 – OLS regression results for French companies before and after IFRS7 (2005)	291 - 292
Table 7.13 – OLS regression results for all German companies before and after IFRS7 (2005)	293 - 294
Table 7.14 – OLS regression results for German mandatory adopters before and after IFRS7 (2005)	295 - 296
Table 7.15 – OLS regression results for German voluntary adopters before and after IFRS7 (2005)	297 - 298
Table 7.16 – OLS regression results for UK companies before and after IFRS7 (2008)	306 - 308
Table 7.17 – OLS regression results for French companies before and after IFRS7 (2008)	309 - 310
Table 7.18 – OLS regression results for all German companies before and after IFRS7 (2005)	311 - 312
Table 7.19 – OLS regression results for German mandatory adopters before and after IFRS7 (2005)	313 - 314
Table 7.20 – OLS regression results for German voluntary adopters before and after IFRS7 (2005)	315 - 316
Table 7.21 – OLS regression results for UK companies before and after IFRS8 (2006)	320 - 322
Table 7.22 – OLS regression results for French companies before and after IFRS8 (2006)	323 - 324
Table 7.23 – OLS regression results all German companies before and after IFRS8 (2006)	325 - 326

Table 2. List of Tables and Figures	**Page**
Table 7.24 – OLS regression results for German mandatory before and after IFRS8 (2006)	327 - 328
Table 7.25 – OLS regression results for German voluntary before and after IFRS8 (2006)	329 - 330
Table 7.26 Consolidated results for Monthly Forecast Accuracy - IFRS3	338
Table 7.27 Consolidated results for Monthly Forecast Accuracy - IFRS7 (2005)	339
Table 7.28 Consolidated results for Monthly Forecast Accuracy - IFRS7 (2008)	339
Table 7.29 Consolidated results for Monthly Forecast Accuracy - IFRS8 (2006)	340
Table 7.30 Consolidated results for Monthly Forecast Dispersion - IFRS3	341
Table 7.31 Consolidated results for Monthly Forecast Dispersion - IFRS7 (2005)	342
Table 7.32 Consolidated results for Monthly Forecast Dispersion - IFRS7 (2008)	342
Table 7.33 Consolidated results for Monthly Forecast Dispersion - IFRS8 (2006)	343
Table A.1 – Table of Contents - Appendix	390
Table A1.1 – Correlation Matrix	391 - 395
Table A2.1 – Winsorisation	396
Table A3.1 – Beattie et al. (2004) Disclosure Framework and Dictionary Reconciliation	397 - 401
Table A3.2 – Custom dictionary	402 - 416
Table A4.1 – Ordinary Least Squares regression results for UK companies reporting before IFRS3 (2008)	424
Table A4.2 – Ordinary Least Squares regression results for UK companies reporting under IFRS3 (2008)	425

Table 2. List of Tables and Figures	Page
Table A4.3 – Ordinary Least Squares regression results for French companies reporting before IFRS3 (2008)	426
Table A4.4 – Ordinary Least Squares regression results for French companies reporting under IFRS3 (2008)	427
Table A4.5 – Ordinary Least Squares regression results for all German companies reporting before IFRS3 (2008)	428
Table A4.6 – Ordinary Least Squares regression results for all German companies reporting under IFRS3 (2008)	429
Table A4.7 – Ordinary Least Squares regression results for German mandatory adopters reporting before IFRS3 (2008)	430
Table A4.8 – Ordinary Least Squares regression results for German mandatory adopters reporting after IFRS3 (2008)	431
Table A4.9 – Ordinary Least Squares regression results for German voluntary adopters reporting before IFRS3 (2008)	432
Table A4.10 – Ordinary Least Squares regression results for German voluntary adopters reporting under IFRS3 (2008)	433
Table A4.11 – Ordinary Least Squares regression results for UK companies reporting before IFRS3 (2010)	435
Table A4.12 – Ordinary Least Squares regression results for UK companies reporting after IFRS3 (2010)	436
Table A4.13 – Ordinary Least Squares regression results for French companies reporting before IFRS3 (2010)	437
Table A4.14 – Ordinary Least Squares regression results for French companies reporting after IFRS3 (2010)	438
Table A4.15 – OLS regression results for all German companies reporting before IFRS3 (2010)	439
Table A4.16 – Ordinary Least Squares regression results for all German companies reporting after IFRS3 (2010)	440
Table A4.17 – OLS regression results for German mandatory adopters reporting before IFRS3 (2010)	441

Table 2. List of Tables and Figures	Page
Table A4.18 – OLS regression results for German mandatory adopters reporting after IFRS3 (2010)	442
Table A4.19 – OLS regression results for German voluntary adopters reporting before IFRS3 (2010)	443
Table A4.20 – OLS regression results for German voluntary adopters reporting after IFRS3 (2010)	444
Table A4.21 – OLS regression results for UK companies reporting before IFRS7 (2005)	446
Table A4.22 – OLS regression results for UK companies reporting after IFRS7 (2005)	447
Table A4.23 – OLS regression results for French companies reporting before IFRS7 (2005)	448
Table A4.24 – OLS regression results for French companies reporting after IFRS7 (2005)	449
Table A4.25 – OLS regression results for all German companies reporting before IFRS7 (2005)	450
Table A4.26 – OLS regression results for all German companies reporting after IFRS7 (2005)	451
Table A4.27 – OLS regression results for German mandatory adopters reporting before IFRS7 (2005)	452
Table A4.28 – OLS regression results for German mandatory adopters reporting after IFRS7 (2005)	453
Table A4.29 – OLS regression results for German voluntary adopters reporting before IFRS7 (2005)	454
Table A4.30 – OLS regression results for German voluntary adopters reporting after IFRS7 (2005)	455
Table A4.31 – OLS regression results for UK companies reporting before IFRS7 (2008)	457
Table A4.32 – OLS regression results for UK companies reporting after IFRS7 (2008)	458
Table A4.33 – OLS regression results for French companies reporting before IFRS7 (2008)	459

Table 2. List of Tables and Figures	Page
Table A4.34 – OLS regression results for French companies reporting after IFRS7 (2008)	460
Table A4.35 – OLS regression results for all German companies reporting before IFRS7 (2008)	461
Table A4.36 – OLS regression results for all German companies reporting under IFRS7 (2008)	462
Table A4.37 – OLS regression results for German mandatory adopters reporting before IFRS7 (2008)	463
Table A4.38 – OLS regression results for German mandatory adopters reporting after IFRS7 (2008)	464
Table A4.39 – OLS regression results for German voluntary adopters reporting before IFRS7 (2008)	465
Table A4.40 – OLS regression results for German voluntary adopters reporting under IFRS7 (2008)	466
Table A4.41 – OLS regression results for UK companies reporting before IFRS8 (2006)	468
Table A4.42 – OLS regression results for UK companies reporting after IFRS8 (2006)	469
Table A4.43 – OLS regression results for French companies reporting before IFRS8 (2006)	470
Table A4.44 – OLS regression results for French companies reporting after IFRS8 (2006)	471
Table A4.45 – OLS regression results for all German companies reporting before IFRS8 (2006)	472
Table A4.46 – OLS regression results for all German companies reporting after IFRS8 (2006)	473
Table A4.47 – OLS regression results for all German mandatory adopters reporting before IFRS8 (2006)	474
Table A4.48 – OLS regression results for all German mandatory adopters reporting after IFRS8 (2006)	475
Table A4.49 – OLS regression results for all German voluntary adopters reporting before IFRS8 (2006)	476

Table 2. List of Tables and Figures	**Page**
Table A4.50 – OLS regression results for all German voluntary adopters reporting after IFRS8 (2006)	477
Table A5.1 – Fixed effects regression results for German voluntary adopters reporting under IFRS (2003-2011)	481 - 482
Table A5.2 – Logistic regression results for UK companies reporting before and after IFRS adoption (2003-2011)	483 - 484
Table A5.3 – Fixed effects regression results for UK companies reporting before and after IFRS3 (2008)	485 - 486
Table A5.4 – Logistic regression results for all German companies reporting before and after IFRS3 (2008)	487 - 488
Table A5.5 – Logistic regression results for German voluntary adopters reporting before and after IFRS7 (2008)	489 - 490

this thesis is dedicated to my father, Tzimas

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Declaration of published work

Elements of the research work completed in the thesis have been presented as working papers at:

- HM Revenue & Customs presentation series 2015
- American Accounting Association Annual Meeting 2014 (Atlanta)
- World Finance Conference 2014 (Venice)
- Loughborough University School of Business and Economics inaugural PhD research conference 2014
- British Accounting and Finance Association Doctoral Colloquium and Annual Conference 2014 (London School of Economics)
- British Accounting and Finance Association Financial Reporting and Business Communication 17th Annual Conference 2013 (University of Bristol)
- British Accounting and Finance Association Doctoral Colloquium and Annual Conference 2013 (Newcastle)
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Summary

The thesis presents the results of a study on the impact of International Financial Reporting Standards on the analysts' information environment. The analysis is concentrated on the role of specific IFRSs and corporate disclosure. The effect of IFRS adoption on the information asymmetry between firms and outsiders is examined through properties of analysts' earnings forecasts. A contribution to the existing academic literature is made by examining the role of goodwill, intangible assets and acquisitions before and after IFRS adoption in Europe. The results show that the IFRSs for goodwill, acquisitions and intangible assets are related to improvements in the analysts' information environment. Another contribution to knowledge is made by investigating the effect of corporate disclosure quantity on the analysts' information environment before and after IFRS adoption. For this purpose, a new approach and text analysis technique to assess the impact of corporate disclosure quantity is developed. This involves the creation of a new custom dictionary and the collection of an extensive set of qualitative data. The results show that corporate disclosure quantity under IFRS, is related to improvements in the analysts' information environment but that there are differences in this effect across European countries. The results also demonstrate that the improvements in the accuracy of analysts' earnings forecasts are related particularly to disclosure concerning financial instruments and operating segments. Overall, the findings of the thesis suggest that the adoption of IFRS resulted in an increase in the quality of reported earnings, which is likely to derive from higher comparability of financial statements, enhanced transparency and an improved analysts' information environment. It is also established that fundamental differences across countries remain after IFRS adoption and that the development and harmonisation of financial reporting standards alone are not sufficient to increase the quality of financial information and decrease information asymmetry between market participants.

Chapter 1. Introduction

1.1. Introduction

The major objective of the global capital markets is the efficient allocation of capital. It is also widely accepted that inefficient capital allocation can result in financial crises and economic instability.

Fama (1970) explained that in an ideal world, market prices would act as perfect indicators for resource allocation. A market such as this is termed "efficient" and requires that the ownership of firms making production-investment decisions is represented by securities that investors can choose under the assumption that markets prices fully reflect all the available information (Fama, 1970). Hence, assuming that agents act rationally, the improvement of information quality that is reflected in the market prices will drive them to converge with the securities' underlying fundamental values and therefore improve the allocation of wealth in the economy (Lee, 2001). A major challenge to tackle in this area is the principal-agent problem and, in particular, information asymmetry between company insiders and outsiders. Merton (1986) analysed the information asymmetry problem by distinguishing between two costs: the relatively small cost of data collection and processing within a firm and the relatively higher cost of transmitting this information to outsiders in order that they may exploit it efficiently. Merton (1986) also analysed this latter cost into the cost of providing incentives to insiders to transmit their information and the cost of increasing the credibility of this information. Thus, it can be can argued that one means to reduce the costs of information asymmetry, via an increase in the credibility of that information, is corporate disclosure. Corporate disclosure is crucial for the operation of efficient markets and demand for it arises from information asymmetry between insiders and outsiders (Healy and Palepu, 2001). Whilst fundamental analysis and changes in accounting policy should have no effect in a "fully efficient" market, there are sufficient anomalies observed in empirical research in equity markets to result in financial reporting standard regulators having a significant interest in the information efficiency of new accounting standards (Kothari, 2001).

1.2. The purpose and impact of IFRS

The International Financial Reporting Standards (IFRS) are accounting standards, issued by the International Accounting Standards Board (IASB) with the objective to improve the comparability, transparency and quality of financial statements across adopting countries. In the context of global accounting harmonisation, approximately 90 countries claim to have fully conformed to IFRS by 2013 (AICPA, 2013). Although the extent of their compliance and differences in interpretations have been questioned by some authors (Kvaal and Nobes, 2010).

The cross-country adoption of international standards should improve the comparability of financial statements and reduce the costs of processing financial information by removing the necessity to make adjustments to compare companies in different countries (Ball, 2006). The improved comparability is likely to facilitate cross country acquisitions which can provide numerous benefits to investors and increase international trade and capital flows. Ball (2006) suggested that a possible benefit that IFRS bring is higher quality, better timed and more comprehensive financial information than under national accounting standards. Hence, IFRS are likely to lead to better informed equity valuations, lowering the risk for investors. The benefits can be greater for small investors because an improvement in financial statement information will possibly reduce the information asymmetry between small investors and investment professionals who have access to other channels of information. As Ball (2006) explained, the reduced risk to investors can theoretically imply a lower cost of equity capital that can bring several benefits to the IFRS adopting company resulting in higher market value. Also, the increased transparency and more timely disclosure of loss making activities are likely to reduce agency costs and improve corporate governance by putting pressure on managers to make better investment decisions and act more in the shareholders' and investors' interests. Similarly, timelier loss recognition enables more effective debt covenants based on financial statement variables that subsequently reduce the amount of the company's debt. Under IFRS, the faster trigger of debt covenants reduces the amount of outstanding debt and subsequently the cost of debt decreases providing benefits to the equity holders.

More timely and accurate disclosure would imply that providers of debt finance could identify more accurately those companies that will survive after a period of losses and ensure continuity of finance to them. This would reduce the debt holder's risk and therefore the cost of debt and the costs of corporate failure. In summary, it can be argued that the reduction in the costs of processing financial information is likely to reduce the information asymmetry among stakeholders and consequently improve the efficiency of the financial markets.

1.3. The analysts' forecasts as information asymmetry proxies

A widely accepted approach in the academic literature relating to the financial analyst's information environment is to estimate the differences and variations between actual corporate earnings and those forecasted by financial analysts. Analysts act as intermediaries between company insiders and investors and their earnings forecasts are used as the basis for several company valuation models. Also, analysts' earnings forecast accuracy is a proxy for earnings quality.

Ball (2006) explained that opinions differ on the impact of accounting standards on analysts' earnings forecasts. Proponents of IFRS suggest that better financial reporting standards are likely to increase the quality of reported earnings and this will result in improvements in the analysts' mean forecast accuracy. On the contrary, opponents of IFRS argue that in countries with accounting standards of lower quality, firm managers are more likely to engage anyway in more earnings management, for various reasons. For example, managers can manipulate earnings to meet targets for executive compensation or dividend payouts, to reduce corporate taxes and to avoid loss recognition. Byard et al. (2011) explained that the enhanced corporate disclosure, transparency and comparability of financial statements associated with IFRS can improve the information environment. On the contrary, Ball (2006) argued that "earnings in high-quality regimes are more informative [but] more volatile and more difficult to predict", attributing this to the fair value rules that characterise IFRS. These require the annual review and impairment of assets valued at fair value, which is likely to increase uncertainty in the prediction of earnings. There is also a possibility that the global nature of IFRS may render the system unsuitable for countries with distinctive characteristics.

The literature suggests that analysts may not be able to accurately quantify the effect of IFRS accounting policies and consequently experience higher inaccuracy in their forecasts. This process is also likely to be influenced by various factors at the macro-economic level such as the effectiveness of financial reporting regulation, which the literature tends to classify as strong or weak. Another factor is the nature of the country's legal environment, which is usually classified as common law or civil law. Also, several authors of academic studies considered the significance of the differences between domestic GAAP and IFRS as the time of adoption. Other authors indicated the role of historical corporate financing differences and traditional accounting policy choices. Also, another factor highlighted in the existing literature is the type of IFRS adoption, whether it is voluntary or mandatory.

Several authors indicated that the successful implementation of IFRS and the impact of the adoption was affected by IFRS accounting policies changes and traditional accounting policy choices and cultural and linguistic differences. Also, the authors explained that other country-level factors such as the legal system (code law vs common law) and the effectiveness of financial reporting and legal enforcement play a key role (Lardon and Street, 2004; Nobes, 2006; Kvaal and Nobes, 2010; Kvaal and Nobes, 2012).

Other authors of existing studies confirmed that the level of legal enforcement and market regulations is a key parameter for the successful implementation of IFRS. (Hail and Leuz, 2006; Daske et al., 2008; Li, 2010). Other studies raised the issue of serious adoption difference between "serious" IFRS adoption (full and compliant implementation of IFRS) or "label" IFRS adoption (partly compliant or just iconic adoption) (Daske et al., 2013). Another fundamental factor that was identified by authors was the type of adoption by firms whether it was voluntary or mandatory IFRS adoption (forced by country authorities) (Christensen et al., 2007; Kim and Shi, 2007; Daske et al., 2008; Li, 2010; Daske et al., 2013).

Beyond the above factors, it can be argued that the IFRS adoption effect on the firms' information environment is probably influenced by the manager's discretionary choices. Hence, the impact of IFRS adoption is likely to be subject to the manager's choice of accounting policies with the IFRS rules, the volume and accuracy of disclosure and compliance with regulatory requirements.

1.4. The aim and motivation of the thesis

This thesis has two main dimensions, to assess the role of a) IFRS accounting standards and b) corporate disclosure that conveys the financial information to the market participants. We aim to assess the accounting standard setters' choices and their impact on the quality of financial reporting and the consequent claimed transparency and increased efficiency of financial markets. In an attempt to improve both of these areas of financial reporting concurrently, the European Union mandated IFRS adoption in 2005 and imposed the Transparency Directive for listed companies. Among other requirements, the Transparency Directive increased the disclosure in half-year reports that include financial statements and mandated the issuing of quarterly management reports. It should be noted that the regulators left the additional disclosure of quarterly financial statements at the discretion of the company managers (European Union, 2013). The Directive fell short of requiring full, US-style, quarterly reporting because of fears that such a system encourages short-termism in both managers and investors ("The EU Transparency Directive", PwC (2007)). However, the recent global financial crises highlighted the negative impact of short-termism and the importance of long term, sustainable, low risk investments. As a consequence, the European Union abolished the mandatory quarterly reports and brought a further reduction of disclosure in the financial statements notes for smaller companies (European Union, 2013). Since this research investigates the effects of increased disclosure, it is likely to provide evidence on the implications of these decisions for the efficiency of equity markets in the Eurozone. We investigate the impact that IFRS accounting standards and corporate disclosure requirements had on analysts' earnings forecasts in three major European markets: UK, France and Germany.

1.4.1. The development of a new approach to assess the association between corporate disclosure and analysts' forecasts

This study uses a substantial amount of primary corporate disclosure data that is hand collected, and organised in a pre defined format. The aim is to include all monthly corporate disclosure texts that are transmitted from a company to outsiders and to assess its cumulative impact on the analysts' information environment. In total, the analysis includes over 120 million words contained in over 28,000 company announcements and over 2,800 annual and quarterly reports. The research methodology develops a new custom dictionary in order to identify a) if more information quantity implies more information quality, b) which category of corporate disclosure is more useful to analysts and c) if the adoption of IFRS and the subsequent revisions to some standards have an impact on the relationship between corporate disclosure and analysts' forecasts.

Our empirical analysis employs regressions of earnings quality (which we proxy with the characteristics of analysts' earnings forecasts), modelled using variables representing IFRS changes and firm specific characteristics. A detailed analysis of the data and the research methodology is included in Chapter 5.

1.4.2. The research questions

Before and after IFRS adoption

The main research question investigated in this thesis is whether IFRS adoption increased earnings quality and disclosure, by improving the analysts' information environment and increasing the accuracy and reducing the dispersion of earnings forecasts. We also test whether IFRS adoption results in a higher number of analysts providing forecasts.

The research questions are then focussed in two strands: a) the accounting standards for intangible assets and acquisitions and b) the quantity of corporate disclosure.

The strand on accounting standards focuses on the impact of IFRS accounting standards for goodwill, goodwill impairment, intangible assets and acquisitions.

We test whether the IFRS accounting rules for goodwill are related to changes in the forecast accuracy and dispersion due to additional valuable information to the market participants compared to domestic GAAPs. We also test whether there are any changes due to the shift from goodwill amortisation to goodwill impairment and the related disclosures.

Beyond the rules for goodwill, IFRS brought increased disclosure for acquisitions and business combinations. Hence, a further research question concentrates on the role of the relative size of acquisitions under IFRS and its effect on forecast accuracy and dispersion.

The academic literature has shown that intangible assets are a substantial information asymmetry factor. However, most recent studies on IFRS adoption showed that intangible assets under IFRS lead to more accurate analysts' forecasts. Therefore, we further investigate the impact of intangible assets under the IFRS rules on forecast accuracy and dispersion.

The second strand of our research questions concentrate on the impact of disclosure quantity on analysts' earnings forecasts post IFRS adoption. IFRS brought a substantial increase in the amount of financial information that companies disclose in addition to the narrative disclosures in financial reports. We conducted content analysis, using the customised dictionary described above. Hence, we investigate the impact of increased disclosure quantity post IFRS adoption on the analysts' forecast accuracy, dispersion and following.

Post IFRS adoption era

The second part of the empirical analysis focuses on the effect of revisions to IFRS3 Business Combinations, IFRS7 Financial Instruments and IFRS8 Operating Segments and their impact on analysts' forecast accuracy and dispersion.

The IFRS3 (2008) revision required acquisition costs to be expensed instead of capitalised, changed the contingent consideration rules for acquisitions allowing for a recognition in profit or loss in the income statement, permitted the use of the full goodwill method, changed the rules relating to transactions with non-controlling interest and abolished the requirement of step acquisitions. Also, the IFRS3 (2010) revision changed the rules for share based payment awards, contingent consideration and non-controlling interest. Hence, using variables for goodwill and relative size of acquisitions, we investigate if the implementation of IFRS3 (2008) and then IFRS3 (2010) is related to changes in forecast accuracy and dispersion.

The implementation of IFRS7 (2005) brought a substantial increase in quantitative and qualitative information regarding a corporation's financial instruments such as financial derivatives and the firm's exposure to market, liquidity and credit risk. The subsequent revision of IFRS7 (2008) resulted to the reclassification of financial derivatives, extensive disclosures about fair value hedge accounting, clarifications on the fair value disclosures of financial instruments, and extensive disclosure for derivative financial liabilities. Using content analysis, we investigate if increased disclosure quantity about financial performance and position is related to changes in analysts' forecast accuracy and dispersion following the implementation of both IFRS7 (2005) and IFRS7 (2008).

Finally, IFRS8, Operating Segments, resulted to a substantial increase in information regarding a firm's operating segments with respect to products/services and geographical areas. Using content analysis we investigate if increased disclosure quantity about financial performance and position as well as disclosure quantity about firm strategy, product market performance, performance of business strategy model is related to changes in analysts' forecast accuracy and dispersion following the implementation of IFRS8 Operating Segments.

1.4.3. The empirical chapter focussing on the adoption of IFRS

The results of the first empirical chapter are included in Chapter 6. This chapter investigates the impact of IFRS adoption on properties of the analysts' earnings forecasts and uses data before and after mandatory IFRS adoption. Data from companies in Germany that voluntarily adopted IFRS before the EU mandate are also used in order to uncover any differences. Gassen and Sellhorn (2006) showed that German voluntary IAS/IFRS adopters had a higher proportion of foreign turnover, higher size, wider ownership base and higher likelihood of being listed on international stock markets. Hence, we examine if there were significant differences between German voluntary and mandatory adopters. For German voluntary adopters, we also investigate if there were observed benefits in the firms' information environment arising from the managers' choice to voluntarily adopt high quality financial reporting standards (IFRS).

For German voluntary adopters, we also test if there were any financial statements' comparability benefits arising from the use of the same set of standards, after the mandatory adoption of IFRS from the rest firms in Germany.

The first part of this chapter is dedicated to company characteristics that are widely used in the literature to model analysts' earnings forecasts such as size, age, gearing, profitability and share price related variables. Thus, the analysis aims to uncover the role of the above factors as well as to trace any changes after the adoption of IFRS.

The second part of the analysis in this chapter focuses on the impact of the new IFRS regulations arising from amendments to the standards for intangible assets, goodwill and acquisitions, on the properties of the analysts' earnings forecasts. The empirical results are compared before and after IFRS adoption in each country, in an attempt to determine whether IFRS adoption improves accounting quality.

The third part of this chapter is devoted to the possible effect of IFRS adoption on the relation between corporate disclosure and analysts' earnings forecasts. In this section, the analysis aims to identify whether information quantity implies information quality as reflected in properties of analysts' earnings forecasts before and after IFRS adoption. Also, the analysis aims to reveal any asymmetric effects across the different corporate disclosure categories to assess which category is more beneficial for the analysts' earnings forecasts.

The results show that the IFRS adoption is related to improvements in the analysts' information environment. In fact, the impact of IFRS adoption is not symmetric and it depends on firm and country characteristics. IFRS regulations for goodwill and acquisitions appear to have a significant, positive impact on the analysts' information environment, mainly for mandatory adopters. The analysis supports the idea that intangible assets still remain an important factor in information asymmetry after IFRS adoption. Asymmetric differences in the impact of IFRS adoption are observed in the corporate disclosure analysis too, as the results show that analysts are likely to make more accurate earnings forecasts for UK and French firms that disclose more about their financial performance and position whereas for German firms there is a greater effect associated with more disclosure about corporate strategy and operations.

1.4.4. The empirical chapter focussing on the post-IFRS adoption era

The results of the second empirical chapter are included in Chapter 7. This chapter investigates the impact of IFRS revisions on the properties of the analysts' earnings forecasts and uses data post mandatory IFRS adoption. Data from companies in Germany that voluntarily adopted IFRS before the EU mandate is distinguished in order to uncover any differences arising from financial reporting incentives. The extended time frame in our sample aims to test the persistence of differences in earnings quality for the above two groups.

The IFRSs that are investigated in this chapter are those for which there were major revisions in the period following adoption: IFRS3, Business Combinations, IFRS7, Financial Instruments and IFRS8, Operating Segments. In total, two IFRS3 revisions, the adoption of IFRS7, one IFRS7 revision and the adoption of IFRS8 are investigated.

The first part of this chapter focuses on the two revisions to IFRS3, Business Combinations and their probable effect on the analysts' information environment. The first revision to IFRS3 (2008) changed the rules mainly for acquisition costs, contingent considerations, step acquisitions and permitted the full goodwill method, while the second revision (2010) comprised amendments regarding acquisitions and share based payments, contingent considerations and non-controlling measurement. Hence, we measured changes in information asymmetry related to the IFRS3 revisions through variables deriving from the disclosure of goodwill and acquisitions.

The second part of Chapter 8 focuses on the adoption of IFRS7, Financial Instruments, and on its subsequent amendments in 2008 and 2009. The adoption of IFRS7 and its subsequent revisions resulted in a substantial increase in the quantity of disclosure information regarding financial instruments. Also, IFRS7 (2005) required qualitative disclosures about risks faced by the firms and their risk management strategies. Other requirements included the disclosure of the components of fair value movement, quantitative disclosures about market risks and the discussion of the capital management strategy.

The revision of IFRS7 (2008) required changes in fair value measurement and disclosure. It also provided further clarifications regarding the maturity analysis of financial derivatives. We measure the impact of IFRS7 (2005) and IFRS7 (2008) on the analysts' information environment through disclosure proxies regarding the financial performance and position of a company.

The third part of Chapter 8. investigates the impact of IFRS8 Operating Segments on properties of the analysts' earnings forecasts. The adoption of IFRS8, Operating Segments, required the identification, measurement and reporting of a company's operating segment results, on the basis of segments that were identified and used for management purposes. Hence, IFRS8 resulted in a considerable increase in the quantity of information regarding a company's products, services and geographical reach. We measure the impact of IFRS8, Operating Segments, on analysts' forecasts properties through disclosure proxies related to the company's corporate strategy and operations and for a company's financial performance and position.

The results show that the IASB revisions to IFRS3 Business Combinations, IFRS7 Financial Instruments and IFRS8 Operating Segments had different effects on the analysts' information environment.

The empirical results show that the first revision to IFRS3 is related to improvements in analysts' forecast accuracy in French and German companies that adopted IFRS before the EU mandate, but with deteriorations in forecast accuracy for UK companies and German mandatory adopters. In contrast, the results indicate that the second revision to IFRS3 is associated with improvements in the analysts' information environment in the UK and German companies that adopted IFRS before the EU mandate but not for French firms and the German mandatory adopters.

Furthermore, the results indicate that the increase in disclosures relating to financial performance and position after the implementation of IFRS7, Financial Instruments, was associated with improvements in analysts' forecast accuracy in the UK and France but with deteriorations in Germany. Also, the changes made to IFRS7 are related to improvements in the analysts' information environment in the three countries, except for the case of German voluntary adopters.

Finally, the empirical results show that the implementation of IFRS8, Operating Segments, was associated with forecast accuracy improvements for French and German companies with higher disclosure of corporate strategy and operations and for UK companies with higher disclosure of financial performance and position.

1.5 The structure of the thesis

The contents of the thesis are provided in Table 1, below.

Table 1.1 The structure of the thesis

Chapter	Content	Page
Chapter 1.	Introduction to the thesis, background, motivation and contribution to the literature	18 - 33
Chapter 2.	IFRS, Global Harmonisation and Economic Outcomes: An Overview	34 - 75
	Reviews the literature on the expected economic outcomes after IFRS adoption, assessing financial information comparability, value relevance and the cost of capital.	
Chapter 3.	IFRS, Accounting Quality and Analysts' Earnings Forecasts	76 - 113
	Reviews the literature on the impact of IFRS adoption on earnings quality and analysts' earnings forecasts.	
Chapter 4.	Corporate Disclosure: Determinants and Outcomes	114 - 142
	Reviews the literature on corporate disclosure and outlines the various techniques for assessing it; the effect of IFRS adoption on corporate disclosure and the impact on analysts' earnings forecasts.	
Chapter 5.	Research Design and Methodology – Quantitative and Qualitative analysis	143 - 175
	Provides details of the empirical methodology employed and presents a new approach to quantify the narrative disclosure in corporate reports.	
Chapter 6.	IFRS Adoption, Corporate Disclosure and Analysts' Information Environment	176 - 251
	Investigates the effect of IFRS adoption on corporate disclosure and the analysts' information environment.	
Chapter 7.	Accounting Standards and Disclosure Requirements: Changes in the Post IFRS Era and their Impact on the Analysts' Information Environment	252 - 345
	Investigates the impact of the revisions to IFRS3, Business Combinations, IFRS7, Financial Instruments and IFRS8 Operating Segments.	
Chapter 8.	Conclusions	346 - 372

1.6 The contribution of the thesis

The existing academic literature mainly used samples from multiple countries investigated the relationships between proxies of earnings quality and financial reporting variables and other firm specific variables. Most of the existing studies use a research framework that is designed to broadly analyse the impact of IFRS adoption at the country-level. The main focus is on the type of IFRS adoption (voluntary or mandatory), level of financial reporting and legal enforcement (strong or weak) and the legal system (civil law or common law) in each jurisdiction.

Our research covers samples of the largest UK, French and German companies in order to identify the differences in earnings quality and disclosure practices between these countries. These companies collectively constitute a considerable part of the European Economy, which increases our confidence in the generalisability of our findings. The reasons for the above differences could arise from the effects of legal system differences (civil law in France and Germany and common law in the UK), historical corporate financing differences (market orientated in the UK and bank orientated in France and Germany) as well as the differences in financial reporting standards used in these countries before IFRS adoption. The three countries constitute an interesting sample, as prior UK standards (UK GAAP) were far more similar to IFRS than other standards used previously by companies in France and Germany.

Following the adoption of IFRS, their classification shows that the UK has strong enforcement, with low differences between UK GAAP and IFRS, while Germany has strong enforcement, with high differences from IFRS and France has weak enforcement, with high differences from IFRS. Furthermore, the sample of German companies is comprised of both voluntary and mandatory adopters of IFRS. This provides the opportunity to investigate whether there are any important differences between the two. The extended time frame in our sample aims to test the persistence of differences in earnings quality for the two groups.

While the results of existing studies provided an overview of the impact of IFRS adoption, they did not examine the distinctive characteristics of the information environment in different jurisdictions. Also, most of the existing studies did not take into account changes in accounting standards after the adoption of IFRS, such as IFRS3, Business combinations, IFRS7, Financial Instruments and IFRS8, Operating Segments.

The changes in the above accounting standards had a significant impact on firms' financial statements and disclosure. We address this gap and analyse in depth the accounting treatment of intangible assets, acquisitions and business combinations. Our findings demonstrate the impact of IFRS adoption and the relevant accounting standards on the properties of analysts' earnings forecasts. We use analysts' earnings forecast errors, variance and following as proxies for earnings quality. Also, we use a time frame which includes the revisions to IFRS7 and IFRS8, which both affected the regulatory requirements of quantity and quality of corporate disclosure. We also assess the impact of the IFRS3 revisions and the role of goodwill, goodwill impairments and acquisitions.

Possibly, our most significant contribution relates to the narrative disclosure of our sample companies. Existing academic studies tend to not consider the narrative information that is transmitted by companies in annual reports, nor that transmitted through other channels of information that contribute to the analysts' information environment. We address this gap and implement an analysis of corporate disclosure, in order to determine whether greater information quantity is associated with higher information quality. We also consider the role of IFRS adoption in the above relationship. To do this, we developed an original, custom dictionary and a classification system, to reflect disclosures by the sample companies and created a number of variables to capture the quantity of disclosures across the different categories. For this purpose, we collected qualitative data transmitted by firms to outsiders through corporate reports and other public announcements.

We investigate the properties of analysts' earnings forecasts on a monthly basis, using the cumulative monthly totals of corporate disclosure. The use of monthly forecasts allows us to capture intra-year patterns between the forecasts and corporate disclosure quantity over the financial year rather than considering only one observation from each financial year.

The methodology and research design of our research project is explained in more detail in Chapter 5: *Research Design and Methodology – Quantitative and Qualitative Analysis*, following the three literature chapters (Chapter 2: *IFRS Global Harmonisation and Economic Outcomes: An overview*, Chapter 3: *IFRS, Accounting Quality and Analysts' Earnings Forecasts* and Chapter 4: *Corporate Disclosure: Determinants and Outcomes* This is followed by empirical results relating to IFRS adoption in Chapter 6 and those relating to subsequent changes in IFRS in Chapter 7. We then present our conclusions in Chapter 8.

Chapter 2. IFRS, Global Harmonisation and Economic Outcomes

This chapter begins by providing a discussion on the theoretical framework of the information asymmetry and agency theories, followed by theories surrounding the role of corporate disclosure and financial reporting standards.

The chapter continues by analysing the studies from the academic literature that aimed to assess the economic outcomes that likely have emerged from the voluntary and mandatory adoption of IFRS. The amount of studies is vast, their content is diverse and they provide an insight on the implementation determinants, institutional factors, political and economic incentives and firm characteristics that shape the impact of IFRS. The discussion begins with findings regarding the expected global harmonisation and continues with an overview on a highly debated topic; that is the fair value method that acts as a key point of convergence with US GAAP. The discussion continues with studies on the expected economic outcomes after IFRS adoption, assessing financial information comparability, value relevance and the cost of capital. Several research studies highlight the key determinants of financial reporting quality as the managers' incentives and the available opportunities and provide empirical evidence on whether IFRS helped to mitigate these opportunities. Finally, several authors suggest that the assessment of the IFRS impact needs to take into account individual firm characteristics and concurrent developments at the economy level.

2.1. The theoretical framework

Fama (1970) established the principle that in an ideal world, market prices would act as perfect indicators for resource allocation. Such a market is designated "efficient" and in this context the investment decision making process involves securities that investors can choose under the assumption that markets prices fully reflect all the available information (Fama, 1970).

Fama (1970) classified three forms of the efficient market hypothesis (EMH): weak, semi-strong and strong. As Jensen and Ruback (1978) described :

- In the weak form of the EMH, prices reflect information only available from historical security prices
- In the semi-strong form of the EMH, prices reflect all public available information
- In the strong form of the EMH, prices "fully reflect" all the available information

In reality, the strong form of EMH is a "null-hypothesis" and it is realistically impossible that the market is fully efficient. Lee (2001) following Modigliani and Miller (1963) suggested that the EMH significantly depends on the mechanism of arbitrage, a fundamental concept of financial economics, which dictates that the market prices adjust to incorporate all available information, true and false. Assuming that market agents act rationally, any improvement of information quality will be reflected to the securities' market prices and lead them to converge with the securities' underlying intrinsic values (Lee, 2001). Hence, the investment decision making and therefore the allocation of wealth in the economy would improve as information quality improves.

The main obstacle to overcome in this field remains the principal-agent problem, or otherwise information asymmetry between company insiders and outsiders. Akerlof (1970) analysed information asymmetry by using the metaphor of the "market for lemons" and illustrated the conflicting incentives of buyers and sellers in the automotive industry.

The lemons principle highlighted the role of trust and uncertainty and their differing effect in the insurance, money lending and employment businesses. Along the same lines, Healy and Palepu (2001) explained that all company insiders, due to the private information that they possess, possibly claim that their business prospects and ideas are "good". This is not the case, and this probability drives investors to value companies conservatively which leads to the mispricing of securities and inefficient markets.

Merton (1986) stated that the collection, processing of information and its transmission to other economic agents are fundamental activities in finance. The assumption behind most asset pricing models is that the transmission and processing of publicly available information occurs instantly for all market participants and that investors also react on the information immediately after receipt. However, Merton (1986) noted that the asset-price behaviour relies on both the nature of the disseminated information and the time frame of the analysis. For example, we might expect to observe quick reactions in prices following the announcement of standardised financial data such as earnings or dividend announcements that can be quickly assessed by investors and financial analysts using mainstream models. Extensive disclosures of accounting policies, corporate strategy and other economic events may be a different case.

Merton (1986) further explained that the information event of an academic discovery, anomalous profit opportunity, or extensive and complex information about a firm's activities is not absorbed easily into prices. Thus, the anticipated time between the creation of this investment opportunity/economic event and its exploitation by rational market participants would be considerably higher. Merton (1986) divided the costs of reducing the information asymmetry problem in two categories. In the first case, the firm bears the comparatively smaller cost of financial data collection and processing. In the second case the firm bears the comparatively higher cost of communicating this information to outsiders (investors, analysts, government) for a variety of purposes including investment evaluation, equity and debt finance, and regulatory obligations. Merton (1986) further categorised the latter into the cost of giving incentives to insiders to communicate their information and the cost of increasing the reliability of this information.

Healy and Palepu (2001) argued that demand for financial reporting and corporate disclosure arises from information asymmetry and the agency problem between insiders and outside stakeholders. The reliability of corporate disclosures by managers can be enhanced by government regulators, accounting standard setters, statutory auditors and other financial market intermediaries (Healy and Palepu, 2001). Following Healy and Palepu (2001) we argue that one means to reduce the costs of information asymmetry, is corporate disclosure via an increase in the reliability of both quantitative and qualitative information. We also follow Ball (2006) and argue that the global adoption of international financial reporting standards does increase the quality of financial information and associated disclosures. This is related to increased cross country comparability of financial statements and decreased costs of processing financial information (Ball, 2006).

The counter argument, put by Healy and Palepu (2001), concerns the efficiency of the globalisation of financial reporting. Healy and Palepu (2001) questioned the functionality of a global accounting standard setter body due to the discrepancies in the development and enforcement of financial reporting across different countries. Also, the authors raised the unanswered question of which economic forces will dictate the speed and execution of such convergence and what the political and economic consequences will be. Finally, Healy and Palepu (2001) pointed out that in the case of asymmetric convergence by different countries it is questionable if the financial reporting quality will be enhanced just by global accounting standards.

Proponents of the strong form of the EMH argue that basing investment strategies on fundamental analysis or changes in accounting policies and accounting standards should have zero effect in a "fully efficient" market. However, Kothari (2001) noted that there are several anomalies reported in empirical accounting research in which suggest that accounting standard regulators should have a considerable interest in the information efficiency of new financial reporting standards (Kothari, 2001).

The rapid globalisation of financial and labour markets led to intense interest in creating internationally recognised and homogenous accounting standards. Kothari (2001) stated that the question of whether there should be a single, common set of standards is perhaps the ultimate question. Questions still remain about differences in information asymmetry and market efficiency following the adoption of the same or similar accounting standards across a different legal, political, economic and regulatory environments (Kothari, 2001). This research project aims to make a contribution by answering several of the above calls for investigations into the effect of both new international accounting standards and changes in corporate disclosure under conditions of information asymmetry.

2.2. Global financial reporting convergence

2.2.1. International accounting harmonisation

This thesis is a research project that uses samples from multiple countries to investigate the impact of IFRS adoption on the analysts' information environment and identify any cross-country differences. Therefore, it is important to obtain an understanding of the existing findings from research projects that concentrated on the country-level factors that might have affected the adoption of IFRS. Such understanding may assist to formulate our research questions as well as to interpret this project's findings and link them to the academic literature. A number of authors focussed on the country-level determinants for convergence of the national standards with IFRS or full conversion (Hope et al., 2006; Chua and Taylor, 2008).

Other authors (Lardon and Street, 2004; Nobes, 2006; Kvaal and Nobes, 2010; Kvaal and Nobes, 2012) further investigated the factors affecting the successful application of IFRS by concentrating on the role of legal and financial reporting enforcement and the differences between IFRS accounting policies changes. These studies also concentrated on the role of traditional accounting policy choices in each country as well as cultural and linguistic differences.

Chua and Taylor (2008) provided an overview on the underlying social and political factors of multiple countries choosing to adopt IFRS. In fact, they explained that the Asian financial crisis of 1997 uncovered the need for higher financial reporting quality and argued that this could be one of the motivational factors for the EU to impose the mandatory adoption of IFRS for listed companies. Also, accounting scandals in the beginning of the 21st century in the US such as Enron and WorldCom exposed the deficiencies of the current accounting systems and identified the need for higher quality enforcement and financial reporting standards. Following this, several countries turned to the IASB and IFRS instead of keeping their national standards or replacing them with US GAAP.

In an early study on the countries' motivation to adopt IFRS, Hope et al. (2006) concentrated on the institutional determinants that drove 38 countries to voluntarily adopt IFRS until 2004. Hope et al. (2006) argued that jurisdictions with lower investor protection systems have higher incentives to adopt a higher quality and widely used accounting standards set. To proxy the investor protection level they used security regulations, legislation for protection by directors and the degree of commitment to lift access barriers for international investors. Also, Hope et al. (2006) claimed that countries with higher incentives to facilitate foreign access to their capital markets have a higher probability of voluntarily adopting IFRS in order to mitigate investors' risk. Outlining the incentives of companies in these jurisdictions, Hope et al. (2006) suggested that firms adopting more widely accepted financial reporting standards aim to attract foreign capital, to become cross listed and increase the quantity (and possibly quality) of their corporate disclosure. In fact, their results showed that countries with weaker security mechanisms for investors have a higher probability of adopting IFRS.

However, jurisdictions that adopt IFRS are not only countries that attempt to gain access to international funds and investors but also countries that have already tended to lift barriers of access to their capital markets (Hope et al., 2006). Hence, Hope et al. (2006) suggested that even countries with higher quality economic infrastructure regard IFRS as a step to improve corporate disclosure and accounting policies and subsequently achieve higher international comparability. Nevertheless, Hope et al. (2006) indicated that their results are likely to be biased against IFRS adopters from weak investor protection regimes that are excluded because of data constraints. However, the factors affecting the impact of accounting standards conversion or convergence cannot include only financial reporting or legal enforcement.

The success of a major regulatory change is a function of several features and a study by Lardon and Street (2004) highlighted several implementation problems for the upcoming IFRS adoption in Europe. Lardon and Street (2004) used the 2002 convergence surveys conducted by the largest global accounting firms in 17 European countries.

These surveys' results indicated the perceived highest obstacles towards IFRS convergence in the following areas: association of financial reporting with tax reporting in several countries, lack of detailed instructions on the IFRS adoption, relatively limited capital markets and the absence of transactions in particular areas such as pensions and retirement benefits. Also, concerns have been raised regarding the complex identity of national accounting standards, especially in items such as asset impairment (IAS36), financial instruments (IAS39), income taxation and employee benefits (IAS12; IAS19) (Lardon and Street, 2004). Similar to Nobes (2006), their analysis uncovered several complications such as lags in the translation of standards from English to some countries' languages. Also, they expressed their concerns about the suitability of IFRS for SMEs due to the existence of dual accounting standard systems with significant differences, meaning the use of IFRS for listed companies and the use of local GAAP for smaller entities. As Lardon and Street (2004) highlighted, the survey for SMEs revealed that several national accounting standard setters seem to believe in national standards instead of an international setting.

Nobes (2006) joined the discussion about IFRS implementation and reflected on the potential for international accounting differences to persist after IFRS adoption. The study by Nobes (2006) analysed the early impact of IFRS adoption on two of the three countries of this thesis (the UK and Germany) and provides a framework that helps to interpret further empirical evidence in this area. He compared and contrasted a market-orientated economy with common law system and tax conformity (the UK) with a bank orientated economy with a code law system and tax convenience (Germany). Similar to Lardon and Street (2004), Nobes (2006) concentrated on specific accounting policies and indicated other obstacles for the implementation of IFRS. Nobes (2006) explained that the different fiscal year end can cause asymmetric implementation dates of new standards (and amendments) and referred to the EU interventionism that can cause accounting dissimilarities with non-EU countries. For example, he referred to the amendments made to IAS39 and IAS31 by the EU that could lead to different treatments of the fair value of financial instruments, hedge accounting and equity in EU and non-EU countries.

Also, Nobes (2006) stated that linguistic and translation differences from English in the IFRS standards (Lardon and Street, 2004), as well as the allowance of national accounting policies where IFRS standards do not apply, can alter their implementation. Furthermore, there are a number of areas where flexibility is allowed under IFRS that can result in cross-border reporting differences. For example, Nobes (2006) suggested that UK and German companies are likely to:

- select different presentation formats for their financial statements
- employ different inventory valuation methods, since German legislation bans FIFO, which is widely used in the UK.
- treat actuarial gains differently
- use depreciation methods,
- value investment properties differently, since fair value dominate in the UK and historical cost in Germany.

Similarly, Nobes (2006) indicated that different past policies for goodwill (amortisation or annual impairment) are likely to have a diverse effect on its value at the first IFRS financial statements.

In addition to this, several differences can arise in less visible areas such as currency fluctuations that could affect subsidiaries' financial information, asset impairment and capitalisation of costs due to tax and traditional disparities in the UK and Germany. Nobes (2006) also underlined the importance of the financial reporting enforcement level and its possible effect on the degree of compliance with IFRS, suggesting that enforcement is likely to be higher in the UK than Germany. In fact, two studies by Kvaal and Nobes (2010; 2012) suggested that despite the official adoption of IFRS a range of national traditions and practices persist.

Kvaal and Nobes (2010) explored the differences in accounting policy choice among five countries that mandatorily report under IFRS. Their study aimed to outline how managers can continue previous GAAP practices by exploiting discretion and flexibility in 16 accounting policies' choices allowed under IFRS in the 2005/2006 fiscal period. As Kvaal and Nobes (2010) explained, this heterogeneity can be detrimental to the alleged comparability of annual reports compiled under IFRS.

Their samples included the largest companies from the stock markets of UK, France, Germany, Spain and Australia and therefore contained the vast majority of our research project's sample firms. Their analysis investigated the following key areas: income statement presentation, reporting of operating profit, treatment of equity-accounted earnings (after finance costs and outside operating profit), balance sheet presentation, liquidity presentation, disclosure of equity changes, operating cash flow measurement method, presentation of dividends received and interest paid disclosed in the cash flow statement, fair value for property plant and equipment and investment property, fair value for financial assets, interest capitalisation, inventory flow policy, actuarial gains and losses, and proportional consolidation (Kvaal and Nobes, 2010). Their results showed high dissimilarities both in presentation and measurement/treatment choices that frequently arise from previous national accounting customs.

The above observations imply that each jurisdiction has a unique context and therefore that uniformity and comparability are likely to be diminished by policy choices allowed under IFRS, as well as additional differences that may exist in items such as impairments and discount rates.
Therefore, Kvaal and Nobes (2010) outlined the need to further investigate if the same choices exist beyond the first year of mandatory IFRS adoption and the role of institutional factors that potentially influence them. When data became available, Kvaal and Nobes (2012) conducted an almost identical study and examined the same accounting policy choices in the same set of countries but in the 2008/2009 fiscal period to track any potential changes.

In fact, Kvaal and Nobes (2012) uncover that most companies did not change the pattern of their accounting policies throughout the period. Of those that did change, Kvaal and Nobes (2012) found that UK companies made minimal changes while French and Spanish companies made substantial policy changes, larger than in their transition period. This study also highlights the contrast between Anglo-Saxon countries and continental European countries (which is also evident in Christensen and Nikolaev, 2013) and provides us with the motivation to research the existence of further contrasts in other accounting areas.

On top of their comparison analysis, Kvaal and Nobes (2012) looked at the use of actuarial gains and losses and comprehensive income presentation and indicate that companies in continental Europe have moved closer towards the UK practices. Nevertheless, Kvaal and Nobes (2012) still observed similar national patterns in accounting policy choice in 2008/2009 with 2005/2006. In summary, Kvaal and Nobes (2012) explained that their findings are complementary to those of Ball (2006) who also highlighted the complications of achieving cross-border comparability and accounting harmonisation due to national traditions in accounting policy choice.

Christensen and Nikolaev (2013), using a sample of UK and German companies (two of the three countries employed in this research project's samples), investigated the choice between using historical cost accounting and fair value for non-financial assets and provided further evidence on the persistence of national patterns. Consistent with Nobes (2006), Christensen and Nikolaev (2013) showed that in Germany only historical cost accounting has been allowed under German GAAP while UK GAAP allowed both methods and this is attributed to the role of banks in the German economy, which results in more conservative accounting policy choices.

Their findings showed that almost half the UK firms saw mandatory IFRS adoption as an opportunity to voluntarily change from fair value to historical cost. In both countries, historical cost is used for intangibles as well as for property plant and equipment with only a few companies using fair value, the exception to which is German companies that used fair value for investment property. Christensen and Nikolaev (2013) argued that the managers' preference for historical cost accounting is likely to be attributed to the costs of accurate fair value estimations. Also, they argued that accounting regulators should consider whether a move towards mandatory fair value accounting would probably increase the costs for the companies. This study provides us with the motivation to further investigate if the above patterns are likely to exist in companies in the UK and Germany especially for accounting standards that extensively use fair value such as IFRS3, Business Combinations and IFRS7, Financial Instruments.

In summary, academic studies have highlighted the cross-country differences that impose obstacles to the adoption and implementation of IFRS, as well as the reasons and determinants of convergence or adoption. Current research studies support the idea that financial crises, low investor protection mechanisms, low quality of corporate disclosure and the desire to attract foreign capital are factors that motivate companies and countries to voluntarily adopt IFRS (Hope et al., 2006; Chua and Taylor, 2008). Considerable obstacles have affected the successful implementation of the new accounting standards such as IFRS accounting policies changes and traditional accounting policy choices; legal system (code law vs common law); effectiveness of financial reporting and legal enforcement and cultural and linguistic differences (Lardon and Street, 2004; Nobes, 2006; Kvaal and Nobes, 2010; Kvaal and Nobes, 2012). The next section concentrates on the important role played by fair value accounting, which characterises IFRS (Christensen and Nikolaev, 2013), its advantages and disadvantages and its international applicability.

2.2.2. Fair value, relevance and reliability

As discussed above, fair value is a fundamental characteristic of IFRS and its use instead of historical cost could provide a more timely and accurate snapshot of the financial performance and position of a company. However, fair value could also result in higher volatility of financial information (Ball, 2006). The use of fair value is extensive under IFRS in goodwill, intangible assets and financial instruments whose impact on the analysts' information environment in investigated later in this research project. As suggested by previous studies (Nobes, 2006; Kvaal and Nobes, 2010; Christensen and Nikolaev, 2013), cross country contrasts on the adaptability and use of fair value may exist. Further analysis on the role, advantages and disadvantages of fair value are provided by Schipper, (2005) and Laux and Leuz, (2009).

It has been argued that fair value accounting is a fundamental element of convergence between US GAAP and IFRS (Schipper, 2005). Around the time of the mandatory IFRS adoption in Europe, Schipper (2005) analysed several implementation challenges involved in convergence efforts between IASB and FASB.

She forecasted that the adoption of IFRS across countries, firms, legal systems and a diverse set of firm-types would require a comprehensive set of implementation guidance. Hence, the convergence efforts between IASB and FASB should include application instructions to adopters and implementation bodies, otherwise harmonisation would be impaired. Schipper (2005) noted that a crucial area of potential conflict in convergence is the preference for a more quantitative approach to accounting standards under US GAAP and a more qualitative approach under IFRS. Consistent with Nobes (2006) and Chua and Taylor (2008), Schipper (2005) also highlighted the importance of financial reporting enforcement. She viewed the existence of multiple securities and market regulators in Europe as an obstacle to convergence and called for a single enforcement body that could diminish financial reporting and market harmonisation costs. She also highlighted the role of diversity in the EU, and noted that the environment creates a research area in which distinct ownership structures, financial reporting incentives and enforcement can be observed. Such diversity is evident in studies such as (Lardon and Street, 2004; Nobes, 2006; Kvaal and Nobes, 2010; Kvaal and Nobes, 2012) to name a few.

Schipper (2005) outlined the effects of the increased fair value usage that IFRS adoption brings and, consistent with Ball (2006), she indicated that the extensive use of fair values in financial instruments increases the volatility of reported earnings. This argument is consistent with Ball (2006) who supported the idea that periodic restatements of assets to their fair values are likely to make the firms' future earnings more difficult to predict. Based on the above, Schipper (2005) highlighted fair value and its reliability as a crucial element of successful convergence between IFRS and US GAAP. Fair value measurements are based on a hypothetical exchange and estimate of an item's market price that both counterparties would accept by taking into account the probabilities of future outcomes. Schipper did not regard fair value volatility as a factor of unreliability and argued that the subsequent measurement revisions entail more information and achieve values closer to the "real" economic value of assets and liabilities. Hence, in conjunction with the suggestions by Ball (2006) this provides us with motivation to address the above argument by assessing the possible impact of timely recognition (using goodwill impairment as a proxy) under IFRS later in this thesis.

Schipper (2005) also stated that one of the obstacles to achieving reliability is the absence of market exchanges for intangible assets. She also stated that the number of markets for financial instruments is smaller in Europe than in the US (Schipper, 2005). In many cases, the lack of reliable data and measurement models are likely to reduce fair value reliability. On top of that, fair value inputs and considerations are highly dependent on the managers' ability, bias and perceptions. The above arguments will also be tested later in this research project by investigating the role of intangible assets under IFRS as well as the implementation of IFRS7, Financial Instruments.

The advantages and disadvantages of fair value accounting (FVA) under times of uncertainty are discussed by Laux and Leuz (2009). At the time the article was written, several authors had been speaking out against FVA, condemning its short termism, and suggesting that it contributed to the financial crisis of 2008/2009, as well as suggesting that it is not suitable for the valuation of long term assets.
On top of that, other opinions suggested that since prices could fluctuate due to market forces in the short term, the valuation models for long term assets could have questionable reliability. In contrast, advocates of FVA supported the idea that valuing assets and liabilities at fair value promotes a) transparency through the use of active markets, b) timeliness as values are marked to market and c) reliability of financial information due to the market mechanisms. Laux and Leuz (2009) explained that IFRS and US GAAP permit FVA to be flexible and have discrepancies from market values. This enables company managers, on one hand, to be conservative in diverging from market prices due to possible legal issues (earnings management by decreasing income) and, on the other hand, FVA might provide opportunities for increasing income especially during financial crises (earnings management by increasing income). As Laux and Leuz (2009) explained, fair value accounting in good economic times could increase the value of assets and lead companies to increase their gearing, potentially resulting in contagion effects and contributing to a financial crisis. However, in the same way, fair value could act as a signal of bad economic performance and prevent it by informing investors, government departments and other stakeholders. For example, a decrease in earnings due to a fair value adjustment could result to a decline in the firm's share price.

Laux and Leuz (2009) discussed the alternative choice of historical cost accounting and suggested that although it could be suitable for some assets like debt instruments, the managers' would still have significant discretion with respect to valuation. In summary, Laux and Leuz (2009) argued that in order to determine the appropriateness of FVA we need to investigate its interaction with political and legal influences and corporate disclosure practices.

Taking into account the arguments by Schipper (2005) and Laux and Leuz (2009), part of the empirical analysis of this research project will attempt to investigate the role of fair value by focussing on goodwill, intangible assets and financial instruments. The analysis considers the probable diverse impact across different countries (UK, France and Germany in this thesis) as explained in the existing literature (Lardon and Street, 2004; Nobes, 2006; Kvaal and Nobes, 2010; Kvaal and Nobes, 2012) as well as other studies that are mentioned later in the thesis.

2.2.3. Convergence and potential IFRS adoption by the United States and the rest of the world

Motivated by the increased incidence of IFRS across the world, several studies examined the different scenarios of potential IFRS adoption by other countries such as the US (Hail et al., 2010) as well as China, India and Canada (Ramanna, 2012).

The IASB and FASB have been collaborating since 2002 towards the convergence of IFRS and US GAAP. The aim of this collaboration has been to create a joint set of high quality global accounting standards. In 2007, the Securities and Exchange Commission of the US, removed the requirement of non-US companies registered in the US and reporting under IFRS to file accounts under US GAAP (IASB, 2016). Hail et al. (2010) analysed the costs and benefits of a probable IFRS adoption by the United States, explaining that the US economy is characterised by a focus on capital markets, strong enforcement of regulations and high quality financial reporting and legislation. Even so, the authors highlighted a likely improvement in the comparability of financial statements as a potential benefit of adopting IFRS. Also, Hail et al. (2010) suggested that IFRS adoption is unlikely to alter the firms' reporting incentives and consequently reporting quality.

Ceteris paribus, IFRS and US GAAP are supposed to have small differences in terms of impact on market liquidity and accounting quality (earnings management, timeliness of recognition, value relevance). Nevertheless, to a certain extent, the US could benefit from improved comparability with a number of smaller countries. On the cost side, IFRS are likely to bring considerable conversion and on-going costs for firms and public services. It should be noted though that financial reporting costs can not be reduced for multinationals that report under dual standards due to stock market regulations.

Hail et al. (2010), highlighting the potential political pressure, argued that multinationals are likely to support IFRS adoption in the US due to cost savings and increased financial statement comparability between their subsidiaries. They also suggested that international accounting firms could probably support IFRS adoption in the US due to their experience with IFRS and increased fee income (for the accounting firms) arising from the transitional costs.

However, Hail et al. (2010) suggested that US GAAP differs considerably with IFRS in respect to taxation, intangible assets, business combinations, compensation and debt making uncertain the transition's impact on crucial items such as earnings and shareholders' funds. Hail et al. (2010) suggested that an IFRS adoption by the US could eliminate competition between the accounting standards setters resulting in several implications such as increased political pressure on the IASB and potential conflicts of interest. It can be argued that competition between IFRS and US GAAP has been constructive and imposed discipline to some extent, as well as led to convergence between the two standards (Hail et al. 2010). The authors highlighted the US economy's capital market and investor orientation as well as the role of SEC and FASB as regulatory and supervisory authorities and potential hurdles for IFRS. On the successful implementation of IFRS adoption in America, these organisations could play a supplemental and monitoring role, especially in imposing corporate disclosure requirements. In general, Hail et al. (2010) argued that the dissimilarities in law, enforcement and sovereign economies can possibly affect the application and impact of IFRS. Also, the absence of alternative financial reporting choices (such as the option to use more than one set of accounting standards) or scenarios challenge the judgments of whether IFRS is responsible for observed economic improvements in jurisdictions that adopted IFRS.

Hence, Hail et al. (2010) suggested that it is essential to investigate if the observed economic improvements stated in the literature are a consequence of either a) increased quality of accounting standards, b) higher compatibility of IFRS with regulators and authorities, c) potential spill-over comparability effects due to IFRS diffusion, d) increased financial statements comparability arising from common high quality standards. Hail et al. (2010) argued that existing research has only concentrated on the IFRS financial statements disclosure and omitted to assess other channels of information and the laws affecting them. This thesis attempts to fill the above gap in the literature by assessing the impact of corporate disclosure quantity under IFRS on the analysts' information environment.

Ramanna (2012) provided a different overview than Hail et al. (2010) and concentrated on the political factors that are likely to shape global accounting harmonisation in China, India, Canada and the United States.

Ramanna (2012) suggested that the countries' political bond with IFRS has two dimensions: the country's political influence on the IASB and the country's degree of relationship to political powers that influence the IASB. The IASB and its predecessor the IASC have been closely associated with Britain and the EU and its decisions have been frequently aligned with both jurisdictions. It could be expected that countries like Canada with geographical proximity, cultural and strong commercial relations with the United States would choose US GAAP as a move towards accounting harmonisation. However, from one perspective, Canada chose to adopt IFRS due to longstanding cultural and national associations with Britain and from another one, due to political resistance against US influence and to a possible desire to increase trade outside North America (Ramanna, 2012). US GAAP has been the global alternative to IFRS and the convergence programme reduced some differences between the two but the idiosyncrasies of the US economy still cause some significant differences. Chua and Taylor (2008) suggested that IFRS gained significant ground on the internationalisation race because in public perceptions, the alternative US GAAP have been closely aligned to the SEC and US interests, which are not universally appreciated.

Ramanna (2012) suggested that the US has a political influence in the development of IFRS (or maybe vice versa) and competition between FASB and IASB has been advantageous for both sets of standards. Looking at the two most powerful emerging markets, China has converged its accounting standards at a significant degree with IFRS since 2005 in a move to improve financial reporting quality, as well as to mitigate anti-dumping lawsuits by the World Trade Organisation that occur when an exporter sells products below cost (Ramanna, 2012). Nevertheless, China did not fully converge with IFRS and continued traditional Chinese practices by avoiding the extensive use of fair value and reversal of assets' impairments. The exclusion of related party transactions disclosures under IFRS in China explains its unsuitability in China's case, due to the high costs arising from the prevalence of state-owned businesses and the transactions between them. In contrast, India has been aiming to fully adopt IFRS by 2011 but failed to do so because of political factors and accounting differences. As Ramanna (2012) explained, Indian GAAP demands a minimum depreciation rate while under IFRS, depreciation depends on the assets' useful life.

He also referred to political concerns that have been raised regarding accounting for foreign currency translations. Hence, it is probable that India would progressively converge with IFRS and keep Indian standards in sensitive areas. Recent developments in India require the gradual adoption of Ind AS (the IFRS equivalent of Indian accounting standards) for listed companies (PwC, 2016).

Chen and Zhang (2010) examined the adoption of IFRS in China and looked at the subsequent effect on audit and regulatory enforcement. China made efforts towards convergence with IFRS in a period prior to this study, and the authors focussed on the 2001 reform that banned different accounting estimates between local GAAP and IFRS. The study involved a sample of 109 Chinese companies from 1999 to 2004 and investigated the line-item deviations between their extant local GAAP and IFRS reports. One of the requirements of the Chinese regulatory authority was that an international auditor (a Big4 firm) should conduct the audit of IFRS accounts. The authors argued that any differences in specific items was more likely to be attributed to firms' non-compliance with IFRS rather than to the difference between Chinese GAAP and IFRS.

Thus, they supported the idea that the Chinese efforts to converge with IFRS have been moving to the right direction and that convergence failures occurred probably due to either language translation problems, inadequate knowledge of IFRS or the exploitation of opportunities by the managers (Chen and Zhang, 2010). Interestingly, they did not find any positive influence to convergence exerted by the Big4 auditors in comparison to Chinese auditors. However, the empirical findings demonstrate that the existence of an audit committee was associated with fewer dissimilarities (Chen and Zhang, 2010).

In general, research studies have provided empirical evidence to argue that IFRS adoption did not bring "full" accounting harmonisation due to translation problems, political interests, cultural differences, national GAAP-IFRS differences, national traditions and the flexibility that IFRS provides. Nevertheless, this does not mean that IFRS entirely failed to bring higher accounting convergence. The next section illustrates the impact of IFRS on financial information comparability.

2.3. IFRS adoption: Economic effects and consequences

2.3.1. Comparability

Several authors have investigated the consequences of IFRS adoption for the comparability of financial statements. Value relevance has been a popular proxy for comparability in the academic literature (Barth et al. 2012) but it has been subject to criticism by authors such as Chua and Taylor (2008) who argued that value relevance is not a direct measure of comparability. Apart from value relevance, authors have employed other comparability proxies such as trading of foreign securities (Bruggerman et al., 2011), mutual fund ownership (Defond et al. 2011), changes in institutional ownership percentage and number of investors (Florou and Pope, 2012). In addition, Kim et al. (2012) looked for an impact on market liquidity and the probability of informed trading when reporting under IFRS in a US exchange.

Kim et al. (2012) considered how IFRS would fit in the US setting by examining the impact of the SEC's abolishment of the mandatory reconciliation required of foreign firms reporting under IFRS. Using a small sample and a difference in difference methodology, they looked at changes in the probability of informed trading (difference between buy and sell orders) and market liquidity proxied by trading cost, bid ask spread, price and zero returns. The analysis provides an insight on the effect of reduced corporate disclosure that on the one hand decreases the costs of financial reporting but on the other hand is likely to be detrimental for information quality. Looking at the disclosure of affected firms, they found no increase in the number of corporate announcements. Also, Kim et al. (2012) did not find any evidence to support the idea that market liquidity or the probability of informed trading (probability that a counterparty in the trading process has superior information on the value of the asset exchanged) was different compared to a sample of foreign firms listed in the US that were not reporting under IFRS. The analysis was extended further by looking at various information asymmetry proxies and the researchers found no impact on the cost of equity capital (estimated by four different accounting valuation models), institutional ownership and analysts' forecast properties.

In addition, they found no evidence for the stock price efficiency (the time that stock prices respond to information) and price synchronicity (the degree that stock prices jointly change). Thus, Kim et al. (2012) claimed that from a market and analysts' perspective, foreign firms in the US reporting under IFRS are not likely to issue financial statements of lower information quality, compared to those issuing under US GAAP.

Christensen et al. (2013) concentrated on the capital market effects of mandatory IFRS adoption and particularly on liquidity. Beyond that, the study aimed to identify whether liquidity effects are different for countries that implemented significant changes in financial reporting enforcement simultaneously or post IFRS adoption and whether other institutional reforms were the cause of observed liquidity improvements. Consistent with Kim et al. (2012), Christensen et al. (2013) argued that neither mandatory IFRS adoption nor other organisational and institutional reforms were likely to improve liquidity.

Hence, they suggested that the observed improvements were likely to be found in countries that implemented major financial reporting enforcement reforms around the same time as a voluntary/mandatory IFRS adoption. The authors argued that enforcement changes, rather than accounting standards changes, are likely to improve market liquidity but also acknowledged that other regulatory changes such as audit reforms might have influenced liquidity.

Assuming that financial statement information influences cross-border equity investments and that local financial reporting standards are an obstacle to these investments, Bruggerman et al. (2011) are consistent with Ball (2006) and hypothesise that IFRS adoption would facilitate them. Examining the implications of mandatory IFRS adoption on international trade, the study employed the trading volumes in the Open Market in Germany as a proxy for foreign equity investments, or in other words, investments of local investors in foreign assets. Following a difference in differences methodology, they created a treatment group for firms that mandatorily adopted IFRS and a control group for firms reporting under local GAAP, and further tested their results on UK and Australian samples.

The results showed an increase in foreign stocks trading volume for firms adopting IFRS and the empirical analysis revealed that this increase is not likely to be associated with factors related to enforcement (contrary to Christensen et al. 2013) or to other institutional characteristics. The effect of IFRS adoption on trading volume is higher for firms with higher GAAP-IFRS differences in net income and in periods around earnings disclosures. However, Bruggerman et al. (2011) explained that their proxies are likely to be affected by other simultaneous changes in the global markets and are not likely to entirely cover all the investors' activity in global equities.

DeFond et al. (2011), also researching in the area of IFRS and comparability, conducted a study to investigate the effect of IFRS adoption on cross border investment. The study employed mutual fund ownership as a proxy for foreign investment and focused on European firms adopting IFRS mandatorily between 2003 and 2007. Arguing that the existing literature shows that uniformity improves comparability, they used constructs of accounting standards implementation credibility (at the country level) and earnings quality as proxies for uniformity.

A secondary benchmark sample was used, within countries not adopting IFRS and the researchers analysed the potential effect of IFRS adoption on domestic mutual funds, controlling for firm and country level characteristics. The results showed no increase in domestic mutual fund ownership with mandatory IFRS adoption but the authors concluded that the mandatory IFRS adoption was likely to improve comparability, solely because of the simultaneous improvement in uniformity. Similarly, firms operating in countries with strong implementation credibility, that experience significant rises in the uniformity of their financial reporting were the most likely to have higher foreign investment.

Similarly to DeFond et al. (2011), Florou and Pope (2012) confirmed the key effect of enforcement mechanisms on the comparability of financial statements. Florou and Pope (2012) looked at the impact of IFRS on institutional investors activity. Adopting the changes in institutional ownership percentage and number of investors as dependent variables, the authors employed a difference in difference research design, using firms adopting IFRS both voluntarily and mandatorily as treatment sample, and firms not reporting under IFRS as control sample. Their analysis employed variables representing enforcement (similarly to Li (2009)) and IFRS-GAAP degree of difference. The authors employed widely used firm specific variables for size, profitability, gearing and risk.

The results showed that both the number of investors and institutional ownership increased post mandatory (and voluntary) IFRS adoption but only in countries with strong enforcement mechanisms and high IFRS-GAAP differences (similarly to Daske et al. (2008) who found similar results for the cost of capital). The authors acknowledged that the effect on institutional holdings could be driven by other simultaneous regulatory or market improvements. They also stated that the results could be affected by potential determinants that affect the supply of equity. Nevertheless, Florou and Pope (2012) demonstrated that the effect on institutional holdings is more intense for investors who are profoundly dependent on financial statements for their investment decisions. Thus, the observed changes are likely to be driven by comparability enhancements due to the shift to IFRS.

Barth et al. (2012) investigated the IAS/IFRS effect on comparability by examining whether IAS/IFRS adoption by non-US firms results in higher financial statement comparability with US firms reporting under US GAAP. Using a large sample, with companies from 27 countries that adopted IAS/IFRS between 1995 and 2006 and companies from the US, they compared the association of economic outcomes (stock price, stock return, future cash flow) with accounting measures (book value, net income). The methodology employed used an accounting system (based on the difference between fitted values of the economic outcomes resulting from applying US GAAP and IFRS multiples to each firm's accounting amounts) and a value relevance comparability approach (accounting amounts as being comparable if they explain the same variation in economic outcomes). The authors also used three accounting quality proxies widely-used in the literature: earnings timeliness, accrual quality and earnings smoothing. The study's findings showed that US GAAP accounting measures were likely to have higher value relevance than IFRS. Similarly to De fond et al. (2011) and Florou and Pope (2012), Barth et al. (2012) suggested that comparability was higher when non-US firms, especially for mandatory adopters, use IFRS instead of local accounting standards. Also, the authors suggested that the effect was stronger for firms in countries with strong enforcement mechanisms and a common law system.

Overall, academic studies have found an increase in comparability associated with IFRS adoption but most argued that US GAAP and IFRS have similar information quality (Kim and Shi, 2011) and that is possible that the effects associated with IFRS adoption are related to an increase in foreign trading (Bruggerman et al., 2011); increase in comparability via more uniformity (De fond et al., 2011); increase in institutional investor numbers and ownership (Florou and Pope, 2012); and increase in comparability via earnings quality (Barth et al., 2012). Nevertheless, most of the existing studies tested the IFRS effect on financial information comparability from the external investors' point of view. However, if IFRS adoption increased transparency and comparability, then this is unlikely to be the only effect as the opportunities to exploit insiders' information were likely to be decreased.

2.3.2. Incentives and opportunities: comparability and directors' share dealings

The impact of IFRS on comparability from the insiders' point of view was investigated at a study by Brochet et al., (2011). The authors examined abnormal returns to directors' share purchases in all UK firms from 2003 to 2006, and argued that the increase in public information and a decrease in private information implied higher financial statement comparability associated with IFRS adoption. Also, they argued that their sample country selection is likely to isolate the IFRS comparability effect, since UK GAAP had the smallest differences with IFRS. They also commented that the IFRS comparability effect is isolated because of invariant institutional factors. In fact, their empirical results showed that abnormal directors' share dealings in the UK were reduced over one, three and six month windows post IFRS adoption. Furthermore, Brochet et al. (2011) employed three other comparability proxies from the literature to test their hypotheses: an earnings–stock return model; a proxy representing the accounting standards of industry peers; and a proxy that compared a firm's earnings-stock return ratio with its foreign industry peers. The results confirmed that IFRS adoption resulted in higher comparability. In further tests, Brochet et al. (2011) controlled for analyst following, shares held by major shareholders, change in accruals and UK GAAP-IFRS reconciliations and still found a reduction in abnormal directors' share trading post IFRS adoption.

Thus, the authors concluded that even in a country with small differences between domestic GAAP and IFRS, and for firms with high information quality, IFRS adoption is likely to be related to comparability improvements.

Similarly to Brochet et al. (2011), Wang and Welker (2011) investigated the probable exploitation of insiders' information and looked at the time window before IFRS adoption in 14 European countries and Australia in order to identify changes in the issue of equity shares. As they explained, during the IFRS transition period the management has private information about the impact of the transition on the company's financial statements and consequently possesses the opportunity to organise the firm's financial structure accordingly. For example, the firms' directors could anticipate a deterioration in the reported financial performance and gain considerable benefits by issuing equity when the firm's share price is still high.

Similarly, the equity investors can draw inferences for the firm's post IFRS adoption financial representation and design their investing strategy accordingly (Wang and Welker, 2011). The issuing of equity shares in the IFRS transition period is likely to be dissimilar across jurisdictions because in stronger enforcement environments the managers are likely to have less flexibility and to be required to provide extensive disclosure, while in weaker enforcement environments, although insiders are likely to have more opportunities, any gains are probably offset by the cost of equity issues. Hence, Wang and Welker (2011) looked in a 16-month period around the IFRS adoption, examining the relationship between stock returns, the earnings difference between GAAP and IFRS and controlling for country and industry fixed effects. The authors acknowledged that one limitation of the study is the lack of data regarding the exact dates of the reconciliation announcements, which makes it difficult to focus on a narrower time frame. A logistic regression was employed, modelling the probability of issuing equity and a linear regression model of equity size (size of new issues) controlling for firm size, research and development assets, the issue of new debt, return on assets ratio, book to market ratio, share price volatility, asset growth, cash requirements and closely held shares.

The authors found that firms with a greater decline in earnings following IFRS adoption had a higher probability of equity being issued during the transition period. Using proxies for the degree of enforcement, the results suggested that firms in stronger enforcement environments were likely to have a stronger relationship between GAAP-IFRS earnings difference and stock market value (similarly to Daske et al. (2008) and subsequently to Florou and Pope (2012) although for different comparability proxies). Hence, they concluded that mandatory IFRS adoption was likely to be associated with changes in equity finance timing.

While Brochet et al. (2011) argued that insiders' opportunities, proxied by abnormal directors' share trading, were likely to be decreased post IFRS adoption, Wang and Welker (2011) presented evidence that company managers knowing the anticipated impact of IFRS adoption on their accounts took advantage of the IFRS transition period and planned the timing of their companies' equity issues accordingly.

2.3.3. Economic outcomes: Value relevance

Several authors used wide samples from IFRS adopting countries and concentrated on the IFRS transition effect on financial statement items. A number of papers investigated the value relevance of IFRS adoption by considering a) the type of adoption (voluntary/mandatory), b) the level of enforcement (financial reporting and legal) and c) the degree of differences between local GAAP and IFRS. Specifically, researchers looked at the relationship between stock prices and earnings (Christensen et al., 2009; Landsman et al., 2011), various financial statement items including book values and earnings (Horton and Serafeim, 2010; Aharony et al., 2010), and the probability of IFRS adoption (Armstrong et al., 2010).

A value relevance study by Landsman et al. (2011) used a sample of firms from 16 countries adopting IFRS and 11 countries under local GAAP from 2002 to 2007. The authors investigated if the value relevance of earnings releases increases post mandatory IFRS adoption. The analysis compared the two samples through a difference in difference method and used abnormal trading volume and abnormal return volatility as proxies for value relevance in a three day frame around earnings press releases.

Several tests were conducted at the country level and firm level which took into account the role of enforcement and the probability of investors' uncertainty. The empirical results showed an increase in the information content of earnings for firms that adopted IFRS mandatorily and these results were confirmed by both country and firm level tests. Additionally, Landsman et al. (2011) suggested that the increase in abnormal trading volume and abnormal return volatility is higher for firms in strong enforcement environments. Further analysis involved a structural equation model and a path analysis, which revealed indirect factors likely to influence the value relevance of earnings reported under IFRS. These factors were increased foreign portfolio investment, increased analyst estimations and reduced reporting lag.

Horton and Serafeim (2010), investigating an environment with relatively strong enforcement and small IFRS-GAAP differences, studied the value relevance of IFRS adoption reconciliations in the UK and examined the specific accounting rules which cause UK GAAP earnings and shareholders' equity to differ significantly from those reported under IFRS. The authors demonstrated that disclosure under IFRS2 results in increases in reported management compensation (share based payments), thereby decreasing shareholders equity (a wealth restructuring between debt and equity holders is also observed at Christensen et al. (2009)) and reducing earnings. Furthermore, they explained that the adoption of IAS 39 Financial Instruments and the IFRS permitting the use of discounting in the valuation of deferred tax assets, and the use of multiples in the valuation of goodwill and intangible assets, are likely to result in higher reported shareholders equity and/or higher reported earnings. Also, they found that IFRS disclosure relating to goodwill impairment and deferred tax assets reveals new information to the market. Their results showed that the reconciliations still led to stock market reactions despite the companies publishing statements explaining that IFRS adoption would not affect their cash flows. In summary, Horton and Serafeim (2010) showed that under IFRS, share-based payments, goodwill impairments, financial instruments values and deferred tax assets/liabilities are value relevant.

Another study by Christensen et al. (2009) expanded the literature by examining the value relevance of earnings reconciliations to IFRS, in a manner similar to Horton and Serafeim (2008). The study concentrated on the probability of firms reporting under UK GAAP violating their debt covenants. The authors assumed that since the differences between UK GAAP and IFRS are small, the stock market should not react to any IFRS reconciliation adjustments. As they explained if the opposite happened, then the value relevance should have been greater for firms with greater costs associated covenant violation. The UK GAAP-IFRS net income difference is used to proxy for the reconciliation information and models also include the difference between this and the industry's expected difference between IFRS and UK GAAP income, as well as proxies for size, asset maturity and interest cover. The results showed that the IFRS reconciliations were value relevant but mainly for firms that were among the first group to disclose reconciliation information and which did not have a cross-listing in the US.

Christensen et al. (2009) also found that the value relevance of the reconciliation is not related to gearing but is decreased for firms with higher interest cover and size, and increased with higher asset maturity. Hence, the value relevance of the IFRS reconciliations is considered to reflect a wealth restructuring between equity and debt holders.

In a value relevance study, Armstrong et al. (2010) explained that prior to IFRS adoption, investors could react positively or negatively due to diverse expectations. For example, a positive reaction could indicate that investors view IFRS adoption as an improvement towards global accounting harmonisation, increased liquidity and competition in the capital markets. Similarly, investors could expect that higher financial statement quality could bring a drop in the cost of capital because of the reduced risk that occurs from reduced information asymmetry. On the other hand, a negative reaction could reflect investors' expectations of lower financial information quality, high IFRS transition costs and more opportunities for managerial discretion. Armstrong et al. (2010) assessed the impact of 16 events that increased or decreased the probability of IFRS adoption for firms domiciled in 18 European countries. The regression results showed a positive stock price reaction for companies that had inferior quality information environment before IFRS adoption, suggesting investors' expected improvements.

Their industry analysis demonstrated that the positive effects were stronger for banks. Also, their findings showed negative effects for firms in countries with a legal system based on code law potentially reflecting lower enforcement. The findings also indicated that investors reacted positively even for firms with superior information quality before IFRS, probably indicating increased expectations of benefits arising from comparability.

Using samples from 14 EU countries, Aharony et al. (2010) investigated the market reaction of financial information before and after the mandatory adoption of IFRS. They concentrated on the value relevance of items that are usually characterised by higher uncertainty about their future values such as research and development expenses, goodwill (Lev and Sougiannis, 1996; Shah et al., 2008; Dedman et al., 2009; Tsalavoutas and Tsoligkas, 2011) and property, plant and equipment revaluations, the book value of equity and earnings. Similarly to Daske et al. (2008), Aharony et al. (2010) investigated the role of legal enforcement mechanisms in this study. The authors compiled a comparability ranking that represented each country's GAAP comparability with IFRS. This ranking was used to demonstrate that prior to IFRS adoption the value relevance of these accounting items was significantly stronger in the countries that had accounting standards more compatible to IFRS. Post IFRS adoption, the higher the divergence of goodwill, property plant and equipment and research and development values under GAAP compared to IFRS, the higher the value relevance and the subsequent benefit to investors. Also, contrary to their expectations and the later study by Landsman et al. (2011), Aharony et al. (2010) did not find that systematic legal system differences were likely to affect their results among countries. They explained that the reason for this was the countries' mosaic of legal systems and different accounting standards.

The above studies showed an increase in the information content of earnings for mandatory adopters of IFRS (Landsman et al., 2011); increased value relevance of goodwill impairment and deferred tax assets disclosed under IFRS (Horton and Serafeim, 2008), increased value relevance of earnings reconciliations (Horton and Serafeim, 2008; Christensen et al., 2013), increases in value relevance of research and development, goodwill, property plant and equipment numbers, especially when they differ considerably under IFRS (Aharony et al., 2010) as well as positive stock market reactions for announcements favouring IFRS adoption (Armstrong et al., 2010). As it can be observed in the findings of the above studies the following factors: a) the type of adoption (voluntary/mandatory), b) the level of enforcement (financial reporting and legal) and c) the degree of differences between local GAAP and IFRS are likely to be country-level determinants of the possible impact of the IFRS adoption. Hence, they will be employed in this research project when appropriate to assist in the interpretation of the empirical results.

2.3.4 Economic outcomes: Cost of capital

Many proponents of IFRS claim that after the adoption of IFRS a firm's cost of raising capital declines due to the potential for higher international diversification by investors and lower risk to investors arising from higher quality financial information (Ball, 2006). The academic literature highlighted the type of the IFRS adoption whether it is mandatory or voluntary, as a crucial factor that differentiates the impact. The explanation is that companies that adopted IFRS voluntarily were likely to have incentives for higher quality financial reporting and therefore entail lower risk for investors. The models that have been used to estimate the cost of capital have included the residual income valuation model, abnormal earnings growth model (Daske, 2006; Christensen et al., 2007; Daske et al., 2008, Jermakowicz et al., 2008, Li, 2010; Daske et al., 2013) and the Price Earnings Growth ratio (Kim and Shi, 2007) and stock returns (Christensen et al., 2007; Karamanou and Nishiotis, 2009). In addition to econometric modelling, studies have also used interviews of managers (Armitage and Marston, 2008) to explore the perceptions of managers about IFRS adoption.

Most of the existing studies investigating the impact of IFRS adoption on the cost of capital employed country-level factors such as the legal system (common law or code law), the differences between local GAAP and IFRS and the level of enforcement (financial reporting and legal) as well as the level of market regulation in each country. They also employed firm-level factors, such as the type of adoption (mandatory/voluntary), firm specific characteristics and firm accounting policies.

The studies investigating the impact of IFRS adoption on the cost of capital are relevant to this thesis as follows:

a) They employed valuation models that use analysts' earnings forecasts as main inputs. Hence, it is possible that changes to the cost of capital post IFRS adoption could be related to changes in the characteristics of the analysts' forecasts that this research project examines.
b) The existing findings on the role of country-level and firm-level factors assisted in formulating the research questions of this thesis, as well in interpreting the empirical results

In a cost of capital study not focussing on the IFRS impact, Hail and Leuz (2006) investigated whether international differences in the cost of equity capital were associated with the characteristics of legal systems and market regulation. The authors suggested that strong legal institutions provide strong investor protection, limit the opportunities for managerial discretion and therefore reduce the investors' perception of the firms' risk and the cost of equity capital. Using samples of firms from 40 countries, between 1992 and 2001, Hail and Leuz (2006) created implied cost of capital estimates using four accounting valuation models and employed proxies for stock market regulation and corporate disclosure regulation. For this purpose, they used proxies for stock market regulation based on a survey from the academic literature of legal professionals in 49 countries.

The authors constructed variables using data on:
a) enforcement, to investigate to proxy the quality of each country's legal system
b) the difficulties in recovering liabilities, to identify differences in each country's regulation effectiveness
c) the listed firm disclosure requirements, to capture differences in stock market regulation between countries

Their results indicated that jurisdictions with stronger market regulation and detailed mandatory disclosures were likely to have a lower cost of capital. Although higher legal quality appeared to have a relatively small effect, the effect of strong market regulation is greater, particularly for countries with less integrated markets. The study provides evidence on the effect of legislation and regulation on the cost of equity capital but it can be argued that: a) does not consider that many jurisdictions are affected by the same legal institutions and b) does not consider the role of financial reporting standards and disclosure. In a second paper by the same authors, Hail and Leuz (2006) examined whether the implied cost of capital is decreased for foreign firms from 45 countries listed in the US when they adopted IFRS for the first time. Their findings showed that firms from countries with lower disclosure requirements and lower investor protection are likely to have considerably decreased implied cost of capital.

Focussing in the effect of mandatory IFRS adoption in the UK, Christensen et al. (2007) examined the price reaction to news related to the expectations for the forthcoming mandatory adoption of IFRS and at a later point the certainty about the implementation of change in accounting standards. They also examined the possible impact on the implied cost of equity capital before and after the announcement. They explained that previous research on the adoption of IFRS in the UK was restricted by the type of adoption (mandatory) as firms with potential incentives to adopt IFRS were not allowed to adopt before 2005. Their study differentiated itself from other studies in the field by selecting a second sample comprised by firms in Germany where companies had the early adoption option. A similar approach in sample selection is adopted in our research project as explained later in this thesis. For comparison purposes, we intended to select samples of German voluntary and mandatory adopters as well as UK and French companies adopting IFRS mandatorily. Christensen et al. (2007) formed the expectation and eventually found that for UK companies and German voluntary adopters, there was a positive correlation between announcements that changed the probability of mandatory IFRS adoption before 2005 and stock prices (Christensen et al. 2007). Also, they further assumed that the higher the degree of similarity of UK firms with German voluntary adopters the lower the implied cost of equity capital post IFRS adoption in the UK.

Thus, the authors in order to determine which firm characteristics influence voluntary IFRS adopters in Germany, employed logistic regressions with 1 if the firm chose IFRS and 0 otherwise as dependent variable and industry indicators, gearing, size and foreign turnover as independent variables. The authors estimated the cost of equity capital using an abnormal earnings growth model and a Price Earnings Growth ratio model. Their independent variables were changes of operating profit margin, book to market ratio, gearing, market value and turnover growth. Their empirical results confirmed their hypothesis that announcements that increased the probability of mandatory IFRS adoption in the UK, were likely to increase the stock price and announcements that reduced the probability were likely to decrease the stock price (Christensen et al., 2007). Their results were consistent with the later studies by Christensen et al. (2009) and Horton and Serafeim (2010) showing that announcements related to IFRS adoption by UK companies were value relevant.

Also, the authors found that UK companies that were more similar to German voluntary adopters based on their firm characteristics were likely to have higher reductions in the implied cost of equity capital post IFRS adoption.

It can be argued that their empirical results could reflect benefits from cross border comparability for UK companies with higher international activities or benefits from the IFRS increased disclosure requirements on companies that already had incentives for transparency. Thus, companies that strived for higher transparency would theoretically expect to gain benefits from better-informed investors and therefore have lower risk. In another study, Armitage and Marston (2008) aimed to investigate if managers themselves expected a reduction in their firm's implied cost of capital after IFRS adoption.

Armitage and Marston (2008) investigated the connection between disclosure and the cost of capital and collected data from interviews with 16 top executives. The authors explained that the appraisal of corporate disclosure quality and estimation of the cost of equity capital are complex tasks and aim to reveal the managers' perception and incentives. The researchers asked their interviewees about the benefits and costs of corporate disclosure with respect to the potential reduction in the cost of capital.

They selected a diverse set of UK companies of different size and industry between 2005 and 2006; a period that coincides with IFRS adoption and the issue of the EU Market Abuse and Transparency directives. Their research findings showed that company directors do not believe that there is a relation between corporate disclosure and the cost of capital past a certain marginal point of good quality disclosure (Armitage and Marston, 2008). Their results uncovered a potential asymmetry in the supply of disclosure in favour of credit rating agencies and banks. They also found that the corporate directors believe that the higher supply of insider information to these counterparties the lower the firm's cost of debt. On top of that, Armitage and Marston (2008) stated that the managers' main objective for disclosure is the improvement of the company's reputation for transparent disclosure of information. It should also be noted that managers did not tend to believe that additional mandatory disclosure imposed by regulators would have a significant impact on the cost of capital of firms already employing good disclosure practices.

Hence, it will be interesting to see later in this thesis if the increase in the quantity of mandatory disclosure by IFRS is likely to affect or not the firms' information environment and its quality as reflected on the properties of analysts' earnings forecasts.

In the context of voluntary IFRS adoption Karamanou and Nishiotis (2009) analysed the effect on the cost of capital of the incentives that managers have to disclose information with more transparency. The authors demonstrated how accounting standards can increase firm value through a reduction in information asymmetry. They selected a small sample across 8 countries from 1989 to 2002 and looked at the long and short-term stock returns close to the voluntary IAS/IFRS adoption announcement. They expected that abnormal returns were associated with the IFRS announcement signal, especially for undervalued companies (identified by Tobin's Q and analysts' suggestions). Their findings indicated an increase in the stock price following adoption announcements and a significant reduction in the firm's cost of capital. The fall in the cost of capital was identified as being responsible for the increases in equity value rather than prospective economic performance. Their results were consistent with the later studies on IFRS adoption by Christensen et al. (2007), Christensen et al. (2009), Horton and Serafeim (2010), showing that announcements related to IFRS adoption were value relevant.

To further confirm that potential future earnings surprises were not responsible for the rises in equity returns, they included a term reflecting analysts' earnings forecast error and found no statistical significance. The authors mainly attributed their results to the increased disclosure that IFRS offered but they also highlighted that the impact of increased mandatory disclosure requires further investigation, as the costs of the additional disclosure requirements could potentially be higher than the benefits.

Several papers suggested the importance of firms' incentives and countries' legal enforcement systems in determining whether IFRS are fully adopted and applied, or just adopted in name rather in substance (label adopters). Daske et al. (2008) drew this distinction and identified a substantial decline in the cost of capital but found that this applied only to serious adopters rather than to label adopters.

Kim and Shi (2007) looked at the partial IFRS adopters and, similar to Karamanou and Nishiotis (2009), aimed to identify if the cost of capital was different for companies with incentives for higher quality financial reporting.

Kim and Shi (2007) looked at the effect of voluntary adoption of IAS (IFRS) from 1998 to 2004, in 34 countries and compared the implied cost of equity capital between companies reporting under international standards or not. They also took into account a third group of companies that adopted some international standards and called them partial IFRS adopters. The Easton Price Earnings Growth model (Easton, 2004) was used to estimate the implied cost of capital. Also, the robustness of the results was confirmed with reference to estimates from a number of alternative models. The analysis concentrated on the role of institutional factors that affect corporate governance (legal system, compulsory disclosures, investor safeguard system) and enforcement (market regulation, difficulties of prosecuting an auditor). Kim and Shi (2007) found that companies reporting under IAS/IFRS were likely to have lower cost of capital but only when they fully adopt them. Their results are consistent with Daske et al. (2008) but contradict with Li (2010) who did not find a reduction in the cost of capital for voluntary IFRS adopters. Kim and Shi (2007) suggested that the cost of capital difference between companies reporting under IFRS was higher in countries with weaker institutional factors. Possibly, the market compensated with lower costs of raising finance the firms that demonstrated higher transparency and quality by voluntarily adopting IAS/IFRS.

While most studies identify a decrease in cost of capital associated with IFRS adoption, some of the evidence presented in the literature is contradictory. Daske (2006) found that the cost of capital increased in Germany post IFRS adoption. The paper investigated the impact on German firms reporting under German GAAP, US GAAP and IAS/IFRS between 1993 and 2002. The author established that German accounting is amongst the least transparent in the European Union and assumed that the adoption of international standards was likely to provide strong benefits arising from higher mandatory disclosure. Monthly data was used in order to increase the statistical power of the results, in versions of the abnormal earnings growth model and the residual income valuation model.

As it will be explained later in this thesis, following Daske (2006) monthly data of analysts' earnings forecasts is used in the empirical analysis of our research project in order to increase the explanatory power of the results.

Contrary to his expectations, Daske (2006) showed that firms reporting under international standards in Germany experienced a rise in the cost of capital during this time frame. The reasons that Daske (2006) attributed to these results are the uncertainty of investors due to the diversity of accounting standards in Germany that reduced comparability, the firm incentives that remained unchanged by IFRS adoption and the use of international standards just for illustratory purposes (similar to the "label adopters" discussed earlier. Germany is a mainly bank-based economy which creates an insider-orientation with respect to disclosure and in this environment analysts could possibly lack expertise with foreign accounting standards. Daske (2006) noted, however, that one limitation of his model is that that the implied cost of capital models rely heavily on analysts' forecasts and their inaccuracies can affect the estimations. Similarly to Daske (2006), Horton et al. (2013) found that the effect of IFRS adoption on the cost of capital can be negative for some firms due to the effect of debt covenants and decreased credit rating. The authors concluded that results can vary depending on the firm's country.

Daske et al., (2013) in a study of the capital market benefits of IAS/IFRS classified sample companies in serious and label IFRS adopters. Their study used a large sample of 30 countries from 1990 to 2005. The authors' rationale was that firm incentives matter more than financial reporting standards and therefore they divided the companies according to their reporting policies. The aim of their analysis was to investigate whether companies adopting IAS voluntarily experience a reduction in the cost of capital and higher market liquidity compared to companies reporting under national GAAP. The authors explained that they expected positive capital market benefits because of increased harmonisation among the adopting firms but noted that they did not anticipate any improvements for label adopters. For this purpose they manually coded each firm's accounting policies and a set of compliance combinations that reflected the magnitude of reconciliation information between local GAAP, US GAAP and IFRS in annual reports.

Using these scores they placed the companies in two groups, those above and those below the median, and construct a serious/ label adopters binary variable. The Ordinary Least Squares regression results showed that serious IFRS adopters experience higher market liquidity and lower cost of equity capital compared to non-adopters and label adopters, consistent with the findings of Kim and Shi (2007) and Daske et al. (2008). Similarly to Karamanou and Nishiotis (2009), Daske et al. (2013) concluded by explaining that their results for serious adopters did not represent the "clean effect" of the accounting standards as they reflect the companies' reporting incentives too because they voluntarily adopt IAS/IFRS and fully comply.

As stated above, Daske et al. (2008) examined the consequences of IFRS adoption from 2001 to 2005, using a difference in difference method that involved a control sample of non-adopting firms. The authors constructed a combined proxy for market liquidity that included trading costs, bid-ask spreads, non-trading days and prices. They also employed four valuation models to construct proxies for the implied cost of capital. The results demonstrated an increase in market liquidity and equity valuations and a decrease in the cost of capital but only in countries with strong enforcement mechanisms and where the infrastructure provided incentives for the firms report transparently. The empirical evidence showed that the benefits were higher for firms that voluntarily adopted IFRS and the effect was stronger in countries where local GAAP had big differences with IFRS (contrary to Li, 2010). Significant benefits were also observed in countries that did not have a convergence strategy prior to the IFRS adoption and in EU countries that were affected by coinciding EU policies.

The findings indicated that around the IFRS adoption, the effects were stronger for companies that voluntarily adopted IFRS and the authors argued that this could reflect either increased comparability with mandatory IFRS firms or simultaneous market developments. It should be noted that Daske et al. (2008) acknowledged that their data spans across the initial transitional period and their estimates for cost of capital and equity valuations were potentially influenced by reconciliation adjustments by both firms and analysts.

A study by Jermakowicz et al. (2008) examined the effects of IFRS adoption on a sample of 157 European firms and looked at the cost of equity capital, the value relevance of book values and earnings releases information content. Using the Ohlson, Juettner-Nauroth (2005) model, the researchers identified increased value relevance and information content of earnings in mandatory IFRS adopters.

The authors examined cumulative abnormal returns at the time of earnings releases, and the cost of equity capital implied using the Price Earnings Growth ratio model. Their results confirmed their hypotheses and showed that the cost of equity capital decreased significantly after IFRS implementation in countries operating under both code law and common law. A higher market reaction was observed to earnings releases in code law countries and this was attributed to the fact that companies in code law countries were obliged to implement larger changes in their financial reporting standards than common law countries. Contrary to Hail and Leuz (2006), Daske et al. (2008), Li (2010), the findings supported the idea that code law countries (with relative weaker legal enforcement) decreased their cost of equity capital and gained considerable benefits by adopting IFRS because they improved their financial information quality and reliability. Limitations of the study included the small sample size (157 firms) that in conjunction with the large number of countries (16 countries), could make the data inconsistent and biased. The concentration on the time frame around transition could have resulted in a high level of uncertainty embedded in stock prices and analysts' estimations due to different analysts' expertise with IFRS across different countries. In addition, only one valuation method was employed, which may led to questionable accuracy in the cost of equity capital estimations.

In another study on the effect of IFRS adoption, Li, (2010) examined the cost of capital using a large sample of firms from 18 EU countries from 1995 until 2006. The paper used a difference in difference design with fixed effects and indicator variables for type of adoption (mandatory and voluntary), time period (before or after adoption) and independent variables for US cross-listings, size, return volatility and gearing. Consistent with similar studies in the literature, Li (2010) examined he relationship between time period, adoption type and enforcement type by employing the La Porta et al. (1998) enforcement index.

The role of accounting standards differences was investigated by employing a variable to quantify the differences between local GAAP-IFRS and a variable to measure differences in additional disclosures made under the local GAAP and IFRS. This approach to determine the relevant firm and country level factors was employed later in this thesis.

The rationale behind this research design was to determine whether the higher disclosure under IFRS and the enhanced comparability resulted in a decreased cost of equity capital. It should be noted though, that the sample contained observations for mandatory IFRS adopters for only a maximum of two years and that this period coincides with other EU capital market improvements. The results showed a substantial reduction in the cost of capital, but only for mandatory IFRS adopters (contrary to the findings of Daske et al., 2008). This reduction was limited to the extent that it met the cost of equity capital level of voluntary adopters post IFRS adoption. It can be suggested that the above observation is related to increased financial information comparability and disclosure. Consistent with Hail and Leuz (2006), Daske et al. (2008), Li, (2010) also showed that the effect is present for mandatory adopters in countries with strong legal enforcement mechanisms.

The existing academic studies show a mixed picture on the effect of IFRS adoption on the cost of capital, as some studies found a reduction in the cost of capital in countries with stronger legal enforcement and market regulations (Hail and Leuz, 2006; Daske et al., 2008; Li, 2010) but other studies found a decrease in the cost of capital for companies benefiting from higher quality due to IFRS in code law countries (Jermakowicz et al., 2008).

Other studies highlight the difference between serious or label IFRS adoption (Daske et al., 2013) in voluntary IFRS adopters, but benefits are also found arising for firms forced to adopt IFRS (Christensen et al., 2007; Kim and Shi, 2007; Daske et al., 2008; Li, 2009; Daske et al., 2013) and frequently attributed to increased IAS/IFRS disclosure (Karamanou and Nishiotis, 2009). Nevertheless, the evidence is not entirely in accord and studies such as Daske (2006) found the opposite results, an increase in the cost of capital on IFRS adoption.

There are several limitations that affect most of the above studies such as selection bias, limited time frames, too wide or too small samples, and difficulties in constructing reliable proxies for enforcement, firm incentives and financial reporting quality. As explained in the next section of this chapter, the observed improvements could potentially be influenced by concurrent improvements and developments apart from IFRS that are challenging to identify and isolate.

2.4 The potential effect of concurrent events

One of the limitations of using large samples from multiple countries to assess the impact of mandatory IFRS adoption is the existence of simultaneous developments in the capital markets such as the Transparency and Market Abuse Directives issued by the EU in 2005 (European Commission, 2013).

Pope and McLeay (2011) reviewed the existing academic literature on the impact of IFRS adoption, outlined the crucial factors that shape it and made various recommendations for improvement. The authors highlighted several changes in market regulation, such as the Financial Transparency Directive and the Market Abuse Directive that are concurrent with mandatory IFRS implementation and underline the problem of identifying which change is likely to be responsible for the observed effects. Calling for further and deeper research in this area, Pope and McLeay (2011) outlined the need for research designs and analysis that combines accounting data and financial reporting disclosures. Numerous academic studies identify effective enforcement as one of the key elements of success for new financial reporting regulations. Hence, the authors made several recommendations for firms with incentives for high quality financial reporting but which operate in weak enforcement jurisdictions.

Particularly, they suggested as a potential solution the change of primary listing market to a higher enforcement jurisdiction. As an alternative they suggested an additional cross-border listing to a higher enforcement market but argued that this would not apply in the EU because the EU regulations regarded as enforcer the relevant authorities at the firm's primary market (the market that the firms is mainly conducting its operations).

As an improvement to enforcement in the EU, Pope and McLeay (2011) recommended Leuz's (2010) proposal for the establishment of a new international enforcement system that could cover all firms with incentives for high-quality reporting and impose extensive supervision and regulation on them. However, Pope and McLeay (2011) explained that although this could increase market confidence, there are several implementation obstacles. Hence, they suggested the allowance of firms to freely switch national enforcers within the EU in order to increase competition between enforcers and provide benefits for firms under high quality enforcement.

Basing his analysis on accounting and institutional economics studies, Wysocki (2011) provided a research setting for 'new institutional accounting' and distinguished the factors that influence the economic effects of accounting and non-accounting institutions. He stated that economic outcomes by accounting institutions such as the IASB can be proved to be inefficient and justified his argument by explaining that the actual costs of shaping, implementing, supervising and enforcing IFRS, could outweigh the expected benefits (such as cross border comparability, transparency, financial reporting quality) or be economically efficient only for particular jurisdictions. He suggested that existing research is usually unable to determine what the economic outcomes would be under different combinations of accounting standards and changes in regulation (Pope and McLeay, 2011). This could possibly be the counter argument to Pope and McLeay (2011) and their call for either a single enforcement mechanism or changes additional cross border listings to higher enforcement markets. Furthermore, the effect of IFRS adoption on such a diverse set of countries in terms of tradition, culture, local political economy and enforcement is unlikely to be symmetric and it is likely to result to many heterogeneous IFRS varieties. Similarly, it is crucial to determine whether and how much financial statements quality under IFRS or other concurrent developments are responsible for the observed capital market improvements.

Also, it is important to examine the contribution of other expected IFRS enhancements on international network, comparability and institutional compatibility (Wysocki, 2011).

2.5 Summary

This chapter provided an overview of the existing research undertaken on the IFRS determinants of international accounting harmonisation such as low investor protection mechanisms, low quality of corporate disclosure and the desire to attract foreign capital. It also demonstrated the factors likely to affect the implementation of new standards such as traditional accounting policy choices, legal system (code law vs common law), effectiveness of financial reporting and legal enforcement and cultural and linguistic differences.

The chapter also provided an overview of the observed economic outcomes after IFRS adoption in areas such as financial information comparability, value relevance of financial information and changes in the cost of equity capital. Any inferences are always subject to limitations and the available data sets and research methods. The next chapter provides an insight on the impact of IFRS adoption on accounting quality and the analysts' information environment and highlights the key role played by intangible assets.

Chapter 3. IFRS, Accounting Quality and Analysts' Earnings Forecasts: An Overview

This chapter begins with an overview of the impact of IFRS adoption on accounting quality and earnings management and continues with an insight on research studies that examine the IFRS effect on analysts' earnings forecasts. Furthermore, various academic papers demonstrated the diverse treatment and effect of intangibles before and after IFRS adoption.

As outlined in the previous chapter, authors of studies on the IFRS implementation (such as Lardon and Street, 2004; Hope et al., 2006; Nobes, 2006; Chua and Taylor, 2008; Kvaal and Nobes, 2010; Kvaal and Nobes, 2012), studies on the impact of IFRS adoption on the cost of capital (such as Hail and Leuz, 2006; Christensen et al., 2007; Kim and Shi, 2007; Jermakowicz et al., 2008; Daske et al., 2008; Li, 2009; Daske et al., 2013) and studies on accounting quality analysed in this chapter (such as Soderstrom and Sun 2007; Christensen et al. 2008; Osma and Pope 2011, Byard et al. 2011; Capkun et al. 2013; Ahmed et al. 2013) identified the following factors affecting the possible impact IFRS adoption: the characteristics of a country's legal and political system, the level of enforcement, the quality of the previous standards (and their degree of difference with IFRS) and the financial reporting incentives of firms (partly reflected by voluntary/mandatory adoption).

Similarly, Horton et al. (2013) highlighted the importance of management incentives and suggested that the voluntary adoption of IFRS by a company is likely to demonstrate the management's intentions to reduce information asymmetry between insiders and outsiders of their company. They suggested that this is more likely to be the case for firms with incentives for higher quality financial reporting that operate in low enforcement-low investor protection jurisdictions. As Healy and Palepu (2001) stated, there are incentives for managers to provide voluntary disclosure and reduce information asymmetry in order to attempt to reduce the cost of financing and potentially increase the firm's market value.

Thus, the existing literature suggests that management's incentives to improve the external information environment could be identified by the voluntary adoption of IFRS. It can be argued that such incentives are also likely to be reflected by increased corporate disclosure.

Hence, a question that we will attempt to answer in this thesis is to which extent the mandatory adoption of financial reporting standards can help to mitigate the firm incentives for low quality financial reporting. Additionally, we will investigate whether mandatory disclosure requirements are likely to have an impact in the analysts' information environment for firms with incentives for high quality financial reporting.

3.1. Incentives and opportunities: IFRS, earnings management and accounting quality

A considerable part of the literature investigates the impact of IFRS adoption on accounting quality by examining the possible effect on earnings management. Authors in the literature have been using various measures to proxy for accounting quality. These include proxies using value relevance based on regressions of stock returns on earnings and book values (Gassen and Sellhorn, 2006; Barth et al., 2008; Paananen and Lin, 2009; Osma and Pope, 2011), proxies using earnings management measures based on estimating the correlations between accruals and cash flows (Van Tendeloo and Vanstraelen, 2005; Paananen and Lin, 2009; Barth et al., 2008; Capkun et al., 2013; Ahmed et al., 2013), based on the variance of net income (Barth et al., 2008; Gassen and Sellhorn, 2008; Paananen and Lin, 2009; Ahmed et al., 2013), based on changes in cash flow and earnings (Gassen and Sellhorn, 2006; Capkun et al., 2013), proxies of conservatism estimated through a reverse regression of earnings on stock returns (Gassen and Sellhorn, 2006), proxies of earnings persistence based on regressions of earnings on lagged earnings (Gassen and Sellhorn, 2006) the variance of net income over cash flows (Barth et al., 2008; Capkun et al., 2013; Ahmed et al., 2013) the frequency of positive earnings (Barth et al., 2008; Capkun et al., 2013) proxies of timely loss recognition through a) the frequency of negative earnings (Barth et al., 2008; Paananen and Lin, 2009; Capkun et al., 2013) or b) binary variables for loss makers (Christensen et al., 2008; Ahmed et al., 2013).

Most of the above studies investigate if and how the adoption of IFRS is likely to be related to changes in the manipulation of earnings by company managers, while our research investigates whether and how the adoption of IFRS is likely to affect properties of the analysts' earnings forecasts. Hence, it is crucial to study the existing academic literature and identify factors likely to affect accounting quality.

It can be suggested that such factors related to the manipulation of earnings are expected to be related to properties of their forecasts too. Such understanding will help us to build on the existing literature in order to construct the methodology and research design of our project. Also, we will be able to critically evaluate our findings and identify any common patterns with the existing studies.

A study, of accounting quality, by Barth et al. (2008) examined whether firms implementing IAS/IFRS were likely to have higher accounting quality compared to firms that reported under local standards. As they explained, on one hand IAS could limit the management's discretion to exploit opportunities in managing earnings but on the other hand this under certain circumstances could limit the firm's flexibility to report the closer to reality results. They also highlighted several areas in IAS that allowed managerial discretion. Their sample included companies that implemented IAS from 21 countries between 1994 and 2003 and employed the following accounting quality proxies:

- value relevance (regressions using stock returns as dependent variables and earnings and equity book value, net income for earnings as independent variables)
- earnings management (correlation between accruals and cash flows, variance of net income, variance of net income over cash flows, frequency of positive earnings)
- timely loss recognition (frequency of negative earnings)

Barth et al. (2008) used a method to match each firm adopting with another non-adopting firm, matched on country and size and compare accounting quality before and after IAS adoption. Their independent variables were turnover growth, market value, equity issuance, debt issuance, cash flow, ownership concentration, BIG5 auditor, and exchange listing details.

Their findings showed that firms using IAS had lower earnings management, higher value relevance and more timely recognition of losses compared to firms not using IAS. Also, Barth et al. (2008) showed that firms before IAS adoption did not have significantly better accounting quality than non-adopters. They also compared the accounting quality change (before and after IAS) for each group and argued that the accounting quality improvement is greater for IAS firms. A potential deficiency of this study is that the authors, although they used multiple countries, did not take into account factors that later studies (Van Tendeloo and Vanstraelen, 2005; Osma and Pope, 2011; Capkun et al. 2013) considered such as the legal and financial reporting enforcement level, investor protection regulation and the local GAAP-IAS differences.

In fact, Capkun et al. (2013) used a sample of 29 countries between 1994 and 2009 and their findings, consistent with Barth et al. (2008), indicated decreased earnings management for voluntary adopters. However, Capkun et al. (2013) argued that voluntary adopters switched to IFRS because they already had incentives for transparency and consequently higher quality financial statements. Similar to Christensen et al. (2008) they also supposed that a considerable proportion of mandatory IFRS adopters could have a higher likelihood of conducting earnings smoothing. On top of that, Capkun et al. (2013) suggested that IFRS underwent substantial changes by the IASB after 2005. Therefore, a substantial number of accounting standards changed and the use of a wider time frame could help to better assess the overall impact of IFRS adoption. They also argued that after the mandatory adoption by listed companies in all EU countries, IFRS allowed higher flexibility of accounting policy choices compared to national standards and had numerous ambiguous areas. In fact, the authors explained how IFRS after 2005 provided higher flexibility through intangible assets' policies and overt (IFRS standards with allowed alternatives) and covert options (IFRS standards with vague criteria) (Nobes, 2006). They also explained that IFRS use fair value extensively and that permits management discretion for some assets, which could be related with earnings manipulation. In our research we investigate a) intangible assets and b) use of fair value measurement and these areas are likely to be associated with changes in earnings quality after IFRS adoption.

Similar to the other studies, Capkun et al. (2013) distinguished firms by incentives and classified them in three categories: mandatory IFRS adopters, voluntary adopters until 2004 and voluntary adopters from 2005 onwards. The authors employed widely used earnings management and timely recognition models from the literature. Capkun et al. (2013) stated that their findings were consistent with Barth et al. (2008) as they found that voluntary IFRS adopters were likely to have lower earnings management. Their results showed that all groups including voluntary IFRS adopters were likely to have higher earnings management in the post 2005 period due to the above changes in IFRS. In additional tests, the authors showed that in countries where the level of financial reporting enforcement was stronger post 2005 relative to period before, the increase in earnings management was less likely to occur.

Looking at the results of Capkun et al. (2013) it can be criticised that the choice to voluntarily adopt IFRS was not available in all the countries. Therefore, firms with high quality incentives in major economies, e.g. UK and France, were not allowed to switch to IFRS until the mandatory adoption by the EU. This is likely to bias the results of a study with a large number of countries such as Capkun et al. (2013). This is also likely to be the case with another study on earnings management by Ahmed et al. (2013).

In a study investigating the impact of IFRS adoption on accounting quality, Ahmed et al. (2013) compared mandatory adopters from 20 countries with non-adopting firms from 2002 to 2007. Ahmed et al. (2013) followed Barth et al. (2008) arguments and explained that the probable effect of IFRS adoption on accounting quality is ambiguous. On one hand IFRS adoption is likely to be related to improved accounting quality (due to the use of fair value that leads to more timely and accurate recognition), expected less managerial discretion and IFRS consideration as principles based (contrary to domestic standards that tend to have stricter rules). On the other hand, the authors explained that principles-based standards can impair accounting quality as sometimes they cannot be appropriate for the recognition of certain economic events or have vague application instructions (Barth et al. 2008; Nobes, 2006).

The authors followed a matching methodology and matched the firms on five factors: book to market ratio, size, accounting performance, industry and legal enforcement. Ahmed et al. (2013) employed three accounting quality proxies: earnings management, reporting aggressiveness and income smoothing. For earnings management, they used two logistic regression models and examined a) if company earnings are equal or higher to analysts' forecasts and b) if firm earnings are at the positive earnings threshold between 0% and 1%. They employed linear fixed effects models and as dependent variables for income smoothing they used a) the correlation between accruals and cash flow, b) the volatility of earnings growth and c) the volatility of earnings over the volatility of cash flow growth. Also, they examined if the size of accruals increased and if timely loss recognition changed with IFRS adoption. Their findings are consistent with Capkun et al. (2013) as Ahmed et al. (2013) found a substantial increase in income smoothing and aggressive reporting of accruals, as well as a reduction in timeliness of loss recognition for mandatory IFRS adopters. It should be noted that the observed effects were found in high enforcement jurisdictions and were consistent with Nobes (2006) point about higher IFRS flexibility after 2005.

While Barth et al. (2008), Capkun et al. (2013) and Ahmed et al. (2013) used a sample from multiple countries, Gassen and Sellhorn (2006) focussed on one country and attempted to identify the motivation and impact of voluntary IFRS adoption by German companies between 1998 and 2004. The study's findings showed that voluntary IAS/IFRS adopters had a higher proportion of foreign turnover, higher size, wider ownership base and higher likelihood of being listed on international stock markets. Subsequently, Gassen and Sellhorn (2006) examined the impact of voluntary IFRS adoption on earnings quality by using the following proxies: accrual quality (unexpected working capital accruals), earnings predictability (low earnings shocks), conservatism (reverse regression of earnings on returns), value relevance (proportion of stock returns explained by earnings information) and earnings persistence (regression of current earnings on lagged earnings). Their results showed that firms reporting under IFRS instead of German GAAP had higher earnings persistence and conservatism and lower earnings predictability.

Gassen and Sellhorn (2006) found that firms reporting under IFRS had higher stock price volatility, higher stock turnover and higher bid-ask spread. Gassen and Sellhorn (2006) stated that their proxies were not likely to fully assess accounting quality as they did not take into account the firms' disclosure. On top of that, they stated that their model did not contain all explanatory variables and that their proxies for earnings quality and information asymmetry were likely to be biased and noisy.

On another study focussing on IFRS and accounting quality, Christensen at al. (2008) investigated the impact of incentives before and after IFRS adoption by examining two proxies for accounting quality, timely loss recognition and earnings management. Their sample spanned from 1998 to 2005 and, similarly to Gassen and Sellhorn (2006), is comprised only of German firms, where a considerable number of companies adopted IFRS voluntarily. To test the existence of earnings management, Christensen et al. (2008) looked at the residuals of pooled regressions using changes in cash flow and earnings as dependent variables. To examine the timeliness of loss recognition, the authors used a logistic regression, where the dependent variable took binary values representing GAAP or IFRS and the main independent variable was a binary variable that equalled one when a profitability ratio was below -20%. The empirical results showed that firms that voluntarily adopted IFRS had reduced earnings management and greater timeliness of loss recognition. The findings showed that mandatory IFRS adopters did not have any improvements in accounting quality. The authors further explained that firm incentives play a greater role compared to the quality of accounting standards.

In this paper, the observed accounting quality improvements for voluntary adopters were likely to be associated with less insider activities and more incentives for higher quality reporting. However, the sample firms were all located in Germany and it should be noted that voluntary adopters changed their accounting standards to IFRS across a broad time frame, while mandatory adopters adopted in one year, 2005. Hence, it can be suggested that the data for mandatory adopters in Christensen et al. (2008) is likely to be unbalanced, as accounting quality for mandatory adopters is investigated only in one financial year.

In our study, we examine the impact of IFRS adoption on earnings quality and use similar samples of German voluntary and mandatory adopters to identify any differences in financial reporting due to firm incentives. The extended time frame in our sample aims to test the persistence of differences in earnings quality for the above two groups.

Another study using samples of German companies by Van Tendeloo and Vanstraelen (2005) preceded Gassen and Sellhorn (2006) and Christensen et al., (2008) and examined whether earnings management in Germany decreased following voluntary IFRS adoption. The authors suggested that past studies have shown that companies in countries with a code law legal system like Germany were likely to have lower accounting quality and higher earnings management. The authors described the traditions and practices of the German accounting system and stated that German firms tend to mitigate the earnings variability during both good and bad financial periods. To achieve this objective, they conduct earnings management through unrealistic depreciation and impairment of assets, use of tax-free reserves and maintenance of hidden reserves (Van Tendeloo and Vanstraelen, 2005). This is relevant to our research project, as goodwill impairment under IFRS could be used for earnings smoothing. We investigate if goodwill impairment could consequently affect the analysts' earnings forecast errors.

Van Tendeloo and Vanstraelen (2005) aimed to examine if voluntary adopters had lower earnings management due to either the higher quality of IFRS or the firm incentives for higher financial information quality. The authors further investigated the consequences of having a Big 4 auditor and/or a cross listing in a major foreign market. From 1999 to 2001 they compared companies reporting under German GAAP and companies that voluntarily adopted IFRS/IAS. The authors used linear regressions with discretionary accruals as their dependent variable (Van Tendeloo and Vanstraelen, 2005). Their results showed that IFRS/IAS adopters were not associated with lower earnings management. In fact, the authors suggested that earnings smoothing actually increased as firms that did not have the option to manage earnings via hidden reserves (although the authors acknowledged that they were not able to capture all of them) did use discretionary accruals for this purpose.

When including hidden reserves, the level of earnings management was similar to the local GAAP firms. The authors also suggested that earnings management was likely to be decreased if the firm had a Big4 auditor. Therefore, Van Tendeloo and Vanstraelen (2005) suggested that the adoption of high quality accounting standards do not necessarily improve accounting quality when they are not complemented with strong audit and investor protection regulation (Nobes, 2006; Kvaal and Nobes, 2010).

In another study in Germany, Paananen and Lin (2009), similar to Christensen et al., (2008), differentiated the work from that of Van Tendeloo and Vanstraelen (2005) and Gassen and Sellhorn (2008) by looking to the IFRS effect on mandatory and voluntary adopters. The authors examined the IAS/IFRS effect on accounting quality by splitting their samples in three adopting periods: 2000-2002 IAS, 2003-2004 voluntary IFRS adoption and 2005-2006 mandatory IFRS adoption. The authors suggested that by dividing the sample periods they were able to assess the impact of IAS/IFRS improvements, as well as the company incentives for voluntary adoption and the effect of mandatory IFRS adoption. Paananen and Lin (2009) also stated that by studying only one country they were able to clear out all country factors such as enforcement level, legal system, level of market regulation etc.

Paananen and Lin's (2009) used earnings quality measures such as value relevance, timely recognition and earnings smoothing. For their value relevance proxy they employed the Ohlson (1995) model with stock prices regressed on earnings and book value of equity. Regarding earnings smoothing, Paananen and Lin (2009) employed the change in cash flow, the correlation between accruals and cash flows, the earnings variability and a non-linear model with an IAS/IFRS indicator as the dependent variable. For timely recognition they used the non-linear model with a binary variable indicating firms with profitability ratio below -20% similarly to Gassen and Sellhorn (2006). The authors found results consistent with Van Tendeloo and Vanstraelen (2005) and argued that earnings quality is likely to deteriorate after mandatory IFRS adoption as a) earnings smoothing and earnings management increased and b) timely loss recognition and value relevance decreased. Thus, Paanenen and Lin (2009) explained that their results were robust after removing mandatory adopters.

They also argued that accounting quality deteriorated with IFRS after 2005 probably because of the revisions and the new standards. These inferences contradict Christensen et al. (2008) who found that earnings management decreased and therefore suggested that accounting quality improved after voluntary IFRS adoption.

Osma and Pope (2011) examined earnings quality post mandatory IFRS adoption in a large sample with firms from 20 countries from 1999 to 2008. Similarly to other studies (Van Tendeloo and Vanstraelen, 2005; Capkun et al. 2013), Osma and Pope (2011) found that the level of enforcement and local GAAP-IFRS differences are likely to influence the impact of IFRS adoption on earnings quality. They investigated the relationship between accounting quality and balance sheet adjustments in the IFRS transition period. The authors suggested that during the transition period, IFRS granted flexibility to firms in certain areas and therefore provided them with earnings management opportunities. As they explained, IFRS adoption did not require restatements of asset and liability values from past M&A transactions or a write-back of goodwill that has been impaired. To proxy for abnormal adjustments they obtained the residuals from industry level regressions of firms' transition adjustments to pre-defined local GAAP–IFRS differences (adjustments that were expected based on the differences between accounting standards). For accounting quality proxies, Osma and Pope (2011) followed the existing literature and used a) total accruals, b) the value relevance of earnings, c) the likelihood of a small reported profit and d) an asymmetric persistence of income model. Their findings did not reveal any improvement in earnings quality following IFRS adoption. In fact, they found an association between abnormal balance sheet adjustments and earnings quality, and argued that the accounting quality post IFRS adoption was significantly dependent on the differences between IFRS and local GAAP and the changes on transition. Consistent with the academic literature on IFRS, they showed that stronger enforcement was likely to be associated with lower abnormal balance sheet adjustments.

Although earnings management was not the primary research objective, the findings of a study by Ozkan et al. (2012) provided an interesting insight on the managers' incentives and accounting quality. The authors examined the impact of IFRS adoption from an executive compensation perspective, using a broad sample from 15 European countries mandatorily adopting IFRS between 2002 and 2008. The rationale behind their research questions was that if companies' executive compensation boards consider that IFRS adoption may improve earnings quality, then they would probably increase its use in pay for performance sensitivity (change in direct compensation for executives). The authors expected that IFRS adoption was likely to increase the comparability of earnings between countries. If that was the case, then companies with extensive international activity would be likely to increase the use of foreign peers in relative performance evaluation and remuneration linked to company earnings.

For this purpose, Ozkan et al. (2012) employed linear regression models and used the change of direct executive compensation as dependent variable and the following independent variables: age, book to market, size, stock return, change in return on assets and individual executive properties. The authors found evidence to suggest that mandatory IFRS adoption in Europe probably increased the cross-border comparability of earnings. In fact they argued that post IFRS adoption, firms were likely to have a higher probability of earnings linked to pay for performance sensitivity (executive compensation). Also, they found that post IFRS adoption, companies increased the comparison with foreign peers' earnings when determining their relative performance. They also found that the greater the differences between local GAAP and IFRS the higher was the use of earnings for pay for performance sensitivity.

The empirical findings from the existing studies on accounting quality are ambiguous. Some authors showed that companies voluntary adopting IAS/IFRS were likely to have lower earnings management after IFRS adoption (Barth et al., 2008; Capkun et al., 2013; Christensen et al., 2008) whereas other authors found that voluntary IFRS adopters had increased earnings management (Van Tendeloo and Vanstraelen, 2005; Paananen and Lin, 2009), higher value relevance (Barth et al., 2008;) and more timely recognition of losses (Barth et al., 2008; Christensen et al., 2008) after IFRS adoption.

However, a number of authors found that mandatory IFRS adopters were likely to have an increase in income smoothing and a reduction in the timeliness of loss recognition (Paananen and Lin, 2009; Ahmed et al., 2013; Capkun et al., 2013) and lower value relevance (Paananen and Lin, 2009) after IFRS adoption.

3.2. Analysts' forecasts

Several studies in the academic literature researched the financial analysts' information environment and usually concentrated on the analysts' earnings forecasts. Financial analysts play an important role in the function of the markets and the economy because they possess specialised knowledge and act as intermediaries between firms and shareholders/outside investors providing investment recommendations and company reviews. The analysts' earnings forecasts are fundamental elements of multiple valuation models such as the residual income valuation and the abnormal earnings growth models (Daske, 2006) and their widespread use by academics, analysts and investors probably contributes to the efficiency of the markets. Therefore, it can be argued that analysts' earnings forecasts are a proxy for information asymmetry and theoretically, high quality financial reporting standards would reduce these asymmetries between insiders and outsiders.

Ball (2006) describes the debate between academics on the effect of accounting standards on analysts' forecasts properties. On one hand, adoption of high quality accounting standards such as IFRS could potentially improve the analysts' earnings forecast accuracy. On the other hand in countries with low investor protection, the IFRS adoption could be detrimental for analysts' earnings forecasts because insiders could have incentives to manipulate accounting data and exploit opportunities (directors' pay, loss recognition, tax avoidance) (Ball, 2006). On top of that, IFRS allow extensive use of fair value accounting, which although it can provide timely information to the outsiders, uses fair values that are marked to market and therefore more volatile compared to amortised cost. Moreover, the existence of institutional factors such as each jurisdiction's financial reporting and legal enforcement environment, legal system and cross country differences in financial analysts' expertise probably imply that the effect of IFRS adoption is not likely to be symmetric (Ball, 2006).

The authors of empirical studies in this area used several proxies to represent the information asymmetry between firms and analysts, such as the analysts' forecast error, the analysts' absolute forecast error, the analysts' forecast dispersion (to represent the degree of disagreement between analysts) and the number of analysts' estimations (to represent analyst following). The table below presents a summary of the proxies and methods used in the literature and includes most of the studies related to the analysts' information environment that are cited in this thesis. It should be noted that the number of analysts' estimations and forecast horizon are used as independent variables too.

Table 3.1 Studies of analysts' earnings forecasts												
	Bae et al. (2008)	Ernstberger et al. (2008)	Horton et al. (2013)	Tan et al. (2011)	Byard et.al. (2011)	Brown et al. (2013)	Choi et al. (2013)	Liang and Riedl (2014)	Matolcsy and Wyatt (2006)	Barth et al. (2001)	Amir et al. (2003)	Cheong et al. (2010)
Forecast error											X	
Absolute forecast error	X	X	X	X	X	X	X	X	X		X	X
Deflated by stock price	X	X		X	X	X	X				X	
Deflated by actual earnings			X									X
Deflated by analysts' forecast								X				
Deflated by total assets									X			
Individual analysts' forecast	X		X	X								
Mean analysts' forecast	X						X		X			
Median analysts' forecast		X			X	X						X
Analysts' forecast dispersion			X		X	X	X		X			X
Analyst following	X	X	X	X	X	X			X	X		X
Analyst forecast horizon		X	X				X	X				
Revisions volatility												
Monthly data		X				X						

Table 3.1 Studies of analysts' earnings forecasts (continued)									
	Chalmers et al. (2012)	Lang and Lundholm (1996)	Hope (2003)	Hope (2003)	Hodgson et al. (2008)	La Bruslerie and Gabteni (2012)	Glaum et al. (2013)	Cotter et al. (2012)	Lehavy et al. (2011)
Forecast error									
Absolute forecast error	X	X	X	X	X	X	X	X	X
Deflated by stock price		X	X	X		X	X	X	X
Deflated by actual earnings					X		X		
Deflated by analysts' forecast									
Deflated by total assets	X								
Individual analysts' forecast					X				
Mean analysts' forecast	X		X	X		X			X
Median analysts' forecast		X					X	X	
Analysts' forecast dispersion	X	X		X				X	X
Analyst following	X	X	X		X		X	X	
Analyst forecast horizon					X				
Revisions volatility		X							
Monthly data									

3.2.1. IFRS adoption and analysts' earnings forecasts

A considerable number of studies investigated the impact of IFRS adoption on analysts' earnings forecasts. Earlier studies such as Ernstberger et al. (2008) and Bae et al. (2008) focussed on the impact of firms voluntarily adopting IAS/IFRS. Other studies examined the impact of the EU mandatory adoption of IFRS for listed companies in 2005. This provided the opportunity to the researchers to assess the international standards when companies were forced to adopt and in some cases consider voluntary adopters too, in studies such as Horton et al. (2013); Tan et al. (2011); Byard et.al. (2011); Brown et al. (2013); Choi et al. (2013); Liang and Riedl (2014).

3.2.1.1. Institutional factors and analysts' forecasts properties

As stated earlier, authors of various studies on IFRS adoption and accounting quality such as Nobes (2006) and Hail et al. (2010), outlined the importance of legal and financial reporting enforcement. Barniv et al. (2005) examined the role of financial reporting and legal enforcement on earnings forecasts' accuracy. The main idea behind their analysis was that jurisdictions with common law systems are likely to have a) higher accounting quality and b) stronger mechanisms for investor protection and corporate governance, in contrast to countries with civil law system that are likely to have lower accounting quality and weaker investor protection and corporate governance (Barniv et al., 2005). Given the above assumptions, the authors expected that analysts would generate accurate earnings forecasts less frequently in civil law than common law countries. The authors selected a sample with firms from 21 civil law countries and 12 common law countries from 1984 to 2001 and estimated the absolute forecast error of each individual analyst over the average absolute forecast error for the same company and the same fiscal year. Barniv et al. (2005) employed an Ordinary Least Squares model and regressed this ratio on analyst and brokerage house specific characteristics. Their empirical results showed that the analyst and brokerage house specific characteristics had a stronger effect on absolute forecast error in common law countries than civil law countries.

Also, the authors suggested that "superior" analysts had higher incentives to produce more accurate estimates than their peers in the United States, which is a jurisdiction with high accounting quality and strong legal and financial reporting enforcement. Their findings showed that French companies were operating in a strong financial reporting environment while German companies in strong investor protection systems. Their results showed that the level of financial reporting and legal enforcement were strong in companies from Scandinavia. Later studies (Byard et al., 2011; Brown et al., 2013) further contributed in the literature with findings on the association of financial reporting and legal enforcement with the impact of IFRS adoption on analysts' earnings forecasts. The above studies are relevant to our research project as they help to form expectations and interpret findings in the countries of our sample based on those factors.

3.2.1.2. Voluntary IFRS adoption

Bae et al. (2008) as well as Ernstberger et al. (2008) examined the impact of voluntary IFRS adoption on analysts' earnings forecasts. Bae et al. (2008) examined the effect of cross-border accounting standard differences on the number of analyst estimations and the analysts' absolute forecast error by using a sample from multiple countries while Erstberger et al. (2008) concentrated only on Germany.

Bae et al. (2008) aimed to uncover whether cross country GAAP differences created obstacles to financial analysts, in order to identify if international financial reporting harmonisation, expected by some authors to arise from IFRS adoption, could eliminate differences up to a certain extent. Thus, the authors assumed a priori that analyst following and earnings forecast accuracy were likely to be low when GAAP differences between countries were high, and they used two proxies for earnings quality: a) mean number of analyst estimations and b) forecast by individual analyst less actual earnings over the stock price. Their independent variables included analyst, firm and country characteristics.

For this purpose they employed a sample from 49 countries, between 1998-2004, that included the forecast data of individual analysts. Also, Bae et al. (2008) created two variables for accounting standard differences: a) a custom index list of 21 accounting items to take into account the GAAP differences and b) employed data from a survey that indicated the degree of deviation of each country GAAP from IAS. Their findings were consistent with their expectations and showed that higher GAAP differences (including voluntary IAS-GAAP differences) were likely to be associated with lower analyst following and higher absolute forecast error. In summary, the findings by Bae et al. (2008) confirmed that international accounting standard differences can be detrimental for the cross-border financial analysts' information environment and that global accounting harmonisation could be a probable solution. Building on Bae et al. (2008), in our research project we assess the impact of IFRS adoption by taking into account the local GAAP-IFRS differences to form our expectations and interpret our findings. This will be particularly important when assessing specific changes in accounting standards and comparing them with the empirical results between companies in the UK, France and Germany.

Further evidence is provided by Ernstberger et al. (2008) who focussed on Germany from 1998 to 2004 and investigated if reporting under IAS/IFRS or US GAAP instead of German GAAP was associated with lower absolute forecast error. Germany allowed the use of the three different sets of accounting standards before 2005 and several companies adopted US GAAP or IFRS voluntarily (Ernstberger et al., 2008). As they explained, IFRS and US GAAP allowed for much more extensive fair value use than German GAAP, which could provide more timely (but more volatile) information about the firm's economic performance. Also, Ernstberger et al. (2008) argued that IFRS and US GAAP have less accounting policies discretion and disclosure requirements of higher quality and quantity compared to German GAAP. This could be related to improvements in earnings forecast accuracy as some studies found that switching to IFRS / US GAAP can imply more conservative earnings and less flexibility in the use of accruals (which can be detrimental to earnings forecasts' accuracy due to earnings management). The authors adopted a popular method in the literature to estimate the forecast error by using the difference between EPS Median and actual, over the monthly share price.

They also estimated the absolute forecast error on a monthly basis, an approach that a later study by Brown et al. (2013) adopted as well. The selection of monthly data increases the number of observations and is likely to be related to increased explanatory power of the empirical results. Ernstberger et al. (2008) selected the following independent variables: the monthly forecasts' horizon, analyst following, size, equity beta, market segment, cross-listings in the US and loss makers. Their empirical results showed that earnings forecasts for companies that chose to report under IAS/IFRS or US GAAP had lower absolute forecast error. Nevertheless, as the authors acknowledged, the firms that chose to comply were likely to have incentives for high financial reporting quality and the observed earnings forecast accuracy improvements could be related to this factor.

3.2.1.3. Mandatory IFRS adoption

Several studies (Tan et al., 2011; Byard et.al., 2011; Horton et al., 2013; Brown et al. 2013; Choi et al., 2013; Liang and Riedl, 2014) investigated the effect of mandatory IFRS adoption on analysts' earnings forecasts.

Horton et al. (2013) examined the impact of IFRS on the analysts' earnings forecasts and estimated the earnings forecast accuracy (percentage difference between actual EPS and 3 months before IBES forecast deflated by actual earnings) of individual analysts' from 2001 to 2007 in multiple countries. The authors investigated the importance of adoption type (mandatory or voluntary), including control variables such as total accruals, a variable representing loss making firms, size and characteristics of analysts' forecasts. The results showed that mandatory IFRS adoption was related to improvements in the information environment as earnings forecasts were more accurate than those for voluntary and non-adopters. This was evident especially for firms that had a higher difference between the pre and post IFRS adoption reported earnings implying an improvement in financial information comparability. Also, Horton et al. (2013) confirmed that the improvement in earnings forecast accuracy was not associated with earnings management. The authors also argued that it is crucial to identify the type of adoption, whether it is voluntary or mandatory, as this is one of the key parameters needed to assess the adoption effects.

However, it should be noted that the authors admitted that their results might be driven by correlated independent variables, due to the inclusion of both mandatory and voluntary indicator variables in the models. The authors suggested that the comparison with non-IFRS adopting firms could be influenced by their (potentially smaller) size and other firm characteristics. They also explained that the earnings' forecasts errors usually have considerable variation throughout the fiscal year as new information becomes available to the analysts. It is possible that the effect of IFRS adoption is not symmetrically reflected in the 3 month forecast before the reporting of actual earnings per share. In our research we use the analysts' earnings forecasts on a monthly basis before the announcement of the actual earnings per share. This is likely to increase the explanatory power of our results and enable us to better assess the analysts' earnings forecast accuracy over the 12 month period.

Tan et al. (2011) followed a similar methodology to Horton et al. (2013) and investigated foreign analysts' earnings forecasts by using a broad sample across 25 countries. The authors divided the sample into mandatory and voluntary IFRS adopters and covered a period from 2001 to 2007. The authors argued that IFRS adoption can bring global accounting harmonisation, financial statement comparability and enhanced corporate disclosure. They also suggested that IFRS adoption is likely to increase analyst following and improve the analysts' earnings forecast accuracy. Also, the authors suggested that fair value under IFRS has an ambiguous effect as it can increase earnings volatility and diminish forecast accuracy. For the same reason they suggested that fair value might result in increased earnings smoothing (potentially via financial derivatives) that might improve earnings forecast accuracy. In their empirical work, the authors used analyst data that included the analysts' location using the foreign analyst following and absolute forecast error (difference between the last individual analyst's earnings forecast less the actual earnings deflated by the previous year's stock price) as dependent variables. They also included independent variables for firm size, market to book ratio, intangibles, stock performance and volatility as well as if the firms had cross listings or issued equity. Also, Tan et al. (2011) took into account the analysts' characteristics, such as general and firm experience and broker size. They also considered the local accounting standards-IFRS differences, similar to Bae et al. (2008) and used industry, country and year fixed effects.

Tan et al. (2011) found that mandatory IFRS adoption was associated with increased foreign analyst following and lower absolute forecast error. They suggested that the explanation for the observed effects is likely to be the lower cost of processing financial information since the effect was stronger for foreign analysts following firms in countries with a) high GAAP-IFRS differences and b) high differences between the firm's local GAAP and the analysts' local GAAP. As explained above, following Bae et al. (2008); Byard et al., (2011), in our research we consider the local GAAP-IFRS differences to identify any patterns between the three countries of our sample.

In addition to the above, Tan et al. (2011) found that IFRS adoption was likely to improve the local analyst following, especially for analysts following international companies and with experience in working with IFRS. Furthermore, Tan et al. (2011) tested the robustness of their inferences by looking at a non-adopters sample and did not find any concurrent analysts' forecast improvements. Nevertheless, this study can be criticised in that it did not take into account the legal and financial reporting enforcement environment of the countries, as do Byard et al. (2011), as well as any other mandatory capital market developments that could be related to changes in the analysts' earnings forecasts.

In contrast, Byard et.al. (2011) addressed this problem by taking into account the enforcement environment. They also used a sample of mandatory IFRS adopters and a control sample of voluntary IFRS adopters to examine if the mandatory IFRS adoption improved the analysts' information environment. By looking at any changes on the voluntary adopters' information environment before and after the mandatory adoption of IFRS by the EU, Byard et al. (2011) attempted to uncover the potential impact of simultaneous market developments. Byard et al. (2011) agreed that a priori, the IFRS adoption effect is vague because of firm incentives, fair value accounting, "label adopters" (firms that adopted IFRS but did not fully comply with the IFRS standards), concurrent developments and enforcement level. Byard et al. (2011) employed a difference in difference research design from 2003 to 2006 with companies in 35 countries and examined the IFRS adoption effect on the analyst following, and earnings forecast accuracy and dispersion.

Contrary to Horton et al. (2013), Byard et al. (2011) defined earnings forecast accuracy as the difference of actual EPS less the median EPS forecast deflated by the stock price (instead of the percentage difference from the mean EPS forecast). In our research project, we did not choose the stock price as deflator because stock prices are volatile and may bias the estimated forecast errors. Instead, we chose to use the percentage difference approach as we believed that it represents more accurately the analysts' forecast errors over time.

Byard et al. (2011) included the independent variables of size, forecast horizon, analyst following, and variables that rank countries according to their enforcement level and GAAP-IFRS differences. In order to further investigate the role of firm characteristics, Byard et al. (2011) employed proxies for profitability, gearing, ownership concentration, growth opportunities, global operations and whether the firm had a BIG4 auditor. Byard et al. (2011) found that after IFRS adoption the absolute forecast error and dispersion were reduced and that analyst following was increased for earnings forecasts for both voluntary and mandatory adopters. Not being able to determine whether the improvements for voluntary adopters were due to a) comparability with mandatory adopters, b) quality of IFRS as accounting standards or c) simultaneous market and regulatory improvements. Byard et al. (2011) further analysed the data and suggested that most of the improvements were found in countries with strong enforcement and high GAAP-IFRS differences (consistent with Tan et al. 2011).

In addition, at the firm-level, they found that companies with BIG4 auditors, wider ownership base and higher growth, that possibly had incentives for high financial reporting quality, had lower absolute forecast error and dispersion post mandatory IFRS adoption. In summary, the authors suggested that earnings forecasts were more accurate and less dispersed for firms in countries with mandatory IFRS adoption and strong enforcement. They found the same for firms that adopted IFRS mandatorily and operated in weak enforcement with strong incentives for transparency, indicating the importance of the firm's financial reporting incentives (Byard et al., 2011).

Similarly to Byard et al. (2011), Brown et al. (2013) considered the role of financial reporting and legal enforcement but they also included audit quality in order to investigate the effect of mandatory IFRS adoption on analysts' earnings forecasts. For this purpose, they obtained data from surveys and enforcement organisations in order to create a proxy for a country's audit level (litigation risk, training etc) and a proxy for financial reporting enforcement level. They also employed seven other country enforcement proxies: audit fees, World Bank's rule of law proxy, number of enforcement body employees, Hope (2003) enforcement proxy, La Porta et al. (1998) market enforcement proxy and a survey based enforcement index by the World Economic Forum (Brown et al., 2013). Their sample was comprised of firms in 39 countries from 2002 to 2009 but used audit and enforcement only for three single years 2002, 2005, 2008. It can be suggested that this is a potential limitation of this study as the authors assumed that audit and enforcement levels did not change in the in-between years.

Brown et al. (2013) used pooled Ordinary Least Squares regression models with monthly forecast data with absolute forecast error (median EPS less actual over stock price) and dispersion as the dependent variables. Their independent variables included proxies for profitability (return on assets), size (market value), book to market, gearing, number of analyst estimations, number of days between forecast and reported annual earnings, loss makers and a variable for the earnings per share forecast variability (Brown et al., 2013). Their empirical results showed that companies in countries with high audit and accounting enforcement levels were associated with low absolute forecast error and low forecast dispersion. However, the results of this study are antithetical to the rest of the literature because the authors found that IFRS adoption (both mandatory or voluntary) was not associated with reduction in analysts' earnings forecast errors while they did find reductions for earnings forecasts for companies that reported under US GAAP. It can be suggested that a potential weakness of this study is that Brown et al. (2013) did not examine any changes in the effect of audit and enforcement before and after the mandatory IFRS adoption to determine if the effects were weaker or stronger. Also, it can be suggested that the effect of IFRS adoption could be weaker for companies in countries with lower standard of audit or enforcement.

Two studies investigated the effects of IFRS adoption in the analysts' earnings forecasts. Choi et al. (2013) concentrated only on earnings forecasts for UK companies while Liang and Riedl (2014) compared earnings forecasts for UK with US companies in the investment property sector.

Choi et al. (2013) focussed on the United Kingdom and examined if IFRS adoption made both forecasted and reported earnings more informative. Specifically, Choi et al. (2013) examined the value relevance of earnings and they expected that it would be higher if IFRS adoption increased the earnings information quality. They argued that in that case, the value relevance of earnings forecasts would contain less useful information for the market post IFRS adoption. Choi et al. (2013) explained that their selection of only one country at a time (similar to our research project) helps to isolate the IFRS adoption effect because it holds constant the financial reporting enforcement, corporate governance structure and legal status quo. Also, the authors stated that the specific selection of companies in the UK further helped due to the type of adoption (mandatory), the small differences between UK GAAP and IFRS and the high quality market environment.

In their empirical analysis, Choi et al. (2013) employed one value relevance model with the stock price as the dependent variable and as independent variables, the book value per share, dividends per share, earnings per share and the difference between earnings forecasts and actual earnings per share. A second value relevance model included all the previous plus the difference between the first and last earnings per share forecast of each year. In addition, they looked at the impact on analysts' earnings forecasts where they estimated absolute forecast error using the difference between actual earnings per share and first earnings per share mean forecast scaled by the stock price. They also used the earnings per share forecast dispersion scaled by the forecast error for the company. In summary, Choi et al. (2013) found that IFRS adoption increased the value relevance of reported accounting information and according to their hypothesis that it also decreased the value relevance of analysts' earnings forecasts. The authors suggested that the latter decrease is not because of a deterioration in analysts' ability, as they found improved forecast accuracy and reduced forecast dispersion post IFRS adoption.

Several robustness tests such as repeating the analysis using US data and using other valuation models provided Choi et al. (2013) with enough confidence to suggest that IFRS adoption increased the usefulness of financial reporting numbers for investors in the UK.

Subsequently, Liang and Riedl (2014) compared analysts' forecasts for firms from the US and the UK in the investment property sector in order to investigate the role of fair value accounting and historical cost on analyst forecast accuracy in two countries with strong enforcement, strong investor protection, developed financial markets and several listed investment property firms. As they stated, the investment property industry provided a favourable ground to examine the effect of fair values on a company's assets. They explained that UK companies under both UK GAAP and IFRS recognise real estate assets at fair value, while US companies use historical cost accounting. Liang and Riedl (2014) estimated the absolute forecast error of analysts' forecasts for net assets using the difference between each analyst's latest forecast and market value in three different time frames scaled by the average forecast between analysts. They also estimated the absolute forecast error using the latest mean earnings per share less the reported earnings over the latest mean earnings per share. Also, Liang and Riedl (2014) employed the following independent variables: size, forecast horizon, loss makers, insider shares, earnings change, gearing, stock price volatility, a dummy variable to take into account the crisis for 2007 and 2008, US listings, book to market ratio, non-property assets and non-property liabilities. Hence, Liang and Riedl (2014) found that compared to the US companies, UK companies that reported under fair value had analysts' forecasts with lower absolute forecast error for net assets but also that these differences considerably decreased during the financial crisis. Interestingly, they found that full fair value under IFRS was likely to result in higher absolute forecast errors but also higher value relevance (Liang and Riedl, 2014).

In summary, existing studies found that voluntary IFRS adopters were likely to have lower absolute forecast error (Ernstberger et al., 2008; Byard et al., 2011), lower forecast dispersion (Byard et al., 2011) and increased analyst following (Byard et al., 2011). Mandatory IFRS adopters were likely to have lower absolute forecast error (Tan et al., 2011; Horton et al., 2013; Byard et al., 2011; Horton et al., 2013; Choi et al., 2013) increased analyst following (Tan et al., 2011; Byard et al., 2011), lower forecast dispersion (Byard et al., 2011; Horton et al., 2013; Choi et al., 2013). In contrast, Brown et al. (2013) found no relation between IFRS adoption and absolute forecast error. Also, Liang and Riedl (2014) found higher absolute forecast errors in some cases after IFRS adoption. Beyond the above, it is also important to take into account a considerable number of academic studies that investigated the treatment of intangible assets and how they affected the information environment before and after IFRS adoption.

3.3. Intangible assets and information quality

Numerous academic studies revealed the important role of intangible assets in information asymmetry. Intangible assets such as research and development investments, human capital, IT software, brands, patents and technological innovations are complex to appraise and value. Academic studies have also shown that intangibles lack sufficient disclosure. Such assets are not traded in organised, active markets and consequently the estimation of their fair values is complex and often unreliable. Additionally, goodwill impairments, research and development expenses, advertising costs are directly expensed in the profit and loss statement and can potentially contribute to the information asymmetry (Aboody and Lev, 2000). Hypothetically, when intangibles are a high proportion of company assets, they are likely to a) be used to exploit earnings management opportunities, b) imply more volatile and inaccurate analysts' earnings forecasts, c) be value relevant. In this research project, we analyse the effect of intangible asset intensity on analysts' earnings forecasts and identify if IFRS adoption resulted in changes in the observed effects. We also conduct an in-depth analysis by comparing the accounting standards for intangibles before and after IFRS adoption in the UK, France and Germany and link them to the observed effects.

3.3.1. Intangible assets: Diverse treatment and effect

Earlier research studies on intangible assets looked at the value relevance of research and development expenditure (Lev and Sougiannis, 1996; Amir et al., 2003; Shah et al., 2008), any association with insider trading (Aboody and Lev, 2000), at the impact of intangible assets on analysts' earnings forecasts (Barth et al., 2001; Amir et al., 2003; Matolcsy and Wyatt, 2006) and at their effect on market value (Lev and Radhakrishnan, 2005).

One of the seminal papers in the area, Lev and Sougiannis (1996), examined the value relevance of research and development expenses in the US by looking at their association with successive earnings and with share prices. As they explained, FASB at the claims, in contrast to IFRS that allows research and development capitalisation under certain conditions, that it maintained full write-off of research and development expenses, under US GAAP, because there was not a clear association between research and development investment and particular, future turnovers. Lev and Sougiannis (1996) collected annual data for US companies from 1975 to 1991 and developed an empirical process to derive an amortisation rate for research and development capital. Subsequently, they used these estimated amortisation rates for each company to generate revised book values and net income, based on the estimated research and development capital. They then employed value relevance models and found that these revisions of net income and book values were highly related to share prices. They attributed this effect to a) the possibility that the market compensates the investors in research and development companies for the excess risk they take, or b) a potential mispricing of companies with higher research and development capital (as in Barth et al., 2001). Thus, Lev and Sougiannis (1996), consistent with Amir et al. (2003) and Shah et al. (2008), argued that a straightforward association between research and development investment and future economic rents exists and that accounting standard setters should reconsider the capitalisation of research and development. As stated above, so far the IASB permitted the some research and development capitalisation but FASB has not.

In a study investigating the association of analyst following and intangible assets, Barth et al. (2001) used a sample from 1983 to 1994 that contained approximately 3000 US firms. Consistent with other studies, Barth et al. (2001) stated that intangible asset values contain a considerable amount of insider information and therefore are a significant factor in the information asymmetry between companies and financial analysts. Hence, they suggested that analysts may have incentives to follow firms with high intangibles intensity because successful forecasts and recommendations for these firms would raise their reputation and compensation. Due to the absence of secondary markets for intangible assets and their complexity, Barth et al. (2001) suggested that analysts would have to allocate greater resources to provide forecasts for firms with more intangible assets. Their empirical findings showed that companies with higher advertising costs and research and development expenses had a higher number of analyst estimations and were more likely to be "mispriced" (Lev and Sougiannis, 1996). Also, Barth et al. (2001) argued that companies with higher trading volume, size, higher growth opportunities and those that were easier to follow had a higher number of analyst estimations too. Their findings confirmed that higher effort was required from analysts to provide estimations for companies with high intangible assets intensity.

Similar to Barth et al. (2001), Matolcsy and Wyatt (2006) examined the association between analysts' earnings forecasts and intangible assets in Australian firms from 1990 to 1997. As they explained, existing academic studies have shown companies with a higher proportion of intangible assets are likely to have higher analyst following but also earnings forecasts with lower earnings forecast accuracy. Matolcsy and Wyatt (2006) differentiated their study by investigating the case where companies had the option to capitalise intangibles or not. Australian GAAP allowed the capitalisation of intangible assets under certain conditions and managers had the opportunity to capitalise investments in intangibles that would generate future economic rents. Since 2005 and the convergence of Australian GAAP with IFRS, internally developed intangibles cannot be capitalised, in contrast to intangible assets that are externally acquired.

Contrary to findings from the US where analysts were likely to have earnings forecasts with higher forecast inaccuracies for companies with higher intangible assets intensity, Matolcsy and Wyatt (2006) expected that Australian analysts would experience higher earnings forecast accuracy due to their experience with these firms and the information generated by research and development capitalisation. Their empirical design involved Ordinary Least Squares models and two-stage-least-squares models, to reflect the simultaneous voluntary disclosure of intangibles by firms and the analysts' demand for this information, with three dependent variables a) the number of analyst estimations, b) the natural log of forecast dispersion and c) the absolute forecast error (mean earnings per share less actual earnings per share). Both EPS measures were scaled by total assets. The authors used the following independent variables: intangibles scaled by market value, gearing, loss makers, stock volatility, stock return, age, earnings variability, size and the ratio of operating cash flows to debt. Their findings were consistent to their expectations and showed that the capitalisation of intangible assets was associated with an increase the number of analyst estimations (Barth et al., 2001) and lower absolute forecast error and dispersion. On top of that, Matolcsy and Wyatt (2006) found that companies with higher underlying intangibles in Australia were likely to have lower analyst following. They also suggested that the restrictions in the capitalisation of intangibles limit the disclosure of valuable information and therefore impair financial reporting quality.

In a similar study to Matolscy and Wyatt (2006), Amir et al. (2003) examined the effect of intangibles on analysts' earnings forecasts using US samples. They explained that if analysts took into account additional intangible assets information, the earnings forecast quality would not be related to intangible assets (research and development) intensity in a firm. Based on this assumption, they investigated if the presence of research and development assets affected the analysts' forecasts error (bias) and accuracy. They also examined whether analysts' forecasts incorporated information for intangible assets that was not reflected in financial reports (Amir et al., 2003). They used a sample of US firms from 1982 to 2000 and regressed abnormal returns using Ordinary Least Squares and 2 Stage Least Squares regressions on three items: a) earnings, b) value relevant fundamental signals from the literature and c) the present value of analysts' earnings forecasts.

The authors focussed on the effect of intangibles on analysts' forecast bias (non-absolute error) and forecast accuracy, which they defined as the absolute difference of the analysts' mean forecast 8 months before, less the actual earnings, deflated by the share price 8 months before. It can be suggested that the inclusion of only one observation during the 12 month forecasts is not likely to capture the whole picture of the analysts' earnings forecast errors. Hence contrary to Amir et al. (2003), and since we collected disclosure data on a monthly basis, we chose to conduct our analysis on a monthly basis.

Amir et al. (2003) used the following independent variables: size, industry, earnings variance, age and the research and development intensity (defined as research and development capital over equity book value plus research and development capital). Their results showed that investors of companies with higher research and development intensity were more likely to consider analysts' forecasts when making their investment decisions. As they explained, analysts consider supplementary intangible asset information but that is not sufficient to compensate for the research and development intensity effect, especially for companies in transportation, electrical and computer equipment and industrial machinery industries (Amir et al., 2003). On top of that they observed that analysts' earnings forecasts for firms with high research and development intensity were more inaccurate (Lev and Radhakrishnan, 2005) and optimistic and showed that forecast error is positively associated with high earnings variance and negatively associated with firm size.

Their results were consistent with a prior study by Aboody and Lev (2000) who identified research and development as a significant factor in information asymmetry, which is likely to increase insider trading, especially for science intensive companies. As they explained, relative to outsiders, managers have superior knowledge about the contribution of each asset to their firm's productivity and value it accordingly. Thus, in the absence of established markets for research and development, values are determined by the firms' managers while investors and financial analysts are only informed through corporate financial reports (Aboody and Lev, 2000). Therefore, Aboody and Lev (2000) explained that this disclosure flexibility creates considerable opportunities for the management.

Hence, they suggested that firms with higher research and development were associated with higher information asymmetry and higher insider trading. Using a large sample with US firms from 1985 to 1997 they investigated average and market adjusted returns from 1 day before the insider's transaction disclosure, up to a 6 month and a 12 month period (Aboody and Lev, 2000). Also, they constructed four portfolios depending on the firm's research and development intensity and whether the insiders were buying or selling shares, and modelled portfolio returns using the Fama and French three factor model. In summary, Aboody and Lev (2000) found that research and development firms were likely to have more insider gains than companies without research and development and that directors planned the timing of their dealings with respect to research and development expense. Also, Aboody and Lev (2000) explained that investors were likely to react intensely (as reflected by investors' trade volume) in directors' dealings of firms with higher research and development intensity.

In a single country study, using data from non-financial UK firms from 1998 to 2002, Shah et al. (2008) investigated the association between firm size and research and development and its effect on market value. Thus, they designed a linear model with market value as the dependent variable and advertising costs, earnings (net income plus research and development and advertising costs) research and development expenses, book values, dividends, advertising costs (collected data for firm advertising costs) and capital contributions as independent variables. In their analysis, Shah et al. (2008) divided their sample in three categories based on size and research and development intensity. Their findings were consistent with Lev and Sougiannis, (1996) and Amir et al. (2003), as they showed that research and development expenses were likely to be value relevant no matter the size of the company or industry.

In summary, the empirical findings for intangibles are mixed, as on one hand they showed that capitalisation of research and development was value relevant (Lev and Sougiannis, 1996; Amir et al., 2003; Shah et al., 2008) and non-capitalisation of research and development was associated with mispricing (Lev and Sougiannis, 1996; Barth et al., 2001), capitalised intangibles associated to a higher number of analysts' estimations (Barth et al., 2001; Matolscy and Wyatt, 2006) and lower absolute forecast error (Matolscy and Wyatt, 2006) and lower forecast dispersion (Matolscy and Wyatt, 2006). On the other hand, studies such as Amir et al. (2003) showed that higher intangibles intensity was likely to be associated with higher absolute forecast error (Amir et al., 2003), over-optimism (Amir et al., 2003), increased insider trading (Aboody and Lev, 2000) and lower analyst following (Matolscy and Wyatt, 2006).

3.3.2. IFRS and intangible assets

Regarding the IFRS treatment of intangible assets which is related directly to our research, a study by the Financial Reporting Council on the impact of IFRS (FT, 2010) in mergers and acquisitions indicated that the new accounting rules for mergers and acquisitions (IFRS3) were "costly and difficult" and that investors thought they were not useful. IFRS3 allows the use of the full goodwill method, abolishes the amortisation of goodwill at a constant rate and allows the impairment of up to 100% of a company's goodwill after an annual review. Hence, it can be suggested that this change is likely to be related with low earnings forecast accuracy especially for companies with a significant proportion of goodwill. Also, the Financial Reporting Council suggested that under IFRS there is insufficient disclosure on intangible assets like acquired brands that are often a reason to acquire a company as they add significant value.

According to a PwC report by Yu (2012), intangible asset valuation is key to the success or failure of merger and acquisition deals and this could explain the importance given to intangible assets by international accounting standard setters and the attempt for global harmonisation of the treatment of intangible assets. In summary, research has shown that intangible assets were not sufficiently well reported under IFRS.

Therefore, this creates opportunities for managers to exploit insider information such as knowledge of future acquisitions and it is likely that a high proportion of intangible assets in a company could be related to analysts' uncertainty about future company earnings.

A number of academics investigated the treatment of intangibles under IFRS looking at several measures such as the value relevance of research and development (Dedman et al., 2009; Tsalavoutas and Tsoligkas, 2011), intangibles and analysts' absolute forecast error (Cheong et al., 2010; Chalmers et al., 2012) and intangibles and analysts' forecast dispersion (Chalmers et al., 2012).

In a study of companies in the UK, Tsalavoutas and Tsoligkas (2011) examined the value relevance of research and development post IFRS adoption and particularly whether it varied according to the firms' size. The authors explained that accounting rules for research and development in the UK altered after the mandatory IFRS adoption as the capitalisation of research and development is no longer subject to management's discretion but is mandatory under certain conditions. Hence, Tsalavoutas and Tsoligkas (2011) expected that this requirement could convey useful information to investors about the company's research and development investment and future economic rents. They expected that both capitalised and expensed research and development would be value relevant but expected a positive relationship for the former and a negative relationship for the latter. They also expected a distinct impact depending on the firms' size (Tsalavoutas and Tsoligkas, 2011). Their research design used a sample that comprised UK firms from 2005 to 2007. They employed a value relevance model with the market value of equity (three months after the fiscal year end) as dependent variable and the following independent variables: size, capitalised research and development costs, expensed research and development costs, net income and equity book value. The research and development variables were extracted from the research and development scoreboards of the Department for Business, Innovation and Skills. The authors, consistent with Dedman et al. (2009), found that the capitalised research and development had a positive association with the firms' market value. Contrary to Shah et al. (2008) they found that expensed research and development had a negative association with market value for larger companies.

As they explained, the expensed research and development was negatively related to the market value possibly because it reflected market perceptions of the costs of unsuccessful research and development projects.

In another study using UK samples from 1991 to 2006, Dedman et al. (2009) examined the practices regarding the measurement and disclosure of intangibles with specific focus on research and development. The authors argued that research and development investment, brand and advertising, human resource training and development are treated as expenses although they create economic benefits and have limited compulsory disclosure. Following IFRS adoption in 2005, the capitalisation of development expenses was made compulsory. Due to this change, the authors examined the value relevance of research and development expenses and specifically tested if the market undervalues them. Also, they looked at two biotechnology firms that disclosed ambiguous information, in order to investigate if the market covers any information deficiencies (due to less disclosure) for research and development. Dedman et al. (2009) found that the stock market prices were likely to incorporate a firm's research and development expenses in the UK and thus that research and development expenses were value relevant, as did Tsalavoutas and Tsoligkas (2011). The authors suggested that companies with higher research and development intensity were likely to be under-valued. They further showed that the inclusion of research and development in the Fama - French three factor model was likely to increase its explanatory power. However, they found that stock prices were not an adequate measure to reflect any insider trading in research and development related to scandals such as the cases of two biotechnology firms that they investigated. Dedman et al. (2009) acknowledged that they were only able to investigate the role of research and development and that they did not take into account other intangible assets.

It can be suggested that a future similar study could use a higher number of observations post the IFRS adoption and subsequently compare the two periods to uncover any significant changes in the value relevance of research and development and intangibles. We conduct a similar analysis to evaluate the association between intangibles and analysts' forecasts in our research project.

In a study focussing in the Pacific area, Cheong et al. (2010) examined the effect of IFRS adoption on analysts' earnings forecasts. They looked at the analysts' forecast accuracy in Hong Kong, New Zealand and Australia from 2001 to 2008 and concentrated on the role of intangible assets. Similarly to Chalmers et al. (2012) arguments, Cheong et al. (2010) suggested that IFRS adoption is likely to influence the analysts' information environment due to changes in intangibles policies and disclosure. Such changes include the research and development expense instead of capitalisation, and the abolishment of goodwill amortisation and replacement with an annual impairment review that could contain information about the firm's prospects. The authors used a cross sectional fixed effects method and compared a sample of 66 IFRS adopting firms from Australia, Hong Kong and New Zealand to a sample of 50 IFRS non-adopting firms from Canada. Their dependent variable was the percentage difference between the forecast and the actual earnings (the first EPS median forecast less the actual reported EPS over the actual EPS). We use this approach to estimate the absolute forecast error in our study.

In their empirical work, Cheong et al. (2010) controlled for intangibles, gearing, stock return volatility, profitability, forecast dispersion, number of analyst estimations and size via two proxies: market value and total assets. Instead of choosing a difference in difference method, Cheong et al. (2010) chose to run separate regressions for treatment and control group and set the year 2005 (when IFRS became mandatory in Australia and Hong Kong) as the cut-off point. Their empirical results demonstrated an improvement in analysts' earnings forecast accuracy post IFRS adoption in the treatment group and did not find any statistical significance for the control group. Cheong et al's (2010) results are consistent with Chalmers et al. (2012) as they found empirical evidence that higher intangible asset intensity was associated with improved analysts' earnings forecast accuracy, possibly due to enhanced IFRS disclosure quality. It should be noted though, that in contrast with Chalmers et al. (2012), Cheong et al. (2010) did not separate goodwill from intangibles and therefore it is not clear if both items were informative to analysts. Similarly, to Chalmers et al. (2012) in our study we intend to remove goodwill from the rest intangible assets and test it separately. Also, Cheong et al. (2010) estimated the forecast error by only using the first month of the year and therefore probable variation of the error within the year is not captured. This is why we intend to conduct our analysis on a monthly basis.

Similarly to Cheong et al. (2010), Chalmers et al. (2012) focussed on the role of intangible assets under IFRS using a large sample comprised of Australian firms from 1993 to 2007. Chalmers et al. (2012) explained that the accounting policies under Australian GAAP were quite different to IFRS. As they suggested, research and development expenses are no longer capitalised and goodwill amortisation is banned in favour of an annual impairment review. Also, under IFRS, intangibles can be recognised at fair value only if there is an existing market about them and intangibles that are in-house generated cannot be recognised as assets. Chalmers et al. (2012) argued that valuing intangibles is likely to entail considerable uncertainty due to subjective valuation, which generates obstacles for analysts' earnings forecasts. On the other hand, they explained that disclosure of intangible assets is likely to provide valuable information to the market and the financial analysts. Chalmers et al. (2012) adopted the EPS mean consensus forecast and the EPS forecast dispersion that are commonly used in the literature, but deflated them by total assets contrary to Cheong et al. (2010) who used the percentage approach.

In their empirical analysis, Cheong et al. (2010) used capitalised intangible assets as their main independent variable and controlled for size, age, gearing, loss makers, operating cash, earnings and stock return volatility, analyst following, stock return and industry. Interestingly, Chalmers et al. (2012) added to previous studies by taking into account the financial reporting changes during their time frame and divided it in four periods. Similarly to Cheong et al. (2012) their findings showed that higher intangible assets intensity was likely to be associated with lower absolute forecast error and lower forecast dispersion for earnings forecasts for Australian firms. This effect became even stronger in the post IFRS adoption period and Chalmers et al. (2012) attributed this to increased information and disclosure about intangible assets. Further tests uncovered that goodwill annual impairment was probably more informative for analysts in the post IFRS adoption period. We aim to test the role of intangibles and goodwill and their association with analysts' earnings forecasts after IFRS adoption using similar empirical models in samples of companies in the UK, France and Germany. Our empirical work will contribute to the literature by comparing and contrasting the observed effects in companies in Europe with companies in the Pacific area. The relevant analysis is shown in Chapter 6.

The empirical results showed that capitalised research and development costs are positively value relevant (Dedman et al., 2009; Tsalavoutas and Tsoligkas, 2011) and that expensed research and development costs are negatively value relevant (Tsalavoutas and Tsoligkas, 2011). Also, empirical evidence showed that higher intangible assets intensity is associated with lower absolute forecast error (Cheong et al., 2010; Chalmers et al., 2012) and lower forecast dispersion (Chalmers et al., 2012).

3.4. Summary

This chapter provided a summary of the existing empirical studies on accounting quality, earnings quality and their association with intangible assets. It also provided an overview of the observed effects on the above after the adoption of IFRS across the world. The empirical results from research projects on accounting quality vary considerably. The results for firms adopting IFRS voluntarily, that in theory would have incentives for higher quality financial reporting, showed that companies had lower earnings management (Barth et al., 2008; Christensen et al., 2008; Capkun et al., 2013) while other authors found increased earnings management (Van Tendeloo and Vanstraelen, 2005; Paananen and Lin, 2009). In contrast, some authors found lower earnings smoothing (Capkun et al., 2012), higher value relevance (Barth et al., 2008) and more timely recognition of losses (Barth et al., 2008; Christensen et al., 2008). There is also empirical evidence to suggest that mandatory IFRS adopters had increased income smoothing and a reduction in the timeliness of loss recognition (Paananen and Lin, 2009; Ahmed et al., 2013; Capkun et al., 2013) and lower value relevance (Paananen and Lin, 2009).

Similar to the results for accounting quality, academic studies showed that earnings forecasts for voluntary IFRS adopters were likely to have lower absolute forecast error (Ernstberger et al., 2008; Byard et al., 2011), lower forecast dispersion (Byard et al., 2011), and IFRS adopters have increased analyst following (Byard et al., 2011). Similarly, earnings forecasts for mandatory IFRS adopters were likely to have lower absolute forecast error (Tan et al., 2011; Byard et al., 2011; Horton et al., 2013; Choi et al., 2013), lower forecast dispersion (Byard et al., 2011; Horton et al., 2013; Choi et al., 2013) and the firms have increased analyst following (Tan et al., 2011; Byard et al., 2011).

In contrast, Brown et al. (2013) did not find any changes in the analysts' earnings forecasts after IFRS adoption, while Liang and Rield (2014) found that earnings forecasts after IFRS adoption were associated with higher absolute forecast error. Hence, the ambiguous results on IFRS adoption and analysts' earnings forecasts suggested that further research is required.

In fact, a number of earlier studies concentrated on the accounting policies for intangible assets and found that capitalised intangibles were likely to attract a higher number of analysts (Matolscy and Wyatt, 2006; Barth et al., 2001), lower absolute forecast error (Matolscy and Wyatt, 2006) and lower dispersion (Matolscy and Wyatt, 2006). On the contrary, other authors such as Amir et al. (2003) showed that higher intangibles intensity was associated with higher absolute forecast error (Amir et al., 2003), over-optimism (Amir et al., 2003), increased insider trading (Aboody and Lev, 2000) and lower analyst following (Matolscy and Wyatt, 2006). Furthermore, studies on IFRS adoption, intangibles and analysts' forecasts in the Australia-Pacific area showed that higher intangible assets intensity was associated with lower absolute forecast error (Cheong et al., 2010; Chalmers et al., 2012) and lower forecast dispersion (Chalmers et al., 2012). Hence, the IFRS treatment of intangibles and the IFRS adoption impact on analysts' earnings forecasts requires further investigation that we will address in our research project.

The next chapter provides an outline of the studies on corporate disclosure and the methods and techniques used to evaluate it. The chapter also provides a summary of academic studies on the role of corporate disclosure and the impact of IFRS adoption on analysts' earnings forecasts.

Chapter 4. Corporate Disclosure: Determinants and Outcomes

Academic researchers in the fields of accounting and finance developed several methods to quantify aspects of corporate disclosure contained in both quantitative and qualitative disclosures. Researchers have analysed corporate announcements, financial statements, annual reports and other channels of communication, either in "holistic" or in "built for purpose" approaches. Holistic approaches are used to analyse the entirety of disclosures in company documents, while built for purpose approaches are used to analyse specific items of disclosure. The research methodology of existing studies in corporate disclosure has developed around four pillars:

- analysis using analyst disclosure assessment indices (Lang and Lundholm, 1996; Sengupta, 1998; Hope, 2003; Hope, 2003)
- analysis of disclosure quality using quantitative models (Barron et al., 1998; Botosan and Harris, 2000; Barron et al., 2002; Byard and Shaw, 2003; Beuselinck et al., 2010; Kim and Shi, 2012)
- analysis using manual techniques, usually manual coding of disclosures (Clatworthy and Jones, 2003; Daske and Gebhardt, 2006; Lapointe et al., 2006; Verriest et al., 2013; La Bruslerie and Gabteni, 2012; Hodgson et al., 2008; Cotter et al., 2012; Glaum et al., 2013; Tsalavoutas and Dionysiou, 2014;)
- analysis using automated techniques frequently through programming and custom or linguistic dictionaries (Kothari et al., 2009; Loughran and McDonald, 2011; Lehavy et al., 2011; Brown and Tucker, 2011; Muslu et al., 2014)

The review of the existing studies in this chapter provides an overview of the existing methods and techniques in the field of corporate disclosure analysis, whether in examining its association with the analysts' earnings forecasts, or the effect of IFRS adoption or both. Hence, the review helps to identify a) the research tools and techniques and b) the existing empirical findings relating to the second major aspect of this research project; the impact of IFRS adoption on analysts' earnings forecasts and the role of corporate disclosure.

The review of the academic literature is used to determine which methodology is likely to be the most suitable for the needs of our research. Therefore, the literature review provides us with inspiration and background to develop our disclosure analysis.

4.1. Corporate disclosure policies and analysts' information environment

4.1.1. Studies using analyst disclosure index

Existing studies in the literature used databases where financial analysts submitted their perceptions regarding the disclosure quality of corporate annual reports. Authors such as Hope (2003) employed the FAF report (Report of the Financial Analysts Federation Corporate Information Committee), while other authors such as Lang and Lundholm (1996) and Sengupta (1998) used the CIFAR (Center for International Financial Analysts Research) disclosure index. The above studies examined the impact either on the analysts' earnings forecasts or on the cost of debt.

The seminal study by Lang and Lundholm (1996) analysed the effect of corporate disclosure policies on the analysts' earnings forecasts by using a sample of 751 US firms between 1985 and 1989. Their main source for determining a firm's information quality was the FAF report based on the quality of disclosure a) in annual reports, b) in quarterly and monthly reports, c) about a firm's communications with its investors and relevant relations (Lang and Lundholm, 1996). The authors explained that companies often release information beyond the mandatory disclosure requirements that can considerably increase available information for analysts and investors. Also, they argued that an increase in corporate disclosure could have an ambiguous effect on the investors' demand for analysts' information and recommendations. On one hand, Lang and Lundholm (1996) explained that if analysts act as information providers and supply additional information to investors then an increase in corporate disclosure by a company would reduce demand for analysts' reports and consequently their number of analyst estimations for the company. On the other hand, the authors suggested that if analysts act as information intermediaries and provide valuable incremental information to investors then an increase in corporate disclosure could possibly increase the demand for analysts' reports.

We employ the above arguments to assess whether the increase in the quantity of corporate disclosure after IFRS adoption was associated with a) changes in the characteristics of analysts' earnings forecasts and b) changes in the number of analyst estimations. However, it can be suggested that changes in the number of analyst estimations are not necessarily related to changes in the demand for such forecasts. They could be related to other factors such as accounting standard changes or individual financial analysts' skills or private information.

Lang and Lundholm (1996) formed similar expectations regarding the association between increased disclosure and analysts' forecast dispersion. They argued that an increase in corporate disclosure with a simultaneous increase in forecast dispersion could imply that analysts used distinctive prediction methods, while a simultaneous decrease could mean that analysts had different channels of private information. Nevertheless, Lang and Lundholm (1996) suggested that increased disclosure can probably only improve analysts' forecast accuracy and reduce the volatility of subsequent revisions of their forecasts.

The authors used characteristics of the analysts' earnings forecasts as dependent variables and the following independent variables: size (market capitalisation), standard deviation of return on equity, percentage of new forecasts and the earnings' variance. Their results showed that companies increasing the amount of disclosed information, especially in the investor relations area, had higher analyst following lower earnings' forecast dispersion and higher earnings' forecast accuracy (Lang and Lundholm, 1996). Hence, the authors argued that their empirical results for investor relations disclosures imply that analysts are likely to favour direct contact with the firm for which they are providing estimations. Thus, the authors suggested that increased disclosure is likely to be associated with improved information quality and therefore lower risk for investors and a reduction in the cost of raising capital.

A study by Sengupta (1998), employed the above argument by Lang and Lundholm, (1996) on the association between corporate disclosure and the cost of debt, using US data from 311 firms, from 1987 to 1991, and the same data source as Lang and Lundholm (1996) (the Report of the Financial Analysts Federation Corporate Information Committee). Consistent with Lang and Lundholm (1996), the author assumed that companies with higher quality and more timely disclosures would have a lower risk premium because they would be regarded by lenders and market intermediaries as having a smaller likelihood of not releasing and retaining private information.

The quality of corporate disclosure is not the only determinant of risk for a firm, as risk is comprised of idiosyncratic (firm) and systematic (market) risk. Hence, the author explained that a firm's cost of debt is likely to increase with higher market uncertainty and therefore higher systematic risk. Sengupta (1998) estimated the cost of debt by using two dependent variables: a) the total net interest rate cost for a firm issuing debt and b) the yield to maturity, which was the interest rate that included any amount paid by the creditor. In summary, Sengupta (1998) found that credit rating agencies were likely to take corporate disclosure quality (as perceived by analysts) into account in their evaluations. Also, the empirical results showed that higher disclosure quality was associated with lower cost of debt. On top of that, the author found that disclosure quality played an even more important role for the cost of debt under uncertain market conditions.

In similar vein, Hope (2003) used an analyst disclosure index as a proxy for corporate disclosure quality. However, contrary to the above studies he investigated the association between the disclosure of accounting policies in annual reports and the analysts' earnings forecast error and dispersion. The author used a sample of 1059 firms from 23 countries and obtained firm-level disclosure score data from the CIFAR index in 1993 and 1995. The author explained that detailed explanations of accounting policies can be useful for financial analysts because a) in some instances companies have considerable discretion in accounting policy choice, b) they confirm the policies that the firm follows, and c) they facilitate analysts' forecasting procedures.

Hence, Hope (2003) investigated if an increased level of accounting policy disclosures was associated with reduced earnings' forecast error and reduced dispersion especially in jurisdictions with considerable accounting policy discretion.

Hope (2003) estimated the absolute error as the absolute difference between earnings per share mean forecast (the average between the fourth and sixth month of the fiscal year) and the reported earnings per share. Forecast dispersion was defined as the standard deviation of all forecasts. Both measures were scaled by the stock price at the beginning of the fiscal year. Contrary to Hope (2003), in our study we will follow Brown et al. (2013) and use the full 12 month earnings forecasts in order to increase the explanatory power of the results. We will also use the percentage difference method as in Horton et al. (2013) instead of scaling the errors with the share price.

Hope (2003) used two disclosure score categories from the CIFAR index for a) accounting policy disclosures and b) non accounting policy disclosures. The independent variables included: gearing, percentage of new forecasts, loss makers, earnings change between two years, industry, size, number of listings, BIG6 auditor or not, government ownership and whether the company issues only parent financial statements. Moreover, Hope (2003) employed country level variables on: legal system, ownership concentration, accounting policy discretion, income smoothing, and earnings' guidance. It should be noted that in endogeneity tests, the author found that accounting policy disclosure levels exhibited endogeneity with absolute forecast error and forecast dispersion and consequently employed 3 Stage Least Squares regressions for his empirical analysis. The results showed that higher levels of accounting policy disclosure were associated with lower forecast dispersion and absolute forecast error. Interestingly, Hope (2003) found that accounting policy disclosure was superior to other annual report disclosures, proxied by the CIFAR index for the analysts' earnings forecasts. Also, the authors highlighted the need for further investigation of accounting policy disclosures and the impact of other disclosures, especially by focussing on the firm's operating environment. Hope (2003) did not consider the fundamental role of accounting standards and market regulation changes, which can considerably change both quantity and quality of corporate disclosures.

In response to the suggest by Hope (2003) above, we decided to investigate how changes in the corporate disclosure and requirements of accounting standards are associated with changes in the analysts' earnings forecasts.

In a second paper Hope (2003) addressed the relation between the disclosures in annual reports, the effectiveness of financial reporting enforcement (similar to Byard et al., 2011; Brown et al., 2013) and analysts' earnings forecasts. In this paper, Hope (2003) analysed data from 1100 firms in 22 countries, using the CIFAR disclosure index from 1993 and 1995 and also developed a self-constructed index of enforcement, based on five institutional factors: investors' protection, legal environment, audit expenditure, insider trading legislation and judicial efficiency (Hope, 2003). The author stated that extensive information about a firm's investments, events, product and market segments and corporate strategy could potentially be beneficial for the analysts' earnings forecasts. Consequently, a higher quantity of information in the annual report could be associated with lower absolute earnings forecast errors, especially for companies that are followed by fewer analysts. In order to reflect this idea, our research is designed to investigate the impact of disclosure quantity (by each specific disclosure category) on the analysts' earnings forecasts.

Hope (2003) suggested (similar to later studies by Nobes, 2006; Byard et al., 2011; Brown et al., 2013) that stronger financial reporting enforcement could reduce the probability of fraud in an economy, and reduce analysts' uncertainty about a firm's policies and practices. He stated that stronger enforcement could subsequently improve analysts' earnings forecasts, especially when a firm had considerable discretion in accounting policy choice. The results showed that firms operating in strong financial reporting enforcement jurisdictions were likely to have higher earnings' forecast accuracy (similarly to Byard et al., 2011 and Brown et al., 2013). Also, Hope (2003) argued that the quality of information in annual reports was more likely to be associated with improved forecast accuracy for analysts' forecasts of firms using accounting standards with considerable discretion in accounting policy choice.

In summary, several empirical studies based on disclosure indices indicated that an increase in the amount of disclosed information, especially in the investor relations area, was associated with higher analyst following, lower analysts' forecast dispersion and higher forecast accuracy (Lang and Lundholm (1996). Other studies showed that higher corporate disclosure quality is associated with lower cost of debt (Sengupta, 1998). Authors such as Hope (2003) showed that higher accounting policy disclosure level was associated with lower forecast dispersion and absolute forecast error. Also, the author showed that strong enforcement plays an even more important role on analysts' forecast accuracy in jurisdictions with higher discretion in accounting policy choice (Hope, 2003).

4.1.2. Analysis of disclosure quality using quantitative models

A number of studies in the accounting empirical literature use a method developed by Barron et al. (1998) to estimate the level of private and public information reflected in analysts' forecasts. Barron et al. (1998) used as inputs the forecast dispersion, mean forecast and number of estimations in order to estimate uncertainty and consensus in analysts' earnings forecasts. As uncertainty (*U*), Barron et al. 1998 defined the deficiency in each analysts' private information and estimate it as "the expected squared error in individual forecasts averaged across analysts" Barron et al. (2002).

Where D was forecast dispersion, A were the actual earnings, F_a the individual analyst's forecast and F the average forecast across analysts.

$$U = \left(1 - \frac{1}{N}\right) D + SE$$

As consensus (ρ) Barron et al. (1998) defined the degree that individual analysts' estimations possess the same information.

$$\rho = \frac{SE - \frac{D}{N}}{\left(1 - \frac{1}{N}\right) D + SE}$$

Also, they estimated D dispersion as:

$$D = \frac{1}{N-1}\sum_{\alpha=1}^{N}(F_a - F)^2$$

and mean analysts forecast squared error:

$$SE = (A - F)^2$$

Using this methodology Barron et al. (2002) examined the relationship between analysts' earnings forecasts and intangible assets, by taking into account the related public and private information that analysts held. Specifically, Barron et al. (2002) focussed on the US between 1986 and 1998 where firms were obliged to fully expense intangibles and hypothesised that intangible assets intensity was likely to affect the predictability of future earnings from current earnings. As they explained, at the time of the study US GAAP required the capitalisation of acquired intangibles such as goodwill and the full expense of internally generated intangibles such as advertising and R&D (Barron et al., 2002). Thus, they argued that capitalised intangibles could imply the generation of future economic rents, while expensed intangibles could signal uncertainty about any prospective benefits that in turn would affect analysts' earnings forecasts. Hence the authors used R&D expenses, advertisement expenses and capitalised intangibles containing goodwill in order to examine if they were associated with changes in the analysts' earnings forecasts. They also used the following independent variables: market capitalisation, market to book ratio and the absolute percentage change in earnings (Barron et al. 2002). It should be noted that Barron et al. (2002) used forecasts generated within a month after the first quarterly earnings announcement of 451 firms in their sample. Consistent with Amir et al. (2003), their empirical results showed that analysts providing forecasts for companies with higher intangible assets intensity (especially high tech companies with substantial investment in R&D) were likely to have higher forecast dispersion and higher absolute forecast errors. The authors also noted that financial analysts were likely to incorporate private information in their estimations because the average of the analysts' estimations had higher earnings forecast accuracy than the individual analysts' forecasts.

In another study using the Barron et al. (1998) models, Byard and Shaw (2003) examined the effect of corporate disclosure on analysts' idiosyncratic and public information. The authors used a sample of 729 firm quarters in the US from 1986 to 1996. In this study, the authors used disclosure proxies from the Association of Investment Management and Research Corporate Information Committee that reflected analysts' perceptions about the public information available. The data from AIMR provided both sell and buy side analysts' assessments about each firm's disclosure quality in annual reports, quarterly reports and other information such as press releases and their communications with analysts' providing forecasts for each firm. The authors suggested that an increase in the quality of annual report disclosure could increase the precision of the analysts' public information (in other words contribution of public information to analysts' forecasts) and to a lesser extent than an increase in quality of information from other channels such as private meetings and conference calls. Similarly, Byard and Shaw (2003) explained that it is possible that an increase in the quality of publicly available information could increase the individual analyst's ability to processing it and therefore increase the precision of the analysts' private information. However, it is also possible that analysts could benefit from private meetings that were not related to the quality of information in annual and quarterly reports.

The authors hypothesised that the precision of the analysts' private and public information was not related to the quality of disclosures in the three AIMR disclosure categories. Byard and Shaw (2003) used the same proxies as Barron et al. (1998) for analysts' information precision, and controlled for quarterly earnings surprises and market capitalisation. The results showed that higher quality public disclosures were associated with higher precision of the analysts' public (common) and private (idiosyncratic) information (Byard and Shaw, 2003). Interestingly, their analysis also showed that analysts were more likely to incorporate their public information instead of their private information from firms' events and activities (specifically organised by firms for analysts providing forecasts for each particular company).

4.2. Corporate disclosure and IFRS

4.2.1. IFRS disclosure evaluation using quantitative models

A number of research studies employed the Barron et al. (1998) proxies for the analysts' public and private information to examine the association with either mandatory IFRS adoption (Beuselinck et al., 2010) or voluntary IFRS adoption (Kim and Shi, 2012).

The study by Beuselinck et al. (2010) examined the effect of mandatory IFRS adoption on analysts' earnings forecasts focussing on changes in public and private information. They employed two empirical proxies adopted from Barron et al. (2002) that included the forecasts' dispersion, the absolute error and the number of analysts. The authors used a sample comprised of firms in 16 EEA jurisdictions from 2003 to 2007 and employed widely used independent variables such as market value, R&D expenses, book to market ratio, analysts' forecast characteristics and industry and country fixed effects. Their results showed that the precision of both public and private information increased with mandatory IFRS adoption but they did not find sufficient evidence to suggest that it affected the analysts' earnings forecasts. Thus, Beuselinck et al. (2010) found that analysts required considerable time to adapt to the new disclosure policies. They found that the effect was more intense when firms had complex accounts and the GAAP-IFRS differences were higher. The findings of this study suggested that the difference in analysts' specialisms and accounting knowledge can significantly affect each individual analyst's earnings forecast and create the illusion that analysts with higher prediction power possessed private information.

Similar to Beuselinck et al. (2010), Kim and Shi (2012) used the Barron et al. (2002) models to investigate the impact of voluntary IFRS adoption on the individual analysts' forecasts following and accuracy. Kim and Shi (2012) argued that there is no clear answer as to whether analysts prefer to provide forecasts for firms with low or high levels of corporate disclosure.

On one hand, firms with high information quality could satisfy investors' information needs without the help of intermediaries but on the other hand this information could be complex enough to require specialised analysts' evaluation. Firms with low information quality could attract analysts to provide forecasts and analysis but also could push analysts to acquire private information (Kim and Shi, 2012). Hence, they argued that it is crucial to determine whether firms with incentives for high information quality (demonstrated by their voluntary IFRS adoption) are associated with lower absolute forecast errors and lower demand for analysts' estimations, due to improvements in public information. (Kim and Shi, 2012).

The authors used a sample from 1998 to 2004 which was comprised of voluntary IFRS adopters and non-adopters from 29 countries. The sample was biased as for each voluntary adopter there were approximately 16 non-adopters. Nevertheless, they applied several robustness tests including a propensity score matching technique that validated their results. In their main analysis, they employed the log of the number of analyst estimations to represent analyst following and the Barron et al. (1998) model to proxy for the precision of public and private information. A probit model was used to identify the factors that characterise analysts' earnings forecasts of voluntary IFRS (and non) adopters and a two stage least square model was used for analyst following and information quality.

Their results showed that voluntary IFRS adoption increased analyst following and that disclosure under IFRS was beneficial for analysts and was impounded into their estimations. Furthermore, the empirical model demonstrated that voluntary IFRS adoption was associated with an increase in the quality of public information (similar to Beuselinck et al. 2010 results for mandatory IFRS adoption). They also found that the increased number of analyst estimations was associated with increased quality of private information (Kim and Shi, 2012). Criticisms of the paper include the points that a) the quality of private information could be highly correlated with level of analysts' skills and b) increased financial information comparability could attract analysts with IAS/IFRS experience. It can also be suggested that the quality of public information could be examined through value relevance models too.

In summary, the empirical results from studies on IFRS using quantitative models of disclosure suggested that IFRS adoption (both voluntary and mandatory) was associated with an increase in the quality of public and private information embedded in the analysts' earnings forecasts (Beuselinck et al., 2010; Kim and Shi, 2012).

4.2.2 IFRS disclosure evaluation using manual techniques

4.2.2.1. IFRS, compliance and disclosure quality

A considerable number of research papers analysed the relationship between the compliance with the IFRS requirements and assessed disclosure quality, either through disclosure scores or proxies for earnings management and value relevance. A number of authors used customised disclosure systems and concentrated on the management discussion and analysis sections, and financial statements such as Lapointe et al. (2006) or the whole annual report document (Tsalavoutas and Dionysiou, 2014). Other authors focussed on specific IFRS standards (Verriest et al., 2013) or other authors' assessments of annual reports (Daske and Gebhardt, 2006).

In a study using data from 90 Swiss firms from 1997 to 2001, Lapointe et al. (2006) investigated the relationship between voluntary disclosure, earnings management and the value relevance of earnings. They explained that company directors have significant corporate disclosure flexibility and can disclose voluntary information by complying with international standards such as IAS or US GAAP or via the quantity and quality of information in their corporate annual reports. Also, the authors stated that existing studies for firms in Switzerland have shown the extensive use of abnormal accruals by managers in order to reduce the earnings variance. Consequently, Lapointe et al. (2006) hypothesised that companies with high quality incentives disclosing extensive voluntary information or reporting under globally accepted standards (such as IFRS) would have lower earnings management. On top of that, Lapointe et al. (2006) assumed that investors would attach less value to the discretionary accruals of companies that reported either under IAS/US GAAP or had high levels of corporate disclosure. Hence, the authors focussed on the annual reports in order to capture both quality and quantity of the disclosed information.

The authors adopted the existing convention in the literature that the disclosure in annual reports could be perceived as a proxy for the total disclosure level of a company. In their earnings management model, the dependent variable was based on earnings management (the cross sectional Jones model) that estimated discretionary accruals, and their independent variables were the previous year's earnings, an indicator variable for international accounting standards, the disclosure scores and interaction terms (Lapointe et al. (2006). In their value relevance model, Lapointe et al. (2006) employed the firm's market value six months after the fiscal year end as dependent variable and total accruals, discretionary accruals, earnings and book values (at the year end) as independent variables.

Their empirical results showed that discretionary accruals were lower in companies that adopted IAS or US GAAP (similarly to Capkun et al., 2013) and for firms with high disclosure scores (Lapointe et al. 2006). Similarly, Lapointe et al. (2006) found that discretionary accruals were likely to be significantly less value relevant for Swiss companies that adopted IAS or had high disclosure scores. It can be suggested, however, that information contained in annual reports is published on an annual basis and does not provide investors with timely information about the company prospects and performance. Thus, the information in an annual report can be indicative of the firm's incentives but its analysis can only partly explain an economic effect especially if it varies more frequently than annually. In our research, we use monthly corporate announcements and quarterly reports to assess the variance of analysts' earnings forecasts over the financial year.

In another study on the value relevance of earnings, Tsalavoutas and Dionysiou (2014) examined the value relevance of compliance with the mandatory disclosure requirements imposed by IFRS. They focussed on the Greek stock market and analysed the disclosure compliance of 150 companies in 2005; the year that IFRS became mandatory for listed companies in Greece. They explained that the Greek market has distinctive characteristics that could help to uncover any improvements in market efficiency that IFRS were expected to bring. Specifically, the Athens Stock Exchange is characterised by a) a low level of financial reporting enforcement, b) low voluntary disclosure and volume of annual reports and c) high differences between Greek GAAP and IFRS.

Hence, the authors expected that companies with higher compliance with disclosure requirements would demonstrate a commitment to transparency and have higher value relevance of earnings and book values. Their disclosure compliance index was comprised of 481 items and their total compliance score measured the firms' compliance relative to the maximum level. To examine the relationship between disclosure compliance and other firm characteristics, Tsalavoutas and Dionysiou (2014) further divided their sample in high and low disclosure compliance portfolios and created interaction variables. In summary, their results demonstrated that higher compliance with the IFRS disclosure requirements was associated with higher value relevance of earnings and book values as well as with higher explanatory power of the valuation model. Tsalavoutas and Dionysiou (2014) suggested that the substantial increase in the IFRS mandatory disclosure items relative to the Greek GAAP was likely to increase transparency and reduce investors' uncertainty (50% of investors in the Greek market are international investors) regarding each firm's financial information.

Other studies such as Daske and Gebhardt (2006) and Verriest et al. (2013) concentrated on the assessment of disclosure quality after IFRS adoption. Verriest et al. (2013) examined the role of corporate governance on 223 European firms' disclosure and compliance choices at the time of mandatory IFRS adoption in 2005. They explain that firms had high flexibility in making and disclosing their reconciliation from national standards to IFRS. The authors manually assessed the corporate disclosure and compliance in three dimensions: a) estimated compliance and disclosure quality by looking at six IFRS standards that substantially increased the amount of disclosure, b) they assessed the reconciliation information by examining the size and type of it and c) they investigated the firms' choice on the voluntary adoption of IAS39 (Financial Instruments). The authors suggested that prior studies showed that firms disclosing high quality information had greater audit committee effectiveness and higher board independence. Hence, they concentrated on IFRS adoption and building on previous studies, investigated the impact of strong corporate governance on disclosure quality by creating proxies representing: a) the board of directors independence, b) board of directors functioning and c) the audit committee effectiveness.

The authors found that companies with high corporate governance were likely to early adopt IAS39 even when they had bad performance indications. Hence, the authors stated that they were less likely to exploit optional policy choices and more likely to have higher accounting conservatism. Also, their findings were consistent with the literature as higher corporate governance firms tended to have higher disclosure quality and compliance with IFRS. Such firms also had IFRS restatements characterised by high transparency. In another study on IFRS and disclosure quality, Daske and Gebhardt (2006) concentrated on three German speaking countries, Austria 1997-2004, Germany 1996-2003, Switzerland 2001-2004, to investigate if IAS/IFRS adoption was related to increased disclosure quality. Their proxies for disclosure quality were based on secondary annual reports' quality scores created by other researchers that in the authors' opinion were characterised by higher objectivity and independence compared to alternatives. Due to different versions and disclosure scores of "Best Annual Report" competitions in the three countries, Daske and Gebhardt (2006) converted all disclosure quality scores in the 0-100 range and attempted to identify their determinants via empirical models. In their analysis, the authors compared local standards with both IAS/IFRS and US GAAP, using difference in differences estimation. Their empirical results, showed that disclosure quality was likely to increase after adoption of US GAAP and more so after adoption of IAS/IFRS. The authors did not find significant disclosure quality differences between early and late voluntary adopters of IFRS. On top of that, the authors argued that companies that voluntarily switched to IFRS were likely to have incentives for higher transparency and seek a cross-listing in a US market. Their results showed that the picture did not change even after controlling for mandatory and voluntary adopters. Similarly to Verriest et al. (2013) and Lapointe et al. (2006), all scenarios showed that IFRS adoption was associated with higher corporate disclosure quality.

Overall, the evidence in existing studies suggests that earnings management is likely to be reduced with IAS/US GAAP adoption and higher disclosure quality (Lapointe et al., 2006) and that IAS/US GAAP adoption is related to higher disclosure quality (Daske and Gebhardt, 2006). Other authors found that stronger corporate governance is associated with higher IFRS disclosure compliance (Verriest et al., 2013) and that higher IFRS disclosure compliance is likely to increase the value relevance of earnings and book values (Tsalavoutas and Dionysiou, 2011).

4.2.2.2. IFRS disclosure and analysts' forecasts

Several empirical studies focussed on the association between corporate disclosure and analysts' earnings forecasts after IFRS adoption. Authors of papers such as La Bruslerie and Gabteni (2012) looked at the impact of voluntary information beyond the mandatory IFRS items and assessed the level of disclosure in the annual report as a whole (Hodgson et al., 2008; Cotter et al., 2012; Glaum et al., 2013) using either primary or secondary analysis.

In a study examining the voluntary IFRS disclosure in annual reports, La Bruslerie and Gabteni (2012) examined its effect on analysts' earnings forecasts in 67 companies in France between 2003 and 2008. The authors stated that information asymmetry is probably endogenous to corporate disclosure, and they attempted to show that companies with highly communicative policies were likely to have reduced information asymmetry. They further explained that these idiosyncratic factors are reflected in voluntary corporate disclosure, which complements the mandatory disclosure requirements of IFRS (La Bruslerie and Gabteni, 2012). For this purpose, La Bruslerie and Gabteni (2012) using principal component analysis, constructed a voluntary disclosure score index comprised of 40 items that provided information beyond the mandatory IFRS requirements. In their hypotheses, La Bruslerie and Gabteni (2012) expected that the mandatory IFRS adoption in 2005 affected the firms' voluntary disclosure because of the new requirements. Nevertheless, they also hypothesised that companies having a high degree of voluntary disclosure in the past would continue to have a high degree in the future too. However, the authors stated that higher voluntary disclosure is not necessarily associated with a change in absolute forecast error and dispersion because on one hand, voluntary information can be beneficial for analysts but on the other hand, it could contain information that is irrelevant to the forecasting of earnings. In their analysis, they employed poisson regressions and multivariate panel analysis and as dependent variables used the disclosure scores, the absolute forecast error and dispersion at the end of the fiscal year both scaled by the share price. Their independent variables included market to book ratio, total assets, debt to equity ratio, institutional investor ownership, profit margin, market beta and industry and disclosure index indicators (La Bruslerie and Gabteni, 2012).

In summary, the authors found that the voluntary disclosure of information significantly increased between 2003 and 2008, influenced by the mandatory IFRS adoption and the concurrent market developments (such as the Transparency and Market Abuse Directives from 2005). The results also showed that voluntary disclosure was strongly associated with lower absolute forecast error and dispersion, especially for firms that consistently provided a higher level of information. To a certain extent, the methodology of our research is related to the study by La Bruslerie and Gabteni (2012) as we investigate the impact of the quantity of corporate disclosure on the analysts' earnings forecasts. La Bruslerie and Gabteni (2012) did not specify which disclosure categories were likely to be more associated with improved earnings' forecast accuracy; an area that our research explores.

Similar to La Bruslerie and Gabteni (2012), Hodgson et al. (2008) looked at companies' compliance with IAS disclosure requirements and its impact on analysts' earnings forecasts. Using a sample of 87 companies in 13 countries between 1999 and 2000, Hodgson et al. (2008) employed a weighted disclosure index comprised of 209 mandatory disclosure items and another alternative index that weighted each item according to the proportion of companies that failed to comply with it. The authors expected that firms with higher compliance with IFRS disclosures were associated with lower absolute forecast error. Similarly, the authors expected that any increases in compliance would be associated with increases in analysts' earnings forecast accuracy. As dependent variable the authors used the natural logarithm of the absolute percentage difference between each individual analyst's earnings forecast and the actual earnings at the end of the financial year. Similarly to La Bruslerie and Gabteni (2012), their empirical results showed that higher compliance with IAS was associated with higher forecast accuracy. One criticism of this study is that it used a smaller sample than other studies, across a large number of countries, for a time period of only two years. Factors such as financial reporting enforcement, type of legal system and differences between local GAAP and IFRS were not take into account in this study.

Using a disclosure analyst index, Glaum et al. (2013) used data for German companies between 1997 to 2005 in order to identify the impact of IAS/IFRS (and US GAAP) adoption and corporate disclosure on analysts' forecasts.

As they explained, the effect of IFRS adoption can be multidimensional in the firms' information environment. Therefore, the authors suggested that the use of a structural equation model in their research design helped to better isolate its influence on analysts' forecasts and uncover the role of corporate disclosure as a mediator. Similarly to Daske and Gebhardt (2006) they used disclosure quality measures from "Best Annual Report" competitions that focussed on the management discussion and the notes of the financial statements. Also, the authors explained that German accounting had been characterised by its concentration on tax legislation and on protecting the creditors, as traditionally Germany has been a bank-based economy. In contrast, US-GAAP and IFRS come from an Anglo-Saxon background and focus on financial market efficiency and investor protection and their adoption could be associated with changes in the firms' information environment (Glaum et al., 2013). Glaum et al. (2013) implemented a structural equation model with absolute forecast error (difference between the actual earnings per share and median earnings per share forecast scaled by the stock price or the actual earnings per share) and the notes to the financial statements and management reports (both from the disclosure index); as independent variables and with disclosure scores as dependent variables. They controlled for ownership structure, foreign turnover, stock price volatility, size, return on assets, equity issues and US cross listings. In a model with absolute forecast error as dependent variables they controlled for analyst following, earnings per share change, earnings per share forecast sign changes, return on assets, gearing, size and industry (Glaum et al., 2013). Consistent with Daske and Gebhardt (2006), their empirical results demonstrated that the adoption of US GAAP or IFRS was improved the disclosure quality in German companies (and mitigated disclosure quality differences between them) and subsequently improved the analysts' earnings forecast accuracy. Glaum et al. (2013) argued that the content of management reports did not improve the analysts' earnings forecast accuracy, whereas the notes to financial statements did. In our research, similar to Glaum et al. (2013) we investigate the role of different disclosure categories but we concentrate on the quantity of information rather than disclosure quality.

In a study similar to Glaum et al. (2013), Cotter et al. (2012) examined the impact of mandatory IFRS adoption and its disclosure requirements on analysts' earnings forecasts, using a sample of 145 firms in Australia from 2003 to 2007. They examined the effect on earnings forecasts' accuracy by estimating the absolute forecast error and the forecast dispersion. Their first hypothesis tested if the earnings forecasts' accuracy and forecast dispersion were reduced after IFRS adoption and the second hypothesis tested if the same measures were negatively correlated with disclosure about the impact of IFRS adoption. For this purpose, Cotter et al. (2012) used Ordinary Least Squares regressions and their models included variables such as size, analyst following, earnings difference and previous forecast error as well as quantitative and qualitative disclosure variables. The research design for the second research question, on disclosure, included the manual coding of qualitative and quantitative disclosure data. However, as Cotter et al. (2012) acknowledged the data collection was limited only to annual reports and earnings guidance reports and did not include other types of disclosure such as news announcements or investor releases. In our research, we address this gap and include all published disclosures from companies to outsiders.

The results of Cotter et al (2012) indicated that absolute forecast errors were greater in the IFRS transition year and significantly greater than the adoption year. Additionally, the analysis showed that earnings' forecast dispersion mostly remained unchanged. The results showed substantial correlations between earnings forecast error, forecast dispersion, earnings differences, previous error and dispersion. Concerning financial statements and qualitative disclosure, Cotter et al. (2012) revealed that it was increased in the IFRS adoption year in comparison with the transition year, and they argued the firms were able to estimate the IFRS adoption effect more accurately in the adoption year. The results showed that the quantitative disclosure was smaller in both years but followed the same pattern as qualitative disclosure and was higher in the adoption year. Interestingly, Cotter et al. (2012) stated that most of the firms issued a form of earnings briefing and that approximately 3 out of 4 analysts used IFRS to prepare their forecasts 3 months before IFRS adoption. Also, Cotter et al. (2012) suggested that firms that were expecting high differences in their financial statements and disclosure after IFRS adoption were expected to issue earnings guidance.

In general, (consistent with Glaum et al., 2013 for Germany) Cotter et al. (2012) argued that analysts in Australia adjusted well to the IFRS adoption, with lower absolute earnings' forecast error and the same levels of forecast dispersion, although Cotter et al. (2012) suggested that disclosure did not have a substantial effect, probably the lack of data on detailed disclosures.

To sum up, the empirical results from this section demonstrated that voluntary disclosure beyond IFRS requirements was associated with lower absolute forecast error and forecast dispersion (La Bruslerie and Gabteni, 2010), that higher disclosure compliance with IFRS was associated with lower absolute forecast error (Hodgson et al., 2008) and that IFRS adoption was associated with lower absolute forecast error (Glaum et al., 2013; Cotter et al., 2012).

4.3. Corporate Disclosure: Tone analysis using manual coding

The studies in the previous sections used manual coding to quantify corporate disclosure (quantity or quality) and investigate its effect on a range of measures including accounting quality and earnings quality. A study by Clatworthy and Jones (2003) investigated the role of sentiment in the disclosure of firms and its association with the company's stock performance. Clatworthy and Jones (2003) concentrated on the positive and negative content of corporate disclosure of the 50 largest and 50 smallest UK listed companies. The authors investigated whether the chairman's statement in UK annual reports had significantly differences in size and content in companies that were performing well compared to companies that were performing badly. Previous studies had shown that company managers tended to attribute the company's good performance to their own abilities and the bad performance to other reasons (Clatworthy and Jones, 2003). Thus, the authors aimed to identify whether companies assigned both negative and positive performance to the same internal and external environment determinants. For this purpose they manually analysed the qualitative data from the chairman's statements into "good" and "bad" news items, its length, size, and internal and external factors. Subsequently, the authors divided the sample into companies with good and bad performance and performed two-tailed t-tests.

The results showed that companies tended to attribute their bad performance to external rather than internal factors and good news to themselves in a possible attempt to influence the impressions of the public (Clatworthy and Jones, 2003). The results also demonstrated that companies that had improved performance were likely to express their good news with higher confidence. Because this study used a research methodology that is labour intensive and requires a considerable amount of time to manually process the company disclosures, Clatworthy and Jones (2003) concentrated only on a small part of the annual report. Later studies, as explained in the next section, have used automated techniques to analyse corporate disclosure and measure its tone, in far greater volumes.

4.4. Corporate disclosure: Content analysis using automated techniques

As stated in the previous section, research methods using manual techniques and coding have considerable limitations, mainly because they are labour intensive and therefore usually analyse a limited amount of available data. There is a trend in the accounting and finance literature to employ computer intensive techniques to analyse text and quantify disclosure for research purposes. Seminal papers such as Kothari et al. (2009) and Loughran and McDonald (2011) used dictionaries defined by psychologists and custom dictionaries in order to capture a measure of the tone in corporate disclosure and use it in econometric models.

4.4.1. Content analysis and textual tone

A research paper by Kothari et al. (2009) emerged from a long term research project that examined the role of favourable and unfavourable disclosures for a company on its cost of capital, analysts' earnings forecasts and stock price volatility. Kothari et al. (2009) collected a substantial amount of disclosure data and developed a dictionary-based model to quantify the textual data. As they explained, the quality of corporate disclosures are significantly influenced by the content of this information and this subsequently affects the "firm's capital market environment" (Kothari et al., 2009). In their study they concentrated on the sentiment rather than on the quality of information transmitted by the companies and suggested an interesting approach to analyse substantial amounts of company information.

Instead of including information issued exclusively by the company, they conducted an holistic analysis by including all firm related information available in annual/quarterly reports, the financial and business press, analysts' reports and company announcements (Kothari et al. 2009). The authors argued that the financial press is likely to provide more timely information to investors rather than analysts, who tend to focus on deep analysis and create their own recommendations. They further justified their decision to separately analyse the information provided by managers, analysts and business press by arguing that managers probably tended to provide optimistic news due to personal interest while analysts were probably more conservative due to the information asymmetry risk that they face. Based on previous studies in the literature, Kothari et al. (2009) anticipated that higher disclosure would be associated with decreases in uncertainty and risk. The reduction in risk would subsequently be associated with decreases in the firm's stock price variance as well as the firm's cost of capital (debt and equity) especially if the information is favourable.

Their sample was comprised of 889 US firms from 1996 to 2001 and used available databases to download disclosure texts, such as EDGAR, Investext, Factiva and Dow Jones Interactive (Kothari et al., 2009). Their study provided an innovative approach to categorise the above material in non mutually exclusive categories using a classification system (in dictionary form) that was comprised of the following 6 categories:

1. Statements of market risk, industry analysis and competitive forces
2. Statements of firm-level strategy intent, product market performance, performance of business strategy model in use
3. Statements of human and organisational capital, quality of management performance, corporate governance and leadership
4. Statements of market recognition, power and consistency of branded image, measures of consumer confidence and trust in branded image
5. Statements of corporate and business unit financial performance
6. Statements of federal government regulation enacted or pending influential to firm competitiveness, product market performance, and/or disclosure practices

Kothari et al. (2009) (p. 1650)

Although in this case Kothari et al. (2009) used it for classification purposes, such an approach to automatically analyse the content of corporate text allows a vast amount of information to be analysed without restricting the research design to specific areas of corporate disclosure such as the narratives of annual reports or the notes of the financial statements.

The authors used the General Inquirer computer software that had embedded a tone dictionary to obtain quarterly data about the frequencies of positive or negative pieces of company information. The authors used the Fama and French three factor model to estimate the cost of equity capital and used this, the stock price volatility and the dispersion of analysts' earnings forecast errors as dependent variables. Their independent variables were the firm's size, book to market ratio, gearing and the proportion of positive or negative disclosure per quarter. Hence, Kothari et al. (2009) found empirical evidence to suggest that disclosure with negative (positive) content was likely to increase (decrease) the cost of capital. This seemed to be much more the case for information disclosed in the business press rather than management and analysts' disclosures, implying that the market was likely to reflect uncertainty about the credibility of the latter two groups. The empirical results were similar for the analysts' earnings forecast error dispersion and stock price volatility as positive (negative) information tended to decrease (increase) both variables. The study by Kothari et al. (2009) is used as the basis for the development of the research methodology to quantify the narratives in corporate reports. We use the above disclosure categories in order to capture the quantity of disclosures and investigate their impact on analysts' earnings forecasts before and after IFRS adoption in Europe.

In another seminal study in the development of custom dictionaries to analyse corporate text, Loughran and McDonald (2011) developed their own custom dictionary to analyse the tone in texts with financial information. As they explained, the use of dictionaries designed for research in psychology or sociology may not capture the positive or negative tone of a business text with sufficient reliability. Loughran and McDonald (2011) gave several examples of words that had multiple meanings, which could be positive or negative depending on expression, context or situation.

Therefore, Loughran and McDonald (2011) constructed five different word lists containing strong modal words (e.g. will, must highest), weak modal words (e.g. possibly, depending, could), litigious words, words reflecting uncertainty and positive words. Their qualitative data spanned from 1994 to 2008 and was comprised of approximately 50000 10-K documents (American annual reports) containing about 2.5 billion words and a sub sample of approximately 37000 management discussion and analysis reports.

In their analysis, the authors compared the Harvard Psychosociological Dictionary with their custom dictionaries and realised that there were multiple words classified as negative (or positive) in the former that would make no sense in a financial context. On top of that Loughran and McDonald (2011) examined the value relevance of the two positive/negative dictionaries by regressing excess returns (buy and hold stock return less buy and hold market index return) on size, share turnover, institutional ownership, book to market ratio, a dummy for NASDAQ listing and the Fama-French alpha (based on a regression of the Fama-French three factor model) but did not find any association (Loughran and McDonald, 2011). They did not find any association between positive/negative words and the short-term return around the time of the 10-K filings, or the abnormal trading volume or stock return volatility (Loughran and McDonald, 2011). In summary, Loughran and McDonald (2011) suggested that their self-constructed dictionaries were likely to capture the tone in accounting and finance textual data more accurately. Also, they argued that although tone analysis could not directly explain stock returns, it could be used to derive proxies for types of information and help academics and professionals to capture other channels of information (Loughran and McDonald, 2011). This study provides us with the motivation to develop a custom dictionary based on the objectives of our analysis. As explained in the next chapter of the thesis, we employ similar techniques to test the suitability of our words and word stems using their category classification.

4.4.2. Content analysis and usefulness of accounting information?

A number of research papers have looked at the readability of annual reports and analysts' earnings forecasts (Lehavy et al., 2011), the value relevance of changes in management discussion and analysis sections after changes in firm performance (Brown and Tucker, 2011) and the development of custom dictionaries to investigate the relationship between stock returns and forward looking management disclosures (Muslu et al., 2014). The review of the studies above outlines the recent developments in the area of content analysis using automated tools and provides an overview of the alternative research methods and techniques to analyse and quantify corporate disclosure.

In a study investigating the impact of corporate textual disclosure on analysts' earnings forecasts, Lehavy et al. (2011) concentrated on the readability and complexity of annual reports and used the Gunning-Fog index as a proxy. As demonstrated below, this measure takes into account the proportion of complex words and words per sentence in a text and derives a readability score.

$$FOG_{i,t} = (average\ words\ per\ sentence + percent\ of\ complex\ words)\ x\ 0.4$$

The authors argued that this proxy provides an objective measure of readability and examined its impact on several analysts' earnings forecast characteristics such as earnings' forecast revision response time, number of analyst estimations, information embedded in analysts' reports and the earnings' forecast error and dispersion. Lehavy et al. (2011) stated that a more complex and less readable annual report could potentially increase the costs of processing information for analysts and the public. On one hand this could decrease the analysts' desire to provide estimations but on the other hand, it could increase the demand for analysts' specialised reports. In addition, they expected that companies with less readable reports would be associated with higher absolute forecast errors and forecast dispersion. Lehavy et al. (2011) further suggested that a less readable report would require more time and effort from analysts to process.

The authors used the ratio of a company's stock returns to the analysts' revisions as a proxy for the information content of analysts' reports, and suggested that it was higher for companies with low annual report readability. They used a sample comprised of US firms from 1995 to 2006 and estimated the revision time as the time between the submission of the annual report until the issue of the first analyst's forecast.

Beyond the analysts' report information content, the authors employed the Barron et al. (1998) proxy for uncertainty, divided in private uncertainty and common uncertainty among analysts. Also, Lehavy et al. (2011) controlled for institutional ownership, size, corporate segments, number of management forecasts, intangibles, stock price volatility, market adjusted returns, R&D expenses and advertising expenses. The results showed that companies that issued 10-K reports with lower readability were likely to have higher forecast dispersion and absolute forecast error, as well as higher uncertainty as proxied by the Barron et al. (1998) measures. Also, they found that the same companies were likely to have high investor demand for analysts' reports. Hence, Lehavy et al. (2011) suggested that not only complications in content but linguistic complexity was likely to affect the investors' understanding of the corporate reports and influence their demand for financial analysts' services. This study provides an example of when corporate disclosure quantity does not imply corporate disclosure quality as reflected in earnings quality. Hence, this study provides us with motivation research: a) whether higher quantity of corporate disclosure is associated with earnings' forecast quality, b) whether there are any differences between disclosure categories and c) what is the role of the adoption of new accounting standards and disclosure requirements.

A study by Brown and Tucker (2011) focussed on the narrative disclosures in the management discussion and analysis sections in annual reports and constructed a measure to identify their degree of difference across time. They employed a large sample (approximately 28000 observations) of US firms from 1997 to 2006. As they explained, the purpose of the management discussion and analysis sections is to inform investors about the firms' position in areas such as market risk, capital resources available, liquidity and changes in earnings.

The authors developed a method to track similarities and differences in management discussion and analysis documents based on algorithms widely used by internet search engines. Using this method, Brown and Tucker (2011) aimed to determine if the management discussion and analysis disclosures were value relevant. In addition, Brown and Tucker (2011) examined the impact of regulatory changes. This raised the following question; if there have been considerable differences in the management discussion and analysis section between companies with larger or smaller economic changes throughout the study's period. Therefore, to develop their disclosure analysis method, Brown and Tucker (2011) employed a Vector Space Model that estimated the similarity between two documents and derived a difference score that was subsequently converted to an expected difference score according to each document's length. Using this score as the dependent variable, Brown and Tucker (2011) regressed it on changes in gearing, liquidity, working capital, earnings per share, stock return volatility, acquisitions and free cash flow. In a secondary analysis they included competition, institutional ownership, BIG6 auditors, litigation and analyst following.

Their empirical findings showed that companies with higher degree of difference in their management discussion and analysis are likely to have higher market participants' reaction around the filings of 10-K reports (Brown and Tucker, 2011). However, they also found that analysts' earnings forecasts revisions and/or the magnitude of revisions are not associated with any management discussion and analysis modifications. Brown and Tucker (2011) attributed this to the information content of management discussion and analysis and argued that the results might reflect long term cash flow information rather than the current period performance. Regarding the association between management discussion and analysis modifications and economic changes, Brown and Tucker (2011) found a positive association that became even stronger for changes in capital resources and liquidity rather than changes in operations. Brown and Tucker (2011) also found that the management discussion and analysis alterations and the length of this section had a declining trend (despite concurrent regulatory pressure for the opposite) over the study's period, which probably implies that managers give it less importance.

Brown and Tucker (2011) then divided their sample in two by selecting the companies with the 50 lowest and 50 highest disclosure modification scores and found that the latter group was likely to provide more information about the business and in particular, more about operations, liquidity and earnings' change.

Another content analysis study using computer linguistics to analyse management discussion and analysis, by Muslu et al. (2014), provided an interesting insight by developing a custom dictionary which concentrated on the quantity of forward looking phrases. The authors used a US sample with 5705 firms between 1993 and 2009. Their study aimed to determine if companies with an information deprived environment were likely to have a higher quantity of forward looking disclosures in their management discussion and analysis and if the same disclosures were likely to be related to improvements in the firms' information environment. For this purpose they narrowed down their study to two stock return time frames, in order to uncover any potential relation between forward looking management discussion and analysis disclosures and stock returns for firms with a modest information environment. Their methodology involved regressions using stock returns as dependent variables and future earnings and their interaction with disclosure as independent variables (Muslu et al., 2014). The authors developed a UNIX Perl program that using the US annual report database was able to automatically download, extract and analyse the management discussion and analysis sections, looking at their forward looking statements. Their empirical findings showed that companies that had more abnormal forward looking disclosures in their management discussion and analysis had stock returns around the submission of their reports that better reflected forthcoming earnings. However, before the submission of their 10-K reports (11 months) and after (1month) the firms with more abnormal forward looking management discussion and analysis statements had stock returns that reflected the future earnings at a smaller degree. Thus, Muslu et al. (2014) argued that forward-looking disclosures were likely to reduce the effect of a deprived information environment but noted that their results were significantly influenced by loss making firms. In general, Muslu et al. (2014) indicated that their study, like other text analysis studies, was partly a test of their method of analysis.

The authors acknowledged that the questions on why firms choose this information channel and whether the information in management discussion and analysis section is correlated with other annual report sections remain unanswered. Our research is similar to the study by Muslu et al. (2014) in that it assesses the quantity of corporate disclosure and its association with the future economic performance of firms. In the following chapters, we provide evidence relating to the questions raised by Muslu et al. (2014) on a) whether the quantity of corporate disclosure is associated with changes in the analysts' earnings forecasts and b) which disclosure categories are most likely to be associated with these changes.

4.5. Summary

In summary, the authors of the existing literature on corporate disclosure have two main purposes: to produce quantitative measures reflecting the characteristics of different channels of corporate disclosure and to investigate their impact on financial reporting quality. The boundaries and limitations set on these studies, due to data constraints, available research resources or the nature of the research questions, provide several opportunities for further research to fill gaps in the literature. So far, the studies have provided some early evidence on the impact of IFRS adoption on the firms' and analysts' information environment and on the role of corporate disclosure. Assuming a reasonable level of market efficiency, it can be suggested that any improvements in the information environment due to higher accounting and disclosure quality should not be attributed only to the content of annual reports but are likely be associated (probably not symmetrically) with other channels of corporate communication too. Similarly, any changes in disclosure regulation or financial reporting standards could potentially add value to the information available to analysts, investors and other stakeholders. The problem this research faces is that characteristics of corporate disclosure such as, compliance, defining categories, definitions, types (what is mandatory or not) and meanings, are subjective and difficult to capture. Most importantly it is challenging to determine their quality of disclosure. Such challenges can only provide inspiration to the researcher and drive to new exciting paths in the evaluation of financial reporting and business communication.

Chapter 5. Research Design and Methodology – Quantitative and Qualitative analysis

5.1 Identifying the gap in the literature

The existing research mainly involves a broad analysis of the relationships between measures of earnings quality and financial reporting variables and other firm specific variables, using large samples of firms from multiple countries. In most cases, the research design is constructed to analyse the effects of the type of regulation adoption (mandatory or voluntary), type of enforcement (usually classified as strong or weak enforcement) and the legal environment (civil law or common law) in each country. However, whilst the results of these studies consider the impact of IFRS, they do not investigate the unique characteristics of the information environment in different countries. The majority of studies do not take into account changes in accounting regulations subsequent to the adoption of IFRS such as changes made in 2007 and 2008 to IFRS3 Business combinations, IFRS7 Financial Instruments and IFRS8 Operating Segments. These changes may have a material impact on companies' financial statements and disclosure. An in-depth analysis of accounting standards and the treatment of intangibles, acquisitions and business combinations by companies is likely to demonstrate the impact of IFRS adoption. Including variables to identify those firms who were most affected by the regulation changes, such as measures of intangible assets and amortisation and to reflect the acquisition of subsidiaries as well as financial instruments and operating segments, is likely to identify the effect of these factors on earnings quality.

Existing studies of earnings quality such as Byard et al. 2011, Tan et al. 2011 tend to suffer from a significant weakness, in that the models do not take into account the narrative information that is disclosed in annual reports and others such as Cotter et al. (2012) and Glaum et al. (2013) neither consider the many other sources of information that contribute to the analysts' information environment. Hence, a complementary analysis of corporate disclosure, in terms of the link between information quantity and information quality, is likely to yield further, interesting findings.

In summary, our study contributes to the literature in the following key ways.
We attempt to address both of the above gaps by creating a number of variables to reflect the quantity of disclosures made by firms across different categories and collect disclosure information from a range of different sources. For this purpose, we develop a new custom dictionary to quantify the information transmitted by firms to outsiders through corporate reports and announcements. We examine the properties of analysts' forecasts on a monthly basis and we test an approach between the monthly corporate disclosure and the monthly evolution of analysts' forecasts. Using monthly forecasts allows us to model the evolution of the relationship between the forecasts and the disclosure information throughout the financial year rather than just using on observation at each year end. Also, compared to previous studies on IFRS adoption we use an extended time frame to include the IFRS7 and IFRS8 revisions that possibly affected the quantity and quality of corporate disclosure and we assess the impact of IFRS3 on the role of goodwill, goodwill impairments and acquisitions in Europe.

Consistent with prior literature, our empirical models use four properties of analysts' forecasts (accuracy, forecast errors, variance and number of analysts following) as measures of earnings quality. These factors are modelled using known control variables suggested by the literature (Size, age, return on assets, gearing, volatility and stock returns) plus variable representing mandatory or voluntary adoption of IFRS; variables representing the factors identified above as those for which new IFRS rules have been issued since adoption (goodwill, intangibles and acquisitions) and finally a set of variables representing the narrative disclosure of individual firms based on analysis of all publicly disclosed information about the firm.

The research covers samples of UK, French and German companies in order to identify the differences in earnings quality and disclosure practices between these countries. The reasons for these differences are likely to be due to the effects of legal system differences (civil law in France and Germany and common law in the UK), historical corporate financing differences (market orientated in the UK and bank orientated in France and Germany) as well as the differences in financial reporting standards used in these countries before IFRS adoption.

The three countries provide a useful contrast since prior UK standards (UK GAAP) were far more similar to IFRS than other standards used previously by our sample companies (French, German and US GAAP). Byard et al. 2011 construct a table based on previous studies (Kaufmann et al. 2007; Bae et al. 2008) and classify the countries according to the legal and enforcement environment and the differences between IFRS and local GAAP. Following adoption, their classification shows that the UK has strong enforcement – low differences from IFRS, whereas Germany has strong enforcement – high differences from IFRS and France has weak enforcement – high differences from IFRS. These distinct country-level characteristics have implications for the analysts' information environment since weak enforcement is likely to make forecasting more difficult and increase variability. Since the largest companies from each country were selected for our study, they jointly constitute a considerable part of the European Economy, which increases our confidence in the generalisability of our findings. Furthermore, the German sample contains both voluntary and mandatory adopters of IFRS, which provides the opportunity to assess whether there are any important differences between the two.

5.2 The regulatory background in the UK, France and Germany

The economic background

The UK, is a leading economic power, a major financial centre and the third largest economy in Europe. Financial services, particularly banking, insurance, and business services, are key industries driving British GDP growth. Manufacturing although substantially reduced, still comprises approximately 10% of economic output. The 2008 global financial crisis severely damaged the economy, due to the importance of its financial services sector. The recession led the UK government to implement several measures to stimulate the economy and stabilise the financial markets (CIA, 2016).

Germany has the largest economy in Europe and the fifth largest economy in the world. It is a major exporter of machinery, vehicles, chemicals, and other consumer products. Following the global crisis, economic stimulus and stabilisation policies were implemented in 2008 and 2009 in conjunction with tax cuts increased Germany's total budget deficit (CIA, 2016).

France has the second largest economy in Europe. The French economy is highly diversified and consists of multiple industries. The French government has partially or fully privatised previously state-owned companies in automotive, air transport, construction and telecommunications. However, the French government is still a major shareholder in several industries, particularly power, public transport, and defence. Also, France is the most visited country in the world and derives the third largest tourism revenues in the world. The 2008-2009 crisis severely affected the budget deficit and public debt and GDP growth in France (CIA, 2016).

The financial system

In the financial system in bank-based economies such as in France and Germany, banks have a leading role in managing savings, allocating capital, supervising the investment decisions of corporate managers, and providing risk management services. In more market-based systems such as in the United Kingdom, financial markets facilitate the investment of funds in firms, exert corporate control, and facilitate risk management via sophisticated financial products (World Bank, 2016).

Cross-country research showed that the distinction between bank-based and market-based financial systems showed the importance of efficient financial regulation and services delivery. Research has also showed that it is necessary to consider the underlying characteristics of the financial system, such as the regulatory and information environment (World Bank, 2016). It should be noted though that it is important to investigate how the same regulatory changes (such as the IFRS adoption) affect different systems when implemented at the same time.

The legal system

The UK operates under common law system while France and Germany operate under civil law system.
Features of a common law system include (World Bank, 2016):

- A written constitution or codified law is not always present
- Judicial decisions are binding. Also, decisions of the highest court can be overturned by the same court or legislation
- Extensive freedom of contracts
- In general, everything is permitted if it is not explicitly prohibited by law

On the other hand, features of a civil law system include (World Bank, 2016):

- There is generally a written constitution based on specific codes (e.g., civil law, corporate law, administrative law, tax law and constitutional law) enshrining into legislation basic rights and duties
- Only legislative enactments are considered binding. There are little margins for judge-made law in civil, criminal and commercial courts. However, in practice judges tend to follow previous judicial decisions
- In some civil law jurisdictions such as in Germany, writings of legal scholars have considerable influence on the courts
- There are separate constitutional courts, administrative courts and civil court systems for each code
- Less freedom to make contractual arrangements

Financial regulation

The disclosure requirements in the three stock exchanges (London Stock Exchange, Euronext Paris and Frankfurt Stock exchange) follow the EU Transparency Directive and require the publication of half yearly and quarterly reports. They also require reports on internal control and corporate governance, statutory auditor fees, disclosures on share buyback programmes, information about the annual general meeting, directors' dealings and other regulated information (LSE, 2016; FSE, 2016, AMF, 2016).

However, changes in the corporate governance regulations occurred in the 3 countries of the sample. These changes could potentially affect the financial reporting quality at the country level and we review the most notable changes.

UK

The UK Corporate Governance Code (formerly the Combined Code on Corporate Governance) governs actions and behaviour of company directors. The Code lists the standards of good practice concerning issues on leadership, effectiveness, accountability, remuneration, and shareholder relations (Deloitte, 2016).

Changes in the Corporate Governance code that could have affected the company disclosures during the timeline of our sample occurred on 2006 and 2008. The first change resulted to increased disclosure aiming to clarify the application of the principles of the Corporate Governance Code by a company. The second change that may affected corporate disclosure related to the appointment of a chairman. These changes required additional information about the job specification and the chairman's responsibilities (PwC, 2010).

The above changes as well as other minor amendments in the disclosure requirements of the Corporate Governance Code are expected to have a minor impact on the companies' total disclosures.

France

The AFEP-MEDEF French corporate governance code was amended in 2007 and 2008. In disclosure terms, the changes mainly affected the disclosure of executive compensation of listed company directors. The changes required disclosure of information regarding collective benefit schemes, options, performance shares awards, stock options and any associated risks. These changes did not substantially alter the disclosure requirements but provided additional useful information to the market regarding executive compensation. The French corporate governance code also encourages companies not to make selective disclosures to financial analysts but to disclose all information available to all parties at the same time (ECGI, 2010).

Germany

The German corporate governance code was amended in several instances from 2005 to 2011. The 2005 revision occurred concurrently with the enactment of mandatory disclosure of executive compensation by German legislation. The 2007 revision of the code required the preparation of quarterly and half yearly reports. However, these requirements were already enacted by the Transparency Directive and therefore had no impact on the firms of our sample. None of the subsequent revisions up to 2011 made any amendments to the disclosure requirements. Hence, it is suggested that none of the corporate governance code changes could be concurrent with regulation changes and distort our findings (DCGK, 2016).

In summary, the disclosure requirements of the corporate governance codes across the three countries could potentially affect our findings. However, due to the absence of significant regulatory changes during the time frame of our study, we expect any impact caused by corporate governance disclosures to be minimal.

Related published studies

This study is closely related to Chalmers et al. (2012) and Cheong et al. (2010) which investigate the association between intangible assets reported under IFRS with analysts forecasts properties in the Pacific area. Furthermore, it is related to Brown et al. (2013) and Ernstberger et al. (2008) on the basis of using monthly analysts' data but differs on both the country selection (Australia in Brown et al., 2013) and standards/time frame (IAS until 2004 in Ernstberger et al., 2008). Regarding disclosure analysis, this research project adopts a disclosure classification system by Kothari et al. (2009) but differentiates as a) it uses it as the basis for the development of new custom dictionary b) to obtain disclosure proxy scores rather than only categorise the disclosure texts and conduct separate analysis for each one. Also, on the basis of concentrating on the IFRS adoption and disclosure effect on analysts forecasts, the project differentiates by using monthly data and a longer time frame but also differentiates to Beuselinck et al. (2010) and Kim and Shi (2012) on not using the Barron et al. (1998) models, to La Bruslerie and Gabteni (2012) and Cotter et al. (2012) on not manually coding corporate disclosure and to Glaum et al. (2013) on not using disclosure scores from annual report competitions.

5.3. Hypotheses development

5.3.1. Before and after IFRS adoption

Consistent with the academic literature, we hypothesise that the introduction of IFRS adoption is likely to increase earnings quality and disclosure, which will improve the analysts' information environment and this will be reflected in the accuracy of their earnings forecasts. Hypotheses are tested in both the periods before adoption of IFRS and in the periods after adoption, in order to determine whether the relationship between analyst's forecasts and each key variable is changed by the adoption of IFRS. Hence, the following hypotheses are developed:

$$H_1: \textit{The absolute earnings forecast error is reduced following IFRS adoption}$$

$$H_2: \textit{The earnings forecast dispersion is reduced following IFRS adoption}$$

$$H_3: \textit{The number of analyst estimations increases following IFRS adoption}$$

The main motivation behind the development of hypotheses between the number of analysts estimations and a) IFRS adoption and b) financial position and performance disclosures is for a) enhanced accounting quality and comparability from IFRS resulting in a higher number of analysts providing forecasts and b) higher analyst following with higher quantity of key financial information and narratives that could be further enhanced by IFRS adoption. The number of analyst estimations is not tested in any other hypotheses but it is considered when examining the independent variables and any meaningful observations from the results are reported. In relation to accounting standards issued post the adoption of IFRS, we develop specific hypotheses relating to the issue of IFRS3 (Business Combinations), IFRS3 brought important changes to accounting for acquisitions, in particular, requiring the impairment of goodwill after an annual test, increased disclosure for current and past business combinations and the identification and valuation of more intangible assets acquired from the target company.

A study by the Financial Reporting Council (FT, 2010) suggest that goodwill and intangibles are still poorly reported under IFRS and that a higher proportion of goodwill will lead to higher information asymmetry and more uncertainty in analysts' forecasts. However, the new accounting rules for goodwill can potentially to provide additional valuable information to the market and the financial analysts compared to domestic GAAPs due to the goodwill impairment and the related disclosures. Therefore, the following hypotheses are developed:

$$\boldsymbol{H_4}: \boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error}$$

$$\boldsymbol{H_5}: \boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ forecast\ dispersion}$$

The fact that the company's managers have the option to impair up to 100% of goodwill in a financial year is also worthy of investigation. The effect of this choice on earnings quality and analysts' forecasts is not clear. On one hand, since it is likely to result in more earnings volatility it could be assumed to increase information asymmetry and so increase analysts' uncertainty, but on the other hand, information about the management's view of the speed of goodwill impairment could convey valuable information about the firm's prospects. Thus, the role of goodwill impairment is investigated by developing the following hypotheses:

$$\boldsymbol{H_6}: \boldsymbol{Higher\ goodwill\ impairments\ are\ associated\ with\ changes\ in\ absolute\ forecast\ error}$$

$$\boldsymbol{H_7}: \boldsymbol{Higher\ goodwill\ impairments\ are\ associated\ with\ changes\ in\ forecast\ dispersion}$$

As before, hypotheses $\boldsymbol{H_6}$ and $\boldsymbol{H_7}$ are tested in both the periods before adoption of IFRS and in the periods after adoption.

In addition to the main requirements discussed earlier, when IFRS3 became effective in 2004 it required increased disclosure about business combinations and acquisitions. In additionally, there were revisions to IFRS3 in 2008 that a) required that acquisition costs to be expensed instead of capitalised, b) changed the contingent consideration rules for acquisitions allowing for a recognition in profit or loss in the income statement and increased disclosure, c) permitted the use of the full goodwill method, d) changed the rules relating to transactions with non-controlling interest, e) abolished the requirement of step acquisitions (the requirement to measure the assets and liabilities at fair value at each step of the transaction to compute a 'portion' of goodwill was abolished. Goodwill is now calculated as the difference between the fair value of any interest in the business held before the acquisition, the consideration transferred and the net assets acquired). Despite the flexibility that IFRS grants to company managers regarding accounting for acquisitions, IFRS adoption enhances disclosure for acquisitions. It is assumed that the more material the numbers relating to acquisitions in a published set of accounts the larger the effect on analysts' ability to forecast earnings. However, as above with goodwill write-off, the expected sign of this relationship is not predictable. Higher size of acquisitions is defined as the net value of acquisitions in the financial year over total assets. Hence, the following hypotheses are developed:

$$\boldsymbol{H_8}: \boldsymbol{Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error}$$

$$\boldsymbol{H_9}: \boldsymbol{Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ forecast\ dispersion}$$

Hypotheses $\boldsymbol{H_8}$ and $\boldsymbol{H_9}$ are tested in both the periods before adoption of IFRS and in the periods after adoption.

According to existing academic and professional literature, higher intangible assets intensity may diminish analysts' earnings forecast accuracy. (Amir et al., 2003). Some studies suggest that intangibles are poorly reported under IFRS (FT, 2010).

However, studies in the literature find that under IFRS, higher intangible assets intensity is likely to be associated with lower absolute forecast error (Chalmers et al., 2012; Cheong et al., 2010) and lower forecast dispersion (Chalmers et al., 2012). Hence the following hypotheses are developed:

$$H_{10}: \textit{Higher intangible assets intensity is associated with changes in absolute forecast error}$$

$$H_{11}: \textit{Higher intangible assets intensity is associated with changes in forecast dispersion}$$

Proponents of IFRS claim that IFRS adoption can enhance the narrative disclosures in the notes to the financial statements and therefore increase transparency and comparability (Ball, 2006). The mandatory adoption of IFRS within the context and in conjunction with the EU Transparency Directive resulted in a considerable increase in the amount of financial information that companies disclose. Hence, our study aimed to assess if the increased quantity of financial information improved the information environment post IFRS adoption. In addition to the narrative disclosures in financial reports, we used content analysis and a customised dictionary to analyse pieces of information about the companies in our sample published by the companies themselves. Search terms were developed to identify information relating to financial position and performance of the firm and the following hypotheses are developed:

$$H_{12}: \textit{Higher disclosure quantity of financial position and performance is associated with changes in absolute forecast error}$$

$$H_{13}: \textit{Higher disclosure quantity of financial position and performance is associated with changes in forecast dispersion}$$

$$H_{14}: \textit{Higher disclosure quantity of financial position and performance is associated with changes in the number of analyst estimations}$$

Given the research design of this project, it is likely that the best proxy the information content of the financial statements is the disclosure category including statements about company performance and financial position (LN(FINPOS)). Also, it is expected that this disclosure category is most affected by IFRS adoption and this is the rationale behind the decision to create an interaction term with the IFRS indicator variable only with this disclosure variable. Therefore, we did not develop hypotheses relevant to IFRS adoption for the rest of the disclosure categories. However, outside the IFRS adoption framework, we examine the results for the disclosure categories other than LN(FINPOS) to identify the effect of each disclosure category on analysts' forecasts and any differences across countries and accounting standards.

5.3.2. The post IFRS adoption period

The main purpose of the second part of the empirical analysis is to assess the policy revisions of IFRS3, IFRS7 and IFRS8 within this project's time frame by analysing each standard's implementation before and after periods. It is important to investigate whether the IFRS revisions resulted in further improvements in the analysts' information environment.

This study's sample covers 2003 to 2011 and the analysis focuses on two IFRS3 revisions (2008 and 2010), three IFRS7 revisions (2005, 2008 and 2010) and two IFRS8 revisions (2006 and 2009). To avoid any confusion, the revisions are designated according to the year that they are issued; the effective dates are stated in each corresponding sub-section below. IFRS3 will be tested using the previously explained balance sheet variables while IFRS7 and IFRS8 will be assessed by observing if the coefficients of the disclosure variables change through time. It is intended to identify patterns related to those changes in regulations that are a significant component in the information environment and one which most studies disregard.

5.3.2.1. IFRS3 Business Combinations

In 2008, the IASB issued a revision for IFRS3 Business Combinations which was a result of a collaboration with FASB, the US accounting standards setter (Deloitte, 2008). The revision of IFRS3 was considered a move towards higher convergence between IFRS and US GAAP but there were still considerable differences in several areas relating to goodwill, such as the mandatory requirement (instead of optional) full goodwill method in the US, the use of fair values, contingencies and employee benefits and the definition of control (Deloitte, 2008). In addition to measurement and recognition difference, disclosure requirements differed too.

The most important changes in the 2008 amendments were effective for annual reports starting from 01/07/2009 (Deloitte, 2008). The new IFRS approach:

a) demanded that acquisition costs to be expensed instead of capitalised. These include various related costs such as legal, accounting, valuation, consulting, advisory and any costs for an internal acquisitions department.
b) changed the contingent consideration rules for acquisitions allowing for charge in the income statement and increased disclosure. Specifically, if new information about the fair value of the contingent consideration becomes available, the change should be recognised in the income statement.
c) permitted the use of the full goodwill method which permits an entity to recognise 100% of the goodwill of the acquired entity (instead of just the acquiring entity's goodwill portion) increasing the non-controlling interest in the net assets of the acquired entity too.
d) changed the transactions with non-controlling interest rules for changes in ownership interest that are recognised as equity transactions.
e) abolished the requirement of step acquisitions. Previously, the fair value measurement of each asset and liability was required at each step. From the revision onwards, the goodwill is calculated as "the difference between the fair value of any investment in the business held before the acquisition, the consideration transferred and the net assets acquired" (IASB, 2014).

Despite the flexibility that IFRS grants to company managers regarding acquisitions, such as discretion on the expenditure of acquisitions costs, IFRS3 enhances disclosure for acquisitions in conjunction with changes in the accounting treatment of acquisitions that may impact the income statement.

Hence, the following hypotheses for IFRS3 2008 are developed:

$$\boldsymbol{H_{15}}: \boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error\ following\ IFRS3\ (2008)\ adoption}$$

$$\boldsymbol{H_{16}}: \boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ forecast\ dispersion\ following\ IFRS3\ (2008)\ adoption}$$

$$\boldsymbol{H_{17}}: \boldsymbol{Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error\ following\ IFRS3\ (2008)\ adoption}$$

$$\boldsymbol{H_{18}}: \boldsymbol{Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ forecast\ dispersion\ following\ IFRS3\ (2008)\ adoption}$$

In 2010, in the context of Annual Improvements to IFRSs, IFRS3 (2010) changed in three areas (KPMG, 2010): a) Concerning acquisitions after a firm applied IFRS3 2009, when an acquirer is obliged to replace the acquiree's awards then is obliged to voluntarily replace unexpired acquiree share based payment awards too, b) regarding business combinations that occurred before the application of IFRS3 2009, any contingent consideration that has not been settled with IFRS3 2009 then it will continue to be accounted for with IFRS3 2004 and "any cost of the business combination is adjusted if and when payment of the contingent consideration is probable and the amount can be measured reliably", c) applicable from the adoption of IFRS3 2009 "IFRS 3 is amended to limit the accounting policy choice to measure non-controlling interests (NCI) upon initial recognition either at fair value or at the NCI's proportionate share of the acquiree's identifiable net assets to instruments that give rise to a present ownership interest and currently entitle the holder to a share of net assets in the event of liquidation" (KPMG, 2010).

Due to the limitations in managers' flexibility, it is expected that the above revisions are likely to slightly increase the information content or improve the information quality and the following hypotheses are developed:

$$\boldsymbol{H_{19}: Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error\ following\ IFRS3\ (2010)\ adoption}$$

$$\boldsymbol{H_{20}: Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ forecast\ dispersionfollowing\ IFRS3\ (2010)\ adoption}$$

$$\boldsymbol{H_{21}: Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error\ following\ IFRS3\ (2010)\ adoption}$$

$$\boldsymbol{H_{22}: Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ forecast\ dispersion\ following\ IFRS3\ (2010)\ adoption}$$

5.3.2.2. IFRS7 Financial Instruments

As discussed in detail later, the analysis of narrative disclosures using the custom dictionary distinguishes among different categories of corporate disclosure by following an holistic approach and by using mutually inclusive disclosure proxies. The variable LN(FRMSTR) is a disclosure proxy for firm strategy, product market performance and performance of business strategy model. The variables LN(FINPOS) is a disclosure proxy for corporate and business performance and financial position. Inevitably, it can be suggested that it is challenging to determine whether either LN(FRMSTR) or LN(FINPOS) is the most appropriate measure to examine the impact of either IFRS7 Financial Instruments of IFRS8 Operating Segments. It is assumed with caution that IFRS7 is likely to be *more* relevant to LN(FINPOS) and IFRS8 be *more* relevant to LN(FRMSTR). The argument for LN(FINPOS) and IFRS7 Financial Instruments is that this disclosure category contains search terms such as "debt", "derivative", "financial instrument", "debenture".

The argument for LN(FRMSTR) and IFRS8 Operating Segments is that this disclosure category contains search terms such as “product”, “service”, “customers”, “revenue” as well as “operating segment” and “sales”.

IFRS7 (2005)

IFRS7 (2005) became effective for annual periods beginning 01/01/2007 and it considerably increased the volume of quantitative and qualitative mandatory disclosure for financial instruments. IFRS 7, Financial Instruments Disclosures, consolidated and enhanced existing disclosure requirements (IAS32 Financial Instruments) and added some significant new disclosures.
According to PwC (2007) the key requirements of IFRS7 initially were:

- Determination of the criteria used to classify financial instruments.

IFRS7 required particular disclosures for financial assets and liabilities at fair value as well as for financial assets that were available-for-sale. Also, IFRS7 demanded disclosures when an impairment (which would affect the earnings/loss of the firm) is set against a financial asset or an allowance account is created.

- Qualitative disclosures about risks faced and the strategies used to manage them.

IFRS7 demanded narrative disclosures for credit risk, market risk, and liquidity risk and specifically to identify and provide details of the risk exposure related to financial instruments as well as to state the policies, objectives, methods and procedures for risk management and measurement. Also, IFRS7 required the disclosure of any changes from the previous reporting period. PwC (2007) regarded the above requirements as the most significant brought by IFRS7 as they were requiring the companies to recognise the above risks and disclose their plans to encounter them.

- Disclosure of the components of the fair value movement for items classified as fair value through profit and loss.

IFRS7 required the disclosure of fair value of financial instruments due to market movement and any changes in credit as well as their impact on the profit and loss statement. This change is expected to increase substantially the information to investors about the firms' investments and exposure to financial instrument risks as well as the marked to market impact on the firm's earnings or loss.

- Quantitative disclosures about the potential impacts of market risks.

Quantitative disclosures about the firm's credit, market and liquidity risk are required after IFRS7 PwC (2007). For credit risk, quantitative disclosures included information about the maximum exposure to credit risk. Also, disclosures required information for the credit quality, age and analysis of assets that are neither past due or impaired as well as analysis of financial assets that are individually determined to be impaired. Therefore, this requirement would provide additional information to analysts about impairments related to credit risk that would impact the earnings of the firm.

For liquidity risk, IFRS7 required narrative disclosures for liquidity risk as well as a maturity analysis for financial liabilities demonstrating the remaining contractual maturities.

For market risk a sensitivity analysis is required by IFRS7 for market risks affecting the firm in the reporting period such as prices, currency and interest rate risks. The sensitivity analysis should clearly demonstrate its methods and assumptions as well as the impact to the profit and loss statement. Hence, IFRS7 disclosures are likely to convey useful information to analysts about the impact of financial instruments (used to mitigate market risk) to the profit and loss statement and potentially improve the analysts' information environment.

- Discussion of the capital management strategy.

Finally, IFRS7 required disclose quantitative and qualitative information about the firms' strategies, goals, policies and procedures for managing capital PwC (2007).

IFRS7 (2008)

Further changes became effective for annual periods from 01/01/2009. Initial revisions of IFRS7 in May 2008 demanded the reclassification of derivatives based on whether their treatment included "fair-value-through-profit-or-loss" and also required changes of the presentation of hedges at the segment level, as well as applicable effective interest rate on cessation of fair value hedge accounting (Deloitte, 2008). In October 2008 the IASB further revised IFRS7 and did not permit the reclassification of securities out of trading category if fair value has been previously elected but allowed it only for reclassification to loan category under the cost basis if intention and ability to hold for the foreseeable future for loans or until maturity for debt securities (Deloitte, 2008). Finally further changes to IFRS7 in March 2009 required (Deloitte, 2008):

- Fair value disclosures must be made separately for each class of financial instrument
- Additional disclosures for changes in the method for determining fair value and the reasons
- Establish a three-level hierarchy for making fair value measurements and additional disclosures as well as a sensitivity analysis
- Provided further clarifications regarding the current maturity analysis for non-derivative financial instruments and required additional disclosures of a maturity analysis for derivative financial liabilities

The above changes to IFRS7 effective from 01/01/2009, were likely to change the measurement and classification of financial instruments and most importantly to enhance the disclosure for the impact of the marked to market financial instruments to the profit and loss statement. Hence, the above additional disclosures are expected to be related to improvements in analysts' earnings forecasts accuracy.

The above enhancements in disclosure substantially increased the quantity of qualitative and quantitative information and are expected to considerably improve the analysts' information environment.

Using indicator variables for the adoption of IFRS7 and subsequent revisions we will exploit the disclosure variables and assess any changes that could be related to the initial adoption of IFRS7.

It should be noted that the adoption of IFRS7 (2008) *Financial Instruments* coincides with the adoption of IFRS8 (2006) *Operating Segments* as they are both effective from 01/01/2009. Both standards are likely to affect the corporate disclosure in total but it can be suggested that IFRS7 (2008) is more likely to affect LN(FINPOS) while IFRS8 (2006) is more likely to affect LN(FRMSTR) and LN(FINPOS). However, given the research design of this project it is acknowledged that it is challenging to distinguish which disclosure category is more affected by each standard. As demonstrated below a distinction between the two disclosure categories is attempted in the case of IFRS8 Operating Segments but the inferences should be interpreted with caution.

IFRS7 (2010)

Finally in the context of Annual Improvements to IFRS, some minor clarification of disclosures came into effect. (Deloitte, 2010). The 2010 version of IFRS7 provided some further clarification on the disclosure requirements of credit risk and collateral held, and removed the requirement to disclose renegotiated loans. The revisions recommended qualitative disclosures about financial instruments to help users of corporate disclosure to form an overall picture of the nature and extent of risks related to financial instruments (Deloitte, 2010). The above amendments provided only clarifications about existing disclosure requirements and were not likely to alter the underlying disclosures about financial instruments. Hence, the above changes are considered minor and will not be further investigated.

5.3.2.3. IFRS8 Operating Segments

The key differences between IFRS8 and its predecessor IAS14 were identified by PwC (2008) as follows:

- Entities that IFRS8 applies to

IFRS8 applies to entities that intend to sell equity or debt securities to a public market regardless if they will be traded or not compared to IAS14 which required securities to be traded.

- Definition of operating segments

IAS14 required the business or geographical separation of operating segments while IFRS8 requires the identification of segments based on the business activities that could generate revenue or incur expenses and for which discrete financial information is available. According to PwC (2008) this change is likely to result in an increase in the number of operating segments and change their composition. Hence, probable increases in disclosure of segments could provide analysts with more specific revenue/expenses information and be related to improvements in earnings forecasts.

- Reported information on operating segments

Under IAS14 reported information was based on the financial information presented at the financial statements while under IFRS8 reported information is based on information that the management uses to efficiently manage the on going business PwC (2008). Hence, it is expected that a higher amount of insider information will be reflected on operating segments disclosures which could further help the analysts in understanding the business and its revenue generating units.

- Measurement of information reported for operating segments

Compared to IAS14 where the measurement of information was based on reported financial information, similarly to the above, under IFRS8 segment disclosures are based on management information. This on one hand could uncover more private information to the market and the analysts but on the other hand as PwC (2008) stated this information is not subject to statutory audit and therefore raises questions about its reliability.

It can also be suggested that this change could result to a loss of financial information comparability. Hence, this change on one hand could be related to improvements due to increased disclosure of private information but on the other hand the ability of the management to manipulate such information without external control may also have a negative effect in the information quality of segment disclosures.

The implementation of IFRS8 Operating Segments was effective for periods beginning or after 01/01/2009. The associated increases in the quantity of segmental information are likely to increase the quantity of disclosures about both firm strategy and business model as well as the firm's financial position and performance. Hence, it is expected to be associated with improvements in the analysts' information environment and reflected in analysts' earnings forecasts.

IFRS8 (2010)

In the context of "Improvements to IFRS 2009" (Deloitte, 2009), IFRS 8 was amended in order to clarify that an entity is required to disclose a measure of segment assets only if that measure is regularly reported to the chief operating decision maker. The above changes are considered minor and will not be further investigated.

5.3.2.4. Intangible assets

The improvements to IFRS in 2008 and 2009 made minor adjustments to IAS38 Intangible assets. The amendments clarify the context in which an entity can recognise a prepayment asset for advertising or promotional expenditure and specify that they are permitted up to the point at which the entity has the right to access the goods purchased or up to the point of receipt of services Deloitte (2008).
"Removal of wording perceived as prohibiting the use of the unit of production method if it results in a lower amount of accumulated amortisation than under the straight-line method. Entities may use the unit of production method when the resulting amortisation charge reflects the expected pattern of consumption of the expected future economic benefits embodied in an intangible asset." (Deloitte, 2008).

In 2009, IAS 38 has been amended "to clarify the requirements under IFRS 3 (2008) regarding accounting for intangible assets acquired in a business combination as well as to clarify the description of valuation techniques commonly used by entities when measuring the fair value of intangible assets acquired in a business combination that are not traded in active markets" (Deloitte, 2009). It can be suggested that these changes were not likely to have a sizeable effect and are mainly for clarification purposes. Thus, they will not be further investigated.

5.4.Data and sample selection

Firms from three countries were selected for the study: United Kingdom, France and Germany. The index constituents from the major index of each country (FTSE100, DAX30 and CAC40 respectively) were obtained from Datastream. All the companies that were at least once listed in one of the three indices in the years 2003 to 2011 were selected. Utilities companies were removed from the sample due to the known problems in predicting of their earnings, as well as financial and insurance companies due to the different nature of their financial statements compared to other industries. Utilities companies tend to have predictable earnings while financial companies operate with high leverage. Financial companies are structurally different and operate in a different environment (Ohlson, 1980). The FTSE100 sample initially yielded 159 unique companies and 101 companies after removal of financial, insurance and utilities companies. 22 further companies were removed due to lack of available data from Thomson One Banker I/B/E/S or Datastream. One company continues to report under US GAAP rather than IFRS and thus the final UK sample consisted of 78 companies. The CAC40 sample initially yielded 48 unique companies of which 12 were financial, insurance and utilities companies. Two of the remaining companies were removed due to insufficient data and thus, the final French sample consists of 34 companies. The DAX30 sample initially yielded 36 unique companies, which were reduced to 25 in the final sample. The total sample therefore contains 137 firms, 1233 firm years and 14796 firm months.

5.5 Research design

5.5.1. Measures of the analysts' forecasts

The monthly analyst forecasts for the sample companies from 2001 to 2012 from I/B/E/S were obtained, including the EPS (Earnings Per Share) Mean and Median consensus forecasts, the EPS actuals, the EPS consensus forecasts standard deviation and the EPS forecast period. The financial year end period to which each forecast corresponds was also recorded so that the last analysts' forecast of each company for each financial year can be aligned. This method removes the bias that could be created by the companies' having different financial year ends. The monthly forecast accuracy (MFA) is calculated by taking the absolute value of the % forecast error of Mean FY1 forecasts, as follows:

$$\boldsymbol{MFA} = \left|\frac{(\boldsymbol{monthly\ EPS\ forecast - EPS\ actual})}{\boldsymbol{EPS\ actual}}\right|$$

The analysts' forecast dispersion is estimated by obtaining the EPS Standard deviation FY1 directly from I/B/E/S and replacing any missing values where needed with the company's average. Finally, the monthly number of estimations for EPS FY1 is obtained, representing analyst following.

5.5.2. Independent variables

The empirical model controls for firm specific characteristics known to be related to forecast accuracy and dispersion, including **(ln(SIZE)),** based on the log of the firms year-end market capitalisation as larger firms tend to have a greater analyst following and improved forecast accuracy Amir et al. (2003). In addition, older firms tend to experience lower forecast bias and inaccuracies (Amir et al, 2003) and **(ln(AGE))** is therefore included, which is the firm's age, measured as the natural logarithm of the number of annual return observations reported on Datastream. Prior studies have also suggested that if firms expect to report higher earnings, they tend to release more information to the market (Byard et al, 2011) therefore the Return On Assets ratio **(ROA)** is also included as a control variable.

Market to Book ratio is included as value firms are considered likely to experience high forecast accuracy (Tan et al, 2011) and the firm's leverage (DE, the Debt to Equity ratio) is included since firms with more leverage. (Byard et al, 2011). Similarly, the company's historic stock returns (**(RETURNS)**; the percentage change of the stock price) and price volatility **(VOLATILITY)** are taken into account since more volatility implies less accuracy and more dispersion in the forecast (Tan et al, 2011). It is assumed that high return stocks reflect increased investor confidence about the firm's performance yielded from positive information disclosed from the firm. This can result to reduced information asymmetry which can also be reflected to improved analysts forecast accuracy.

To test hypotheses $\boldsymbol{H_1}$, $\boldsymbol{H_2}$ and $\boldsymbol{H_3}$ and evaluate the impact of reporting under IFRS a dummy variable **(IFRS)** is constructed as in Tan et al. (2011). (**IFRS)** takes the value of 1 if firm reports under IFRS in the respective financial year, and 0 otherwise. The samples of the UK and France are comprised of mandatory adopters and therefore IFRS takes the value of 1 for all periods after 2005, when IFRS became mandatory for all quotes companies across the EU. For Germany, the sample includes so early, voluntary adopters of IFRS and so two variables are created, (**VOLUG),** an indicator variable for voluntary IFRS adopters and (**MANDG),** an indicator variable for mandatory IFRS adopters represent the interaction of the IFRS and voluntary adoption terms.

To test hypotheses $\boldsymbol{H_4}$ and $\boldsymbol{H_5}$ and assess the effect of goodwill in a company's accounts a variable representing goodwill intensity **(IGW)** is constructed, which is measured as gross goodwill over total assets (Duff and Phelps, 2013) To test hypotheses $\boldsymbol{H_6}$ and $\boldsymbol{H_7}$ and investigate the effect of goodwill impairment, a variable **(EIGD)** is constructed to measures goodwill impairments scaled by EBITDA (Duff and Phelps, 2013). An important issue needs to be addressed at this point and that has not been spotted in any other academic study to the best of the writer's knowledge. Following IFRS adoption, Thomson Reuters I/B/E/S/ switched the calculation of EPS data from post-goodwill basis to pre-goodwill basis and restated all the previous values as well. This means that the EPS data used in this study is gross of goodwill amortisation and impairment.

Although, it is possible to use the previously post goodwill data until 2005, the pre goodwill data is used for consistency. Therefore, it is suggested that although the EPS data does not take into account any goodwill impairment on earnings, any information effects are still reflected on the analysts' forecasts due to the associated disclosure.

To test hypotheses $\boldsymbol{H_8}$ and $\boldsymbol{H_9}$ and assess the effect of business combinations a variable **(NASACQ)** is constructed that measures net assets from acquisitions scaled by total assets. In order to test hypotheses $\boldsymbol{H_{10}}$ and $\boldsymbol{H_{11}}$ and investigate the effect of intangible assets a variable **(NIAI)** is created to represent intangible asset intensity; measured as net intangible assets over total assets **(**Barth and Kasznik, 1999). To test hypotheses $\boldsymbol{H_{12}}$, $\boldsymbol{H_{13}}$ and $\boldsymbol{H_{14}}$ and assess the effect of the quantity of narrative information disclosed about of financial performance and position **(LN(FINPOS))** a variable was constructed from the process of content analysis detailed below. In line with prior literature, the models also include interaction terms between the explanatory variables listed above and the IFRS variable.

To evaluate the impact of the IFRS standard revisions the following indicator variables are constructed according to the fiscal year that each company implements each policy (distinguish between voluntary and mandatory adoption does not take place because the number of voluntary adopters is minimal). The variables are **(IFRS32008), (IFRS32010), (IFRS72005), (IFRS72008), (IFRS82006)** and are constructed through manual coding by checking each company's annual report.

5.5.3. Construction of the narrative disclosure measure

The volume of corporate disclosure was assessed by collecting qualitative data from the annual and quarterly reports supplemented by data from interim and quarterly reports, earnings guidance statements, investor briefings and monthly company press releases, which are obtained through databases and websites such as: corporate websites, Morningstar Company Intelligence and www.investegate.co.uk. All corporate announcements available are included except announcements that disclose directors' dealings, interests in shares and voting rights.

The reason for this exclusion is that these announcements are likely to be less informative for analysts and investors relative to the other corporate disclosures but these announcements tended to inflate the disclosure scores for individual companies due to the high number of times they appear relative to other announcements. The data was hand collected, and organised in a pre-defined format, creating monthly documents for each firm, coded with the year and month to be subsequently entered into the text analysis software. In total, the analysis includes over 120 million words contained in over 28,000 company announcements and over 2,800 annual and quarterly reports. Content analysis was used to examine the amount and type of information in the disclosure data. The different types of disclosure were pooled together and the data set was transformed into quantitative form. For this purpose, an a priori classification system was adopted to differentiate between the different types of disclosure data and create disclosure proxies to include in the quantitative analysis (Gibson and Brown, 2009). LIWC software was used to create a pre-defined dictionary customised to the project's purposes, to systematically analyse the disclosure data. The document conversion software PDF to Text Converter Expert was employed to convert the annual and quarterly reports where necessary to text files. The custom disclosure score categories are divided into 6 categories constructed using dictionaries such as those in Kothari et al. (2009). Kothari et al. (2009) classify the disclosure category statements as: a) Market risk, industry analysis and competitive forces, b) firm strategy, product market performance, performance of business strategy model c) human and organisational capital, management performance, corporate governance and leadership, d) market recognition, power and consistency of brand, e) corporate and business performance and financial position, f) government regulation, accounting regulation, disclosure practices affecting the firm. The creation of the custom dictionary began by adopting the disclosure categories classification and included words and word stems in Kothari et al. (2009). Using our personal judgement further disclosure proxies were added and distributed across the relevant categories.

In order to further refine the custom dictionary and test the validity of the initial system to measure corporate disclosure information, two methods were employed. Firstly our dictionary was compared and reconciled with Beattie's (2004) corporate disclosure framework and subsequently, a unique feature of LIWC software was exploited to develop more efficient search terms. Specifically, the disclosure model was manually tested with 9 random annual reports covering all three countries containing over 900,000 words and the software indicated which words and phrases were identified as belonging to the search categories and which were not captured by our dictionary. This enabled us to manually review all of the "uncaptured" phrases and their frequency of use to identify any synonyms or terms relating to any of the above disclosure categories that had not been included in the dictionary up to that point so that they could be added subsequently. A document was then created that included all the words and word stems that comprise the disclosure proxies and we confirmed the ability of the custom dictionary to identify them.

It should be emphasised that the disclosure proxies are mutually inclusive, in other words disclosure proxies that could probably be assigned to more than one category were assigned as the dictionary constructor's objective judgement. The allocation of the disclosure proxies to each category followed the Kothari et al. (2009) to the greatest extent possible and was discussed and reviewed with a Chartered Accountant. An important assumption in this process is that the dictionary model analyses the disclosure data in an holistic way rather than concentrating on specific sections, type or category. It is assumed that a change in the information environment triggered by a change in disclosure requirements will be reflected not only in the mandatory sections but through the rest channels of information. For example, if a company is required to provide detailed information about its operating segments in the notes of the financial statements, it is also expected to provide such descriptive information in its monthly/quarterly disclosures. Hence, the software mapping tool can scan the disclosure data and analyse it automatically. Scanning each monthly file, the software gives the value of 1 to each word that matches to the relevant category and yields the total disclosure proxies for each category.

The custom dictionary expands on the work of Beattie's (2004) disclosure approach by building on the disclosure classification and validating the automated analysis with an established manual coding system. The custom dictionary is also based on the disclosure categories by Kothari et al. (2009) but is heavily refined and enhanced. Firstly, our approach aims to obtain disclosure proxy scores rather than only categorise the disclosure texts and conduct separate analysis for each one. Also, we intended to capture the disclosure quantity rather than the sentiment of the text as in Kothari et al. (2009). During the dictionary design we further removed irrelevant words and enhanced the system using the techniques described above. Our custom dictionary approach is similar to the automated techniques used in Loughran and McDonald (2011) but aims to capture the disclosure quantity rather than the sentiment within text as our purpose is to analyse content not tone. Our dictionary is also adjusted for vague and commonly used nouns, verbs and expressions that could distort the scoring results. The custom dictionary is also similar to the dictionary by Muslu et al. (2014) in that it assesses the quantity of corporate disclosure and its association with the future economic performance of firms. However, the dictionary in Muslu et al. (2014) is different in concentrating to the forward-looking disclosures in their management discussion and analysis section rather than the entirety of the disclosures.

A monthly disclosure score was produced for each company for each month and these measures were added incrementally until the last month of the financial year. The natural log of each month's score (e.g. **(LN(FINPOS)**)) was included in the quantitative models. The internal consistency and reliability of the disclosure scores are tested using Cronbach's alpha (Bryman, 2004). The tests demonstrate high internal consistency for both raw scores: 88.62% and scaled using the natural logarithm: 96.01%.

In summary, the disclosure analysis aims to a) assess the level of information in the annual report, b) investigate the effect of monthly announcements in the monthly evolution of forecast accuracy towards the financial year end and c) investigate if information quantity implies information quality, with respect to its ability to affect analysts forecasts.

The research design is likely to contribute to the literature by suggesting a) an approach to investigate the effect of corporate disclosure on the monthly evolution of the forecast error and b) a custom dictionary method to quantify the narratives of corporate reports and announcements.

5.5.4. Accounting standards association with analysts' information environment

An important assumption is required for the research design of this project. On one hand, the rationale behind this project's approach is to investigate if there is any association between the analysts' EPS FY1 (financial year t) monthly variables **(MFE), (MFA), (MFD), (NOA)** and the reported annual accounting data and firm characteristics at the end of the financial year t. On the other hand, it makes logical sense to assume that an analyst is issuing her first EPS forecast for financial year t with the available information from the annual report of financial year t-1. Hence, the disclosure proxies of the t-1financial year's annual report are entered in the first monthly observation of financial year t and are subsequently incrementally added to each month's disclosure proxies. There is a potential conflict in order to assess the accounting standard effect and an example is used to illustrate this. Suppose that in financial 2005 a company reports its first results under IFRS.

An analyst who issues her first monthly forecast for the company's EPS of financial 2005 needs to take into account the IFRS accounting standards that will be used to calculate the company's earnings but has available disclosure information that has been reported under GAAP. However, any subsequent announcement or interim report by the company will be under IFRS. Similarly for the adoption of the revised IFRS accounting standards and disclosure requirements. Therefore the question that arises is which is the "correct" way to code each observation since it is affected by different reporting regulations? The answer comes from the Efficient Market Hypothesis and its semi-strong form (Fama, 1970). Analysts and investors probably are a) aware of the IFRS adoption or standard implementation in advance, b) informed about the impact through IFRS restatements and company announcements, c) informed through other channels of information. Hence, it is assumed that the proxies for the analysts' information environment are likely to reflect the accounting standards or standard adoption for the full financial year that they are applied.

Thus, each monthly observation in financial year t is assigned with indicator variables that show if the firm reports under IFRS or implements an IFRS revision in financial year t.

5.6. Multiple regression models

The empirical analysis involves pooled OLS regressions with standard errors robust to heteroskedasticity (White's robust errors). The issue of outliers is addressed by winsorising at the 1st and 99th percentile for all continuous variables. Two versions of the model were run, one where the dependent variables was forecast accuracy **(MFA_{it})** and one where the dependent variable was forecast dispersion **(MFD_{it}).**
The basic regression model is:

$$\begin{aligned}\boldsymbol{Dependent\ variable} &= \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} \\ &+ \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} \\ &+ \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} \\ &+ \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} \\ &+ \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} \\ &+ \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS_{it} + \varepsilon_{it}\end{aligned}$$

The dependent variables are:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.
(MFA Mean) is the absolute value of ***(MFE Mean)***.
(MFE Median) is the percentage difference between the analysts' median earnings per share forecast each month and the reported earnings per share at the end of the financial year.
(MFA Median) is the absolute value of ***(MFE Median)***.
(MFD) is the standard deviation of all analysts' earnings forecasts in each month.
(NOA) is the number of analyst estimations each month for EPS FY1.

The model is ran one time for each dependent variable using the following independent variables.

The independent variables are:

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.
(ln(SIZE)) is the log of firm i's market capitalisation at the end of each financial year.
(*ln(AGE*)) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.
(BM) is the market to book ratio from Datastream measured as market value over net assets.
(DE) *is* the debt to equity ratio from Datastream measured as total debt over common equity.
(ROA) is the return on assets ratio from Datastream measured as net profit over total assets.
(RETURNS) is the percentage change of the stock price at the end of each financial year.
(VOLATILITY) is the stock price volatility over the company's financial year.
(*IGW*) is the goodwill intensity measured as gross goodwill over total assets.
(*NIAI*) is the intangible assets intensity, measured as net intangible assets over total assets.
(*EIGD*) is the goodwill impairments scaled by EBITDA.
(NASACQ) measures net assets from acquisitions scaled by total assets.
(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.
(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.
(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.
(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(IFRS) is an indicator variable = 1 if firm i reports under IFRS in year *t*, and 0 otherwise. For voluntary adopters in Germany it represents the financial year of 2005; when IFRS was mandated in the EU.

For German companies only:

(MANDG) is an indicator variable that takes the value of 1 if the company is a German mandatory adopter and 0 otherwise.

(VOLUG) is an indicator variable that takes the value of 1 if the company is a German voluntary adopter and 0 otherwise.

To construct the above independent variables, financial data were obtained from Thomson Reuters Datastream, Thomson One Banker and the published annual reports of individual companies. From Datastream we obtained: market capitalisation at the financial year end (Worldscope item WC08001); PE ratio (Datastream item PE); gross goodwill (Worldscope itemWC02502); amortisation and impairment of goodwill (Worldscope item WC18224); base date (since when Datastream had available data for the firm) (Datastream item BDATE); market to book value (Datastream item MTBV); stock price volatility (Worldscope item WC08806); stock price at financial year end (Worldscope item WC05001), Net assets from acquisitions, (WC04355Total Assets worldscope item WC02999), Total Debt as percentage of Common Equity (Worldscope item WC08231), Return On Assets (Worldscope item WC08326), Total Net Intangibles from Thomson One Banker, EBITDA (Worldscope item WC18198). Also, information for the IFRS voluntary adoption, IFRS financial year adoption and the IFRS transition restatements is obtained from the annual reports. Any 0/0 calculations are replaced by 0 such as intangibles intensity and goodwill impairments that lead to DIV0.

Additional checks for missing gross goodwill values were completed by subtracting amortisation and impairment of goodwill from gross goodwill values. Where needed values were replaced with the correct values obtained from the annual reports. Also, other missing values were replaced such as market capitalisation by multiplying the Market to Book ratio with book values. Additionally, missing Return On Assets values were replaced by obtaining the values from Morningstar.com. Also, a number of companies had in some cases less or more than 12 month forecasts for a given financial year. To deal with this issue the last 12 monthly forecasts for each financial year were obtained and the missing values were filled by substituting with the average forecast error across all years.

5.7. Summary

This chapter provided an explanation of how this research project aims to make a contribution to the academic literature in the area of the impact of IFRS adoption on analysts' earnings forecasts. Based on the previous literature, we outline the development of the hypotheses of this project. Also, we explain in detail the development of a new custom dictionary to analyse the narratives of the company reports. Also, the chapter includes the detailed procedure for the data collection, sample selection and the development of the econometric models employed in the empirical analysis. The next two chapters contain the empirical analysis, investigating a) the impact of IFRS adoption on the analysts' earnings forecasts across the whole sample period and b) the impact of IFRS standards' revisions on the analysts' earnings forecasts during the post IFRS adoption.

Chapter 6. IFRS Adoption, Corporate Disclosure and Analysts' Information Environment

This empirical chapter examines the impact of IFRS adoption on properties of the analysts' earnings forecasts and uses data before and after mandatory IFRS adoption in the UK, France and Germany. The sample is comprised of UK and French companies that mandatorily adopted IFRS, while the German sample is divided into mandatory adopters and voluntary adopters that adopted IFRS before the EU mandate. Prior literature (Christensen et al. 2008; Horton et al. 2013) suggests that firms adopting new IFRS regulations before the mandatory adoption date do so on the basis of incentives relating to financial reporting quality such as lower cost of financing (Healy and Palepu, 2001). All firms reporting under IFRS, whether mandatory or voluntary adopters, are likely to benefit from comparability effects once the mandatory adoption date has passed. Hence, identifying a separate sample of voluntary adopters allows us to investigate the different effects of these two groups separately.

This chapter begins with the graphical representation of the median values of the following dependent variables for each country: forecast error, forecast accuracy (absolute forecast error), forecast dispersion (standard deviation of analysts' estimations) and analyst following (number of analysts' estimations). The purpose of this section is to demonstrate the evolution of the above variables over time and to highlight any differences and similarities across the three countries.

The chapter continues with the presentation and analysis of the empirical results. The method that is followed is to firstly assess the impact of each independent variable over the whole sample period and subsequently to look for differences before or after IFRS adoption. The differences observed between the reporting periods are then discussed with reference to the theories from the literature analysed in Chapter 3. We then consider interactions between the test variables and IFRS adoption. Interaction terms are created for the independent variables and the indicator variable IFRS, which take the value of 1 when the firm is using IFRS and the value of 0 otherwise.

The interaction terms are used to determine whether IFRS adoption a) is associated to any changes in the sign of coefficients, b) influences an existing association in either a positive or negative direction. By choosing only one of the two approaches we wouldn't be able to determine either if the coefficients do change before and after the IFRS adoption or if IFRS adoption is indeed related to the observed effects.

The first part of this empirical chapter is dedicated to firm characteristics that are widely used in the academic literature to model analysts' earnings forecasts such as size, age, leverage, profitability, stock price performance and volatility variables. Hence, we aim firstly to establish the relationships between these factors and earnings quality, based on analysts' forecasts properties, and subsequently to identify any changes in these relationships following the adoption of IFRS.

The second part of the analysis focuses on assessing the impact of the IFRS accounting standards for goodwill, acquisitions and intangible assets on attributes of the analysts' earnings forecasts. These were the areas where regulations in IFRS changed significantly since mandatory adoption, with the issue of amendments to IFRS3 and, as such, the areas that have been seen as some of the most contentious and most important during this time. Thus, the analysis looks at the effect of these areas before and after IFRS adoption in each country in an attempt to determine if and how IFRS adoption improves accounting and earnings quality through these specific rule changes.

The third part of the analysis is devoted to discussing the possible effect of IFRS adoption on the relationship between corporate disclosure and analysts' earnings forecasts. In this section, the analysis aims to test and investigate whether information quantity implies information quality, and to uncover any asymmetric effects of the different categories. Information disclosed by the companies in their annual reports and through other channels was categorised into six groups representing information about the firm's market, strategy, corporate governance, brands, financial position and performance and finally, regulation. Variables measuring the quantity of disclosures in each of these categories are incorporated into the models of analysts' forecasts properties to assess the relationship between disclosure quantity and earnings quality and to measure the relative effects of the different categories of corporate disclosure.

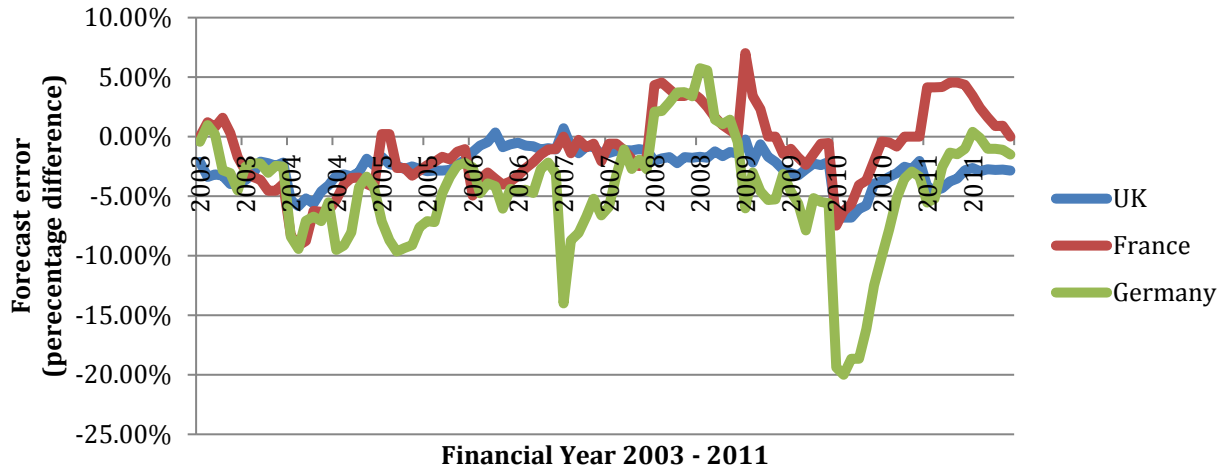
This also gives us a basis for concluding which type of information is likely to be more beneficial or not for the analysts' information environment.

Overall, the analysis treats the adoption of IFRS associated changes in disclosure requirements as an exogenous shock to the firm information environment and allows us to conclude whether IFRS enhanced or not the transparency, comparability and quality of financial information.

6.1. Time series charts of the dependent variables

The charts below represent the median value, for each country, of analysts' forecast errors, forecast accuracy, forecast dispersion and number of analyst estimations, measured monthly from 2003 to 2011.

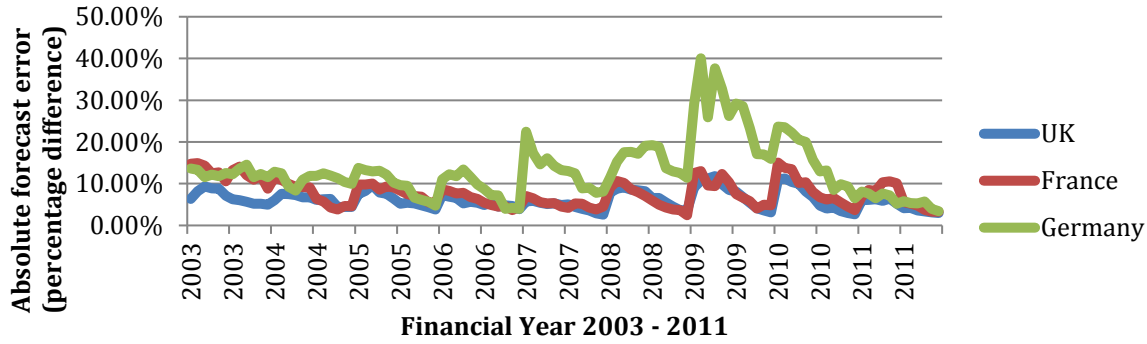
Figure 6.1 Monthly forecast error (Mean)



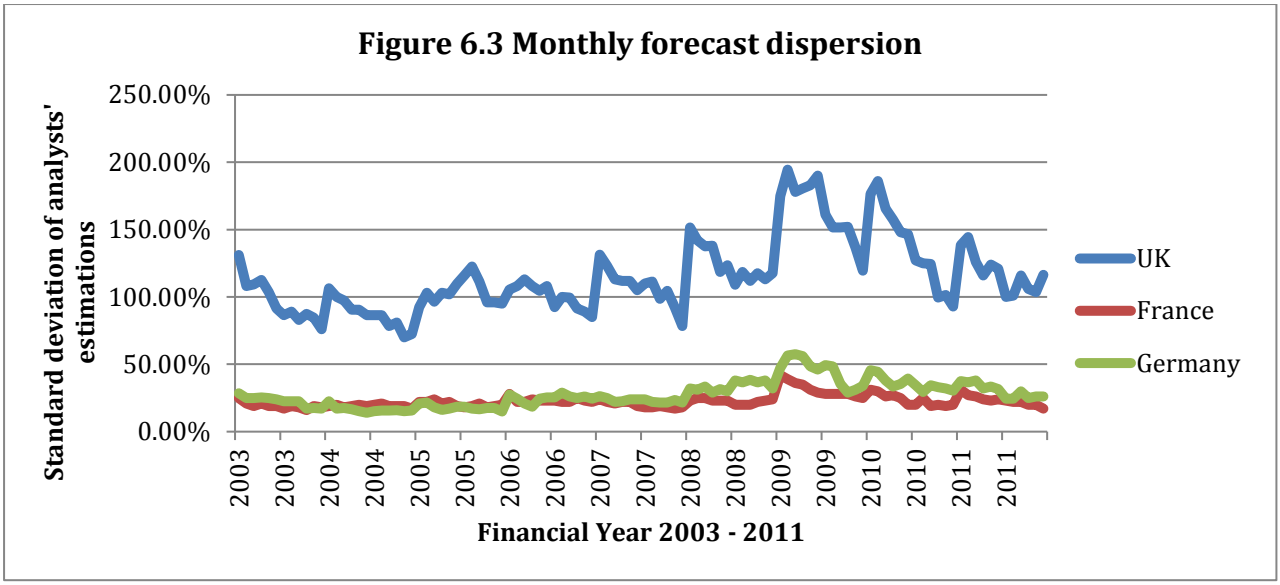
The figures above demonstrate that before the financial crisis of 2007/2008 analysts in the three countries were more likely to underestimate the companies' earnings. During the crisis, the bias in forecast errors did not change for UK companies, while in Germany and France, the picture changed and analysts overestimated the companies' earnings. During the subsequent years the Eurozone debt crisis emerged and analysts in all three countries overreacted to the bad news and substantially underestimated the companies' earnings. In conjunction with the graphs for forecast accuracy, it should be noted that analysts providing forecasts for German companies were likely to underestimate to a higher degree.

This could be attributed to the better than expected performance of Germany's economy driven by exports to non-EU countries that were considerably boosted by the crisis-weakened Euro (FT, 2012) or a more prudent approach to financial reporting in Germany.

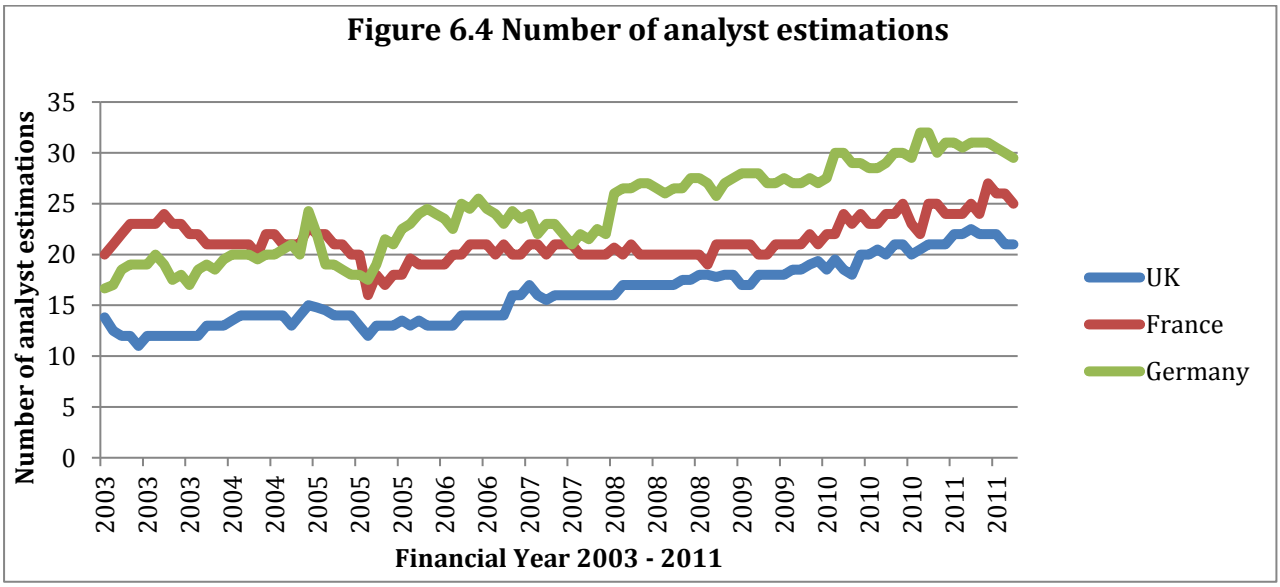
Figure 6.2 Monthly forecast accuracy (Mean)



The figures above depict the monthly evolution of forecast accuracy in the UK, France and Germany, represented by the median value of the absolute forecast error for each month. It is apparent that there is a repeating pattern in the forecasts throughout each fiscal year. The analysts' absolute forecast error is at its highest point in the cycle at the start of year and decreases as new information becomes available throughout the year. Regarding the variation between countries, it can be observed that analysts providing estimations for German firms have the worst performance in forecast accuracy (except the financial year 2011) while UK and France seem to have similar levels of forecast accuracy. Also, although the negative effects of the credit crunch and the Eurozone debt crisis are obvious, a superficial review of the forecast errors does not reveal an obvious change following the adoption of IFRS around 2005.



The figure above represents the median value of the monthly forecast standard deviation for each country starting from the fiscal year 2003 and ending to the fiscal year 2011. The largest dispersion, and thus the highest level of disagreement between analysts, is seen in the UK companies and there seems to be an increasing trend up to 2011. In contrast, the companies in France and Germany have similar levels of forecast dispersion that appear to peak after the 2007-2008 and further increase around the uncertain times of the Eurozone crisis in 2009-2010.



The above figure represents the median value of the number of analyst estimations for the sample of companies in each country from financial year 2003 to financial year 2011.

The UK has the lowest number of analyst estimations but this is likely to be due to the wider size range of the UK sample, since smaller companies tend to be followed by fewer analysts. From the graph, it is apparent that the analyst following substantially increased over time in all three countries and in Germany the number of forecasts in each year almost doubled. An explanation for this increase could be the comparability effects from the mandatory IFRS adoption or other market developments. Tan et al. (2011) found that the higher the differences between GAAP and IFRS in a given country, the more analysts were providing forecasts after IFRS adoption and therefore this implied higher comparability was associated with higher analyst following.

Interestingly, the recession does not appear to negatively affect the analyst following in the UK, France and Germany that could possibly happen due to substantial layoffs in the finance industry such as the collapse of Lehman Brothers.

6.2. Time series charts of the corporate disclosure variables

The narrative disclosures of the companies, collected from their annual reports, interim statements and monthly corporate announcements were classified in six categories (see Chapter 5. for descriptions). These categories cover disclosures relating to the following:

- market risk, industry analysis and competitive forces (***MRKT***).
- firm strategy, product market performance and performance of business strategy model (***FRMSTR***).
-human and organisational capital, management performance, corporate governance and leadership (***CORPGOV***).
- market recognition, power and consistency of brands (***BRND***).
- corporate and business performance and financial position (***FINPOS***)
- government regulation, accounting regulation and disclosure practices (***REGACC***)

In each category, the variables are constructed by measuring the cumulative, monthly number of disclosures for each company within each financial year. When the variables are used in regression models, the natural logs of the raw disclosure scores are taken.

Figure 6.5 UK, France and Germany

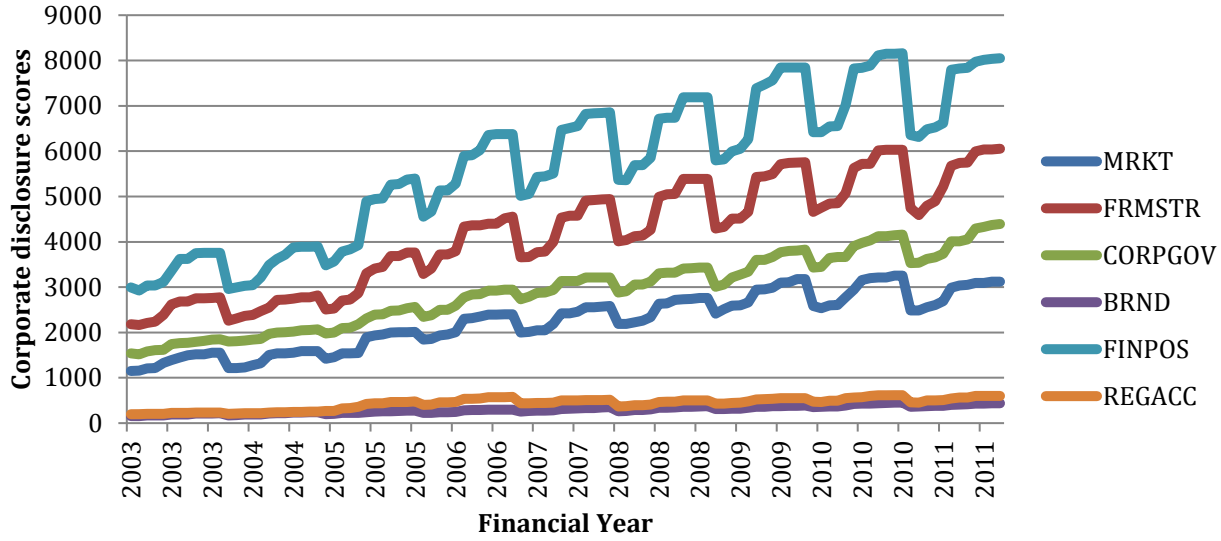


Figure 6.6 UK

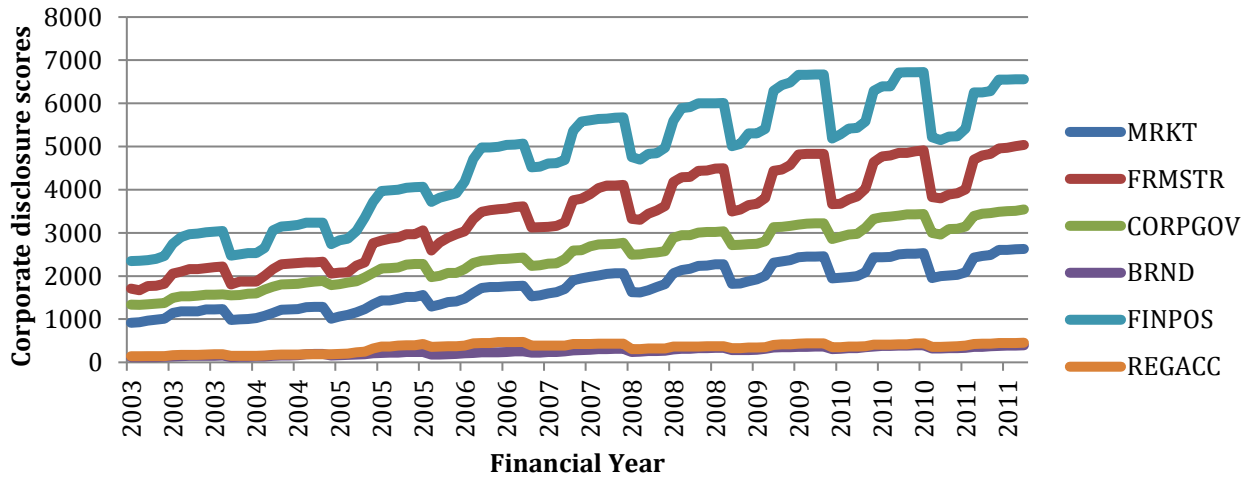
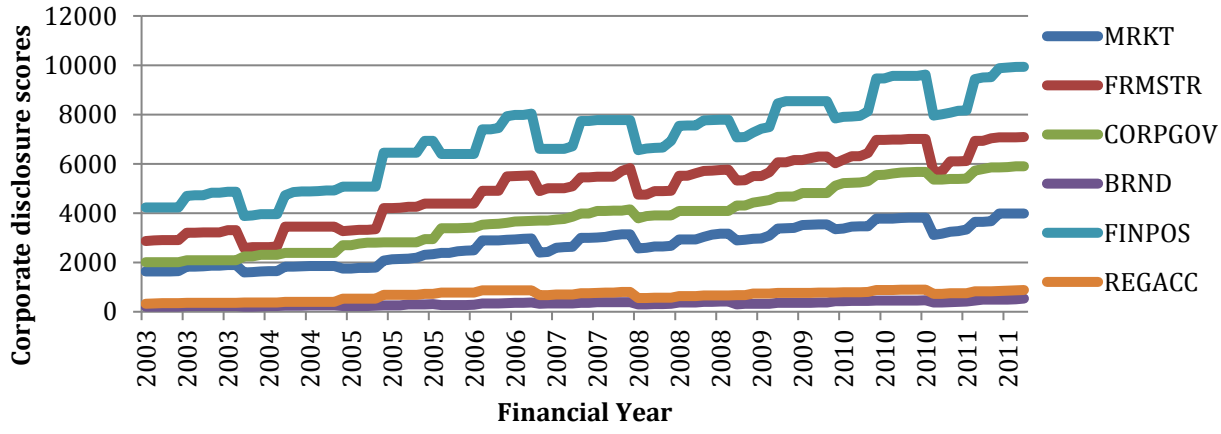
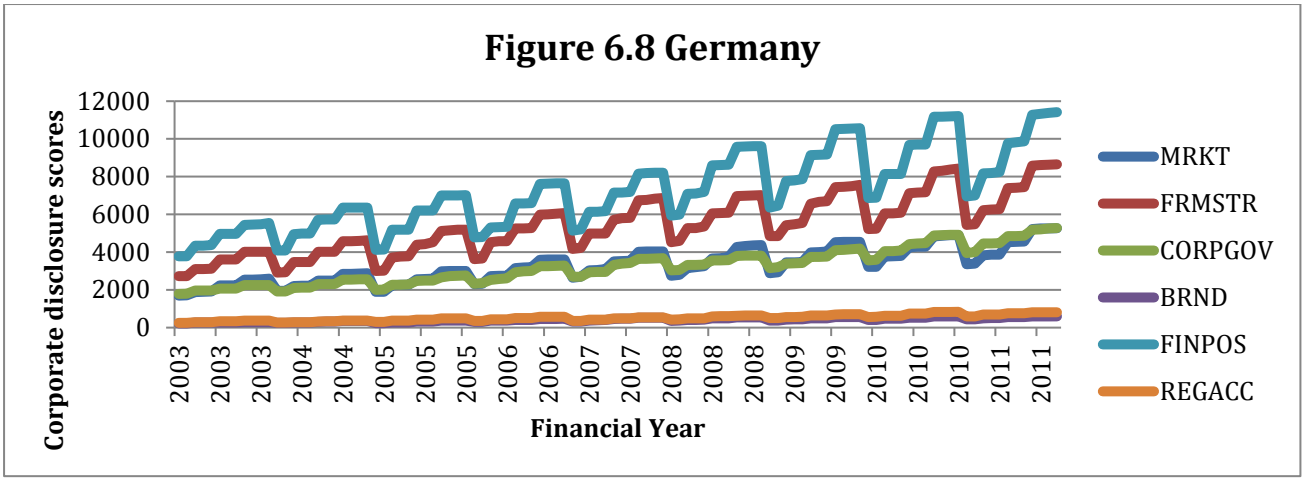


Figure 6.7 France





The figures above represent the median value of the monthly disclosure scores from 2003 to 2011 within each disclosure category. The total disclosure scores in each financial year start with the annual report scores and any monthly announcements in the first month, and continue incrementally until the last month in that year. From the graphs, we observe that the total quantity of disclosures increased over time in all three countries. All categories show significant increases apart from those relating to brands (***BRND***) and regulation and disclosure (***REGACC***) although there is variation as displayed in Table 1.

6.3.Results

A per country analysis is conducted in order to highlight the different impact that IFRS adoption had in the three countries studied. Rather than analysing each country separately the analysis is concentrated on the factors that differently affect each country. The results are presented in 12 tables as follows:

Table 6.1 – Descriptive statistics for the whole sample
Table 6.2 – OLS regression results for UK companies for the whole period (2003-2011)
Table 6.3 – OLS regression results for UK companies reporting under UK GAAP (2003-2004)
Table 6.4 – OLS regression results for UK companies reporting under IFRS (2005-2011)

Table 6.5 – OLS regression results for French companies for the whole period (2003-2011)

Table 6.6 – OLS regression results for French companies reporting under French GAAP (2003-2004)

Table 6.7 – OLS regression results for French companies reporting under IFRS (2005-2011)

Table 6.8 – OLS regression results for German companies for the whole period (2003-2011)

Table 6.9 – OLS regression results for German mandatory adopters for the whole period (2003-2011)

Table 6.10 – OLS regression results for German voluntary adopters for the whole period (2003-2011)

Table 6.11 – OLS regression results for German mandatory adopters reporting under US GAAP and German GAAP (2003-2004)

Table 6.12 – OLS regression results for German mandatory adopters reporting under IFRS (2005-2011)

For France, Table 6.6 and Table 6.7 present the empirical results for reporting under French GAAP and IFRS respectively while Table 6.5 presents the results from both periods. Finally, for Germany Table 6.8 presents the results for both voluntary and mandatory adopters over both periods, Table 6.9 presents the empirical results for reporting under German GAAP, US GAAP and IFRS for mandatory adopters, Table 6.10 the empirical results for voluntary adopters reporting only under IFRS and Table 6.11 and 6.12 present the results for mandatory adopters before and after IFRS adoption respectively.

Table 6.1 - Descriptive statistics for the whole sample

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
MFEMean	14796	-0.015	0.306	-1.627	1.814
MFAMean	14796	0.190	0.419	0.000	3.155
MFD	14796	1.055	1.304	0.020	5.670
NOA	14796	19.021	7.413	2.773	36.000
ln(SIZE)	14796	15.792	1.216	13.161	18.539
ln(AGE)	14796	3.428	0.457	2.398	3.892
BM	14796	2.918	3.882	-10.960	25.110
DE	14796	0.809	1.605	-8.210	8.397
ROA	14796	0.072	0.069	-0.156	0.309
RETURNS	14796	0.113	0.360	-0.690	1.385
VOLATILITY	14796	0.266	0.080	0.147	0.517
IGW	14796	0.207	0.208	0.000	1.058
NIAI	14796	0.078	0.103	0.000	0.504
EIGD	14796	0.032	0.176	-0.818	0.995
NASACQ	14796	0.024	0.052	-0.001	0.314
LN(MRKT)	14796	7.678	0.572	6.242	8.823
LN(FRMSTR)	14796	8.284	0.539	6.885	9.353
LN(CORPGOV)	14796	7.926	7.927	7.927	6.473
LN(BRND)	14796	5.734	0.735	3.898	7.444
LN(FINPOS)	14796	8.589	0.529	7.050	9.658
LN(REGACC)	14796	6.014	0.700	4.168	7.464
MANDGxIFRS	14796	0.047	0.048	0.048	0.000
VOLUGxIFRS	14796	0.079	0.079	0.079	0.000
IGWxIFRS	14796	0.160	0.198	0.000	1.058
EIGDxIFRS	14796	0.014	0.136	-0.818	0.995
NASACQxIFRS	14796	0.018	0.019	0.019	-0.001
NIAIxIFRS	14796	0.067	0.101	0.000	0.504
LN(FINPOS) xIFRS	14796	6.677	3.702	0.000	9.658
IFRS	14796	0.767	0.423	0.000	1.000

The above variables are computed as:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(ln(SIZE)) is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW) is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(MANDG) is an indicator variable that takes the value of 1 if the company is a German mandatory adopter and 0 otherwise.

(VOLUG) is an indicator variable that takes the value of 1 if the company is a German voluntary adopter and 0 otherwise.

(IFRS) is an indicator variable = 1 if firm i reports under IFRS in year *t*, and 0 otherwise. For voluntary adopters in Germany it represents the financial year of 2005; when IFRS was mandated in the EU.

(MANDGxIFRS) is an interaction term computed by multiplying ***(MANDG)*** with ***(IFRS).***

(VOLUGxIFRS) is an interaction term computed by multiplying ***(VOLUG)*** with ***(IFRS).***

(IGWxIFRS) is an interaction term computed by multiplying ***(IGW)*** with ***(IFRS).***

(EIGDxIFRS) is an interaction term computed by multiplying (***EIGD)*** with ***(IFRS).***

(NASACQxIFRS) is an interaction term computed by multiplying (***NASACQ)*** with ***(IFRS).***

(*NIAIxIFRS*) is an interaction term computed by multiplying ***(NIAI)*** with ***(IFRS).***

(LN(FINPOS)xIFRS) is an interaction term computed by multiplying (***LN(FINPOS))*** with ***(IFRS).***

Table 6.2 – OLS regression results for UK companies for the whole period (2003-2011)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.030***	0.018*	-0.365***	
	(0.01)	(0.01)	(0.04)	
ln(SIZE)	0.010***	-0.003	-0.101***	1.941***
	(0.00)	(0.00)	(0.02)	(0.07)
ln(AGE)	-0.042***	0.005	0.887***	0.808***
	(0.00)	(0.00)	(0.03)	(0.11)
BM	0.004***	0.000	0.015***	0.037***
	(0.00)	(0.00)	(0.00)	(0.01)
DE	0.002	-0.003**	-0.024***	-0.381***
	(0.00)	(0.00)	(0.01)	(0.03)
ROA	-0.402***	-0.620***	-0.699***	2.373***
	(0.07)	(0.08)	(0.23)	(0.81)
RETURNS	-0.104***	0.024*	0.198***	-1.727***
	(0.01)	(0.01)	(0.04)	(0.17)
VOLATILITY	0.139***	0.790***	-2.726***	-4.662***
	(0.05)	(0.05)	(0.20)	(0.77)
IGW	-0.231***	0.008	0.330***	5.302***
	(0.04)	(0.03)	(0.13)	(0.44)
NIAI	0.268***	0.287***	1.060***	0.518
	(0.07)	(0.06)	(0.29)	(1.86)
EIGD	-0.037	-0.201***	-0.375***	0.719
	(0.05)	(0.04)	(0.14)	(0.45)
NASACQ	0.635***	-0.227**	-1.959***	-7.261***
	(0.10)	(0.10)	(0.51)	(1.93)
LN(MRKT)	-0.036*	-0.137***	-0.506***	-4.955***
	(0.02)	(0.02)	(0.15)	(0.54)
LN(FRMSTR)	0.146***	0.032	-0.827***	3.404***
	(0.03)	(0.04)	(0.19)	(0.69)
LN(CORPGOV)	-0.083***	0.133***	1.188***	4.331***
	(0.02)	(0.02)	(0.09)	(0.42)
LN(BRND)	-0.025***	-0.030***	0.245***	2.817***
	(0.00)	(0.01)	(0.03)	(0.14)
LN(FINPOS)	-0.135***	0.010	0.597***	-2.096***
	(0.03)	(0.04)	(0.14)	(0.56)
LN(REAGACC)	0.014*	0.021***	-0.314***	-1.590***
	(0.01)	(0.01)	(0.05)	(0.21)
IGWxIFRS	0.165***	-0.153***	-0.564***	-4.298***
	(0.04)	(0.03)	(0.14)	(0.51)
EIGDxIFRS	-0.017	0.097**	0.846***	0.047
	(0.06)	(0.05)	(0.17)	(0.60)
NASACQx IFRS	-0.543***	-0.095	2.094***	-0.253
	(0.11)	(0.11)	(0.60)	(2.33)

Table 6.2 – OLS regression results for UK companies for the whole period (2003-2011)

NIAIxIFRS	0.018	0.047	-1.012***	6.350***
	(0.08)	(0.08)	(0.32)	(1.94)
LN(FINPOS)x IFRS	0.071***	-0.034**	-0.141*	1.540***
	(0.01)	(0.01)	(0.08)	(0.30)
IFRS	-0.596***	0.309**	1.549**	-10.251***
	(0.12)	(0.12)	(0.69)	(2.43)
Constant	0.808***	-0.367***	-1.797**	-30.881***
	(0.13)	(0.12)	(0.72)	(2.57)
R-squared	0.073	0.130	0.171	0.438
Degrees of freedom	8399	8399	8399	8400
Number of observations	8424	8424	8424	8424
*	p<0.10,	**	p<0.05, ***	p<0.01

The above table represents the empirical results from a period that covers the financial years from 2003 to 2011 for each company from the UK.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} IFRS_{it} + \varepsilon_{it}$$

Variables as described in Table 6.1.

Table 6.3 – OLS regression results for UK companies reporting under UK GAAP (2003-2004)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.058***	0.009	-0.091	
	(0.01)	(0.01)	(0.07)	
ln(SIZE)	-0.016***	-0.007	-0.097***	3.050***
	(0.01)	(0.00)	(0.03)	(0.14)
ln(AGE)	-0.055***	0.032***	0.777***	1.818***
	(0.01)	(0.01)	(0.06)	(0.21)
BM	0.004***	-0.000	0.012*	-0.056***
	(0.00)	(0.00)	(0.01)	(0.01)
DE	-0.008**	-0.016***	0.051***	-0.238***
	(0.00)	(0.00)	(0.02)	(0.04)
ROA	-0.683***	-0.684***	-0.873*	-3.284*
	(0.13)	(0.11)	(0.51)	(1.77)
RETURNS	-0.085**	0.060**	0.086	-3.598***
	(0.04)	(0.03)	(0.09)	(0.36)
VOLATILITY	0.198***	0.467***	-2.026***	-0.161
	(0.08)	(0.06)	(0.35)	(1.50)
IGW	-0.311***	0.045	-0.153	5.382***
	(0.04)	(0.03)	(0.13)	(0.53)
NIAI	0.328***	0.218***	1.021***	0.271
	(0.07)	(0.06)	(0.30)	(1.74)
EIGD	0.032	-0.199***	-0.370***	0.042
	(0.04)	(0.03)	(0.14)	(0.44)
NASACQ	0.636***	-0.194*	-1.177**	-5.569***
	(0.11)	(0.11)	(0.52)	(1.81)
LN(MRKT)	-0.165***	-0.124***	-0.939***	-7.714***
	(0.04)	(0.04)	(0.28)	(1.04)
LN(FRMSTR)	0.087	0.147***	-1.622***	2.716**
	(0.07)	(0.05)	(0.33)	(1.30)
LN(CORPGOV)	0.032	-0.166***	2.061***	5.967***
	(0.03)	(0.03)	(0.16)	(0.69)
LN(BRND)	-0.000	-0.015*	0.357***	2.244***
	(0.01)	(0.01)	(0.06)	(0.28)
LN(FINPOS)	-0.058	0.067	0.732***	-2.666***
	(0.06)	(0.04)	(0.24)	(0.85)
LN(REGACC)	0.052***	0.055***	-0.088	-0.145
	(0.02)	(0.02)	(0.11)	(0.42)
Constant	0.760***	0.240	-2.369**	-38.828***
	(0.19)	(0.15)	(1.00)	(3.55)
R-squared	0.158	0.276	0.209	0.528
Degrees of freedom	1853	1853	1853	1854
Number of observations	1872	1872	1872	1872

Table 6.3 – OLS regression results for UK companies reporting under UK GAAP (2003-2004)

*	p<0.10,	**	p<0.05,	***	p<0.01

Dependent variable

$$= \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it}$$

Variables as described in Table 6.1.

Table 6.4 – OLS regression results for UK companies reporting under IFRS (2005-2011)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.027***	0.023*	-0.491***	
	(0.01)	(0.01)	(0.05)	
ln(SIZE)	0.016***	-0.002	-0.112***	1.637***
	(0.00)	(0.00)	(0.02)	(0.07)
ln(AGE)	-0.038***	0.006	0.874***	0.392***
	(0.01)	(0.01)	(0.04)	(0.12)
BM	0.004***	-0.000	0.019***	0.054***
	(0.00)	(0.00)	(0.00)	(0.02)
DE	0.007***	0.002	-0.052***	-0.443***
	(0.00)	(0.00)	(0.01)	(0.04)
ROA	-0.352***	-0.576***	-0.825***	3.248***
	(0.08)	(0.09)	(0.26)	(0.93)
RETURNS	-0.111***	0.024	0.215***	-1.125***
	(0.01)	(0.02)	(0.05)	(0.19)
VOLATILITY	0.125**	0.902***	-3.136***	-6.320***
	(0.06)	(0.07)	(0.24)	(0.89)
IGW	-0.053***	-0.143***	-0.192**	0.736**
	(0.02)	(0.02)	(0.08)	(0.32)
NIAI	0.297***	0.333***	0.156	6.878***
	(0.05)	(0.07)	(0.15)	(0.57)
EIGD	-0.058***	-0.108***	0.491***	0.736*
	(0.02)	(0.03)	(0.10)	(0.40)
NASACQ	0.055	-0.315***	0.011	-7.468***
	(0.04)	(0.04)	(0.34)	(1.31)
LN(MRKT)	0.011	-0.145***	-0.376**	-4.725***
	(0.02)	(0.02)	(0.17)	(0.62)
LN(FRMSTR)	0.135***	-0.006	-0.564**	4.442***
	(0.04)	(0.05)	(0.22)	(0.80)
LN(CORPGOV)	-0.121***	0.213***	0.956***	3.752***
	(0.02)	(0.03)	(0.11)	(0.50)
LN(BRND)	-0.031***	-0.036***	0.235***	3.047***
	(0.01)	(0.01)	(0.04)	(0.17)
LN(FINPOS)	-0.059**	-0.033	0.364**	-0.816
	(0.02)	(0.04)	(0.14)	(0.59)
LN(REGACC)	-0.003	0.022**	-0.390***	-1.921***
	(0.01)	(0.01)	(0.06)	(0.24)
Constant	0.233***	-0.276***	0.409	-37.497***
	(0.07)	(0.08)	(0.53)	(2.16)
R-squared	0.066	0.125	0.167	0.378
Degrees of freedom	6533	6533	6533	6534
Number of observations	6552	6552	6552	6552

* p<0.10, ** p<0.05, *** p<0.01

Table 6.4 – OLS regression results for UK companies reporting under IFRS (2005-2011)

$$\textit{Dependent variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it}$$

Variables as described in Table 6.1.

Table 6.5 – OLS regression results for French companies for the whole period (2003-2011)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.072*	-0.177***	-0.123***	
	(0.04)	(0.03)	(0.03)	
ln(SIZE)	0.016	-0.049***	-0.107***	4.471***
	(0.01)	(0.01)	(0.02)	(0.11)
ln(AGE)	-0.001	0.160***	-0.174***	1.701***
	(0.03)	(0.03)	(0.03)	(0.34)
BM	0.021***	-0.003	0.018	-0.010
	(0.01)	(0.01)	(0.02)	(0.06)
DE	-0.011	0.032***	-0.020	0.274***
	(0.01)	(0.01)	(0.02)	(0.07)
ROA	-0.309**	-1.141**	-1.131***	-11.119***
	(0.16)	(0.51)	(0.21)	(1.76)
RETURNS	-0.106***	-0.257***	-0.011	-3.013***
	(0.02)	(0.02)	(0.03)	(0.24)
VOLATILITY	-0.644***	1.235***	-0.145	3.897***
	(0.11)	(0.15)	(0.11)	(1.34)
IGW	0.023	0.622***	0.215*	12.334***
	(0.13)	(0.15)	(0.13)	(1.11)
NIAI	-0.014	0.395***	1.013***	1.048
	(0.12)	(0.12)	(0.13)	(1.36)
EIGD	0.011	0.230***	-0.642***	-2.196***
	(0.10)	(0.07)	(0.16)	(0.60)
NASACQ	-0.396	-2.341***	-1.037**	-3.429
	(0.51)	(0.63)	(0.50)	(5.61)
LN(MRKT)	0.115**	-0.007	0.347***	0.851
	(0.05)	(0.06)	(0.06)	(0.54)
LN(FRMSTR)	-0.187***	0.507***	0.364***	-4.853***
	(0.07)	(0.10)	(0.09)	(1.00)
LN(CORPGOV)	-0.004	-0.098***	-0.511***	0.270
	(0.02)	(0.02)	(0.04)	(0.39)
LN(BRND)	-0.056***	-0.057***	-0.080***	0.907***
	(0.01)	(0.01)	(0.02)	(0.16)
LN(FINPOS)	0.199***	-0.097**	0.204***	2.549***
	(0.04)	(0.04)	(0.05)	(0.58)
LN(REGACC)	-0.042**	-0.095***	-0.105***	-0.881***
	(0.02)	(0.02)	(0.02)	(0.26)
IGWxIFRS	-0.093	-0.820***	-0.426***	-3.534***
	(0.13)	(0.15)	(0.13)	(1.29)
EIGDxIFRS	0.087	-0.377***	0.674***	-0.161
	(0.12)	(0.12)	(0.17)	(0.95)
NASACQx IFRS	0.146	1.828**	0.798	0.406
	(0.56)	(0.75)	(0.55)	(6.31)
NIAIxIFRS	-0.092	-0.591***	-1.057***	-6.891***
	(0.13)	(0.12)	(0.14)	(1.50)

Table 6.5 – OLS regression results for French companies for the whole period (2003-2011)

LN(FINPOS)x				
IFRS	-0.078***	-0.085***	-0.178***	0.120
	(0.03)	(0.03)	(0.03)	(0.31)
IFRS	0.797***	0.925***	1.637***	-1.040
	(0.24)	(0.23)	(0.28)	(2.56)
Constant	-0.820***	-1.024***	0.811**	-48.659***
	(0.31)	(0.29)	(0.35)	(3.11)
R-squared	0.080	0.261	0.289	0.511
Degrees of freedom	3755	3755	3755	3756
Number of observations	3780	3780	3780	3780
*	p<0.10,	**	p<0.05,	*** p<0.01

The above table represents the empirical results from a period that covers the financial years from 2003 to 2011 for each company from France.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} IFRS_{it} + \varepsilon_{it}$$

Variables as described in Table 6.1.

Table 6.6 – OLS regression results for French companies reporting under French GAAP (2003-2004)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.307***	-0.178***	-0.230***	
	(0.07)	(0.05)	(0.09)	
ln(SIZE)	-0.082***	-0.019	-0.121***	4.121***
	(0.03)	(0.02)	(0.04)	(0.20)
ln(AGE)	0.273***	0.316***	-0.268***	0.036
	(0.07)	(0.06)	(0.08)	(0.57)
BM	-0.000	0.015**	0.041**	0.729***
	(0.01)	(0.01)	(0.02)	(0.09)
DE	0.018	0.027**	0.083***	-0.463***
	(0.02)	(0.01)	(0.03)	(0.14)
ROA	1.892***	-1.584***	-2.865***	-16.196***
	(0.45)	(0.36)	(0.52)	(4.51)
RETURNS	-0.100	-0.113***	-0.484***	-1.527***
	(0.06)	(0.04)	(0.07)	(0.46)
VOLATILITY	0.283	1.807***	0.369	1.025
	(0.23)	(0.17)	(0.28)	(2.15)
IGW	-0.058	0.460***	0.055	12.084***
	(0.13)	(0.13)	(0.12)	(1.15)
NIAI	-0.345**	0.615***	1.349***	7.006***
	(0.15)	(0.12)	(0.17)	(1.64)
EIGD	0.014	0.293***	-0.518***	-1.863***
	(0.10)	(0.08)	(0.11)	(0.54)
NASACQ	1.696***	-3.091***	-1.566***	-12.028
	(0.61)	(0.51)	(0.52)	(7.77)
LN(MRKT)	0.223**	0.153**	0.696***	0.559
	(0.11)	(0.08)	(0.13)	(0.91)
LN(FRMSTR)	0.090	0.689***	0.551**	-4.591***
	(0.22)	(0.16)	(0.23)	(1.73)
LN(CORPGOV)	-0.003	-0.099***	-0.512***	-2.071***
	(0.03)	(0.03)	(0.05)	(0.50)
LN(BRND)	0.012	-0.171***	-0.189***	-0.785***
	(0.03)	(0.02)	(0.05)	(0.28)
LN(FINPOS)	-0.104	-0.319***	-0.074	2.335**
	(0.11)	(0.08)	(0.11)	(1.00)
LN(REGACC)	-0.054	-0.077**	-0.256***	1.741***
	(0.04)	(0.03)	(0.06)	(0.47)
Constant	-2.012***	-2.511***	1.183**	-24.337***
	(0.52)	(0.53)	(0.52)	(4.37)
R-squared	0.131	0.474	0.559	0.643
Degrees of freedom	845	845	845	846
Number of observations	864	864	864	864
*	p<0.10,	**	p<0.05,	*** p<0.01

Table 6.6 – OLS regression results for French companies reporting under French GAAP (2003-2004)

The above table represents the empirical results for French companies reporting under French GAAP in financial years 2003 and 2004. Some companies report in 2005 as well as they firstly adopted IFRS in the financial year 2006.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it}$$

Variables as described in Table 6.1.

Table 6.7 – OLS regression results for French companies reporting under IFRS (2005-2011)

Dependent Variable	**MFE** **Mean** **β/se**	**MFA** **Mean** **β/se**	**MFD** **β/se**	**NOA** **β/se**
ln(NOA)	0.041	-0.174***	-0.143***	
	(0.04)	(0.03)	(0.03)	
ln(SIZE)	0.034***	-0.059***	-0.049***	4.841***
	(0.01)	(0.01)	(0.01)	(0.13)
ln(AGE)	-0.057*	0.131***	-0.162***	1.326***
	(0.03)	(0.04)	(0.03)	(0.41)
BM	0.005	0.001	-0.080***	-0.422***
	(0.01)	(0.01)	(0.01)	(0.09)
DE	-0.011	0.040***	-0.117***	0.430***
	(0.02)	(0.01)	(0.02)	(0.08)
ROA	-0.580***	-1.067*	-0.344**	-8.712***
	(0.17)	(0.59)	(0.16)	(1.88)
RETURNS	-0.085***	-0.283***	0.150***	-2.785***
	(0.02)	(0.03)	(0.02)	(0.28)
VOLATILITY	-0.839***	1.042***	-0.418***	5.005***
	(0.11)	(0.18)	(0.09)	(1.59)
IGW	-0.049	-0.210***	-0.377***	8.965***
	(0.03)	(0.03)	(0.03)	(0.77)
NIAI	-0.084**	-0.209***	-0.000	-7.278***
	(0.04)	(0.05)	(0.04)	(0.79)
EIGD	0.095*	-0.168*	0.215***	-2.727***
	(0.05)	(0.10)	(0.04)	(0.74)
NASACQ	-0.225	-0.628***	-0.040	-2.513
	(0.15)	(0.24)	(0.15)	(2.55)
LN(MRKT)	0.075	-0.009	0.091**	0.748
	(0.05)	(0.07)	(0.04)	(0.65)
LN(FRMSTR)	-0.288***	0.434***	0.265***	-5.058***
	(0.07)	(0.13)	(0.07)	(1.19)
LN(CORPGOV)	0.063**	-0.116***	-0.424***	1.056**
	(0.03)	(0.03)	(0.04)	(0.51)
LN(BRND)	-0.078***	-0.036**	-0.036***	1.226***
	(0.01)	(0.01)	(0.01)	(0.19)
LN(FINPOS)	0.213***	-0.128***	0.107***	2.450***
	(0.03)	(0.05)	(0.03)	(0.59)
LN(REGACC)	-0.071***	-0.079***	-0.033	-1.383***
	(0.02)	(0.03)	(0.02)	(0.33)
Constant	0.186	0.275	2.556***	-54.635***
	(0.21)	(0.25)	(0.23)	(2.69)
R-squared	0.094	0.230	0.376	0.501
Degrees of freedom	2897	2897	2897	2898
Number of observations	2916	2916	2916	2916

Table 6.7 – OLS regression results for French companies reporting under IFRS (2005-2011)

*	p<0.10,	**	p<0.05,	***	p<0.01

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it}$$

Variables as described in Table 6.1.

Table 6.8 – OLS regression results for German companies for the whole period (2003-2011)

Dependent Variable	**MFE** **Mean** **β/se**	**MFA** **Mean** **β/se**	**MFD** **β/se**	**NOA** **β/se**
ln(NOA)	0.054***	-0.001	-0.014	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.047***	-0.046**	0.080***	0.040
	(0.01)	(0.02)	(0.01)	(0.28)
ln(AGE)	-0.049**	-0.058*	0.083***	-0.799*
	(0.02)	(0.03)	(0.02)	(0.41)
BM	-0.011*	-0.024***	-0.087***	0.707***
	(0.01)	(0.01)	(0.01)	(0.11)
DE	-0.004	0.027**	-0.005	-0.178
	(0.01)	(0.01)	(0.00)	(0.12)
ROA	0.445**	-1.902***	0.582**	-6.140**
	(0.21)	(0.32)	(0.24)	(2.63)
RETURNS	-0.301***	-0.297***	0.131***	-4.775***
	(0.02)	(0.04)	(0.02)	(0.46)
VOLATILITY	-0.242	2.238***	2.169***	2.803
	(0.18)	(0.21)	(0.19)	(3.23)
IGW	0.171*	-0.064	0.112	1.304
	(0.09)	(0.15)	(0.07)	(1.50)
NIAI	0.363	-0.717	-0.816***	-22.150***
	(0.40)	(0.56)	(0.27)	(6.20)
EIGD	-0.180	0.832***	0.346***	4.792***
	(0.16)	(0.30)	(0.09)	(0.89)
NASACQ	-0.235**	0.315	0.129	-26.443***
	(0.11)	(0.21)	(0.09)	(2.21)
LN(MRKT)	-0.398***	0.382**	0.010	-6.322***
	(0.12)	(0.17)	(0.07)	(1.93)
LN(FRMSTR)	0.037	-0.214	-0.098	-11.408***
	(0.12)	(0.15)	(0.08)	(2.25)
LN(CORPGOV)	0.041	-0.057	0.319***	7.934***
	(0.05)	(0.05)	(0.04)	(0.74)
LN(BRND)	-0.002	-0.081**	-0.108***	2.765***
	(0.02)	(0.03)	(0.03)	(0.52)
LN(FINPOS)	0.255***	-0.244***	-0.152***	0.762
	(0.07)	(0.08)	(0.06)	(1.26)
LN(REGACC)	0.006	0.066	-0.080***	11.098***
	(0.04)	(0.05)	(0.03)	(0.57)
IGWxIFRS	-0.263**	-0.370**	-0.433***	-13.622***
	(0.10)	(0.16)	(0.07)	(1.49)
EIGDxIFRS	-0.018	-0.068	0.162	-9.163***
	(0.23)	(0.31)	(0.12)	(1.23)

Table 6.8 – OLS regression results for German companies for the whole period (2003-2011)

NASACQx IFRS	0.407***	0.300	-0.025	24.730***
	(0.15)	(0.27)	(0.11)	(3.17)
NIAIxIFRS	-0.115	0.871	1.349***	35.586***
	(0.42)	(0.58)	(0.28)	(6.15)
LN(FINPOS)x IFRS	0.010	0.014	0.097***	-1.606**
	(0.04)	(0.04)	(0.03)	(0.69)
MANDGxIFRS	-0.060	0.056	-0.689***	19.265***
	(0.31)	(0.38)	(0.23)	(6.06)
VOLUGxIFRS	-0.055	-0.001	-0.683***	15.391***
	(0.30)	(0.38)	(0.23)	(5.93)
Constant	-0.432	2.198***	-1.064***	16.081***
	(0.28)	(0.37)	(0.23)	(5.44)
R-squared	0.138	0.255	0.386	0.436
Degrees of freedom	2566	2566	2566	2567
Number of observations	2592	2592	2592	2592
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period that covers the financial years from 2003 to 2011 for each company from Germany.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} MANDGxIFRS_{it} + \alpha_{25} VOLUGxIFRS_{it} + \varepsilon_{it}$$

Variables as described in Table 6.1.

Table 6.9 – OLS regression results for German mandatory adopters for the whole period (2003-2011)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.267***	-0.237***	-0.079***	
	(0.09)	(0.08)	(0.03)	
ln(SIZE)	0.070***	-0.011	0.065***	1.638***
	(0.03)	(0.03)	(0.01)	(0.26)
ln(AGE)	0.049	0.011	0.289***	-0.760*
	(0.05)	(0.06)	(0.03)	(0.43)
BM	0.026**	0.015	-0.026***	0.343***
	(0.01)	(0.01)	(0.01)	(0.11)
DE	0.202***	0.159***	0.210***	1.360***
	(0.04)	(0.05)	(0.02)	(0.36)
ROA	1.291***	-2.914***	-0.196	8.853***
	(0.28)	(0.45)	(0.22)	(2.59)
RETURNS	-0.404***	-0.550***	-0.021	-4.097***
	(0.06)	(0.06)	(0.02)	(0.42)
VOLATILITY	-0.525	1.811***	1.179***	13.794***
	(0.35)	(0.31)	(0.13)	(2.73)
IGW	0.527***	-0.457**	0.341***	-2.994
	(0.18)	(0.23)	(0.09)	(2.06)
NIAI	-2.224***	0.733	-2.134***	-14.054*
	(0.73)	(0.77)	(0.31)	(7.64)
EIGD	12.879***	11.979***	2.284***	79.855***
	(2.81)	(2.33)	(0.63)	(15.08)
NASACQ	-0.963***	0.123	-0.054	-17.270***
	(0.20)	(0.23)	(0.11)	(3.39)
LN(MRKT)	0.171	0.735**	0.455***	2.482
	(0.22)	(0.31)	(0.08)	(1.97)
LN(FRMSTR)	-0.359	-1.440***	-1.078***	1.699
	(0.36)	(0.41)	(0.12)	(3.19)
LN(CORPGOV)	-0.079	-0.374*	-0.003	3.274**
	(0.15)	(0.19)	(0.06)	(1.58)
LN(BRND)	-0.197***	0.350***	0.265***	-3.520***
	(0.07)	(0.11)	(0.05)	(0.88)
LN(FINPOS)	-0.042	-0.045	0.254***	-11.129***
	(0.20)	(0.20)	(0.07)	(1.65)
LN(REGACC)	0.400***	0.344***	0.053	7.782***
	(0.09)	(0.09)	(0.03)	(0.75)
IGWxIFRS	-0.896***	-0.305	-0.523***	-7.912***
	(0.18)	(0.20)	(0.08)	(1.96)
EIGDxIFRS	-13.085***	-11.770***	-1.854***	-88.214***
	(2.86)	(2.36)	(0.64)	(15.26)

Table 6.9 – OLS regression results for German mandatory adopters for the whole period (2003-2011)

NASACQx IFRS	1.364***	0.909**	0.206	21.428***
	(0.27)	(0.41)	(0.16)	(4.06)
NIAIxIFRS	3.451***	1.269*	1.467***	45.798***
	(0.80)	(0.76)	(0.33)	(8.57)
LN(FINPOS)x IFRS	0.083	0.285***	0.165***	2.277***
	(0.06)	(0.08)	(0.03)	(0.83)
IFRS	-0.717	-2.239***	-1.209***	-17.430**
	(0.53)	(0.68)	(0.27)	(7.28)
Constant	0.690	6.231***	-0.540**	2.239
	(0.53)	(0.70)	(0.26)	(6.08)
R-squared	0.208	0.444	0.619	0.644
Degrees of freedom	1055	1055	1055	1056
Number of observations	1080	1080	1080	1080
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period that covers the financial years from 2003 to 2011 for each company from Germany that mandatorily adopted IFRS.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} IFRS_{it} + \varepsilon_{it}$$

Variables as described in Table 6.1.

Table 6.10 – OLS regression results for German voluntary adopters for the whole period (2003-2011)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.028***	-0.014	0.009	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	-0.008	-0.176***	0.095***	-2.359***
	(0.02)	(0.03)	(0.01)	(0.44)
ln(AGE)	-0.188***	0.100*	-0.012	-2.146***
	(0.04)	(0.06)	(0.02)	(0.52)
BM	0.012	-0.080***	-0.058***	0.668***
	(0.01)	(0.02)	(0.01)	(0.25)
DE	-0.028***	0.099***	0.001	-0.546***
	(0.01)	(0.02)	(0.01)	(0.14)
ROA	-0.427	0.457	1.582***	-16.794***
	(0.38)	(0.40)	(0.44)	(4.07)
RETURNS	-0.295***	-0.150***	0.125***	-4.082***
	(0.03)	(0.05)	(0.03)	(0.70)
VOLATILITY	0.180	1.149***	3.448***	-16.188***
	(0.21)	(0.36)	(0.30)	(5.76)
IGW	-0.111	1.354***	0.487***	19.133***
	(0.14)	(0.37)	(0.12)	(2.88)
NIAI	1.211	4.169***	2.189***	29.273**
	(0.94)	(0.82)	(0.41)	(11.68)
EIGD	-0.081	0.970***	0.100	9.641***
	(0.19)	(0.27)	(0.07)	(1.33)
NASACQ	-0.045	-2.478***	-1.062***	-39.595***
	(0.34)	(0.55)	(0.27)	(5.34)
LN(MRKT)	-0.385***	0.273	0.328***	-13.479***
	(0.15)	(0.21)	(0.12)	(2.77)
LN(FRMSTR)	0.061	-0.535**	0.036	-18.184***
	(0.15)	(0.21)	(0.14)	(3.42)
LN(CORPGOV)	-0.026	0.037	0.321***	7.096***
	(0.04)	(0.05)	(0.04)	(0.86)
LN(BRND)	0.072**	0.015	-0.241***	6.912***
	(0.03)	(0.05)	(0.03)	(0.69)
LN(FINPOS)	0.150	-0.048	-0.512***	5.086**
	(0.11)	(0.15)	(0.11)	(2.44)
LN(REGACC)	0.129***	-0.006	-0.120***	18.229***
	(0.04)	(0.07)	(0.04)	(0.92)
IGWxIFRS	-0.581***	-1.726***	-0.661***	-58.079***
	(0.18)	(0.40)	(0.14)	(3.47)
EIGDxIFRS	-0.506**	0.119	0.130	-8.792***
	(0.25)	(0.34)	(0.10)	(1.85)

Table 6.10 – OLS regression results for German voluntary adopters for the whole period (2003-2011)

NASACQxIFRS	0.209	2.077***	0.971***	33.732***
	(0.35)	(0.53)	(0.25)	(5.88)
NIAIxIFRS	-0.761	-3.592***	-1.470***	-10.954
	(0.92)	(0.76)	(0.40)	(11.11)
LN(FINPOS)xIFRS	-0.025	0.191**	0.138***	-0.648
	(0.04)	(0.08)	(0.04)	(1.10)
IFRS	0.334	-1.036	-1.014***	15.632*
	(0.37)	(0.65)	(0.32)	(9.24)
Constant	0.853*	4.410***	-1.053***	74.774***
	(0.50)	(0.72)	(0.37)	(10.99)
R-squared	0.228	0.264	0.462	0.517
Degrees of freedom	1487	1487	1487	1488
Number of observations	1512	1512	1512	1512
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results for German companies reporting under IFRS in the financial years from 2003 to 2011. All companies voluntarily adopted IFRS before the mandatory date and from the financial year 2003 the latest.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} IFRS_{it} + \varepsilon_{it}$$

Variables as described in Table 6.1.

Table 6.11 – OLS regression results for German mandatory adopters reporting under US GAAP and German GAAP (2003-2004)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.174	-0.023	0.025	
	(0.13)	(0.15)	(0.03)	
ln(SIZE)	0.145**	-0.007	0.053***	2.384***
	(0.06)	(0.06)	(0.01)	(0.33)
ln(AGE)	0.196*	0.245**	0.061**	-0.914
	(0.10)	(0.10)	(0.03)	(0.87)
BM	-0.180***	0.055	-0.018***	-0.628**
	(0.04)	(0.05)	(0.01)	(0.31)
DE	0.325***	0.331***	0.143***	-1.360***
	(0.06)	(0.09)	(0.02)	(0.42)
ROA	9.740***	-3.299	0.108	17.362
	(1.56)	(2.11)	(0.27)	(13.24)
RETURNS	0.270***	-0.304***	0.115***	-1.356*
	(0.08)	(0.09)	(0.02)	(0.75)
VOLATILITY	2.537***	1.896***	-0.027	20.655***
	(0.76)	(0.67)	(0.09)	(3.75)
IGW	0.013	0.448	0.419***	-11.065***
	(0.30)	(0.33)	(0.10)	(2.66)
NIAI	-1.631*	-2.399**	-2.395***	26.089***
	(0.91)	(0.96)	(0.33)	(8.64)
EIGD	14.822***	17.449***	3.223***	40.365***
	(2.52)	(2.74)	(0.58)	(14.48)
NASACQ	-0.234	0.858*	-0.243**	-8.200**
	(0.31)	(0.44)	(0.10)	(3.40)
LN(MRKT)	0.447	2.291***	0.431**	-13.627***
	(0.65)	(0.81)	(0.18)	(3.92)
LN(FRMSTR)	0.067	-3.031***	-0.666***	13.806***
	(0.79)	(0.98)	(0.22)	(5.23)
LN(CORPGOV)	-0.326	-0.964***	-0.008	-4.837**
	(0.29)	(0.33)	(0.08)	(2.15)
LN(BRND)	-0.052	0.883***	0.129***	-1.370
	(0.14)	(0.13)	(0.04)	(1.47)
LN(FINPOS)	-0.684**	0.480	0.270***	-7.824***
	(0.32)	(0.38)	(0.08)	(2.36)
LN(REGACC)	0.541***	-0.161	-0.214***	13.708***
	(0.18)	(0.21)	(0.04)	(1.48)
Constant	-2.345***	5.460***	-0.559***	3.992
	(0.71)	(0.79)	(0.16)	(5.53)
R-squared	0.428	0.555	0.715	0.694
Degrees of freedom	353	353	353	354
Number of observations	372	372	372	372

* p<0.10, ** p<0.05, *** p<0.01

Table 6.11 – OLS regression results for German mandatory adopters reporting under US GAAP and German GAAP (2003-2004)

The above table represents the empirical results for German companies reporting under German and US GAAP from 2003 to 2009. Some companies report up to 2009 as they could defer the IFRS adoption.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it}$$

Variables as described in Table 6.1.

Table 6.12 – OLS regression results for German mandatory adopters reporting under IFRS (2005-2011)

Dependent Variable	**MFE Mean β/se**	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.190*	-0.246**	-0.075*	
	(0.10)	(0.10)	(0.04)	
ln(SIZE)	0.185***	-0.028	0.083***	-0.071
	(0.03)	(0.04)	(0.02)	(0.50)
ln(AGE)	-0.276***	-0.071	0.326***	0.415
	(0.05)	(0.07)	(0.03)	(0.52)
BM	0.141***	0.030	-0.022**	0.065
	(0.02)	(0.02)	(0.01)	(0.19)
DE	-0.048	0.098	0.272***	5.030***
	(0.05)	(0.08)	(0.03)	(0.48)
ROA	0.568*	-2.986***	-0.098	16.955***
	(0.30)	(0.53)	(0.26)	(2.80)
RETURNS	-0.768***	-0.658***	-0.065**	-3.852***
	(0.07)	(0.08)	(0.03)	(0.56)
VOLATILITY	-2.173***	1.206**	1.703***	7.658**
	(0.32)	(0.47)	(0.20)	(3.68)
IGW	-0.465***	-0.995***	-0.186**	-14.067***
	(0.14)	(0.19)	(0.08)	(1.64)
NIAI	4.054***	2.843***	-0.556*	18.668***
	(0.57)	(0.78)	(0.30)	(6.10)
EIGD	0.166	0.131	0.328***	-12.537***
	(0.24)	(0.18)	(0.10)	(1.26)
NASACQ	0.331*	0.867**	0.113	3.361
	(0.18)	(0.37)	(0.13)	(2.40)
LN(MRKT)	1.004***	0.026	0.601***	1.684
	(0.25)	(0.33)	(0.12)	(2.72)
LN(FRMSTR)	-3.085***	-1.332***	-1.288***	19.282***
	(0.40)	(0.51)	(0.21)	(4.46)
LN(CORPGOV)	-0.467**	0.190	-0.118	6.908***
	(0.18)	(0.20)	(0.11)	(2.65)
LN(BRND)	0.062	0.171	0.266***	-8.304***
	(0.09)	(0.14)	(0.07)	(1.14)
LN(FINPOS)	2.210***	0.543*	0.377**	-27.779***
	(0.26)	(0.30)	(0.15)	(3.00)
LN(REGACC)	0.179*	0.286**	0.193***	12.204***
	(0.10)	(0.12)	(0.05)	(0.93)
Constant	-0.235	3.758***	-1.346***	2.585
	(0.55)	(0.82)	(0.31)	(8.27)
R-squared	0.333	0.440	0.611	0.620
Degrees of freedom	689	689	689	690
Number of observations	708	708	708	708

* p<0.10, ** p<0.05, *** p<0.01

Table 6.12 – OLS regression results for German mandatory adopters reporting under IFRS (2005-2011)

The above table represents the empirical results for German companies reporting under IFRS from financial year 2005 to 2011 that mandatorily adopted IFRS. Some companies do not report under IFRS up to 2009 as they were allowed to defer the adoption of IFRS.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it}$$

Variables as described in Table 6.1.

6.3.1. Empirical results and control variables

The analysis of the results begins with tests of the control variables and subsequently continues to the hypotheses testing for IFRS adoption and IFRS accounting standards. Finally, the third part of the analysis tests the impact of the disclosure variables on earnings quality.

Number of analysts

Of the three countries studied, the number of analyst estimations NOA appears to be more significant for French companies than for those in the UK and Germany. The empirical results show that analysts' forecasts of French companies with higher number of analyst estimations have improved forecast accuracy (Tables 6.5 – 6.7). The above results show that quantity of estimations improve the EPS consensus quality and could potentially be influenced by companies whose earnings estimations are in high demand in the market and therefore have higher analyst following. In contrast, in the UK and Germany the absolute forecast error does not seem to be affected by the number of analysts' estimations except the post IFRS period for German mandatory adopters where lower absolute forecast error is observed. The changes in analysts' forecasts of German firms post mandatory IFRS adoption (Table 6.12) could reflect positive financial statement comparability effects. Tan et al. (2011) suggested that mandatory IFRS adoption attracts foreign analysts, improves their forecast accuracy and that is likely to lower the cost of processing financial information since the effect is stronger for foreign analysts following firms in countries with high GAAP-IFRS differences and high differences between the firm's local GAAP and the analysts' local GAAP. This could be the case in both France and Germany above as their domestic GAAPs where further away from IFRS than UK GAAP.

The empirical results in Tables 6.2 – 6.12 show that firms with higher number of analyst estimations tend to have overestimated earnings regardless the accounting standards used (except the post IFRS German mandatory adopters which are probably affected by the crises as observed in Figure 6.1).

This association probably reflects that successful companies disclose good news to the market that increase investors' interest and therefore attract more analysts who provide upwards biased estimations.

In all three countries the empirical results in Tables 6.2 – 6.12 mainly show that the higher the number of analysts estimations, the lower the forecast dispersion. In the case of French firms before and after IFRS adoption (-0.230, $p<0.01$) and (-0.143, $p<0.01$) respectively, and in the UK over the whole period (-0.365, $p<0.01$). The possible explanation for this observation is that from one point onwards the additional analysts providing estimations have limited access to information or similar expertise and therefore their forecasts do not considerably differ (Matolscy and Wyatt, 2006; Chalmers et al. 2012).

Size

The results show that analysts' forecasts of companies with higher market capitalisation have lower absolute forecast error post IFRS adoption for French firms (Table 6.7) and for voluntary adopters (Table 6.10). While the size factor seems to be irrelevant for forecast accuracy for companies in the UK and mandatory adopters in Germany, a possible explanation is that larger firms use more channels of information to inform analysts. Hence, these additional disclosures probably compensate for the higher GAAP-IFRS differences in France and Germany. The results are consistent with Amir et al. (2003) who found that larger firms tend to have increased analyst following and improved forecast accuracy.

Tables 6.2 – 6.12 show that analysts' forecasts of larger UK and French firms have lower forecast dispersion higher for German firms. Moreover, larger UK and French firms in the have increased analyst following but not German firms. For UK and French firms, it is likely that increases in disclosure are higher for larger firms and therefore attract more analysts and help them to make more homogeneous estimations. However, for German firms the number of analyst estimations is reduced and the forecast dispersion is higher probably because of the ongoing use of multiple accounting standards which as Daske (2006) explains could increase uncertainty amongst investors.

The dispersion of forecasts for German firms could reflect a lack of IFRS knowledge by analysts due to wide use of German and US GAAP, especially for larger firms that are likely to have higher complexity in their accounts and more sophisticated international operations for diversification and taxation purposes (Van Tendeloo and Vanstraelen (2005); Paananen and Lin (2009); Gassen and Sellhorn (2006); Christensen et al. (2008)).

Tables 6.4, 6.7, 6.12 show that post IFRS adoption, analysts' forecasts of firms with higher market capitalisation is associated with overestimated earnings for UK, French and German firms. Existing studies such as Horton and Serafeim (2010) show that in many cases IFRS tend to result in higher reported earnings and this could be an explanation for the effect on MFE post IFRS adoption. The post IFRS adoption increase in the bias of analysts' forecast errors is likely to be attributed to higher optimism by analysts forecasting the earnings of larger firms and higher expected earnings before the emergence of the financial crises.

Age

The empirical results in Tables 6.3, 6.6, 6.11 show a positive association between absolute forecast error and firm age and hence, in all three countries, analysts' forecasts of older firms tend to have higher absolute forecast error before IFRS adoption. This evidence is not consistent with Amir et al (2003) who find that older firms tend to have lower absolute forecast error and this inconsistency could be attributed to the difference in geographical and institutional factors between the samples.

Post mandatory IFRS adoption, the association between age and forecast error becomes statistically insignificant in (the strong enforcement environment of) the UK and Germany (for mandatory adopters). The age factor may become less relevant because of improvements associated with enhancements in transparency by IFRS for firms of all ages and this effect may be stronger in the UK environment where IFRS rules are enforced more strongly. However, in France which is a weaker enforcement environment, as Table 6.7 shows, analysts' forecasts of older firms have higher absolute forecast error under IFRS (0.131, $p<0.01$) (lower than under French GAAP but still +ve, where UK and Germany are –ve).

The results in Tables 6.2 - 6.12 show that older firms tend to have a higher number of analyst estimations in the UK and post IFRS adoption in France. However, French firms reporting under French GAAP and German voluntary adopters tend to have reduced analyst following as their age increases. This difference could be attributed to long established relationships with analysts and brokerage houses in the more insider orientated economy of Germany and the outsider/market based economy of the UK.

Another major difference across the three countries is that analysts' forecasts of older firms in the UK and Germany have increased forecast dispersion while the opposite is indicated for French firms where they have reduced forecast dispersion. This does imply an asymmetry across analysts in the UK and Germany pointing that either that experienced/informed analysts invest in all kinds of firms because they have the information and the skillset to make those judgements, whereas less experienced/informed analysts stick to older firms because they perceive them as safer investments.

BM and DE

The variables of market to book ratio and debt to equity ratio did not produce statistically significant results and are disregarded in the analysis.

Return on Assets

The results in Tables 6.2 - 6.12 show that analysts' forecasts of firms with higher profitability have improved forecast accuracy in both periods for UK and French firms but only post IFRS adoption for German mandatory adopters. This is consistent with previous literature suggesting that firms that are more profitable tend to have higher incentives for higher quality financial reporting (Byard et al. 2011). Another explanation for the observed higher forecast accuracy is that profitable firms tend to increase positive news disclosure throughout the financial year. Along the same lines, analysts' forecasts of UK and French firms with higher ROA have reduced forecast dispersion. However, analysts' forecasts of German voluntary adopters tend to have higher forecast dispersion (Table 6.12, 1.582, $p<0.01$). The difference in German companies could be partly attributed to positive earnings surprises due to better than expected performance during the financial crisis as evident in Figure 6.1 (FT, 2012).

The empirical results show that the adoption of IFRS probably brought a shift in the analyst following for profitable firms. Tables 6.2 - 6.12 demonstrate that firms in all three countries (except the group of German mandatory adopters) with higher return on assets tended to have lower analyst following before IFRS. On the contrary, as Tables 6.4 and 6.12 show, post mandatory IFRS adoption, UK and German firms with higher return on assets have a higher number of analyst estimations. This shift could be attributed to increased comparability and higher quality earnings reported under IFRS as well as that highly profitable firms probably increase investment interest and therefore attract analysts.

Another notable observation is that post IFRS adoption, analysts tend to overestimate earnings of profitable French firms (Table 6.7; -0.580, $p<0.01$) compared to underestimated earnings under French GAAP (Table 6.7, 1.892, $p<0.01$). Tables 6.3 and 6.4 show that UK firms' earnings are under estimated both before and after IFRS adoption possibly because of the small differences between UK GAAP and IFRS. As discussed previously, IFRS rules in the UK tend to result in higher reported earnings compared to UK GAAP as evidenced in Horton and Serafeim (2010).

Stock returns

The empirical results in Tables 6.5 - 6.12 show that analysts' forecasts of French and German firms with higher stock performance have improved earnings forecast accuracy. Tables 6.2 - 6.4 show that analysts' forecasts of UK companies with higher stock performance tend to have higher absolute forecast errors under UK GAAP while there is no evidence of this post IFRS adoption.

Looking to the rest of the empirical results, several similarities between the three markets are confirmed. Post IFRS adoption we find that in all three countries analysts' forecasts of firms with higher stock returns are associated with lower analyst following, higher forecast dispersion and underestimation of earnings. The association with lower analyst following is consistent with Tan et al. (2011) who report the same observation.

An explanation may be that post IFRS adoption analysts have a variety of reactions to unexpected positive information, as their forecasts' variance increases as stock prices rise which could be attributed to a) differences in the degree of conservatism between analysts or b) differences in the quality of information channels amongst them. This volatility could be related to lower analyst following, as analysts would probably avoid companies with more turbulent performance that could lead to inaccurate earnings forecasts and damage their reputation. The results of this research for stock price volatility are consistent with the literature, such as Tan et al. (2011), who find that higher stock volatility is associated with lower analyst following.

Looking at the results in Tables 6.5 - 6.12 it can be observed that analysts' forecasts of French and German firms with higher stock returns, are associated with improved analysts' forecast accuracy. This is consistent with the findings of Tan et al. (2011), which show that analysts' forecasts of firms with higher stock returns are likely to have lower absolute forecast error. Hence, the empirical results provide some evidence to argue that post IFRS adoption, positive information about the company is likely to improve analysts' forecast accuracy. A possible explanation for this association is that higher stock performance firms are profitable companies or companies with improved prospects and growth opportunities, that disclose positive information about their future earnings in "insider orientated" markets like France and Germany and this increases the stock price and improves analysts' forecasting ability.

The differences observed in the UK, in Tables 6.3 and 6.4, where there appears to be a less significant relationship between stock returns and forecast accuracy, but significant relationships with forecast error and forecast dispersion, which implies that the new positive information about the firm, as reflected in the price rises, may make no difference for the analysts estimations after the adoption of IFRS. The market-based nature of the UK economy and a higher level of market efficiency could be explanations for this difference (Nobes, 2006), as could the fact that UK GAAP was closer to IFRS than the GAAPs of France and Germany. It is also possible that company news is reported faster in environments with high quality legal systems such as the UK common law system (Bushman and Piotroski, 2006).

Stock price volatility

The results in Tables 6.2 - 6.12 for analysts' forecasts of UK, French and German firms show a similar picture as firms with higher stock price volatility are associated with higher absolute forecast errors which is consistent with Tan et al. (2011) who report the same observation. Also, analysts' forecasts of firms with higher stock price volatility have reduced forecast dispersion for UK firms and post IFRS adoption French firms but higher forecast dispersion for German companies reporting under IFRS. The differentiation of the UK firms could be associated with the findings for analyst following that show that the numbers of earnings estimations is likely to be reduced with higher stock price volatility. This could simply imply that least experienced/informed analysts avoid to provide forecasts for volatile stocks in the UK.

For UK firms throughout both periods and German voluntary adopters, there is a negative relationship between stock price volatility and the number of analyst estimations. However there is a significant positive relationship between the two for French and German firms after mandatory IFRS adoption.

A possible explanation for the results above is that volatile stock price movements are likely to reflect uncertainty about the company's future earnings but that the levels of private information possessed by part of the analysts are low in some cases (UK and French firms) or to some analysts' avoidance of providing estimations for risky stocks. In the market-based UK economy (Nobes, 2006), given that the post IFRS adoption period sample entails the highly turbulent periods of the 2007/2008 credit crunch and the 2009/2010 Eurozone debt crisis, it is argued that possibly analysts lack confidence about the future economic climate and avoid to provide earnings estimations especially for volatile stocks (Tan et al. 2011). This may not be true for France and Germany because of their more insider-orientated economies (Nobes, 2006) and implying that analysts would be better informed than investors. Along the same lines, analysts of French and German firms possessing private information may strive to provide investors with specialist information and insight about companies with uncertain prospects. It is widely accepted that higher stock price volatility is likely reflect more private information and this implies higher risk and higher costs of raising equity capital (Easley and O'Hara, 2004).

Therefore, in the French and German economies, analysts could possibly act as intermediaries between banks and corporations that seek to obtain debt finance as an alternative source.

An explanation for the differences seen in the German voluntary adopters could be that these companies adopted IFRS voluntarily, having higher financial reporting quality incentives (Christensen et al., 2007; Kim and Shi, 2007; Li, 2009; Daske et al., 2008; Daske et al., 2013) and probably because fair value could reflect the financial position of the business more accurately. Hence, analysts for voluntary German adopters (and UK companies) could probably avoid providing earnings forecasts when these firms face increased uncertainty reflected on increased stock price volatility. This observation is consistent with Tan et al. (2011).

6.3.2. Empirical results and hypotheses testing

6.3.2.1. IFRS adoption and analysts' forecasts

As Table 6.2 shows, there is some empirical evidence that forecast accuracy is lower with IFRS adoption in the UK as the coefficient on the absolute forecast error is positive and statistically significant at 5% level. Similarly, the results at Table 6.3 show that forecast accuracy is lower for analysts' forecasts of companies reporting under IFRS in France (0.925, $p<0.01$). In contrast, as Table 6.9 shows the forecast accuracy of analysts' forecasts of German firms is improved for mandatory IFRS adopters as the coefficient is negative and statistically significant at 1% level (-2.239, $p<0.01$). Hence, the following hypothesis for UK and French firms is rejected but for German mandatory adopters is accepted:

$$\boldsymbol{H_1}: \boldsymbol{The\ absolute\ earnings\ forecast\ error\ is\ reduced\ following\ IFRS\ adoption}$$

It should be noted that none of the interaction terms in Table 6.8 provides evidence that IFRS adoption is associated with the higher forecast accuracy for analysts' forecasts of German mandatory adopters and that the deterioration of the analysts' predictability post IFRS is likely to be highly affected by the turbulent times of the late 2000s crises.

Also, the analysts' forecasts of German voluntary adopters do not seem to gain any comparability benefits from mandatory IFRS adoption as the coefficient on (IFRS) is not statistically significant.

Regarding the bias in forecast error, the empirical results show that analysts are likely to overestimate the earnings of French companies reporting under IFRS but to underestimate the earnings of UK companies. An explanation for French companies could be that analysts were expecting a slighter effect of the crises on French company earnings while in the UK the underestimations could be related to a) the IFRS adoption that could often result in higher reported earnings (Horton and Serafeim, 2010) and b) to better than expected performance of UK companies during the Eurozone crisis. However, the results do not show any relation between forecast error bias and IFRS adoption for analysts' forecasts of German companies.

The findings for forecast dispersion follow a similar pattern with the bias in forecast error. The results show that companies reporting under IFRS for analysts' forecasts of UK and French firms have increased forecast dispersion as the coefficient on forecast dispersion is positive and statistically significant at the 1% level. In contrast, analysts' forecasts of both German mandatory and voluntary adopters (potential comparability effects) have reduced forecast dispersion with IFRS adoption as the coefficient on forecast dispersion is negative and statistically significant at the 1% level. The interaction terms in Table 6.8 confirm that post IFRS adoption analysts' forecasts of German firms have reduced forecast dispersion. Hence, the following hypothesis is accepted for German firms but is rejected for UK and French firms:

H_2: *The earnings forecast dispersion is reduced following IFRS adoption*

The results regarding forecast dispersion of analysts' forecasts are partly consistent with the expectations by Ball (2006) that predicted that IFRS adoption is likely to bring higher volatility to analysts' earnings forecasts. It is possible that the emphasis of IFRS on fair value and timely disclosure of economic events leads to increased uncertainty. Also, the results for analysts' forecasts of German firms in Table 6.8 show that analyst following is likely to increase with IFRS adoption.

Thus, an additional explanation for the empirical results is that additional analysts attracted by enhanced financial statement comparability, with enhanced knowledge of the companies, provide their estimations that are likely to reduce forecast dispersion. Also, the improvements of analysts' forecasts of German firms after IFRS adoption could be attributed to a) the high enforcement environment that probably facilitated the proper implementation of IFRS and resulted in higher transparency as well as b) the high GAAP-IFRS differences that probably magnified the benefits of enhanced financial statement comparability (Byard et al., 2011). The argument for analysts' forecasts of mandatory German adopters could be consistent with Horton et al. (2013); Tan et al. (2011); Byard et al. (2011) as this group adopted IFRS mandatorily, had higher GAAP-IFRS differences and operates in a high enforcement environment. Also, the results for analysts' forecasts of UK and French firms could be consistent with Brown et al. (2013) that similarly to this study use a sample with slightly extended time period and do not find positive changes in forecast accuracy after IFRS adoption. Regarding the market-based UK, the extension of the sample to include the financial crisis could probably be responsible for the differences with Choi et al. (2013).

The results show that analyst following is reduced post mandatory IFRS adoption for UK firms (Table 6.4) as the coefficient is negative and statistically significant at the 1% level (-10.251, $p<0.01$). Also, the results do not show a possible association between the number of analyst estimations and (IFRS) for French and German firms.

Hence for firms in all countries the following hypothesis is rejected:

H_3: *The number of analyst estimations increases following IFRS adoption*

These results should be interpreted carefully though because the interaction terms (MANDGxIFRS) and (VOLUGxIFRS) at Table 6.8 both indicate a probable increase in analyst following for German firms. It is possible that the mandatory IFRS effect on analyst following is not symmetrical across companies because the interaction terms of IFRS with other independent variables have an heterogeneous effect across the three countries.

An increase in analyst estimations post IFRS adoption can be possibly linked to several suggested benefits of international accounting harmonisation. The increase in the number of analyst estimations post IFRS adoption is likely attributed to a) reduced costs of processing financial information brought by increased financial statements' comparability b) increased demand for analyst forecasts driven by increased small and international investors' interest. Also, as Tan et al. (2011) indicate it is likely that the increase in the number of estimations is partly influenced from the attraction of foreign analysts. For French and German firms, the high differences between the previously used standards and IFRS as well as the type of the economies (bank-based) might acted as obstacles in the number of analyst estimations. A probable explanation for reductions in analyst following post IFRS adoption is the effect of the financial crises after 2007 as analysts would be reluctant to provide estimations for companies severely affected in these uncertain times. Another argument for possible reductions in analyst following could be the substantial employee layoffs in the financial industry.

6.3.2.2. Goodwill intensity

The empirical results in Table 6.4 provide enough evidence to support IFRS adoption is related to lower absolute forecast error for analysts' forecasts of UK firms as the coefficient on goodwill intensity and the coefficient on the interaction term IGWxIFRS at Table 6.2 is negative and statistically significant at the 1% level.

The most obvious justification is the move from goodwill amortisation to goodwill annual impairment reviews. Under UK GAAP goodwill with under 20 years of useful economic life was amortised at a constant rate but goodwill with over 20 years of useful economic life was subject to an annual impairment review; just as under IFRS. Also, IFRS rules require negative goodwill to be recognised immediately in contrast with UK GAAP that required negative goodwill to be expensed over the period expected to benefit. Hence, the changes in goodwill under IFRS were not likely to be related to higher but actually lower absolute forecast error because a) in some cases goodwill was subject to annual impairment already and b) the timely recognition and disclosure contribute to the improvement in analysts' predictability (PwC, 2013).

The findings are not different for German firms, as analysts' forecasts of firms reporting under German and US GAAP have higher absolute forecast error with higher goodwill intensity. However, the same effect with the UK firms is found for German mandatory adopters reporting under IFRS as the coefficient on goodwill intensity for absolute forecast error is negative and statistically significant at the 1% level. The results show that analysts' forecasts of higher goodwill intensity are likely to be associated with higher absolute forecast error for German voluntary adopters. Interestingly, although the coefficient on the interaction term IGWxIFRS is not statistically significant for mandatory adopters, it is for voluntary adopters with a negative sign. This could potentially imply an improvement in comparability but most importantly higher information content of goodwill after the abolishment of goodwill amortisation brought by IFRS3 Business Combinations.

A likely justification for German mandatory adopters is a small but important difference in the accounting for goodwill rules between US GAAP (that the vast majority of the sample's German firms used before IFRS adoption) and IFRS.

Both accounting standards define goodwill as the net value between the fair value less its sell costs and value in use and require goodwill to be subject to an annual impairment review. However, US GAAP do not permit any goodwill impairment loss to exceed the carrying amount of goodwill while IFRS permits it and allocates the excess to the other assets of the cash generating unit or units. Thus, we can argue that US GAAP set a "ceiling" to the amount of goodwill that can be impaired and analysts know the magnitude of the possible loss in the income statement. The picture is similar for the companies reporting under German GAAP because goodwill is amortised at a constant rate. Thus, a likely explanation for the improved analysts' forecast accuracy under IFRS with higher goodwill intensity is the move to goodwill impairment (PwC, 2013).

Similar to analysts' forecasts of UK and German firms, notable improvements can be observed for those of French companies. Under French GAAP the empirical results show that analysts' forecasts of firms with higher goodwill intensity are associated with lower forecast accuracy as the coefficient is positive and statistically significant at the 1% level while under IFRS firms analysts' forecasts of firms with higher goodwill intensity have lower absolute forecast error as the coefficients on goodwill intensity and the interaction term IGWxIFRS are negative and statistically significant at the 1% level.

Similar to the UK GAAP, goodwill is not longer amortised but subject to an impairment review. A notable difference is the valuation of identifiable assets and liabilities at "entry value" under French GAAP and "fair value" under IFRS. Another difference is that goodwill is included in the investment in an associate under IFRS while under French GAAP the attributable goodwill was accounted for separately. Hence, the results could suggest that fair value for goodwill is likely to improve analysts' predictability in France (PwC, 2013).

Thus, consistent with our expectations higher goodwill intensity is related to lower absolute forecast error post IFRS adoption. The results for all countries before IFRS adoption and German voluntary adopters show that higher goodwill intensity is likely to be associated with higher absolute forecast error. Post IFRS adoption for UK, French firms and German mandatory adopters higher goodwill intensity is associated with lower absolute forecast error.

Hence the following hypothesis is accepted:

$$H_4: \textit{Higher goodwill intensity is associated with changes in absolute forecast error}$$

Looking at Tables 6.2 – 6.12 regarding the bias of forecast error, analysts' forecasts of UK firms reporting under UK GAAP with higher goodwill intensity were likely to have underestimated analyst forecasts as well as under IFRS. In the pre IFRS adoption period for German firms the findings do not show any association between MFE and IGW or for voluntary adopters although the interaction term IGWxIFRS is negative and statistically significant. In fact, analysts' forecasts of German mandatory adopters reporting under IFRS with higher goodwill intensity have underestimated forecasts as the coefficient is negative and statistically significant at the 1% level. On the other hand, the empirical results do not provide any support for companies in France reporting under French GAAP or IFRS.

The empirical results in Tables 6.2 – 6.12 for goodwill intensity and forecast dispersion show an homogeneous picture for UK, French and German firms. Under countries' GAAP the results do not provide any evidence to associate goodwill intensity and forecast dispersion except German firms where forecast dispersion increases with higher goodwill intensity as the coefficient on IGW at Table 6.11 is positive and statistically significant at the 1% level (0.419, $p<0.01$). Post IFRS adoption analysts' forecasts of UK, French and German firms adopting IFRS mandatorily with higher goodwill intensity have reduced forecast dispersion. This is confirmed in all cases by the interaction terms IGWxIFRS in Tables 6.2, 6.5, 6.8, 6.10 that are negative and statistically significant and show that IFRS adoption is probably associated with the shift in coefficients. For voluntary adopters, the results show that analysts' forecasts of firms with higher goodwill intensity is associated with higher forecast dispersion but the interaction term IGWxIFRS indicates that the changes probably arised from comparability benefits with mandatory adopters and the IFRS3 implementation.

In summary, analysts' forecasts of UK, French firms and German mandatory adopters post IFRS adoption, higher goodwill intensity is associated with lower forecast dispersion. Hence, it can be argued that the timely recognition, move to goodwill impairment and disclosure for goodwill under IFRS is likely to reduce the variance of analysts' estimations.

Thus, the following hypothesis is accepted:

H_5: *Higher goodwill intensity is associated with changes in forecast dispersion*

Regarding the analyst following, an identical picture is observed in analysts' forecasts of UK and French firms. Before and after IFRS adoption, analysts' forecasts of firms with higher goodwill intensity is associated with higher number of analyst estimations implying that analysts are potentially attracted to companies with higher goodwill intensity. Nevertheless, in both cases the interaction term IGWxIFRS exhibits that this association is likely to be weaker post IFRS adoption as the coefficient on goodwill intensity is negative and statistically significant. The same is observed for German voluntary adopters; although higher goodwill intensity is associated with higher number of analyst estimations the interaction term shows that this is probably weaker post mandatory IFRS adoption and the implementation of IFRS3. Similarly, the coefficient on the interaction term IGWxIFRS is negative and statistically significant for mandatory adopters but in this case higher IGW is associated with lower analyst following in both periods. Therefore, the results could implicate that analysts are possibly attracted by firms with higher goodwill intensity but at a lesser extent after the move to goodwill impairment possibly because of the subjectivity entailed in impairment and the more timely recognition. Likewise, if German voluntary adopters have incentives for higher financial reporting quality compared to the German mandatory adopters then this is probably reflected to the lower analyst following with higher goodwill intensity for the latter group of companies.

One of the factors for a firm's high goodwill intensity is the increased goodwill arising from acquisitions. Thus, a possible explanation for the results above is that IFRS3 requires extensive disclosure about business combinations and acquisitions. Hence, it is assumed that the new accounting rules for business combinations are probably responsible for the improvement in analysts' forecast dispersion. The results for goodwill are strongly supported by similar inferences by Chalmers et al. (2012) and Cheong et al. (2010) that used data from the Pacific area and found that firms with higher goodwill intensity experienced considerable improvements in the analysts' information environment post IFRS adoption.

6.3.2.3. Goodwill impairments

As Table 6.3 and Table 6.4 show, the empirical results provide evidence to support that analysts' forecasts of UK firms with higher proportion of goodwill impairments are associated with lower absolute forecast error before and after IFRS adoption. However, the coefficient on the interaction term EIGDxIFRS is positive and statistically significant and indicates that this association is weaker post IFRS adoption.

As described above, under UK GAAP goodwill is amortised at a constant rate when under IFRS goodwill is subject to an annual review. Hence, it can be argued that goodwill impairments tend to be more informative under IFRS and in this case timely recognition and disclosure of economic events are likely to improve analysts' forecast accuracy.

On the contrary, as Tables 6.6 and 6.7 show analysts' forecasts of French companies reporting under French GAAP with higher proportion of goodwill impairments have higher absolute forecast errors while post IFRS adoption probably there is not an association between MFA and EIGD. However, the coefficient on the interaction term is negative and statistically significant and suggests that IFRS adoption is probably associated with this change. Analysts following French companies with higher proportion of goodwill impairments are likely to experience higher uncertainty possibly because of institutional factors, non full compliance with disclosure requirements and use of goodwill impairments for real earnings management.

An almost identical picture with analysts' forecasts of French firms is observed for German firms, the other bank-based economy. Table 6.12 shows that analysts' forecasts of German mandatory adopters with higher proportion of goodwill impairments were likely to have considerably higher absolute forecast errors before IFRS adoption. Nevertheless, post mandatory IFRS adoption this possible association ceases and EIGD is not likely to be related to forecast accuracy. In fact, the coefficient on the interaction term EIGDxIFRS is negative and statistically significant and indicates that IFRS adoption is probably related to this shift.

Interestingly, higher proportion of goodwill impairments lead to higher absolute forecast error for German voluntary adopters but the coefficient on the interaction term is not statistically significant and does not suggest any changes after the IFRS3 implementation. Similarly to analysts' forecasts of French companies it is suggested that under IFRS increased disclosure requirements help to reduce this phenomenon.

In summary, analysts' forecasts of French firms before IFRS adoption and of both groups of German firms before the IFRS adoption it is likely that the higher the proportion of goodwill impairments the higher the absolute forecast error. However, analysts' forecasts of UK firms during both periods, post IFRS adoption for German mandatory adopters and for French firms, the higher the proportion of goodwill impairments, the lower the absolute forecast error. Hence, the following hypothesis is accepted:

H_6: *Higher goodwill impairments are associated with changes in absolute forecast error*

Under UK GAAP, Table 6.3 does not indicate any empirical evidence for EIGD and MFE. However, post IFRS adoption the results show that that analysts tend to underestimate the earnings of companies with higher goodwill impairment proportion as the coefficient on the proportion of goodwill impairments is negative and statistically significant at the 5% level. The results do not show any association between EIGD and MFE for analysts' forecasts of French firms or German voluntary adopters but indicate a shift for mandatory adopters. Before IFRS adoption, analysts' forecasts of German mandatory adopters with high proportion of goodwill impairment have considerably overestimated forecasts but post IFRS adoption, the picture totally changes and companies with higher proportion of goodwill impairments are not associated with MFE any more.

Looking at the Table 6.3, it is observed that under UK GAAP analysts' forecasts of companies with higher proportion of goodwill impairments experience reduced forecast dispersion as the coefficient on proportion of goodwill impairments is negative and statistically significant at the 1% level (-0.370, $p<0.01$).

Similarly, Table 6.6 exhibits that under French GAAP analysts' forecasts of companies with higher EIGD have considerably reduced forecast dispersion as the coefficient on proportion of goodwill impairments is negative and statistically significant at the 1% level (-0.518, $p<0.01$). On the contrary, before and IFRS adoption analysts' forecasts of German mandatory adopters with higher proportion of goodwill impairments have higher forecast dispersion but there is no evidence for voluntary adopters.

Interestingly, the coefficient on the interaction term EIGDxIFRS for the analysts' forecasts of UK and French firms is positive and statistically significant but negative and statistically significant for German mandatory adopters. Post IFRS adoption and in total contrast with the pre IFRS period, analysts' forecasts of UK and French firms with higher proportion of goodwill impairments is associated with increased forecast dispersion. This change is supported from the coefficient on the interaction term EIGDxIFRS that is positive and statistically significant.

Before IFRS adoption the results for analysts' forecasts of UK and French firms show that the higher the proportion of goodwill impairments, the lower the forecast dispersion. However, before IFRS adoption for German firms and post IFRS adoption in all groups of this study, the results show that analysts' forecasts of firms with higher proportion of goodwill impairments is associated with higher forecast dispersion. Thus, the following hypothesis is accepted:

H_7: *Higher goodwill impairments are associated with changes in forecast dispersion*

Some opponents of goodwill impairment would suggest that the abolishment of a constant rate amortisation of goodwill will cause uncertainty to analysts, but the empirical results show that higher goodwill impairments are likely to improve analysts' forecast accuracy. Similarly to the goodwill intensity section, it is assumed that increased mandatory disclosure for goodwill is responsible for this result. Interestingly, the results provide evidence to suggest that higher goodwill impairments are likely to be associated with higher analysts' forecast dispersion post IFRS adoption as well as reduced analyst following.

The results for goodwill impairment and forecast accuracy are consistent with a study for Australian firms by Chalmers et al. (2012) but not with forecast dispersion as analysts probably react with higher uncertainty in Europe. This observation potentially implies that goodwill impairments contain a higher information content than amortisation and they are probably perceived as economic events and as signals for corporate performance by analysts. Nevertheless, this information is probably not absorbed symmetrically by analysts with analysts' specialisation and insider information as likely justifications.

6.3.2.4. Size of acquisitions

The empirical results for the relative size of acquisitions before and after IFRS adoption are contradictory among the three markets. Concerning forecast accuracy, for analysts' forecasts of firms under UK GAAP at Table 6.3 higher acquisitions are related to lower absolute forecast error for FTSE100 companies as well as under French GAAP for CAC40 companies at Table 6.5.

The picture changes when looking at Tables 6.11 and 6.12 for German mandatory adopters as before and after IFRS adoption, analysts' forecasts of firms with higher acquisitions is associated with deteriorated forecast accuracy. Under IFRS, analysts' forecasts of voluntary adopters in Germany are likely to have lower absolute forecast error with higher acquisitions although the coefficient on the interaction term NASACQxIFRS is positive and statistically significant and indicates the opposite. In fact, analysts' forecasts of German mandatory adopters have higher absolute forecast error with higher acquisitions post IFRS adoption with the interaction term confirming a probable further increase post IFRS adoption. Despite the same picture before and after IFRS adoption there are two important differences between IFRS and US GAAP; the full goodwill method and the contingent assets and liabilities. The full goodwill method estimates goodwill as the difference between the fair value of the company and the fair value of the net identifiable assets while the partial goodwill method as the difference between the purchase consideration and the fair value of the acquired net assets.

The full goodwill method is mandatory under US GAAP and optional under IFRS. Under US GAAP, both acquired contingent assets and liabilities are recognised at fair value while under IFRS contingent assets are not recognised.

Analysts' forecasts of French firms with higher NASACQ are associated with lower absolute forecast error although the coefficient on the interaction term is positive and statistically significant and shows that a weaker association is likely post IFRS adoption. There are several differences between French GAAP and IFRS that might affect the results. Under French GAAP, in successive share purchases, assets and liabilities must be revalued while under IFRS there is no such requirement. Hence, it is suggested that this is likely to provide less information to the market under IFRS. Also, under French GAAP both acquired research and development are recognised and amortised when under IFRS only development is recognised. Also, under French GAAP payments made by the acquirer as a guarantee of the consideration's value do increase the acquisition costs when under IFRS do not (PwC, 2013).

Finally, analysts' forecasts of UK companies with higher acquisitions will still be related to lower absolute forecast error as the coefficient on NASACQ at Table 6.4 is negative and statistically significant at the 1% level. The results for analysts' forecasts of UK firms show that the IFRS changes in accounting for business combinations were not likely to affect analysts' estimations. Under IFRS the transaction costs should be expensed and not included in the cost of the acquisition. It is possible that both market regulation and accounting standards requirements not only provide adequate information to analysts but are related to lower absolute forecast error for firms implementing acquisitions (PwC, 2013). The small UK GAAP – IFRS differences are potentially one of the factors for the unchanged picture regarding NASACQ.

In summary, the results show that before and after IFRS adoption analysts' forecasts of UK and French firms and German voluntary adopters with higher acquisitions are associated with lower absolute forecast error. However, before and after IFRS adoption for analysts' forecasts of German mandatory adopters it is likely that higher acquisitions are associated with higher absolute forecast error.

Hence, the following hypothesis is rejected:

H_8: *Higher size of acquisitions is associated with changes in absolute forecast error*

Examining the relationship between forecast error bias and size of acquisitions the results at Tables 6.2 – 6.12 show that under UK and French GAAP analysts are likely to overestimate the earnings of companies with higher acquisitions but that this association is not likely to exist post IFRS adoption for firms in both countries. German mandatory adopters have overestimated earnings post IFRS adoption but there is not any empirical evidence before IFRS or for voluntary adopters.

Table 6.3 shows that under UK GAAP analysts' forecasts of UK companies with higher acquisitions have considerably reduced forecast dispersion as the coefficient on NASACQ is negative and statistically significant at the 1% level (-1.177, $p<0.01$). The situation is almost identical under French GAAP as the coefficient on NASACQ is negative and statistically significant at the 1% level (-1.566, $p<0.01$) and German mandatory adopters before IFRS adoption as the coefficient on NASACQ is negative and statistically significant at the 1% level (-0.243, $p<0.01$). Post IFRS adoption, the picture changes for analysts' forecasts of all mandatory adopting firms in the UK, France and Germany and size of acquisitions is not anymore associated to forecast dispersion. Analysts' forecasts of voluntary German adopters have reduced forecast dispersion with higher acquisitions but the coefficient on the interaction term is positive and statistically significant and indicates that forecast dispersion is likely to be higher post mandatory IFRS adoption.

Thus, the above observations provide evidence to support that the following hypothesis is accepted:

H_9: *Higher size of acquisitions is associated with changes in forecast dispersion*

The results indicate that post mandatory IFRS adoption, the improving effect of the relative size of acquisitions on the accuracy of analysts' forecasts remains but not for forecast dispersion. Therefore, it is suggested that the new accounting rules for acquisitions, acquisitions costs, full goodwill method and IFRS3 disclosures is likely to cause uncertainty to analysts and deteriorate the homogeneity of their estimations. Obtaining support from the findings for forecast accuracy, it can be suggested that although acquisitions regulations require increased disclosure and provide information to the market, the new accounting rules for business combinations are likely to a) not be fully comprehensible by all analysts, b) provide managers with opportunities for real earnings management. The empirical results for the analysts' forecasts of UK firms and German voluntary adopters show that higher acquisitions are related to lower analyst following. Hence, the increased forecast dispersion post IFRS adoption could be attributed to lack of IFRS technical knowledge by some analysts. The results for acquisitions are partly consistent with the results for goodwill intensity and generally speaking it can be argued that higher goodwill and acquisitions probably transmit valuable information about the company's future earnings but that is not symmetrically absorbed and comprehended by all analysts.

6.3.2.5. Intangible assets

The empirical results in Table 6.3 indicate that under UK GAAP analysts' forecasts of UK companies with higher intangible assets intensity are associated with higher absolute forecast error as the coefficient on intangible assets intensity is positive and statistically significant at the 1% level. Similarly, under French GAAP the results at Table 6.5 show that higher intangible assets intensity is associated with higher absolute forecast error as the coefficient on intangible assets intensity is positive and statistically significant at the 1% level. On the contrary as Table 6.11 shows, German mandatory adopters in the pre IFRS adoption period with higher intangible assets intensity have lower absolute forecast error as the coefficient is negative and statistically significant at the 1% level.

Intangibles and forecast accuracy do not seem to go well for analysts' forecasts of German firms as they are likely to have higher absolute forecast error with higher intangible assets intensity. Regarding mandatory adopters, US GAAP did not allow the capitalisation of development costs while IFRS does. An even stronger difference lies in the impairment of indefinite life intangibles as US GAAP demands the impairment at the asset level and IFRS at the cash generating unit level (PwC, 2013). Moreover, IFRS rules demand a more timely recognition of advertising costs than US GAAP. The coefficient on the interaction term for mandatory adopters does not suggest that IFRS adoption is likely to be responsible for the shift (although it is positive and statistically significant at the 10% level). Regarding analysts' forecasts of German voluntary adopters, the coefficient on the interaction term is negative and statistically significant at the 1% level and indicates potential comparability benefits after the mandatory IFRS adoption for analysts' forecasts of German companies with higher intangible assets intensity.

For analysts' forecasts of UK firms the picture at Table 6.4 remains the same and higher absolute forecast error is associated with higher intangible assets intensity. The accounting rules for intangibles are quite similar between UK GAAP and IFRS and this is likely to be reflected in the results.

In contrast, post IFRS adoption, analysts' forecasts of companies in France with higher intangible assets intensity experience have lower absolute forecast error as the coefficients at Table 6.7 on intangible assets intensity and the interaction term NIAIxIFRS at Table 6.5 are negative and statistically significant suggesting that IFRS adoption is probably associated with this shift. French GAAP and IFRS have several significant differences regarding the treatment of intangibles that can probably explain the above shift in forecast accuracy. Under IFRS, development costs are capitalised when particular criteria are met while under French GAAP development costs were expensed as occurred. Hence, IFRS have stricter requirements and grant less flexibility to managers. Also, French GAAP allowed more capitalisations of various expenses such as advertising costs and business expansion costs in contrast with IFRS that demands the expense of advertising costs in the income statement.

Another strong difference is that IFRS requires the amortisation of all intangibles while French GAAP does not require an impairment test of intangibles over 20 years and allows the non-amortisation of intangibles (PwC, 2013). Although, IFRS in limited circumstances allows the revaluation of intangibles, are in absolute contrast with French GAAP that grant higher flexibility to managers. In general, it can be suggested that IFRS in comparison with French GAAP rules for intangibles limit the opportunities of managers to manipulate earnings through the capitalisation/expenses of intangibles.

Comparing the accounting standard differences across the three countries it can be observed that the higher in number and more prompt recognition of intangibles is likely to improve analysts' forecast accuracy. Hence, it can be suggested that the improvement in information asymmetry was in one extent due to more informative IFRS accounting standards for intangible assets.

Before IFRS adoption, analysts' forecasts of German mandatory adopters and of French firms post IFRS adoption the results suggest that higher intangible assets intensity is associated with lower absolute forecast error. However, analysts' forecasts before and after IFRS adoption of UK firms, before IFRS adoption of French firms and of German companies reporting under IFRS the results suggest that higher intangible assets intensity is associated with higher absolute forecast error.

Thus, the following hypothesis is accepted:

$$H_{10}: \textit{Higher intangible assets intensity is associated with changes in absolute forecast error}$$

Before and after IFRS adoption for analysts' forecasts of UK firms the results at Tables 6.3 and 6.4 show that analysts are likely to overestimate the earnings of higher intangible assets intensity firms. Before IFRS adoption in France, companies with higher intangible assets intensity have underestimated earnings but post IFRS adoption there is no association. The results do not show an association between MFE and intangible assets intensity before IFRS adoption in Germany and for voluntary adopters reporting under IFRS.

However, the results show a shift towards overestimated earnings for analysts' forecasts of German mandatory adopters reporting under IFRS which is supported by the interaction term too as the coefficient is positive and statistically significant.

Analysts' forecasts of UK and French firms have similar patterns for forecast dispersion. As Tables 6.3 and 6.5 show under UK and French GAAP the forecast dispersion is increased with higher intangible assets intensity, as the coefficient is positive and statistically significant at the 1% level. Also, for analysts' forecasts of firms in both countries and under IFRS, there is no empirical evidence to relate forecast dispersion with intangible assets intensity and the interaction term NIAIxIFRS. As explained above, in the case of analysts' forecasts of French firms, intangibles were related to lower absolute forecast error. On the other hand before mandatory IFRS adoption in Germany, forecast dispersion was likely to be decreased for analysts' forecasts of firms with higher intangible assets intensity as the coefficient is negative and statistically significant at the 1% level. The picture changes for analysts' forecasts of German firms post IFRS adoption and companies with higher intangible assets intensity are not associated with forecast dispersion. Interestingly, voluntary IFRS adopters are likely to have higher forecast dispersion with higher intangible assets intensity but the coefficient on the interaction term is negative and statistically significant and could potentially indicate comparability benefits. Another explanation for this phenomenon is the lack of familiarity with intangibles treatment of IFRS in the early adoption days that becomes reduced after the mandatory adoption of IFRS.

Before IFRS adoption, analysts' forecasts of UK and French firms and German voluntary adopters with higher intangible assets intensity are associated with higher forecast dispersion. On the contrary, post IFRS adoption analysts' forecasts of UK, French and German mandatory adopters with higher intangible assets intensity are no longer associated with forecast dispersion. Hence, the following hypothesis is accepted:

$$H_{11}: \textit{Higher intangible assets intensity is associated with changes in forecast dispersion}$$

Post IFRS adoption analyst following is increased for UK firms (Table 6.4) but surprisingly decreased for French firms (Table 6.6) with higher intangible assets intensity. German companies with higher intangible assets intensity attract a higher number of analysts during all periods and adoption groups with the interaction term suggesting a potential increase post mandatory IFRS adoption. In conjunction with the findings for forecast accuracy and dispersion, it can be broadly suggested that quantity (of analysts' estimations attracted by intangible intensive companies) does not necessarily imply earnings forecasts quality especially when looking at the case of France. The above results are likely to imply that analysts are highly attracted by R&D and technology firms (Matolscy and Wyatt, 2006; Barth et al., 2001) that usually have higher intangible assets intensity but that the IFRS treatment of intangibles is likely to increase this effect but not with an increase in forecast accuracy. A similar picture has been observed by Matolscy and Wyatt (2006) in Australia.

The empirical results are partly consistent with existing academic and industrial publications that support that intangible assets are an important information asymmetry factor. Several authors suggest that intangible assets are poorly reported under IFRS and it is believed that the results for analysts' forecasts of UK and German firms are consistent with this argument. However, the empirical analysis indicates that this is not the case for analysts' forecasts of French firms and that analysts' forecast dispersion is mitigated in all countries. IFRS provide less flexibility to managers regarding intangibles and this seems to be fairly effective in a low enforcement country such as France. The results for forecast dispersion are consistent with Chalmers et al. (2012) but not for forecast accuracy. It could be suggested that the IFRS rules for intangibles such as the stricter criteria and the amortisation of all capitalised intangibles (such as R&D) could be more informative and value relevant (Lev and Sougiannis, 1996; Tsalavoutas and Tsoligkas, 2011; Dedman et al. 2009).
In conjunction with the expense of the rest intangibles, the new rules are likely to reduce analysts' disagreements but the use of fair value and timely recognition could add up to the uncertainty about intangibles and be related to the higher absolute forecast error similarly to older studies on intangibles (Barron et al., 2002; Amir et al., 2003; Lev and Radhakrishnan, 2005).

6.3. Corporate disclosure analysis

In this section the impact of corporate disclosure on the analysts' information environment before and after IFRS adoption will be assessed. In this analysis, the aim is to highlight which type of information is beneficial or detrimental for financial analysts. Also, it is intended to assess if IFRS corporate disclosure requirements did improve the transparency and comparability of financial statements as well as to identify if the increase in quantity of information did imply an increase in information quality.

Statements of corporate and business performance and financial position

It should be reiterated that given the research design of this project, it can be suggested that the disclosure category that could better proxy the information content of the financial statements and the effect of its quantity and quality on corporate communication is the "*Statements of corporate and business performance and financial position"* or otherwise LN(FINPOS). Also, it is expected that this category is mostly affected by IFRS adoption and this is the rationale behind the decision to create an interaction term with the IFRS indicator variable only with this disclosure category.

Table 6.6 shows that under French GAAP, analysts' forecasts of firms with greater quantity of disclosure about corporate and business performance and financial position have lower absolute forecast error as the coefficient is negative and statistically significant at the 1% level. On the contrary the empirical results do not show any statistical evidence for analysts' forecasts of UK and German firms before IFRS (although LN(FINPOS) for MFA is statistically significant at the 10% level).

At Tables 6.4, 6.10 and 6.12 post IFRS the same picture is observed with no statistical significance for analysts' forecasts of UK, German mandatory and voluntary adopters.

However, the coefficient on the interaction term LN(FINPOS)xIFRS is negative and statistically significant and indicates that disclosure quantity of corporate and business performance and financial position is associated with improved analysts' forecast accuracy post IFRS for analysts' forecasts of UK firms and to increased absolute forecast error in Germany for both voluntary and mandatory adopters.

For analysts' forecasts of French firms the opposite is observed in Tables 6.5 – 6.7 as analysts' forecasts of firms with greater quantity of disclosure about corporate and business performance and financial position are likely to have lower absolute forecast error as the coefficients for LN(FINPOS) and the interaction term are negative and statistically significant at the 1% level. It can be argued that the financial information disclosure under IFRS has been beneficial for the analysts' earnings forecast accuracy for UK and French firms but not for German firms. A probable explanation for the positive reaction of French firms could be the weaker legal enforcement in the country compared to stronger legal enforcement of UK and German firms. Due to this difference, the analysts' forecasts of French companies with higher supply of disclosures for corporate and business performance and financial position might have incentives for higher quality financial reporting and this could be reflected in the quality of analysts' forecasts. For German firms, the higher absolute forecast error could be related to several differences between IFRS and US/German GAAP and to the lack of analysts' knowledge of IFRS. As Beuselinck et al. (2010) suggested, analysts probably need considerable time to adapt to the new disclosure standards especially when firms have complex accounts and the local GAAP-IFRS differences are higher.

Before and after IFRS adoption for French firms and post IFRS adoption for UK firms, the results demonstrate that greater quantity of disclosure about financial position and performance is associated with analysts' forecasts that have lower absolute forecast error. However, the results do not provide empirical evidence to support a likely association before IFRS adoption for UK and German firms across all periods. Nevertheless, the interaction term is statistically significant and provide some evidence to suggest that higher disclosure quantity of financial position and performance is associated with lower absolute forecast error post IFRS adoption.

Thus, the following hypothesis is accepted:

H_{12}: *Higher disclosure quantity of financial position and performance is associated with changes in absolute forecast error*

It should be noted that for analysts' forecasts of German voluntary adopters, the logistic regressions and the fixed effects model suggest that greater quantity of disclosure about corporate and business performance and financial position could be associated with lower absolute forecast error until the 5% threshold. Hence, the above hypothesis could probably be accepted for analysts' forecasts of German voluntary adopters. Similarly, the decision to accept the above hypothesis post IFRS adoption for analysts' forecasts of UK firms should be taken carefully because the results from the logistic regressions and the fixed effects model indicate that greater quantity of disclosure about corporate and business performance and financial position is probably related to lower absolute forecast error until the 5% threshold as well (but associated with increased absolute forecast error below that threshold).

Under countries' GAAP the results do not provide any evidence to support that greater quantity of disclosure about corporate and business performance and financial position is likely to affect the forecast error bias except German mandatory adopters that are likely to have underestimated earnings. For analysts' forecasts of UK firms post IFRS adoption, Table 6.4 shows that greater quantity of disclosure about corporate and business performance and financial position is associated with earnings underestimations while for French companies and German mandatory adopters it is associated with analysts' overestimations.

Analysts' forecasts of French firms post IFRS adoption with (Table 6.7) greater quantity of disclosure about corporate and business performance and financial position are associated with higher forecast dispersion as the coefficient is positive and statistically significant at the 1% level (0.107, $p<0.01$), while there is not any empirical evidence before IFRS adoption. The situation did not change for analysts' forecasts of UK firms as greater quantity of disclosure about corporate and business performance and financial position is associated with higher forecast dispersion before and after IFRS adoption.

Greater quantity of disclosure about corporate and business performance and financial position is associated with higher forecast dispersion for analysts' forecasts of mandatory adopters before and after IFRS adoption Tables 6.11 – 6.12 and lower forecast dispersion for analysts' forecasts of voluntary adopters. In summary, only for analysts' forecasts of voluntary adopters in Germany the results indicate that greater quantity of disclosure about financial position and performance is associated with lower forecast dispersion. Given the above, the following hypothesis is accepted:

H_{13}: *Higher disclosure quantity of financial position and performance is associated with changes in forecast dispersion*

A similar pattern is observed when looking at the analyst following. Analysts' forecasts of German voluntary adopters have increased analyst following with greater quantity of disclosure about corporate and business performance and financial position but German mandatory adopters have reduced analyst following before and after IFRS adoption. Before and after IFRS adoption analysts' forecasts of French firms with greater quantity of disclosure about corporate and business performance and financial position is associated with higher number of analyst estimations. Analysts' forecasts of UK firms with greater quantity of disclosure about corporate and business performance and financial position is associated with lower analyst following before IFRS adoption but with no empirical evidence post IFRS adoption.

In summary, the results show that before and after IFRS adoption, analysts' forecasts of French firms and German voluntary adopters, greater disclosure quantity of financial position and performance are associated with higher number of analyst estimation. However, before IFRS adoption, analysts' forecasts of UK firms and German mandatory adopters with greater disclosure quantity of financial position and performance are associated with lower number of analyst estimations. Hence, the following hypothesis is accepted:

H_{14}: *Higher disclosure quantity of financial position and performance is associated with changes in the number of analyst estimations*

In conjunction with the findings for forecast dispersion it can be argued that in the low enforcement environment of France greater quantity of financial information is likely to attract additional analysts due to higher firm incentives and enhanced financial reporting quality. On top of that, their wider forecast dispersion post IFRS adoption could be related to the high French GAAP-IFRS differences. For UK firms post IFRS adoption, an increase in analyst following could be related to enhanced comparability. On the other hand, for German firms the difference seems clear between voluntary and mandatory adopters. Regarding German voluntary adopters, the findings are consistent with Kim and Shi (2012) and Glaum et al. (2013) as voluntary adopters with greater levels of disclosure about their financial performance, have lower forecast dispersion probably because these companies have higher incentives for high quality reporting (relative to mandatory adopters) and benefit from greater comparability to other IFRS adopters. This becomes more obvious when looking at the companies forced to adopt IFRS (mandatory adopters) with greater quantity of disclosure about corporate and business performance and financial position that have less analyst following and higher forecast dispersion.

Statements of Market risk, industry analysis and competitive forces

The variable that represents statements of Market risk, industry analysis and competitive forces is LN(MRKT). Before IFRS adoption the empirical results show that analysts' forecasts of German mandatory adopters and French firms under French GAAP with greater quantity of disclosure about market risk, industry analysis and competitive forces have higher absolute forecast error while analysts' forecasts of UK firms under UK GAAP have lower absolute forecast error. Post IFRS adoption, the picture remains the same for analysts' forecasts of UK firms but the results do not show any evidence for German firms. For analysts' forecasts of French firms the picture changes as well and greater quantity of disclosure about market risk, industry analysis and competitive forces is not associated with absolute forecast error.

Tables 6.2 – 6.12 show that before and after IFRS adoption the empirical results indicate that analysts' forecasts of UK firms with greater quantity of disclosure about market risk, industry analysis and competitive forces have lower forecast dispersion but higher for French firms and both German groups.

Concerning the forecast error bias, before IFRS adoption the empirical results show that analysts' forecasts of German mandatory adopters with greater quantity of disclosure about market risk, industry analysis and competitive forces have affected MFE but UK companies are likely to have underestimated earnings while French companies overestimated earnings. Post IFRS adoption, there is no empirical evidence for analysts' forecasts of French firms but there is not any empirical evidence for analysts' forecasts of UK firms between forecast error and disclosure quantity of market risk, industry analysis and competitive forces. The picture is mixed for German firms where analysts' forecasts of mandatory adopters are likely to have overestimated earnings while those of voluntary adopters have underestimated earnings.

Regarding the number of analyst estimations, before and after IFRS adoption analysts' forecasts of UK firms with greater quantity of disclosure about market risk, industry analysis and competitive forces have lower analyst following as well as analysts' forecasts of German voluntary adopters and mandatory adopters before IFRS adoption. For analysts' forecasts of French firms and German mandatory adopters post IFRS adoption, greater disclosure quantity of market risk, industry analysis and competitive forces is not associated with NOA.

In summary, a mixed reaction is observed in the post IFRS adoption period. For analysts' forecasts of French and UK firms, higher amount of information regarding the condition of the market and the economy are probably beneficial to the analysts' information environment in terms of analysts' forecast errors. For analysts' forecasts of UK companies, a possible explanation is that increased information about the market conditions are beneficial for analysts in the UK market based economy while for France the results are interpreted as an improvement in the information environment probably related to the introduction of IFRS. On the other hand, for German companies the analyst following is reduced and forecasts tend to have higher dispersion for firms that tend to have higher disclosures about the market conditions probably due to esoteric bank based type of the German economy.

Statements of firm strategy, product market performance, performance of business strategy model

The variable that represents statements of firm strategy, product market performance, performance of business strategy model is LN(FRMSTR). The disclosure proxies related to the firm's strategy LN(FRMSTR) provide a different but comprehensive picture across the three countries. Tables 6.2 – 6.4 show that before IFRS adoption for analysts' forecasts of UK companies, greater quantity of disclosure about firm strategy, product market performance, performance of business strategy model is related to higher MFA but there is not any evidence for any association post IFRS adoption. Also, before and after IFRS adoption for analysts' forecasts of UK companies, greater quantity of disclosure about firm strategy, product market performance, performance of business strategy model are associated with lower forecast dispersion and higher NOA. This implies that for analysts' forecasts of UK companies, higher management disclosures are likely to attract more analysts providing forecasts that disagree less but do not improve the forecast accuracy.

Tables 6.5 – 6.7 show that both before and after IFRS adoption, analysts' forecasts of French companies, greater quantity of disclosure about firm strategy, product market performance, performance of business strategy model are associated with higher absolute forecast error as well as higher forecast dispersion and lower number of analyst estimations. The results imply that greater quantities of disclosure about the firm's strategy are associated with higher analysts' uncertainty about the firms' earnings reflected by forecast inaccuracies, higher forecast standard deviation and lower analyst following.

For analysts' forecasts of German companies, as Tables 6.8 - 6.12 show, greater quantity of disclosure about firm strategy, product market performance, performance of business strategy model disclosure proxies is likely to be beneficial for the analysts' information environment as both voluntary and mandatory adopters across all periods have lower absolute forecast error. On top of that, analysts' forecasts of German mandatory adopters with greater LN(FRMSTR) have higher analyst following and lower forecast dispersion before and after IFRS adoption but also have lower analyst following for voluntary adopters.

In general, it can be argued that increased information quantity about the firms' operations and strategy is not beneficial to analysts' forecast accuracy of UK and French firms, possibly because they are likely to rely more on the financial information that accompanies the company announcements and reports. In the high enforcement environment of Germany though, analysts seem to give more weighting to the LN(FRMSTR) disclosures. A possible explanation is the high differences between US/German GAAP and IFRS that could lead analysts to give more weight in the informational value of the disclosure about firm strategy, product market performance, performance of business strategy model disclosures by the management of the companies.

Statements of human and organisational capital, management performance, corporate governance and leadership

The variable that represents statements of human and organisational capital, management performance, corporate governance and leadership is LN(CORPGOV). The empirical results at Tables 6.2 - 6.12 show that under individual countries' GAAP, analysts' forecasts of all companies that subsequently adopted IFRS mandatorily, with a greater quantity of LN(CORPGOV) disclosures are likely to have lower absolute forecast error. Post IFRS adoption, the situation remains the same for analysts' forecasts of French companies, but for UK companies the results show that firms with greater quantities of LN(CORPGOV) disclosures have higher absolute forecast error while for German companies there is no evidence of this.

The empirical results at Tables 6.3 - 6.4 show that both before and after IFRS adoption, analysts' forecasts of UK firms with greater LN(CORPGOV) have higher forecast dispersion as well as voluntary German adopters throughout the whole period. On the contrary, analysts' forecasts of French firms before and after IFRS adoption greater quantity of disclosure about human and organisational capital, management performance, corporate governance and leadership is associated with lower forecast dispersion. Table 6.3 and Table 6.4 show that under UK GAAP and under IFRS, UK firms with greater quantity of disclosure about human and organisational capital, management performance, corporate governance and leadership have higher number of analyst estimations.

Before IFRS adoption, analysts' forecasts of German (Table 6.11) and French firms (Table 6.6), greater quantity of disclosure about human and organisational capital, management performance, corporate governance and leadership is associated with lower analyst following but that changes after IFRS adoption. Post IFRS adoption, analysts' forecasts of firms with greater quantity of disclosure about human and organisational capital, management performance, corporate governance and leadership are associated with a higher number of analysts' estimations in all three countries.

The results in this section follow a pattern that separates the analysts' forecasts of French companies from the rest companies in the sample. In this case, the results show that there are potential benefits for the quality of analysts' forecasts with increased information about the company's managers and human capital. This could be related to potential higher insider information and the relatively lower legal enforcement and incentives in France and potentially implies that higher information quantity about the managers' remuneration is likely to bring greater transparency. In contrast, for analysts' forecasts of UK and German companies a possible explanation could be the higher use of stock options that could magnify the effect of the IFRS2 share-based payments on the financial statements and increase analysts' uncertainty about its material effect. The results show that for analysts' forecasts of all firms post IFRS adoption, analyst following is likely to be higher for companies with greater quantity of disclosure about human and organisational capital, management performance, corporate governance and leadership.

Statements of market recognition, power and consistency of brand

The variable that represents statements of market recognition, power and consistency of brand is LN(BRND). The empirical results show that firms with greater quantity of disclosure about market recognition, power and consistency of brand are associated with lower absolute forecast error after IFRS adoption for UK firms (Table 6.4) but not for companies in the other two countries.

In contrast, before IFRS adoption, the results show that analysts' forecasts of German companies with more disclosure about market recognition, power and consistency of brand are likely to have higher absolute forecast error but conversely, more LN(BRND) disclosure is associated with lower absolute forecast error for analysts' forecasts of French companies.

Before IFRS adoption there is no evidence to suggest a relationship between LN(BRND) and MFE in any of the three countries. However, post IFRS adoption, analysts' forecasts of UK (Table 6.4) and French firms (Table 6.7) with greater quantity of disclosure about market recognition, power and consistency of brand have underestimated earnings but overestimated earnings for analysts' forecasts of German companies that adopted IFRS voluntarily.

Regarding the relationship between the variance of earnings forecasts and greater quantity of disclosure about market recognition, power and consistency of brand, the results in both time periods show that analysts' forecasts of UK firms and German mandatory adopters with greater LN(BRND) disclosure have higher earnings forecast dispersion. A different picture is observed for analysts' forecasts of French firms and German voluntary adopters, where firms with greater quantity of disclosure about market recognition, power and consistency of brand have lower forecast dispersion throughout the whole period (Tables 6.5 – 6.7).

Before and after IFRS adoption (Tables 6.3 - 6.4), analysts' forecasts of UK companies with greater quantity of disclosure about market recognition, power and consistency of brand have an increased number of analyst estimations. The same is observed for voluntary adopters in Germany but not for mandatory adopters, which are likely to have a lower number of analyst estimations. For analysts' forecasts of French companies, post IFRS adoption, greater quantity of disclosure about market recognition, power and consistency of brand is associated with higher analyst following, contrary to the previous period under French GAAP where greater LN(BRND) disclosure is associated with lower analyst following (Table 6.7).

In conjunction with the findings for intangible assets, it can be argued that under IFRS, the timely recognition and disclosure of advertising costs and marketing expenses is likely to contribute positively to the analysts' forecast accuracy, forecast dispersion and analyst following. For example, as seen earlier in the thesis (section 6.3.3.5.), analysts' forecasts of French companies with higher intangible assets intensity and disclosure quantity of market recognition, power and consistency of brand, are likely after IFRS adoption to have improved forecast accuracy. Thus, it can be suggested that higher disclosure quantity of LN(BRND) is likely to reveal information about the managers' intentions and decrease the analysts' scepticism about the likelihood of earnings management through manipulation of e.g. advertising and marketing expenses.

Statements of government regulation, accounting regulation, disclosure practices affecting the firm

The variable that represents statements of government regulation, accounting regulation, disclosure practices affecting the firm is LN(REGACC). The results show that analysts' forecasts of UK firms (Tables 6.3 – 6.4) with greater quantity of disclosure about government regulation, accounting regulation, disclosure practices are likely to have higher absolute forecast error before and after IFRS adoption. French companies with greater quantity of disclosure about government regulation, accounting regulation, disclosure practices are likely to have analysts' forecasts with lower absolute forecast error before and after IFRS (Tables 6.6 – 6.7). However, German mandatory adopters with greater LN(REGACC) have analysts' forecasts with higher absolute forecast error post IFRS adoption (Table 6.12). Post IFRS adoption, analysts' forecasts of UK firms and German voluntary adopters (Tables 6.4 – 6.10) with greater quantity of disclosure about government regulation, accounting regulation, disclosure practices are associated with lower forecast dispersion (higher forecast dispersion for German mandatory adopters). Also, greater quantity of disclosure about government regulation, accounting regulation, disclosure practices is associated with higher number of analyst estimations for both groups of German companies during both periods and for French firms before IFRS adoption (Table 6.6) but with lower number of analyst estimations post IFRS adoption for UK and French companies (Tables 6.4 – 6.6).

Overall, the results show that greater quantity of disclosure about government regulation, accounting regulation, disclosure practices have probably an ambiguous effect on the analysts' information environment. On one hand, the higher absolute forecast error of UK companies could be possibly explained to analysts' lack of IFRS technical accounting and legal knowledge or to complex regulations affecting UK companies operating in a high enforcement environment. On the other hand, the lower forecast dispersion for analysts' forecasts of UK and German firms could be linked to the high legal enforcement environment and to increased analysts' confidence about the firms' compliance.

6.4. Alternative tests

Several tests are employed as alternative checks of the empirical results. The purpose of this is to investigate the relationships using different models to ensure that they still hold under different conditions. Firstly, various tests are conducted by transforming the variables **NOA, MFA, MFD** using their natural logarithm. Another group of tests involved the running of pooled OLS regressions without the robust to heteroskedasticity standard errors. Furthermore, the fixed effects regressions take into account any firm, time and industry effects that could potentially affect the empirical results. On top of that, the logistic regression models are considered as further tests to take into account the possibility that the relationship is not linear. Several tests with stepwise regressions have been implemented for all the models where the independent variables were added one by one. The variables coefficients were not likely to change considerably in most cases.

In order to test the validity of this chapter's inferences several alternative tests are employed. A logistic regression model with robust to heteroskedasticity errors is employed to take into account a potential non-linear relationship of the absolute forecast error with the independent variables. The dependent variable takes the value of 1 if the mean/median monthly absolute forecast error exceeds the threshold in three cases: 1%, 5%, 10%. Also, a fixed effects linear regression model is employed with firm, month and industry (General industry classification) fixed effects.

A comparison of the results is implemented for each control variable and hypothesis and if a different empirical result is observed it is stated below; otherwise all inferences remain the same. It should be noted that due to the relatively small number of the sample and the relatively high number of observations the fixed effect model results could be considerably influenced by the removal of the firm specific factors (panel ID).

Overall, the significance of the fixed effects and logistic models do not indicate that alternative specifications of the model are a better fit for the data. In general, the OLS models had higher r-squared that could be as high as double the r-squared of fixed effects models. The exceptions are few and therefore the effects of omitted variables in the OLS models do not seem to be great. This is also evidenced by the normality of the residuals. Examples of the empirical results from the alternative tests are presented in Appendix 5.

6.5. Consolidated results

The tables below present the consolidated results for all hypotheses of Chapter 6. Table 6.13 presents the results for Monthly Absolute Forecast Error (Monthly Forecast Accuracy), Table 6.14 presents the results for Monthly Forecast Dispersion and Table 6.15 presents the results for the Number of Analyst Estimations. N/S implies a relationship with no statistical significance, N/A implies "not applicable", "negative" implies a negative statistically significant relationship and "positive" implies a positive statistically significant relationship. "Interaction" refers to the sign of the coefficient of the relative interaction term.

Table 6.13 Consolidated results for Monthly Forecast Accuracy

Monthly Absolute Forecast Error	UK		France		German Voluntary adopters	German Mandatory adopters	
	UK GAAP	IFRS	FR GAAP	IFRS	IFRS	US GAAP	IFRS
IFRS Adoption	N/A	Positive	N/A	Positive	N/S	N/A	Negative
Goodwill intensity	N/S	Negative	Positive	Negative	Positive	N/S	Negative
	Negative Interaction		Negative Interaction		Negative Interaction	N/S Interaction	
Goodwill impairments	Negative	Negative	Positive	N/S	Positive	Positive	N/S
	Negative Interaction		Negative Interaction		N/S	Negative Interaction	
Net intangibles intensity	Positive	Positive	Positive	Negative	Positive	Negative	Positive
	N/S Interaction		Negative Interaction		Negative Interaction	N/S Interaction	
Size of acquisitions	N/S	Negative	Negative	Negative	Negative	N/S	Positive
	N/S Interaction		Positive Interaction		Positive Interaction	Positive Interaction	
Disclosure quantity of financial position and performance	N/S	N/S	Negative	Negative	N/S	N/S	N/S
	Negative Interaction		Negative		Positive Interaction	Positive Interaction	

Table 6.14 Consolidated results for Monthly Forecast Dispersion							
Monthly Forecast Dispersion	**UK**		**France**		**German Voluntary adopters**	**German Mandatory adopters**	
	UK GAAP	**IFRS**	**FR GAAP**	**IFRS**	**IFRS**	**US GAAP**	**IFRS**
IFRS Adoption	**N/A**	**Positive**	**N/A**	**Positive**	**Negative**	**N/A**	**Negative**
Goodwill intensity	**N/S**	**Negative**	**Positive**	**Negative**	**Positive**	**N/S**	**Negative**
	Negative Interaction		**Negative Interaction**		**Negative Interaction**	**N/S**	
Goodwill impairments	**N/S**	**Negative**	**Positive**	**N/S**	**N/S**	**Positive**	**Positive**
	Positive Interaction		**Negative Interaction**		**N/S**	**Negative Interaction**	
Net intangibles intensity	**Positive**	**N/S**	**Positive**	**N/S**	**Positive**	**Negative**	**N/S**
	Negative Interaction		**Negative Interaction**		**Negative Interaction**	**Negative Interaction**	
Size of acquisitions	**Negative**	**N/S**	**Negative**	**N/S**	**Negative**	**Negative**	**N/S**
	Positive Interaction		**N/S Interaction**		**Positive Interaction**	**N/S**	
Disclosure quantity of financial position and performance	**Positive**	**Positive**	**N/S**	**Positive**	**Negative**	**Positive**	**Positive**
	N/S		**Negative Interaction**		**Positive Interaction**	**Positive Interaction**	

Table 6.15 Consolidated results for Number of Analyst Estimations							
Number of Analyst Estimations	**UK**		**France**		**German Voluntary adopters**	**German Mandatory adopters**	
	UK GAAP	**IFRS**	**FR GAAP**	**IFRS**	**IFRS**	**US GAAP**	**IFRS**
IFRS Adoption	**N/A**	**Negative**	**N/A**	**N/S**	**N/S**	**N/A**	**N/S**
Disclosure quantity of financial position and performance	**Negative**	**N/S**	**Positive**	**Positive**	**Positive**	**Negative**	**Negative**
	Positive Interaction		**N/S**		**N/S**	**Positive Interaction**	

6.6. Summary

In summary, the empirical results suggest that IFRS adoption is likely to be a factor for the reduction of information asymmetry between insiders and outsiders in firms from three major European markets. Also, the empirical results provide evidence to support the idea that the new accounting rules for goodwill and mergers and acquisitions have a positive effect on the quality of analysts' forecasts. Similarly, the empirical results indicate that higher levels of intangible assets are likely to cause uncertainty to financial analysts and increase the information asymmetry but that firm's with more intangibles also have increased analyst following. It appears that the IFRS rules for intangibles have a positive impact in some cases as they are related to higher earnings forecast accuracy, particularly for French firms following IFRS adoption. Also, it can be supported that post IFRS adoption the information contained in past stock prices is more intensely reflected in analysts' forecasts. Also, the possible impact of firm specific characteristics and control variables is highlighted in this chapter. More importantly, the analysis of narrative disclosure, under various different categories indicates that additional disclosure improves the analysts' information environment.

In line with the literature (Hodgson et al., 2008; La Bruslerie and Gabteni, 2010; Cotter et al., 2012; Glaum et al., 2013) it can be suggested that the narrative and financial reporting under IFRS is likely to convey enhanced comparability and transparency to annual reports but the effect is not identical across the three countries studied. In fact, analysts following UK and French companies with greater disclosures about their financial position and performance have more accurate but more dispersed earnings forecasts post IFRS adoption. On the other hand, German companies with greater disclosure about corporate strategy and operations tend to have higher analyst following and analysts' forecasts with higher accuracy and lower dispersion.

In the next empirical chapter, the focus will be on the post IFRS era to further assess corporate disclosure and the subsequent changes of IFRS standards affecting firms in order to further evaluate the information efficiency of new accounting standards.

Chapter 7. Accounting Standards and Disclosure Requirements: Changes in the Post IFRS era and their Impact on the Analysts' Information Environment

This empirical chapter assesses the impact of IFRS revisions on the analysts' earnings forecasts and uses data post the mandatory adoption of IFRS in samples of companies in the UK, France and Germany. The sample of the German companies is split into voluntary and mandatory IFRS adopters, which provides the opportunity to assess whether there are any important differences between the two.

The IFRS standards that are investigated in this chapter are: IFRS3, Business Combinations, IFRS7, Financial Instruments and IFRS8, Operating Segments. In total, two IFRS3 revisions, the adoption of IFRS7, one IFRS7 revision and the adoption of IFRS8 are investigated; other amendments made these standards related mainly to very minor disclosure and definition changes and are therefore not considered separately as explained in Chapter 5.

The chapter begins with the presentation and analysis of the empirical results. This allows us firstly to evaluate the impact of each IFRS accounting standard on the independent variables of interest before and after each standard adoption. For this purpose, the independent variables that are used to assess the hypotheses have interaction terms with each IFRS standard indicator variable. If the empirical results indicate a probable relationship then the empirical results before and after adoption are examined in order to support any inferences. Following the above procedure, the empirical analysis aims to determine whether revisions to the IFRS standards are a) associated with any changes in the sign of the coefficients, b) influence an existing association in either a positive or negative direction.

The first part of the analysis concentrates on the two revisions of IFRS3 (Business Combinations) and their effect on analysts' earnings forecasts. The first revision of IFRS3 changed the rules mainly for acquisition costs, contingent considerations, step acquisitions and permitted the full goodwill method while the second revision is comprised of amendments regarding acquisitions and share based payments, contingent considerations and non-controlling measurement.

It is intended to examine any changes in information asymmetry related to the IFRS3 revisions through variables for goodwill and acquisitions.

The second part of the chapter investigates the impact of the adoption of IFRS7 Financial Instruments and its subsequent amendments in 2008 and 2009 that were introduced as a reaction of the IASB to the global financial crisis. The adoption of IFRS7, Financial Instruments brought a substantial increase in the quantity of information regarding financial instruments and the revisions of the same standard that followed, attempted to increase the disclosures on market, liquidity and credit risk and the firm's exposure on financial derivatives during the financial crisis and consequently resulted in substantial changes in the disclosure relating to financial instruments. As discussed in Chapter 5. the impact of IFRS7 on the analysts' information environment will be assessed through disclosure proxies regarding the financial performance and position of a company.

The third part of the chapter examines the probable impact of IFRS8, Operating segments. The adoption of IFRS8 required the identification and measurement of a company's operating segments and resulted in a substantial increase in the quantity of information regarding a company's products, services geographical reach and also required relevant management disclosures. As discussed in Chapter 5. the effect of IFRS8, Operating Segments on the quality of the analysts' earnings forecasts will be evaluated through disclosure proxies for a company's corporate strategy, product market performance, performance of business strategy model as well as through disclosure proxies for a company's financial performance and position.

A per country analysis is conducted for each IFRS revision (IFRS3 (2008), IFRS3 (2010), IFRS7 (2005), IFRS7 (2008), IFRS8 (2006)) in order to highlight the varied impact that the IFRS revisions had in the three countries studied. Also, following the methodology of the previous empirical chapter, the empirical results for the German sample are presented for all companies but also then analysed into two groups reflecting voluntary (before 2005 or mandatory adoption of IFRS). The reason for this split is to identify if there are any differential factors that persist between the groups following the adoption of IFRS by mandatory adopters. Such factors could include the compatibility of the particular companies and their accounting policies with IFRS.

Another factor could be the specialism and familiarity of the firm's financial reporting employees with IFRS. Finally, the firm incentives for higher quality financial reporting as reflected from the early adoption of IFRS could still be reflected on differences between voluntary and mandatory adopters of the German sample.

The data sets for all IFRS revisions include data of firm accounting periods post mandatory IFRS adoption. Each revision change is assessed by using the period after mandatory IFRS adoption and before any subsequent changes to the standard in question. For example, IFRS3 (2008) is assessed by using data after the mandatory IFRS but not after the revision of IFRS3 (2010). Similarly, IFRS3 (2010) is assessed by using data after the revision of IFRS3 (2008) and IFRS3 (2010) but without the data before the revision of IFRS3 (2008).

The empirical results are organised in the following tables. Additional empirical results on periods only before or after the adoption of each accounting standards, are presented in Appendix 4.

For IFRS3 (2008):

Table 7.1 – OLS regression results for UK companies before and after IFRS3 (2008)
Table 7.2 – OLS regression results for French companies before and after IFRS3 (2008)
Table 7.3 – OLS regression results for all German companies before and after IFRS3 (2008)
Table 7.4 – OLS regression results for German mandatory adopters before and after IFRS3 (2008)
Table 7.5 – OLS regression results for German voluntary adopters before and after IFRS3 (2008)

For IFRS3 (2010):

Table 7.6 – OLS regression results for UK companies before and after IFRS3 (2010)
Table 7.7 – OLS regression results for French companies before and after IFRS3 (2010)
Table 7.8 – OLS regression results for all German companies before and after IFRS3 (2010)
Table 7.9 – OLS regression results for German mandatory adopters before and after IFRS3 (2010)
Table 7.10 – OLS regression results for German voluntary adopters before and after IFRS3 (2010)

For IFRS7 (2005):

Table 7.11 – OLS regression results for UK companies before and after IFRS7 (2005)
Table 7.12 – OLS regression results for French companies before and after IFRS7 (2005)
Table 7.13 – OLS regression results for all German companies before and after IFRS7 (2005)
Table 7.14 – OLS regression results for German mandatory adopters before and after IFRS7 (2005)
Table 7.15 – OLS regression results for German voluntary adopters before and after IFRS7 (2005)

For IFRS7 (2008):

Table 7.16 – OLS regression results for UK companies before and after IFRS7 (2008)
Table 7.17 – OLS regression results for French companies before and after IFRS7 (2008)
Table 7.18 – OLS regression results for all German companies before and after IFRS7 (2005)
Table 7.19 – OLS regression results for German mandatory adopters before and after IFRS7 (2005)

Table 7.20 – OLS regression results for German voluntary adopters before and after IFRS7 (2005)

For IFRS8 (2006):

Table 7.21 – OLS regression results for UK companies before and after IFRS8 (2006)
Table 7.22 – OLS regression results for French companies before and after IFRS8 (2006)
Table 7.23 – OLS regression results all German companies before and after IFRS8 (2006)
Table 7.24 – OLS regression results for German mandatory before and after IFRS8 (2006)
Table 7.25 – OLS regression results for German voluntary before and after IFRS8 (2006)

The tables demonstrating the empirical results before and after (IFRS3 (2008), IFRS3 (2010), IFRS7 (2005), IFRS7 (2008), IFRS8 (2006)) separately can be found in the appendix of the thesis.

7.1. The adoption of IFRS3 (2008)

Table 7.1 – OLS regression results for companies in the UK reporting before and after IFRS3 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.040***	0.038**	-0.534***	
	(0.01)	(0.01)	(0.05)	
ln(SIZE)	0.007*	-0.001	-0.131***	1.754***
	(0.00)	(0.00)	(0.02)	(0.08)
ln(AGE)	-0.042***	0.009	0.932***	0.556***
	(0.01)	(0.01)	(0.04)	(0.13)
BM	0.003***	0.000	0.016***	0.062***
	(0.00)	(0.00)	(0.00)	(0.02)
DE	0.008***	0.003*	-0.057***	-0.437***
	(0.00)	(0.00)	(0.01)	(0.04)
ROA	-0.243***	-0.669***	-0.742***	2.154**
	(0.07)	(0.08)	(0.27)	(0.96)
RETURNS	-0.113***	0.036**	0.163***	-1.058***
	(0.01)	(0.02)	(0.05)	(0.20)
VOLATILITY	0.111*	0.989***	-2.906***	-6.132***
	(0.06)	(0.07)	(0.26)	(0.93)
IGW	-0.032*	-0.155***	-0.240***	1.140***
	(0.02)	(0.02)	(0.09)	(0.36)
NIAI	0.301***	0.428***	-0.001	5.484***
	(0.05)	(0.08)	(0.16)	(0.54)
EIGD	-0.072***	-0.101***	0.611***	0.731*
	(0.02)	(0.03)	(0.10)	(0.37)
NASACQ	0.023	-0.316***	-1.074***	-5.219***
	(0.04)	(0.05)	(0.31)	(1.43)
LN(MRKT)	-0.040*	-0.094***	-0.526***	-4.951***
	(0.02)	(0.02)	(0.18)	(0.62)
LN(FRMSTR)	0.228***	-0.097*	-0.709***	2.728***
	(0.04)	(0.06)	(0.23)	(0.83)
LN(CORPGOV)	-0.091***	0.225***	1.088***	2.889***
	(0.02)	(0.03)	(0.12)	(0.53)
LN(BRND)	-0.033***	-0.038***	0.262***	3.149***
	(0.01)	(0.01)	(0.04)	(0.17)
LN(FINPOS)	-0.109***	0.018	0.570***	0.262
	(0.03)	(0.04)	(0.16)	(0.61)
LN(REGACC)	-0.005	0.004	-0.365***	-1.146***
	(0.01)	(0.01)	(0.06)	(0.25)
IFRS32008xIGW	-0.206***	0.114***	0.072	-2.833***
	(0.04)	(0.04)	(0.19)	(0.64)

Table 7.1 – OLS regression results for companies in the UK reporting before and after IFRS3 (2008)

IFRS32008x NASCCQ	-0.658***	0.067	10.706***	-13.777***
	(0.17)	(0.17)	(1.42)	(4.45)
IFRS32008	0.022	-0.077***	0.013	3.598***
	(0.02)	(0.02)	(0.07)	(0.25)
Constant	0.191***	-0.409***	-0.175	-32.406***
	(0.07)	(0.09)	(0.59)	(2.35)
R-squared	0.081	0.144	0.192	0.397
Degrees of freedom	5882	5882	5882	5883
Number of observations	5904	5904	5904	5905
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in the UK.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \varepsilon_{it}$$

Variables are described below:

MFE Mean is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

MFA Mean is the absolute value of ***(MFE Mean)***.

MFD is the standard deviation of all analysts' earnings forecasts in each month.

ln(NOA) is the number of analyst estimations each month for EPS FY1.

ln(*SIZE*) is the log of firm i's market capitalisation at the end of each fiscal year.

ln(AGE) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

BM is the Market to Book ratio.

DE *is* the Debt to Equity ratio.

ROA is the Return on Assets ratio.

RETURNS is the percentage change of the stock price at the end of each fiscal year.

VOLATILITY is the stock price volatility over the company's fiscal year.

IGW is the goodwill intensity measured as gross goodwill over total assets.

NIAI is the intangible assets intensity; measured as net intangible assets over total assets.

EIGD is measures goodwill impairments scaled by EBITDA.

NASACQ measures net assets from acquisitions scaled by total assets.

LN(MRKT) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

LN(FRMSTR) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

LN(CORPGOV) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

LN(BRND) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

LN(FINPOS) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

LN(REGACC) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

IFRS32008xIGW is an interaction term computed by multiplying ***IFRS32008*** with ***IGW.***

IFRS32008xNASACQ is an interaction term computed by multiplying ***IFRS32008*** with ***NASACQ.***

IFRS32008 is an indicator variable = 1 if firm i uses IFRS3 (2008) in year *t*, and 0 otherwise.

Table 7.2 – OLS regression results for companies in France reporting before and after IFRS3 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	-0.063	-0.128***	-0.113***	
	(0.05)	(0.04)	(0.03)	
ln(SIZE)	0.049***	-0.086***	-0.061***	4.704***
	(0.01)	(0.02)	(0.01)	(0.14)
ln(AGE)	-0.079**	0.144***	-0.206***	1.377***
	(0.04)	(0.04)	(0.03)	(0.42)
BM	0.001	0.004	-0.082***	-0.069
	(0.00)	(0.01)	(0.01)	(0.09)
DE	0.049***	0.029**	-0.131***	0.339***
	(0.01)	(0.01)	(0.02)	(0.09)
ROA	-0.530***	-0.824	-0.124	-11.527***
	(0.16)	(0.58)	(0.16)	(1.70)
RETURNS	-0.051**	-0.299***	0.165***	-2.102***
	(0.02)	(0.03)	(0.03)	(0.28)
VOLATILITY	-0.657***	0.918***	-0.512***	2.712*
	(0.13)	(0.21)	(0.10)	(1.64)
IGW	0.007	-0.217***	-0.417***	7.267***
	(0.04)	(0.04)	(0.04)	(0.81)
NIAI	-0.118***	-0.163***	0.021	-6.289***
	(0.04)	(0.05)	(0.04)	(0.78)
EIGD	0.144***	-0.489***	0.247***	-4.629***
	(0.04)	(0.12)	(0.05)	(0.52)
NASACQ	-0.202	-0.468**	-0.054	1.042
	(0.15)	(0.21)	(0.17)	(2.56)
LN(MRKT)	0.206***	-0.056	0.059	1.511**
	(0.06)	(0.09)	(0.04)	(0.63)
LN(FRMSTR)	-0.325***	0.621***	0.330***	-6.275***
	(0.08)	(0.15)	(0.08)	(1.20)
LN(CORPGOV)	0.047*	-0.140***	-0.451***	-0.460
	(0.02)	(0.03)	(0.04)	(0.55)
LN(BRND)	-0.069***	-0.068***	-0.037***	1.050***
	(0.01)	(0.02)	(0.01)	(0.20)
LN(FINPOS)	0.183***	-0.231***	0.089**	3.977***
	(0.04)	(0.06)	(0.04)	(0.63)
LN(REGACC)	-0.089***	-0.061**	-0.031	-1.232***
	(0.02)	(0.03)	(0.02)	(0.33)
IFRS32008xIGW	0.533***	-0.221*	0.205***	5.703***
	(0.08)	(0.12)	(0.07)	(1.83)
IFRS32008xNASACQ	1.836***	-2.690***	-1.761***	-16.032**
	(0.44)	(0.76)	(0.38)	(6.95)

Table 7.2 – OLS regression results for companies in France reporting before and after IFRS3 (2008)

IFRS32008	-0.217***	0.206***	-0.080***	0.863**
	(0.03)	(0.06)	(0.03)	(0.41)
Constant	-0.015	0.506*	2.927***	-49.849***
	(0.22)	(0.29)	(0.24)	(2.93)
R-squared	0.129	0.242	0.396	0.552
Degrees of freedom	2498	2498	2498	2499
Number of observations	2520	2520	2520	2521
*	p<0.10,	** p<0.05,	*** p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in France.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.1.

Table 7.3 – OLS regressions results for all sample companies in Germany reporting before and after IFRS3 (2008)

	MFE **Mean** **β/se**	**MFA** **Mean** **β/se**	**MFD** **β/se**	**NOA** **β/se**
ln(NOA)	0.057***	-0.004	0.016	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.059***	-0.121***	0.066***	-0.991**
	(0.02)	(0.03)	(0.01)	(0.47)
ln(AGE)	-0.129***	0.001	0.005	-0.633
	(0.03)	(0.05)	(0.03)	(0.54)
BM	0.014	-0.058***	-0.078***	1.107***
	(0.01)	(0.01)	(0.01)	(0.17)
DE	-0.033***	0.023	-0.020***	0.516***
	(0.01)	(0.02)	(0.01)	(0.15)
ROA	0.415	-1.771***	0.543**	-8.178***
	(0.25)	(0.39)	(0.27)	(2.94)
RETURNS	-0.318***	-0.360***	0.157***	-5.351***
	(0.03)	(0.05)	(0.03)	(0.66)
VOLATILITY	-0.397**	1.511***	2.590***	-11.506**
	(0.19)	(0.29)	(0.25)	(5.47)
IGW	-0.178***	-0.632***	-0.446***	-11.427***
	(0.05)	(0.07)	(0.05)	(0.97)
NIAI	0.506***	0.030	0.688***	11.892***
	(0.14)	(0.16)	(0.10)	(2.46)
EIGD	-0.193	0.560***	0.544***	-4.211***
	(0.18)	(0.11)	(0.09)	(0.98)
NASACQ	0.116	0.617***	0.098	3.331
	(0.13)	(0.23)	(0.08)	(2.77)
LN(MRKT)	-0.562***	-0.192	0.155	-1.574
	(0.17)	(0.25)	(0.10)	(2.85)
LN(FRMSTR)	-0.041	0.122	-0.380***	-7.148**
	(0.18)	(0.23)	(0.12)	(3.48)
LN(CORPGOV)	0.203***	0.151*	0.439***	8.911***
	(0.07)	(0.08)	(0.07)	(1.17)
LN(BRND)	-0.044	-0.034	-0.166***	-0.551
	(0.03)	(0.05)	(0.03)	(0.60)
LN(FINPOS)	0.499***	-0.054	0.018	-8.227***
	(0.10)	(0.13)	(0.07)	(1.91)
LN(REGACC)	0.001	0.069	-0.049	12.471***
	(0.05)	(0.07)	(0.04)	(0.89)
IFRS32008xIGW	0.147**	0.216**	0.258***	-4.213*
	(0.07)	(0.09)	(0.10)	(2.41)
IFRS32008x NASACQ	-1.289***	-0.759**	0.599**	-3.530
	(0.22)	(0.38)	(0.26)	(4.49)

Table 7.3 – OLS regressions results for all sample companies in Germany reporting before and after IFRS3 (2008)

IFRS32008	-0.145***	-0.034	-0.119***	3.563***
	(0.04)	(0.05)	(0.04)	(0.59)
Constant	-1.492***	1.835***	-1.659***	44.814***
	(0.40)	(0.60)	(0.34)	(8.85)
R-squared	0.195	0.283	0.423	0.360
Degrees of freedom	1576	1576	1576	1577
Number of observations	1598	1598	1598	1599
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in Germany.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.1.

Table 7.4 – OLS regressions results for German mandatory adopters reporting before and after IFRS3 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	-0.113	-0.359***	-0.085*	
	(0.11)	(0.10)	(0.04)	
ln(SIZE)	0.146***	-0.073*	0.022	0.954
	(0.04)	(0.04)	(0.02)	(0.58)
ln(AGE)	-0.197***	0.069	0.253***	0.138
	(0.06)	(0.08)	(0.04)	(0.61)
BM	0.149***	0.016	-0.035***	-0.030
	(0.02)	(0.02)	(0.01)	(0.18)
DE	-0.041	0.208**	0.265***	4.622***
	(0.06)	(0.09)	(0.03)	(0.50)
ROA	0.871**	-2.863***	0.162	5.881*
	(0.42)	(0.51)	(0.31)	(3.47)
RETURNS	-0.803***	-0.843***	0.011	-4.670***
	(0.08)	(0.09)	(0.04)	(0.61)
VOLATILITY	-2.351***	1.727***	1.619***	10.357**
	(0.39)	(0.56)	(0.24)	(4.62)
IGW	-0.474***	-1.195***	-0.377***	-12.591***
	(0.17)	(0.21)	(0.08)	(1.74)
NIAI	4.330***	2.142**	-0.787**	7.537
	(0.65)	(0.84)	(0.32)	(7.49)
EIGD	0.096	-0.304	0.352***	-11.825***
	(0.25)	(0.20)	(0.11)	(1.39)
NASACQ	0.224	0.757*	0.292**	7.780***
	(0.21)	(0.41)	(0.14)	(2.52)
LN(MRKT)	1.115***	-0.227	0.350***	-0.563
	(0.28)	(0.36)	(0.13)	(3.18)
LN(FRMSTR)	-3.689***	-0.810	-0.988***	26.630***
	(0.47)	(0.58)	(0.22)	(5.48)
LN(CORPGOV)	-0.379	0.399*	0.257**	2.228
	(0.24)	(0.22)	(0.13)	(3.21)
LN(BRND)	0.228**	0.090	0.193**	-9.774***
	(0.10)	(0.16)	(0.08)	(1.36)
LN(FINPOS)	2.614***	0.329	0.266	-28.446***
	(0.31)	(0.34)	(0.17)	(3.30)
LN(REGACC)	0.195*	0.264**	0.140***	10.304***
	(0.12)	(0.13)	(0.05)	(0.98)
IFRS32008xIGW	0.078	0.461***	0.214***	3.213***
	(0.08)	(0.09)	(0.06)	(1.00)
IFRS32008xNASACQ	-0.766**	-0.468	0.043	-5.306
	(0.32)	(0.45)	(0.18)	(4.96)

Table 7.4 – OLS regressions results for German mandatory adopters reporting before and after IFRS3 (2008)

IFRS32008	-0.083*	-0.042	-0.122***	2.912***
	(0.05)	(0.06)	(0.03)	(0.49)
Constant	-1.146*	2.705***	-1.808***	5.934
	(0.68)	(0.88)	(0.33)	(8.93)
R-squared	0.365	0.508	0.619	0.642
Degrees of freedom	566	566	566	567
Number of observations	588	588	588	589
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in Germany for companies that mandatorily adopted IFRS after 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.1.

Table 7.5 – OLS regression results for German voluntary adopters reporting before and after IFRS3 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.066***	0.003	0.041***	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.030	-0.162***	0.078***	-1.286**
	(0.02)	(0.03)	(0.01)	(0.51)
ln(AGE)	-0.219***	0.105*	-0.019	-1.359**
	(0.04)	(0.06)	(0.02)	(0.55)
BM	-0.001	-0.089***	-0.047***	0.876***
	(0.01)	(0.02)	(0.01)	(0.26)
DE	-0.040***	0.068***	-0.013**	-0.236
	(0.01)	(0.02)	(0.01)	(0.16)
ROA	-0.643*	1.142***	1.332***	6.225
	(0.38)	(0.43)	(0.43)	(4.57)
RETURNS	-0.212***	-0.269***	0.139***	-5.634***
	(0.03)	(0.06)	(0.03)	(0.80)
VOLATILITY	0.121	1.562***	2.964***	12.259*
	(0.21)	(0.43)	(0.24)	(7.14)
IGW	-0.475***	0.182	0.039	-10.364***
	(0.12)	(0.25)	(0.09)	(2.30)
NIAI	0.571***	0.602***	0.534***	10.608***
	(0.15)	(0.18)	(0.10)	(2.73)
EIGD	-0.354**	0.896***	0.082	5.535***
	(0.16)	(0.19)	(0.07)	(1.33)
NASACQ	0.373**	-0.641***	-0.196	-11.200***
	(0.17)	(0.19)	(0.14)	(2.99)
LN(MRKT)	-0.475***	-0.136	0.230*	-6.716**
	(0.18)	(0.29)	(0.13)	(3.25)
LN(FRMSTR)	0.120	-0.214	0.123	-15.484***
	(0.16)	(0.22)	(0.15)	(3.62)
LN(CORPGOV)	0.073	0.153**	0.268***	4.630***
	(0.06)	(0.07)	(0.05)	(1.11)
LN(BRND)	0.044	-0.000	-0.294***	6.278***
	(0.04)	(0.06)	(0.04)	(0.78)
LN(FINPOS)	0.205*	0.280	-0.234***	-2.295
	(0.11)	(0.17)	(0.09)	(2.10)
LN(REGACC)	-0.011	-0.003	-0.115***	18.034***
	(0.05)	(0.08)	(0.04)	(0.92)
IFRS32008xIGW	0.175	-1.400***	-0.045	-33.764***
	(0.23)	(0.34)	(0.24)	(4.49)
IFRS32008xNASACQ	-2.354***	-0.769**	1.047**	29.293***
	(0.30)	(0.38)	(0.45)	(5.69)

Table 7.5 – OLS regression results for German voluntary adopters reporting before and after IFRS3 (2008)

IFRS32008	-0.104*	0.293***	-0.029	7.178***
	(0.06)	(0.08)	(0.06)	(0.86)
Constant	0.336	1.429***	-2.211***	64.420***
	(0.43)	(0.52)	(0.36)	(11.15)
R-squared	0.236	0.258	0.468	0.430
Degrees of freedom	1322	1322	1322	1323
Number of observations	1344	1344	1344	1345
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in Germany for companies that voluntarily adopted IFRS before 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.1.

7.1.1 Hypotheses testing

The empirical results in Table 7.1 demonstrate that the implementation of IFRS3 (2008) from UK firms is associated with a deterioration in analysts' forecast accuracy for companies with higher IGW (goodwill intensity) as the interaction term IFRS32008xIGW is positive and statistically significant, although higher goodwill intensity is still associated with lower absolute forecast error before and after the adoption of IFRS3 (2008). Regarding the analysts' forecasts for French firms, the interaction term IFRS32008xIGW is negative but not statistically significant at the 5% level but it is at the 10% level (-0.221, $p<0.1$) and similarly to the UK, higher goodwill intensity is associated with lower absolute forecast error both before and after IFRS3 (2008) adoption. The picture is different for analysts' forecasts between the two groups of German firms, as the interaction term IFRS32008xIGW indicates an improvement in analysts' forecast accuracy for voluntary adopters and a probable deterioration for mandatory adopters. In fact, before the adoption of IFRS3 (2008) higher goodwill intensity is associated with lower absolute forecast error for mandatory adopters but there is no evidence for voluntary adopters, (Tables A4.7 - A4.10 in Appendix 4.) while after the IFRS3 (2008) implementation higher goodwill intensity is associated with lower absolute forecast error for voluntary adopters and higher absolute forecast error for mandatory adopters. Hence the following hypothesis is accepted for UK and German companies but is rejected for French companies:

$$\boldsymbol{H_{15}}\textbf{: }\boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error\ following\ IFRS3\ (2008)\ adoption}$$

The empirical results for forecast dispersion do not demonstrate any association between IFRS3 (2008) and MFD (forecast dispersion) for UK companies and German voluntary adopters. However, the interaction term IFRS32008xIGW is positive and statistically significant for the analysts' forecast dispersion of French companies and of German mandatory adopters. Therefore, the analysts' forecast dispersion is increased for companies with higher goodwill intensity after the implementation of IFRS3 (2008) for French and German companies that adopted IFRS mandatorily in 2005.

Thus, the following hypothesis is rejected for UK and German voluntary adopters but is accepted for French and German mandatory adopters:

$$H_{16}: \textit{Higher goodwill intensity is associated with changes in forecast dispersion following IFRS3 (2008) adoption}$$

Looking at the results for forecast error and IFRS32008xIGW, analysts' earnings forecasts for UK companies are probably driven by analysts' underestimations while for French companies' the analysts' earnings forecasts are probably driven by analysts overestimating the companies' earnings. This could be indirectly related to analysts' expectations for firms with higher goodwill intensity. Analysts could expect lower acquisitions costs for UK companies but increased acquisition costs for French companies following IFRS3 (2008). After the implementation of IFRS3 (2008) UK companies and German mandatory adopters with higher goodwill intensity are likely to be associated with higher analyst following for but lower analyst following for French companies and for German voluntary adopters. This could possibly imply that the forecast accuracy is indirectly related to the analysts' specialism in goodwill accounting as in the groups that IFRS3 (2008) is related to fewer analysts' estimations, the forecasts are more accurate as well.

Regarding the effect of IFRS3 (2008) adoption on the relationship between NASACQ (size of acquisitions relative to total net assets) and analysts' forecasts, the empirical results shown in Table 7.1 do not show an association between the interaction term IFRS32008xNASACQ and MFA for forecasts of UK firms, nor is a relationship seen in in Table 7.4 for German mandatory adopters. On the contrary, analysts' forecasts for German voluntary adopters and French companies with higher acquisitions have lower absolute forecast error following the implementation of IFRS3 (2008). Therefore, the following hypothesis is accepted for German voluntary adopters and French companies but is rejected for German mandatory adopters and UK companies:

$$H_{17}: \textit{Higher size of acquisitions is associated with changes in absolute forecast error following IFRS3 (2008) adoption}$$

The findings for forecast dispersion show that the only group with an observed improvement in analysts' earnings forecast accuracy for the French companies with higher acquisitions as the interaction term IFRS32008xNASACQ is negative and statistically significant. However, the interaction term is positive and statistically significant for analysts' forecast dispersion of UK companies and German voluntary adopters. There is no empirical evidence for German mandatory adopters. Thus, the following hypothesis is accepted for UK, French and German voluntary adopters but not German mandatory adopters:

$$\boldsymbol{H_{18}}\textbf{: }\boldsymbol{Higher\ size\ of\ acquisitions\ is\ associated\ with\ changes\ in\ forecast\ dispersion\ following\ IFRS3\ (2008)\ adoption}$$

It should be noted though that German voluntary adopters with higher acquisitions have analysts' forecasts with higher forecast dispersion relative to the period before while there is an increase in forecast dispersion of analysts' forecasts for UK companies since before IFRS3 (2008) the coefficient of forecast dispersion for analysts' forecasts of firms with higher acquisitions is negative and statistically significant while after IFRS3 (2008) it is positive and statistically significant (Tables A4.1 - A4.2 in Appendix 4).

Also, it can be observed that the implementation of IFRS3 (2008) is associated with underestimated earnings of companies with higher acquisitions for UK and German companies but with analysts' overestimations for French companies. Similarly to the results for goodwill intensity, this could be related to analysts' expectations for firms with higher acquisitions. Analysts could expect lower acquisitions costs for UK and German companies but increased acquisition costs for French companies following IFRS3 (2008). Looking at the results for analyst following, UK and French companies seem to have a similar pattern as the interaction term IFRS32008xNASACQ indicates that the analyst following is reduced after the issue of IFRS3 (2008). There is no evidence of this for German mandatory adopters but contrary to the other samples, German voluntary adopters with higher acquisitions have increased number of analyst estimations following adoption of IFRS3 (2008).

The results from the investigation of the IFRS3 (2008) show a diverse picture across the three countries. Regarding the changes in goodwill rules, the option to use the full goodwill method permitted the recognition of 100% of an acquired entity's goodwill and the abolishment of step acquisitions terminated the measurement of each asset and liability at each step when measuring fair value. The revision of IFRS3 2008 changed the measurement rules of goodwill arising from acquisitions, which is measured now as "the difference between the fair value of any investment in the business held before the acquisition, the consideration transferred and the net assets acquired" (IASB, 2014).

It can be suggested that the above changes were probably related to the lower absolute forecast accuracy of analysts' forecasts for German voluntary adopters with higher goodwill intensity. On the contrary, the analysts' forecasts have higher absolute forecast accuracy for German mandatory adopters with higher goodwill intensity. A likely justification for the probable improvements for analysts' forecasts of German voluntary adopters could be the less complex measurement of goodwill arising from acquisitions but it can also be argued that this could increase management's discretion. Thus, the management incentives could be a reason for the observed deterioration for analysts' forecasts of German mandatory adopters who could have relatively lower incentives for high quality financial reporting compared to German voluntary adopters. Regarding UK and French companies with higher goodwill intensity, the interaction term indicates a probable increase in the absolute forecast error of analysts' forecasts but that is not strong enough to be detrimental for forecast accuracy as higher goodwill intensity is likely to be associated with lower absolute forecast error after IFRS3 (2008). As above, it can be suggested that the higher flexibility given to managers is probably responsible for this observation. Further evidence is given by the findings for forecast dispersion of analysts' forecasts that show increases of forecast dispersion with higher goodwill intensity after the IFRS3 standard revision for French companies and German mandatory adopters. Interestingly, a contradictory picture is observed across the three groups regarding goodwill intensity and analyst following that is likely to be increased for UK companies and German mandatory adopters but likely to be decreased for French firms and German voluntary adopters.

The IFRS3 (2008) revision brought several important changes in the rules for acquisitions as well.

On one hand, IFRS3 (2008) demanded the various acquisition costs (such as legal, accounting, valuation, consulting, advisory) to be expensed instead of capitalised which directly impacts the profit and loss statement and provides the opportunity to the management for earnings management. It should be noted that acquisitions costs should still be capitalised for tax purposes (HM Revenue and Customs, 2009). Hence, this flexibility given to managers could theoretically increase analysts' uncertainty about future earnings and consequently increase the absolute forecast error of analysts' forecasts. On top of that, the IFRS3 (2008) revision allowed the recognition of any changes in the fair values of contingent considerations by acquisitions on the income statement.

On the other hand, IFRS3 (2008) demanded increased disclosure for acquisitions that could actually be associated with lower absolute forecast error of analysts' forecasts due to the additional information and the timely recognition of changes in fair values. This is probably true for analysts' forecasts of French companies and German voluntary adopters with higher acquisitions as the implementation of IFRS3 (2008) is related to lower absolute forecast error contrary to analysts' forecasts of UK companies and German mandatory adopters that are probably related to higher absoluter forecast error relative to the period before IFRS3 (2008). Also, French companies with higher acquisitions have lower forecast dispersion as well but a reduction in analyst following after IFRS3 (2008) relative to the period before. This observation could imply that a smaller number of analysts with more specialised knowledge or private information are providing forecasts for French companies with higher acquisitions. The possession of private information by part of the analysts could be a possible explanation for the observations for UK companies as the implementation of IFRS3 (2008) for UK companies with higher acquisitions is related to an increase in the absolute forecast error and forecast dispersion of analysts' forecasts and a reduction in analyst following.

7.2. The adoption of IFRS3 (2010)

Table 7.6 – OLS regression results for companies in the UK reporting before and after IFRS3 (2010)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.078***	0.001	-1.354***	
	(0.02)	(0.02)	(0.15)	
ln(SIZE)	0.043***	0.020**	0.030	1.633***
	(0.01)	(0.01)	(0.05)	(0.13)
ln(AGE)	-0.045***	0.018**	0.674***	0.287
	(0.01)	(0.01)	(0.06)	(0.22)
BM	0.009***	0.001	0.070***	0.245***
	(0.00)	(0.00)	(0.01)	(0.04)
DE	0.014**	-0.005	-0.118***	-1.186***
	(0.01)	(0.00)	(0.02)	(0.06)
ROA	-1.203***	-0.155	-0.858	-9.726***
	(0.25)	(0.28)	(0.63)	(1.67)
RETURNS	-0.123***	-0.066***	0.526***	-1.897***
	(0.02)	(0.02)	(0.11)	(0.37)
VOLATILITY	0.283**	1.069***	-3.946***	-5.249***
	(0.13)	(0.14)	(0.41)	(1.45)
IGW	-0.256***	-0.020	-0.722***	-5.562***
	(0.04)	(0.04)	(0.18)	(0.57)
NIAI	0.776***	0.390***	-0.086	8.613***
	(0.12)	(0.15)	(0.24)	(0.90)
EIGD	-0.222***	-0.066*	2.283***	1.895***
	(0.04)	(0.04)	(0.27)	(0.39)
NASACQ	-0.824***	-0.642***	4.955***	-33.197***
	(0.25)	(0.22)	(1.23)	(4.07)
LN(MRKT)	0.140**	-0.367***	-0.265	-13.537***
	(0.06)	(0.07)	(0.35)	(1.00)
LN(FRMSTR)	0.059	0.462***	0.039	17.631***
	(0.09)	(0.10)	(0.44)	(1.23)
LN(CORPGOV)	-0.135***	0.250***	-0.842***	-9.152***
	(0.04)	(0.04)	(0.24)	(0.94)
LN(BRND)	-0.060***	-0.017	0.470***	5.588***
	(0.01)	(0.01)	(0.09)	(0.32)
LN(FINPOS)	-0.006	-0.418***	-0.110	-4.085***
	(0.06)	(0.06)	(0.25)	(0.92)
LN(REGACC)	-0.093***	0.044**	0.108	3.195***
	(0.03)	(0.02)	(0.14)	(0.54)
IFRS32010xIGW	0.469***	-0.207***	0.252	2.058**
	(0.07)	(0.07)	(0.24)	(0.96)

Table 7.6 – OLS regression results for companies in the UK reporting before and after IFRS3 (2010)

IFRS32010xNASACQ	0.735***	-0.019	4.563***	30.800***
	(0.26)	(0.26)	(1.68)	(4.90)
IFRS32010	-0.158***	0.046	-0.168	-0.027
	(0.03)	(0.03)	(0.11)	(0.33)
Constant	-0.301**	-0.123	10.049***	11.822***
	(0.14)	(0.12)	(1.08)	(3.43)
R-squared	0.254	0.206	0.301	0.479
Degrees of freedom	1658	1658	1658	1659
Number of observations	1680	1680	1680	1681
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2010) in the UK.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32010xIGW_{it} + \alpha_{20} IFRS32010xNASACQ_{it} + \alpha_{21} IFRS32010_{it} + \varepsilon_{it}$$

Variables are described below:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(ln(SIZE)) is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW)is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(IFRS32010xIGW) is an interaction term computed by multiplying ***IFRS32008*** with ***IGW.***

(IFRS32010xNASACQ) is an interaction term computed by multiplying ***IFRS32008*** with ***NASACQ.***

(IFRS32010) is an indicator variable = 1 if firm i uses IFRS3 (2010) in year *t*, and 0 otherwise.

Table 7.7 – OLS regression results for companies in France reporting before and after IFRS3 (2010)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.272***	-0.316***	-0.131***	
	(0.04)	(0.07)	(0.04)	
ln(SIZE)	0.002	-0.151***	0.063***	4.431***
	(0.02)	(0.03)	(0.01)	(0.22)
ln(AGE)	-0.065	-0.079	0.152***	-0.104
	(0.04)	(0.06)	(0.02)	(0.53)
BM	-0.048**	0.092***	-0.171***	1.162***
	(0.02)	(0.03)	(0.01)	(0.28)
DE	-0.194***	0.053*	0.025***	-0.713***
	(0.02)	(0.03)	(0.01)	(0.19)
ROA	-1.029***	3.395***	0.033	-1.489
	(0.30)	(0.93)	(0.12)	(3.25)
RETURNS	-0.178***	-0.716***	0.191***	-4.121***
	(0.05)	(0.10)	(0.04)	(0.63)
VOLATILITY	-0.525***	-0.913**	0.304**	9.903***
	(0.18)	(0.44)	(0.12)	(3.09)
IGW	-0.060	-0.241*	-0.032	15.423***
	(0.08)	(0.14)	(0.05)	(1.74)
NIAI	0.134**	0.022	-0.237***	-2.351*
	(0.07)	(0.13)	(0.05)	(1.20)
EIGD	0.344***	0.522***	-0.017	0.211
	(0.08)	(0.11)	(0.04)	(0.66)
NASACQ	-0.073	-9.900***	0.369	-36.517***
	(0.42)	(1.10)	(0.23)	(7.19)
LN(MRKT)	-0.366***	-0.392***	0.222***	-0.968
	(0.11)	(0.14)	(0.05)	(1.07)
LN(FRMSTR)	-0.004	0.560**	-0.255***	-3.565
	(0.15)	(0.22)	(0.07)	(2.18)
LN(CORPGOV)	0.406***	0.293***	0.152***	-4.665***
	(0.06)	(0.09)	(0.03)	(0.99)
LN(BRND)	-0.023	-0.118***	-0.060***	0.970***
	(0.02)	(0.03)	(0.01)	(0.25)
LN(FINPOS)	0.016	-0.024	0.033	5.165***
	(0.07)	(0.10)	(0.03)	(1.11)
LN(REGACC)	-0.103**	-0.348***	-0.157***	-1.520**
	(0.05)	(0.05)	(0.02)	(0.71)
IFRS32010xIGW	-0.383***	0.598***	-0.135**	-0.828
	(0.10)	(0.14)	(0.06)	(2.40)
IFRS32010xNASACQ	-4.753***	7.471***	1.701***	3.833
	(0.68)	(1.61)	(0.38)	(14.23)

Table 7.7 – OLS regression results for companies in France reporting before and after IFRS3 (2010)

IFRS32010	0.191***	-0.475***	0.055***	3.394***
	(0.04)	(0.09)	(0.02)	(0.61)
Constant	-0.018	3.158***	-0.434**	-19.904***
	(0.37)	(0.62)	(0.20)	(5.47)
R-squared	0.525	0.449	0.464	0.659
Degrees of freedom	866	866	866	867
Number of observations	888	888	888	889
* p<0.10,	** p<0.05,	*** p<0.01		

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2010) in France.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32010xIGW_{it} + \alpha_{20} IFRS32010xNASACQ_{it} + \alpha_{21} IFRS32010_{it} + \varepsilon_{it}$$

Variables as described at Table 7.6.

Table 7.8 – OLS regression results for all sample companies in Germany before and after IFRS3 (2010)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.044*	-0.105**	-0.178***	
	(0.03)	(0.05)	(0.03)	
ln(SIZE)	-0.023	-0.168***	0.277***	-1.467**
	(0.03)	(0.04)	(0.02)	(0.71)
ln(AGE)	-0.055	0.145***	0.486***	-2.756***
	(0.04)	(0.03)	(0.04)	(0.84)
BM	0.048**	-0.076***	-0.226***	2.370***
	(0.02)	(0.02)	(0.02)	(0.39)
DE	-0.109**	0.120**	-0.245***	2.828***
	(0.05)	(0.06)	(0.03)	(0.88)
ROA	-1.460***	-1.083*	-1.121***	14.492*
	(0.56)	(0.64)	(0.35)	(8.59)
RETURNS	-0.381***	0.029	0.100	-7.450***
	(0.06)	(0.05)	(0.08)	(1.13)
VOLATILITY	0.353	0.156	4.028***	-30.550***
	(0.34)	(0.36)	(0.43)	(8.04)
IGW	0.266**	-0.614***	0.409***	-21.704***
	(0.10)	(0.15)	(0.08)	(3.48)
NIAI	0.407*	-0.038	-0.698***	16.185***
	(0.21)	(0.27)	(0.27)	(5.69)
EIGD	-1.020***	1.457***	-0.069	18.541*
	(0.38)	(0.40)	(0.29)	(11.13)
NASACQ	-0.895***	-0.499*	1.689***	-9.371
	(0.21)	(0.29)	(0.38)	(6.06)
LN(MRKT)	0.062	0.158	-0.248*	-5.004
	(0.19)	(0.25)	(0.14)	(4.49)
LN(FRMSTR)	-0.339	0.529	-0.067	1.837
	(0.25)	(0.33)	(0.26)	(6.11)
LN(CORPGOV)	0.187**	-0.380***	0.088	10.257***
	(0.09)	(0.13)	(0.11)	(2.15)
LN(BRND)	0.026	-0.005	0.207***	-2.720***
	(0.03)	(0.03)	(0.05)	(0.81)
LN(FINPOS)	0.074	-1.124***	-0.027	-10.094***
	(0.19)	(0.16)	(0.17)	(3.62)
LN(REGACC)	0.028	0.540***	-0.118	11.198***
	(0.08)	(0.11)	(0.09)	(1.95)
IFRS32010xIGW	-0.351***	0.522***	-0.285***	5.665
	(0.07)	(0.09)	(0.10)	(3.81)
IFRS32010xNASACQ	3.572***	-0.997	5.622***	-14.117
	(0.60)	(0.65)	(1.39)	(34.95)

Table 7.8 – OLS regression results for all sample companies in Germany before and after IFRS3 (2010)

IFRS32010	0.013	-0.299***	0.055*	-2.062**
	(0.04)	(0.05)	(0.03)	(0.93)
Constant	0.311	7.077***	-4.084***	39.106***
	(0.81)	(1.23)	(0.77)	(14.82)
R-squared	0.316	0.397	0.641	0.409
Degrees of freedom	575	575	575	576
Number of observations	597	597	597	598
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2010) in Germany.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32010xIGW_{it} + \alpha_{20} IFRS32010xNASACQ_{it} + \alpha_{21} IFRS32010_{it} + \varepsilon_{it}$$

Variables as described at Table 7.6.

Table 7.9 – OLS regression results for German mandatory adopters before and after IFRS3 (2010)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.215*	-0.247***	0.031	
	(0.11)	(0.08)	(0.08)	
ln(SIZE)	-0.012	-0.013	0.225***	0.835
	(0.05)	(0.04)	(0.04)	(1.03)
ln(AGE)	-0.257***	0.147***	0.480***	1.220*
	(0.06)	(0.05)	(0.03)	(0.71)
BM	0.062*	-0.114***	0.006	0.401
	(0.03)	(0.03)	(0.03)	(0.54)
DE	-0.048	-0.136**	0.451***	4.735***
	(0.09)	(0.07)	(0.06)	(1.23)
ROA	-0.105	-1.208**	1.479***	60.999***
	(0.66)	(0.47)	(0.40)	(11.68)
RETURNS	-0.529***	0.493***	0.029	-3.369*
	(0.09)	(0.08)	(0.08)	(2.04)
VOLATILITY	-1.572***	1.140***	1.366***	-29.388***
	(0.53)	(0.43)	(0.41)	(10.78)
IGW	-0.310	-0.033	0.029	-8.946
	(0.25)	(0.19)	(0.21)	(5.82)
NIAI	3.494***	-1.364	-2.445***	-18.555
	(1.09)	(0.83)	(0.88)	(22.52)
EIGD	-0.184	0.728**	-0.483	13.314
	(0.59)	(0.35)	(0.55)	(9.81)
NASACQ	-1.318***	0.932***	0.477*	11.503*
	(0.31)	(0.27)	(0.25)	(5.96)
LN(MRKT)	0.379	-0.428	0.560***	-16.061***
	(0.37)	(0.29)	(0.21)	(4.71)
LN(FRMSTR)	-1.369***	1.102***	-1.350***	34.304***
	(0.46)	(0.40)	(0.40)	(7.01)
LN(CORPGOV)	-0.505**	0.171	-0.522***	3.994
	(0.21)	(0.15)	(0.16)	(3.17)
LN(BRND)	0.092	-0.008	-0.077	-8.465***
	(0.13)	(0.10)	(0.11)	(2.04)
LN(FINPOS)	1.054***	-0.852***	0.531**	-13.105***
	(0.25)	(0.20)	(0.24)	(4.25)
LN(REGACC)	0.338***	-0.093	0.412***	-1.699
	(0.11)	(0.08)	(0.07)	(2.21)
IFRS32010xIGW	-0.158**	0.210***	0.073*	0.763
	(0.07)	(0.06)	(0.04)	(1.38)
IFRS32010xNASACQ	3.342***	-2.331**	-2.214***	4.145
	(1.04)	(0.91)	(0.77)	(18.86)

Table 7.9 – OLS regression results for German mandatory adopters before and after IFRS3 (2010)

IFRS32010	-0.109**	0.066	0.108**	-0.111
	(0.05)	(0.05)	(0.05)	(1.06)
Constant	1.297	1.676*	-1.289	-5.979
	(1.26)	(0.99)	(0.99)	(29.64)
R-squared	0.500	0.619	0.923	0.762
Degrees of freedom	230	230	230	231
Number of observations	252	252	252	253
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in Germany for companies that mandatorily adopted IFRS after 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32010xIGW_{it} + \alpha_{20} IFRS32010xNASACQ_{it} + \alpha_{21} IFRS32010_{it} + \varepsilon_{it}$$

Variables as described at Table 7.6.

Table 7.10 – OLS regression results for German voluntary adopters reporting before and after IFRS3 (2010)

	MFE **Mean** **β/se**	**MFA** **Mean** **β/se**	**MFD** **β/se**	**NOA** **β/se**
ln(NOA)	0.151**	-0.417***	0.062	
	(0.07)	(0.11)	(0.06)	
ln(SIZE)	0.104*	-0.111	0.301***	-2.546***
	(0.06)	(0.09)	(0.06)	(0.58)
ln(AGE)	-0.336***	0.262**	-0.221**	5.945***
	(0.10)	(0.12)	(0.09)	(1.19)
BM	0.167***	-0.285***	-0.165**	0.277
	(0.04)	(0.07)	(0.06)	(0.68)
DE	-0.101*	-0.036	-0.098*	-2.905***
	(0.06)	(0.09)	(0.05)	(0.80)
ROA	-7.520***	-5.738***	-1.088	-81.299***
	(1.45)	(1.79)	(0.92)	(17.74)
RETURNS	-0.656***	-0.099	-0.153	2.985**
	(0.10)	(0.13)	(0.11)	(1.41)
VOLATILITY	0.585	-3.179***	7.243***	-146.582***
	(0.83)	(1.03)	(1.21)	(8.13)
IGW	0.525	-2.673***	1.047***	-69.810***
	(0.33)	(0.56)	(0.36)	(2.94)
NIAI	-0.223	-0.689	1.059*	-20.677***
	(0.39)	(0.57)	(0.55)	(6.04)
EIGD	-0.875	-0.680	7.826***	-134.701***
	(1.34)	(1.66)	(1.76)	(15.83)
NASACQ	-0.792*	-2.285***	0.337	15.371**
	(0.46)	(0.73)	(0.70)	(7.52)
LN(MRKT)	0.147	-0.773	0.508*	-30.913***
	(0.34)	(0.52)	(0.28)	(2.93)
LN(FRMSTR)	1.323**	-0.138	0.476	-13.241*
	(0.61)	(0.90)	(0.74)	(7.28)
LN(CORPGOV)	0.740***	-0.530**	1.295***	-12.006***
	(0.15)	(0.22)	(0.26)	(2.74)
LN(BRND)	-0.484***	0.351***	-0.397***	12.544***
	(0.10)	(0.13)	(0.12)	(1.39)
LN(FINPOS)	-0.463	-0.122	-0.706	15.902***
	(0.45)	(0.63)	(0.55)	(5.90)
LN(REGACC)	-1.088***	0.895***	-1.007***	30.931***
	(0.20)	(0.29)	(0.23)	(2.02)
IFRS32010xIGW	-0.166	1.016**	0.104	-2.999
	(0.28)	(0.43)	(0.28)	(3.66)
IFRS32010xNASACQ	13.665**	-5.836	36.641***	-123.942**
	(6.18)	(8.45)	(13.22)	(60.60)

Table 7.10 – OLS regression results for German voluntary adopters reporting before and after IFRS3 (2010)

IFRS32010	-0.053	-0.568***	-0.281***	1.232
	(0.10)	(0.17)	(0.10)	(1.06)
Constant	-5.804***	9.969***	-9.526***	156.175***
	(1.72)	(2.28)	(1.85)	(15.27)
R-squared	0.488	0.470	0.713	0.873
Degrees of freedom	326	326	326	327
Number of observations	348	348	348	349
*	p<0.10, **	p<0.05,	*** p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS3 (2008) in Germany for companies that voluntarily adopted IFRS before 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32010xIGW_{it} + \alpha_{20} IFRS32010xNASACQ_{it} + \alpha_{21} IFRS32010_{it} + \varepsilon_{it}$$

Variables as described at Table 7.6.

The empirical results in Table 7.6 show that the adoption of IFRS3 (2010) for UK companies is associated with lower absolute forecast error for analysts' forecasts of companies with higher goodwill intensity as the interaction term IFRS32010xIGW is negative and statistically significant. On the contrary, for analysts' forecasts of French and German firms with higher goodwill intensity, IFRS3 (2010) is associated with higher absolute forecast error. In fact, the interaction term IFRS32010xIGW for MFA for French firms and for German mandatory adopters and voluntary adopters is positive and statistically significant. Hence, the following hypothesis is accepted for all firms:

$$\boldsymbol{H_{19}}\textbf{: }\boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ absolute\ forecast\ error\ following\ IFRS3\ (2010)\ adoption}$$

Table 7.7 shows that for analysts' forecasts of French firms with higher goodwill intensity the adoption of IFRS3 (2010) is associated with lower forecast dispersion, as IFRS32010xIGW for forecast dispersion is negative and statistically significant. However, the empirical results do not provide any evidence that the adoption of IFRS3 (2010) affected the relationship between IFRS32010xIGW and forecast dispersion for analysts' forecasts of neither UK companies nor German firms. Therefore, the following hypothesis is rejected for the UK and German firms but is accepted for French firms:

$$\boldsymbol{H_{20}}\textbf{: }\boldsymbol{Higher\ goodwill\ intensity\ is\ associated\ with\ changes\ in\ forecast\ dispersion\ following\ IFRS3\ (2010)\ adoption}$$

Table 7.7 shows that analysts' forecasts of French companies with higher acquisitions have higher absolute forecast error as the interaction term IFRS32010xNASACQ is positive and statistically significant. In contrast, the interaction term IFRS32010xNASACQ is negative and statistically significant (Table 7.8) and shows that analysts' forecasts of German mandatory adopters with higher acquisitions have lower absolute forecast error and for UK firms is not significant (Table 7.6).

Therefore, the following hypothesis is rejected for the UK and French firms but is accepted for German firms:

H_{21}: *Higher size of acquisitions is associated with changes in absolute forecast error following IFRS3* (2010) *adoption*

The interaction term IFRS32010xNASACQ does not show that the adoption of IFRS3 (2010) implied lower absolute forecast error than the before IFRS3 (2010) period for analysts' forecasts of French companies with higher acquisitions although during both periods they are associated with lower absolute forecast error (Tables A4.13 - A4.14 in Appendix 4). However, the empirical results for analysts' forecasts of German voluntary adopters indicate that before IFRS3 (2010) analysts' forecasts of firms with higher acquisitions is associated with lower absolute forecast error before, but higher after IFRS3 (2010).

The empirical results for forecast dispersion of analysts' forecasts and the interaction term IFRS32010xNASACQ are consistent for UK, France and German voluntary adopters as the coefficients are positive and statistically significant. Hence, analysts' forecasts of companies with higher acquisitions have higher forecast dispersion after the implementation of IFRS3 (2010) relative to the previous period. In contrast, the empirical results at Table 7.9 indicate that analysts' forecasts of German mandatory adopters have lower forecast dispersion after IFRS3 (2010) relative to the period before. Therefore, the following hypothesis is accepted for UK, France and German voluntary adopters but is rejected for German mandatory adopters.

H_{22}: *Higher size of acquisitions is associated with changes in forecast dispersion following IFRS3* (2010) *adoption*

It should be noted that (Tables A4.11 - A4.12 in Appendix 4) analysts' forecasts of UK companies with higher acquisitions are associated with higher forecast dispersion before and after IFRS3 (2010) adoption.

Also, there is a possible shift in the case of analysts' forecasts of French companies as although before IFRS3 (2010) there are no statistically significant results, higher acquisitions are associated with higher forecast dispersion after the IFRS3 (2010) adoption.

The implementation of the IFRS3 (2010) revision had an asymmetric impact on the analysts' earnings forecasts. Although the changes haven't been expected to alter considerably the analysts' information environment, several possible improvements or deteriorations in the analysts' forecast accuracy and dispersion are observed. For analysts' forecasts of French and German companies, the adoption of IFRS3 (2010) does not seem to be related to changes in the absolute forecast error. However, there is empirical evidence to support that analysts' forecasts of UK companies with higher goodwill intensity have lower absolute forecast error after the adoption of IFRS3 (2010) relative to the period before. On the contrary analysts' forecasts of French and German companies with higher goodwill intensity have higher absolute forecast error after the adoption of IFRS3 (2010) relative to the period before. The analysts' forecasts of French companies with higher goodwill intensity have relatively higher forecast dispersion as well after the adoption of IFRS3 (2010).

It can be suggested that accumulated goodwill from past acquisitions is indicative of a firm's activity in acquisitions and therefore goodwill intensity would be a relative measure of such activity. The IFRS3 (2010) allows the adjustment of business combination costs when the payment of a contingent consideration is probable and can be measured reliably (KPMG, 2010). Possibly, IFRIC's suggestions that the restatements of IFRS3 (2010) could increase financial statements' comparability are acceptable for the UK companies but not for French and German companies (Deloitte, 2013).

Regarding the possible association of the IFRS3 (2010) revision with acquisitions, analysts' forecasts of French companies with higher acquisitions are likely to be less accurate and have higher forecast dispersion. However, there is no empirical evidence for the rest groups of UK and French companies. On top of that, the results indicate that analysts' forecasts of UK firms and German voluntary adopters with higher acquisitions are likely to be associated with higher forecast dispersion.

On the contrary, analysts' forecasts of German mandatory adopters with higher acquisitions have more accurate forecasts than before the adoption of IFRS3 (2010) and have lower forecast dispersion too. A possible explanation for the negative observations for the analysts' forecasts of French companies operating in the relatively lower enforcement environment could be related to the restatements for past business combinations, to increased uncertainty about the contingent considerations and whether their payment is actually probable and measured reliably.

7.3. The adoption of IFRS7 (2005)

7.11 – OLS regression results for companies in the UK reporting before and after IFRS7 (2005)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.045***	0.031***	-0.638***	
	(0.01)	(0.01)	(0.06)	
ln(SIZE)	0.001	-0.014***	-0.072***	2.064***
	(0.00)	(0.00)	(0.02)	(0.10)
ln(AGE)	-0.040***	0.022***	0.928***	0.674***
	(0.01)	(0.01)	(0.04)	(0.15)
BM	0.002***	-0.002***	0.014***	0.022
	(0.00)	(0.00)	(0.01)	(0.02)
DE	0.003	-0.003**	-0.043***	-0.405***
	(0.00)	(0.00)	(0.01)	(0.04)
ROA	-0.097	-0.380***	-0.827***	8.299***
	(0.07)	(0.08)	(0.30)	(1.07)
RETURNS	-0.124***	-0.035**	-0.350***	-3.247***
	(0.01)	(0.01)	(0.07)	(0.29)
VOLATILITY	-0.013	0.779***	-2.752***	-4.487***
	(0.08)	(0.08)	(0.32)	(1.12)
IGW	-0.012	-0.077***	-0.341***	2.200***
	(0.02)	(0.02)	(0.10)	(0.39)
NIAI	0.101***	0.069**	-0.416**	0.969
	(0.03)	(0.03)	(0.18)	(0.68)
EIGD	-0.031	-0.136***	0.459***	0.698
	(0.03)	(0.05)	(0.11)	(0.49)
NASACQ	0.139***	-0.103***	-0.434	-1.396
	(0.04)	(0.03)	(0.30)	(1.43)
LN(MRKT)	-0.041	0.002	-0.824***	-5.586***
	(0.03)	(0.03)	(0.20)	(0.73)
LN(FRMSTR)	0.218***	-0.181***	-1.226***	-0.924
	(0.05)	(0.06)	(0.26)	(0.96)
LN(CORPGOV)	-0.095***	0.185***	1.553***	4.682***
	(0.03)	(0.03)	(0.13)	(0.59)
LN(BRND)	-0.027***	-0.034***	0.242***	2.755***
	(0.01)	(0.01)	(0.05)	(0.18)
LN(FINPOS)	-0.098***	0.055	0.946***	-0.018
	(0.03)	(0.04)	(0.18)	(0.72)
LN(REGACC)	0.002	0.029***	-0.149**	0.482
	(0.01)	(0.01)	(0.07)	(0.32)
IFRS72005xLN(FINPOS)	0.004	-0.010	-0.234**	2.353***
	(0.02)	(0.02)	(0.10)	(0.38)
IFRS72005	-0.047	0.077	2.180***	-18.370***
	(0.14)	(0.15)	(0.83)	(3.26)

7.11 – OLS regression results for companies in the UK reporting before and after IFRS7 (2005)				
Constant	0.251**	-0.405***	-2.431***	-24.135***
	(0.11)	(0.14)	(0.85)	(3.36)
R-squared	0.048	0.138	0.223	0.396
Degrees of freedom	4131	4131	4131	4132
Number of observations	4152	4152	4152	4153
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2005) in the UK.

$$\boldsymbol{Dependent\ variable} = \boldsymbol{\alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72005xLN(FINPOS)_{it} + \alpha_{20} IFRS72005_{it} + \varepsilon_{it}}$$

Variables are described below:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(ln(SIZE)) is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW)is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(IFRS72005xLN(FINPOS)) is an interaction term computed by multiplying ***IFRS72005*** with ***LN(FINPOS).***

(IFRS72005) is an indicator variable = 1 if firm i uses IFRS7 (2005) in year *t*, and 0 otherwise.

Table 7.12 – OLS regression results for companies in France reporting before and after IFRS7 (2005)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	-0.208***	-0.178***	-0.173***	
	(0.05)	(0.05)	(0.03)	
ln(SIZE)	0.050***	-0.002	-0.062***	5.126***
	(0.02)	(0.02)	(0.01)	(0.16)
ln(AGE)	-0.140***	0.161***	-0.365***	1.054**
	(0.05)	(0.05)	(0.03)	(0.53)
BM	0.006	0.001	-0.060***	-0.022
	(0.00)	(0.01)	(0.01)	(0.11)
DE	0.089***	0.074***	-0.055***	0.604***
	(0.01)	(0.02)	(0.01)	(0.13)
ROA	-0.094	-2.577***	0.333	-4.394
	(0.18)	(0.29)	(0.22)	(2.73)
RETURNS	-0.174***	-0.326***	0.060*	-5.116***
	(0.03)	(0.04)	(0.03)	(0.50)
VOLATILITY	-0.475***	1.057***	-0.804***	9.652***
	(0.15)	(0.17)	(0.11)	(2.13)
IGW	0.050	-0.196***	-0.265***	6.200***
	(0.03)	(0.04)	(0.03)	(0.77)
NIAI	-0.109**	-0.303***	-0.112**	-8.698***
	(0.05)	(0.09)	(0.05)	(1.08)
EIGD	0.099*	-1.034***	0.066	-6.261***
	(0.06)	(0.17)	(0.06)	(0.71)
NASACQ	-0.549***	0.067	0.236*	5.227**
	(0.12)	(0.23)	(0.13)	(2.47)
LN(MRKT)	0.030	0.198***	0.006	0.430
	(0.06)	(0.05)	(0.05)	(0.76)
LN(FRMSTR)	-0.150*	0.233**	0.511***	-5.903***
	(0.08)	(0.10)	(0.09)	(1.45)
LN(CORPGOV)	-0.132***	-0.167***	-0.415***	-1.694**
	(0.03)	(0.03)	(0.04)	(0.70)
LN(BRND)	-0.007	-0.101***	-0.044***	1.163***
	(0.01)	(0.01)	(0.01)	(0.24)
LN(FINPOS)	0.131***	-0.109*	-0.035	3.420***
	(0.04)	(0.06)	(0.05)	(0.85)
LN(REGACC)	0.001	-0.031	-0.025	0.273
	(0.02)	(0.03)	(0.02)	(0.43)
IFRS72005xLN(FINPOS)	0.024	0.048	-0.010	0.222
	(0.03)	(0.03)	(0.02)	(0.37)
IFRS72005	-0.213	-0.497*	0.073	-1.808
	(0.26)	(0.28)	(0.18)	(3.20)

Table 7.12 – OLS regression results for companies in France reporting before and after IFRS7 (2005)

Constant	1.339***	-0.278	3.268***	-48.139***
	(0.32)	(0.41)	(0.27)	(4.36)
R-squared	0.169	0.410	0.390	0.510
Degrees of freedom	1683	1683	1683	1684
Number of observations	1704	1704	1704	1705
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS7 2005 in France.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72005xLN(FINPOS)_{it} + \alpha_{20} IFRS72005_{it} + \varepsilon_{it}$$

Variables as described at Table 7.11:

Table 7.13 – OLS regression results for companies in all sample companies in Germany reporting before and after IFRS7 (2005)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.053***	0.060***	0.009	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.035*	-0.032	0.027*	-1.637***
	(0.02)	(0.03)	(0.02)	(0.63)
ln(AGE)	-0.162***	-0.202***	-0.069**	-0.358
	(0.04)	(0.06)	(0.03)	(0.71)
BM	-0.003	-0.086***	-0.081***	0.940***
	(0.01)	(0.02)	(0.01)	(0.21)
DE	-0.049***	-0.055***	-0.019**	0.714***
	(0.01)	(0.02)	(0.01)	(0.18)
ROA	0.330	-2.029***	1.030***	5.289
	(0.27)	(0.42)	(0.29)	(3.49)
RETURNS	-0.259***	-0.228***	0.207***	-7.539***
	(0.04)	(0.05)	(0.04)	(0.82)
VOLATILITY	-0.850***	0.465	2.026***	-18.661**
	(0.23)	(0.37)	(0.24)	(7.92)
IGW	-0.234***	-0.702***	-0.572***	-11.868***
	(0.07)	(0.09)	(0.05)	(1.24)
NIAI	0.812***	0.103	0.629***	3.528
	(0.19)	(0.24)	(0.14)	(3.52)
EIGD	-0.291	0.828***	0.558***	-3.198***
	(0.18)	(0.11)	(0.09)	(1.10)
NASACQ	-0.231**	0.477***	0.128	1.664
	(0.12)	(0.14)	(0.09)	(3.57)
LN(MRKT)	-1.357***	-0.530*	-0.116	-5.008
	(0.22)	(0.31)	(0.14)	(4.62)
LN(FRMSTR)	0.727***	0.221	-0.378**	-4.141
	(0.22)	(0.32)	(0.15)	(4.86)
LN(CORPGOV)	0.134	0.238**	0.461***	7.297***
	(0.08)	(0.12)	(0.08)	(1.72)
LN(BRND)	-0.025	0.036	-0.182***	-0.786
	(0.04)	(0.05)	(0.03)	(0.87)
LN(FINPOS)	0.507***	-0.068	0.196***	-6.645***
	(0.10)	(0.13)	(0.07)	(2.45)
LN(REGACC)	-0.074	0.008	0.026	13.368***
	(0.05)	(0.07)	(0.04)	(1.00)
IFRS72005x LN(FINPOS)	0.279***	0.336***	0.080*	-2.998**
	(0.07)	(0.09)	(0.05)	(1.22)
IFRS72005	-2.406***	-2.891***	-0.574	25.127**
	(0.60)	(0.76)	(0.40)	(10.81)

Table 7.13 – OLS regression results for companies in all sample companies in Germany reporting before and after IFRS7 (2005)

Constant	-0.203	2.452***	-0.668*	53.290***
	(0.40)	(0.51)	(0.37)	(11.79)
R-squared	0.257	0.349	0.505	0.351
Degrees of freedom	1037	1037	1037	1038
Number of observations	1058	1058	1058	1059
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2005) in Germany.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72005xLN(FINPOS)_{it} + \alpha_{20} IFRS72005_{it} + \varepsilon_{it}$$

Variables as described at Table 7.11:

Table 7.14 – OLS regression results for German mandatory adopters reporting before and after IFRS7 (2005)

	MFE **Mean** **β/se**	**MFA** **Mean** **β/se**	**MFD** **β/se**	**NOA** **β/se**
ln(NOA)	-0.132	-0.755***	-0.172***	
	(0.16)	(0.15)	(0.05)	
ln(SIZE)	0.070	-0.229***	0.028	2.175***
	(0.06)	(0.06)	(0.03)	(0.70)
ln(AGE)	-0.225	0.125	-0.069	0.305
	(0.15)	(0.18)	(0.06)	(1.16)
BM	0.146***	-0.048	-0.039***	-0.746***
	(0.03)	(0.04)	(0.01)	(0.26)
DE	-0.214***	0.454***	0.259***	3.906***
	(0.08)	(0.11)	(0.04)	(0.60)
ROA	0.284	-2.172***	0.950***	-2.458
	(0.47)	(0.50)	(0.28)	(4.53)
RETURNS	-0.748***	-0.804***	0.035	-4.616***
	(0.09)	(0.10)	(0.05)	(0.77)
VOLATILITY	-3.836***	0.481	1.130***	32.473***
	(0.76)	(0.82)	(0.34)	(7.41)
IGW	-0.661***	-1.315***	-0.509***	-6.848***
	(0.20)	(0.23)	(0.10)	(1.89)
NIAI	6.186***	-1.959	-1.796***	-60.127***
	(1.18)	(1.54)	(0.53)	(9.27)
EIGD	0.145	-0.777***	0.704***	-10.785***
	(0.30)	(0.30)	(0.11)	(1.66)
NASACQ	0.180	0.124	0.333***	17.935***
	(0.27)	(0.37)	(0.12)	(3.43)
LN(MRKT)	0.476	-1.829**	0.654***	-16.307***
	(0.51)	(0.74)	(0.19)	(4.93)
LN(FRMSTR)	-3.832***	0.887	-1.042***	62.235***
	(0.99)	(1.33)	(0.34)	(7.71)
LN(CORPGOV)	0.034	1.047**	0.721***	-4.772
	(0.44)	(0.48)	(0.18)	(4.49)
LN(BRND)	0.300	0.182	-0.030	-15.210***
	(0.26)	(0.30)	(0.10)	(1.93)
LN(FINPOS)	3.146***	0.059	-0.053	-38.098***
	(0.63)	(0.67)	(0.23)	(5.12)
LN(REGACC)	-0.031	0.285	0.131**	7.585***
	(0.16)	(0.19)	(0.06)	(1.08)
IFRS72005xLN(FINPOS)	0.251	-0.326	0.239***	-0.890
	(0.19)	(0.21)	(0.08)	(1.85)
IFRS72005	-2.127	2.737	-2.273***	8.647
	(1.75)	(1.96)	(0.71)	(16.86)

Table 7.14 – OLS regression results for German mandatory adopters reporting before and after IFRS7 (2005)

Constant	0.012	1.810	-1.861***	-4.978
	(0.92)	(1.23)	(0.34)	(13.25)
R-squared	0.393	0.622	0.715	0.718
Degrees of freedom	363	363	363	364
Number of observations	384	384	384	385
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2005) in Germany for companies that mandatorily adopted IFRS after 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72005xLN(FINPOS)_{it} + \alpha_{20} IFRS72005_{it} + \varepsilon_{it}$$

Variables as described at Table 7.11:

Table 7.15 – OLS regression results for German voluntary adopters reporting before and after IFRS7 (2005)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.066***	0.041**	0.026***	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.042**	-0.047**	0.052***	-1.172*
	(0.02)	(0.02)	(0.01)	(0.61)
ln(AGE)	-0.251***	0.064	0.002	-0.395
	(0.04)	(0.06)	(0.02)	(0.67)
BM	-0.001	-0.122***	-0.054***	0.607**
	(0.01)	(0.02)	(0.01)	(0.30)
DE	-0.043***	0.043**	-0.005	0.433**
	(0.01)	(0.02)	(0.01)	(0.19)
ROA	-0.830**	1.621***	2.172***	30.318***
	(0.32)	(0.42)	(0.46)	(5.72)
RETURNS	-0.168***	-0.154***	0.113***	-6.540***
	(0.02)	(0.06)	(0.03)	(0.98)
VOLATILITY	0.431***	-0.103	2.160***	26.701***
	(0.16)	(0.58)	(0.20)	(8.88)
IGW	-0.337***	-0.202	0.169**	-1.065
	(0.12)	(0.30)	(0.08)	(2.39)
NIAI	0.607***	0.163	0.434***	-3.888
	(0.17)	(0.22)	(0.13)	(3.55)
EIGD	-0.385**	1.429***	0.164**	6.637***
	(0.16)	(0.19)	(0.07)	(1.56)
NASACQ	0.175	-0.504***	-0.521***	-15.010***
	(0.13)	(0.19)	(0.16)	(3.87)
LN(MRKT)	-0.393**	0.023	-0.249**	-4.378
	(0.17)	(0.28)	(0.12)	(4.31)
LN(FRMSTR)	0.119	-0.453*	0.368***	-16.267***
	(0.15)	(0.27)	(0.13)	(4.26)
LN(CORPGOV)	-0.050	0.121*	0.305***	0.076
	(0.05)	(0.07)	(0.06)	(1.25)
LN(BRND)	0.063*	0.076	-0.297***	7.546***
	(0.03)	(0.06)	(0.03)	(0.95)
LN(FINPOS)	0.159	0.055	-0.100	-1.377
	(0.11)	(0.16)	(0.08)	(2.59)
LN(REGACC)	0.016	0.031	-0.045	18.912***
	(0.05)	(0.08)	(0.04)	(0.98)
IFRS72005xLN(FINPOS)	0.117*	0.295**	-0.035	-6.862***
	(0.07)	(0.12)	(0.05)	(1.54)
IFRS72005	-0.981	-2.420**	0.345	60.914***
	(0.61)	(1.04)	(0.39)	(13.40)

Table 7.15 – OLS regression results for German voluntary adopters reporting before and after IFRS7 (2005)

Constant	0.614	2.275***	-1.791***	56.466***
	(0.50)	(0.57)	(0.41)	(12.48)
R-squared	0.328	0.268	0.543	0.403
Degrees of freedom	987	987	987	988
Number of observations	1008	1008	1008	1009
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2005) in Germany for companies that voluntarily adopted IFRS before 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72005xLN(FINPOS)_{it} + \alpha_{20} IFRS72005_{it} + \varepsilon_{it}$$

Variables as described at Table 7.11:

Quantity of disclosure about performance and financial position

The empirical results in Table 7.10, Table 7.11, Table 7.12 and Table 7.13 do not show any effect from the adoption of IFRS7 (2005) on the relationship between absolute forecast error and LN(FINPOS) (quantity of disclosure about performance and financial position) for analysts' forecasts of UK and French companies as well as for German mandatory adopters.

The analysts' forecasts of German mandatory adopters before and after the adoption of IFRS7 (2005) with greater disclosure quantity about corporate and business performance and financial position have higher absolute forecast error (Tables A4.27 - A4.28 in Appendix 4).

Before the adoption of IFRS7 (2005) analysts' forecasts of French firms with greater disclosure quantity about corporate and business performance and financial position are associated with higher absolute forecast error, but with lower absolute after the IFRS7 (2005) implementation (Tables A4.23 - A4.24 in Appendix 4). Nevertheless, it can not be suggested with enough confidence that IFRS7, Financial Instruments is related to this observation since the coefficient on the interaction term IFRS72005xLN(FINPOS) is not statistically significant.

The results in Table 7.14 show that the implementation of IFRS7, Financial Instruments is associated with higher absolute forecast error for analysts' forecasts of German voluntary adopters with greater disclosure quantity about corporate and business performance and financial position relative to the previous period. This is confirmed from the coefficient on the interaction term IFRS72005xLN(FINPOS) which is positive and statistically significant. In fact, the results presented in the appendix exhibit that before the implementation of IFRS7, Financial Instruments the analysts' forecasts of German voluntary adopters with greater disclosure quantity about financial position and performance have lower absolute forecast error.

After the implementation of IFRS7 (2005) the picture changed as the interaction term IFRS72005xLN(FINPOS) is positive and statistically significant and therefore analysts' forecasts of German voluntary adopters with greater disclosure quantity about corporate and business performance and financial position are associated with higher absolute forecast error.

The results show that post the adoption of IFRS7 (2005) analysts' forecasts of UK firms with greater disclosure quantity about corporate and business performance and financial position are associated with lower forecast dispersion as the interaction term IFRS72005xLN(FINPOS) is negative and statistically significant. This is also confirmed by looking at the before and after results presented in the appendix.

The analysts' forecasts of French and German companies do not seem to share the same picture as the interaction term for the German mandatory adopters is positive and statistically significant and suggests that forecast dispersion for companies with greater disclosure quantity about financial position and performance is higher after the adoption of IFRS7 (2005) compared to the previous period. This does not seem to be the case for German voluntary adopters and French companies as the results are not statistically significant.

The analysts' forecasts of UK companies do not seem to be affected by the adoption of IFRS7 (2005) probably because of the market-based UK economy and the relatively wider use of financial instruments. The reduction in the analysts' forecast dispersion and observed improvements on the analysts' earnings forecast accuracy for French companies with greater disclosure quantity about corporate and business performance and financial position after the adoption of IFRS7 (2005) could be justified by a) the increased qualitative disclosures about market, credit and liquidity risks and b) the increased information regarding financial instruments and impact of fair value movements on the profit and loss. Also, the results suggest that analysts' forecasts of German voluntary adopters have higher absolute forecast error and those of German mandatory adopters have higher forecast dispersion. In both cases, the above observations could be associated with the bank-orientated economy of Germany and the possible lower expertise of market-based financial instruments by users of financial reporting.

The empirical results in Table 7.10 show that analysts' forecasts of UK companies with greater disclosure quantity about corporate and business performance and financial position have higher number of analyst estimations after the adoption of IFRS7 (2005) relative to the period before as the interaction term IFRS72005xLN(FINPOS) is positive and statistically significant.

This is confirmed by looking at the before and after tables (Tables A4.21 - A4.22 in Appendix 4) as before the adoption of IFRS7 Financial Instruments greater disclosure quantity about corporate and business performance and financial position is associated with lower number of analyst estimations but with higher number of analyst estimations after the adoption of IFRS7 Financial Instruments.

Quantity of disclosure for market risk, industry analysis and competitive forces

Other noteworthy observations in results presented in the appendix that could be related to the adoption of IFRS7, Financial Instruments include a possible change in the relationship between LN(MRKT) (quantity of disclosure for market risk, industry analysis and competitive forces) and forecast dispersion for UK and French companies and German voluntary adopters.

Before the adoption of IFRS7 (2005), greater disclosure quantity about market risk, industry analysis and competitive forces is likely to be associated with lower analysts' forecast dispersion but post the adoption of IFRS7 (2005) any possible association is not statistically significant. Before the adoption of IFRS7 (2005), for analysts' forecasts of French companies and German voluntary adopters, there is not empirical evidence between disclosure quantity proxies for market risk, industry analysis and competitive forces and absolute forecast error but post the adoption of IFRS7 (2005), greater disclosure quantity about market risk, industry analysis and competitive forces is associated with higher absolute forecast error. This is not the case for German mandatory adopters as before the adoption of IFRS7 (2005) greater disclosure quantity about market risk, industry analysis and competitive forces is probably associated with higher absolute forecast error but with lower absolute forecast error post the adoption of IFRS7 (2005).

Also, it should be noted that before the adoption of IFRS7 (2005), greater disclosure quantity about the market conditions is related to increased analyst following but with lower post IFRS7 (2005) adoption. A possible explanation for the above observations is the increased disclosure for market risks, as IFRS7 required a sensitivity analysis for market risks affecting the firm at the reporting period such as prices, currency and interest rate risks. IFRS7 required the sensitivity analysis to demonstrate its methods and assumptions as well as the impact to the profit and loss statement (PwC, 2007).

After the adoption of IFRS7, with the exception of German mandatory adopters, analysts' forecasts for all firms with greater disclosure quantity about market risk, industry analysis and competitive forces demonstrate a relatively negative impact in the accuracy of analysts' earnings forecasts. A potential explanation is that the firms increasing their disclosure about market risks following the adoption of IFRS7, had higher exposure to such risks and consequently the additional disclosures enhanced the analysts' uncertainty about the impact of market risks on the companies' future earnings.

Quantity of disclosure for firm strategy, product market performance, performance of business strategy model

The results show an interesting picture regarding the disclosure proxies for LN(FRMSTR) (quantity of disclosure for firm strategy, product market performance, performance of business strategy model). For analysts' forecasts of UK and French firms as well as German voluntary adopters, before the adoption of IFRS7 (2005) there is no empirical evidence between disclosure quantity proxies for firm strategy, product market performance, performance of business strategy model and absolute forecast error while after IFRS7 (2005), higher LN(FRMSTR) is possibly associated with lower MFA for analysts' forecasts of UK firms and German voluntary adopters but with higher MFA for French firms. A possible explanation for this observation for the analysts' forecasts of UK and German firms is the increased disclosure of the capital management strategy and the accompanied quantitative and qualitative information about the firms' strategies, goals, policies and procedures for managing capital PwC (2007).

It should be noted that the results for analysts forecasts of French firms with greater disclosure quantity about corporate and business performance and financial position that show improvements in the analysts' earnings forecast accuracy are in contrast with those for disclosure quantity proxies for firm strategy, product market performance, performance of business strategy model that show improvements for analysts' forecasts of UK and German voluntary adopters. It is noteworthy to mention that analysts' forecasts of all firms with greater disclosure quantity about statements regarding regulation and legislation before the adoption IFRS7 (2005) did not have either lower MFA or not statistically significant results but after the adoption of IFRS7 (2005) analysts' forecasts of all firms with higher LN(REGACC) were associated with higher absolute forecast error.

The adoption of IFRS7 Financial Instruments resulted in a substantial increase in quantitative and qualitative information regarding the firm's financial instruments. In fact, IFRS7, Financial Instruments required the following PwC (2007):

- Determination of the criteria used to classify financial instruments.
- Qualitative disclosures about credit, market, liquidity risks faced and the strategies used to manage them.
- Disclosure of the components of the fair value movement for items classified as fair value through profit and loss.
- Quantitative disclosures about the potential impacts of market risks.
- Discussion of the capital management strategy.

In summary, the analysts' forecasts of UK companies with greater disclosure quantity about financial position and performance do not seem to be associated with changes in the absolute forecast error following the adoption of IFRS7 (2005) probably because of the market-based UK economy and the relatively wider use of financial instruments. The results suggest that analysts' forecasts of French firms with higher disclosure for financial position and performance are possibly associated with lower absolute forecast error and dispersion probably because of the increased qualitative disclosures about market, credit and liquidity risks, the increased information regarding financial instruments and the impact of fair value movements on the profit and loss.

Also, the results show that analysts' forecasts of German voluntary adopters with greater disclosure quantity about financial position and performance have higher absolute forecast error while the German mandatory adopters have higher forecast dispersion. For both groups, the results could be associated with the bank-orientated economy of Germany and the possible lower expertise of market-based financial instruments by users of financial reporting.

The results for the effect of the IFRS7 Financial Instruments adoption for analysts' forecasts of all firms with greater disclosure quantity about market risk, industry analysis and competitive forces, with the exception of German mandatory adopters, demonstrate a reduction in analysts' earnings forecasts accuracy. It is possible that the reason is the increased disclosure for market risks, as IFRS7 required a sensitivity analysis for market risks affecting the firm at the reporting period such as prices, currency and interest rate risks.

The requirements of IFRS7 included the methods and assumptions as well as the impact to the profit and loss statement. Therefore, firms with higher exposure to such risks could possibly disclose more information about them and further enhance the analysts' uncertainty about the impact of market risks on the companies' future earnings.

Finally, analysts' forecasts for companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model are associated with improvements in the earnings forecast accuracy for UK and German firms probably due to the increased disclosure of the capital management strategy and the accompanied quantitative and qualitative information about the firms' strategies, goals, policies and procedures for managing capital. Also, the IFRS7 requirements for further narrative disclosures for credit risk, market risk, and liquidity risk and the management's policies, objectives, methods and procedures for risk management and measurement could possibly contribute to the above improved analysts' earnings forecast accuracy.

As stated above, it is observed that the adoption of IFRS7 Financial Instruments is associated with improvements in the analysts' earnings forecast accuracy for analysts' forecasts of French firms with greater disclosure quantity about financial performance and position in contrast with those of UK and German firms that are associated with similar improvements with greater disclosure quantity about firm strategy, product market performance and performance of business strategy model.

7.4 .The adoption of IFRS7 (2008)

Table 7.16 – OLS regression results for companies in the UK reporting before and after IFRS7 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.042**	-0.014	-0.854***	
	(0.02)	(0.03)	(0.08)	
ln(SIZE)	0.019***	0.009	-0.031	1.430***
	(0.00)	(0.01)	(0.03)	(0.09)
ln(AGE)	-0.050***	0.003	0.871***	0.588***
	(0.01)	(0.01)	(0.04)	(0.14)
BM	0.004***	0.002**	0.047***	0.108***
	(0.00)	(0.00)	(0.01)	(0.02)
DE	0.004	0.002	-0.105***	-0.435***
	(0.00)	(0.00)	(0.01)	(0.05)
ROA	-0.490***	-0.704***	-1.203***	3.369***
	(0.10)	(0.11)	(0.30)	(0.98)
RETURNS	-0.085***	0.047**	0.148**	-2.012***
	(0.01)	(0.02)	(0.06)	(0.22)
VOLATILITY	0.292***	1.053***	-3.365***	-6.981***
	(0.07)	(0.09)	(0.31)	(1.03)
IGW	-0.085***	-0.183***	-0.321***	-1.693***
	(0.02)	(0.02)	(0.10)	(0.38)
NIAI	0.423***	0.459***	0.110	4.781***
	(0.06)	(0.08)	(0.17)	(0.61)
EIGD	-0.071***	-0.048**	0.717***	1.376***
	(0.02)	(0.02)	(0.11)	(0.43)
NASACQ	-0.076	-0.458***	0.867*	-3.370**
	(0.05)	(0.06)	(0.51)	(1.50)
LN(MRKT)	0.090***	-0.281***	-0.454**	-8.081***
	(0.03)	(0.04)	(0.21)	(0.67)
LN(FRMSTR)	0.083*	0.079	-0.631**	9.127***
	(0.05)	(0.07)	(0.28)	(0.85)
LN(CORPGOV)	-0.090***	0.307***	0.627***	-2.002***
	(0.03)	(0.04)	(0.14)	(0.59)
LN(BRND)	-0.049***	-0.035***	0.266***	3.444***
	(0.01)	(0.01)	(0.06)	(0.19)
LN(FINPOS)	-0.055*	-0.036	0.325*	-0.803
	(0.03)	(0.05)	(0.18)	(0.72)
LN(REGACC)	-0.045***	0.039***	-0.167*	1.328***
	(0.01)	(0.02)	(0.09)	(0.32)
IFRS72008xLN(FINPOS)	0.012	-0.160***	-0.558***	-1.538***
	(0.02)	(0.03)	(0.11)	(0.40)

Table 7.16 – OLS regression results for companies in the UK reporting before and after IFRS7 (2008)

IFRS72008	-0.138	1.386***	5.105***	16.326***
	(0.16)	(0.26)	(0.97)	(3.49)
Constant	0.070	-0.850***	2.890***	-24.184***
	(0.14)	(0.16)	(0.86)	(3.56)
R-squared	0.087	0.159	0.204	0.423
Degrees of freedom	4335	4335	4335	4336
Number of observations	4356	4356	4356	4357
* p<0.10, ** p<0.05, *** p<0.01				

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2008) in the UK.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72008xLNFINPOS_{it} + \alpha_{20} IFRS72008_{it} + \varepsilon_{it}$$

Variables are described below:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(ln(SIZE)) is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW)is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(IFRS72008xLN(FINPOS)) is an interaction term computed by multiplying ***IFRS72008*** with ***LN(FINPOS).***

(IFRS72008) is an indicator variable = 1 if firm i uses IFRS7 (2008) in year *t*, and 0 otherwise.

Table 7.17 – OLS regression results for companies in France reporting before and after IFRS7 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.143***	-0.281***	-0.217***	
	(0.05)	(0.04)	(0.04)	
ln(SIZE)	0.011	-0.083***	-0.010	4.434***
	(0.01)	(0.02)	(0.01)	(0.15)
ln(AGE)	-0.059	0.105**	-0.035	1.616***
	(0.04)	(0.05)	(0.03)	(0.41)
BM	-0.004	0.047**	-0.136***	0.256*
	(0.01)	(0.02)	(0.01)	(0.13)
DE	-0.014	0.044***	-0.134***	0.210***
	(0.01)	(0.01)	(0.02)	(0.08)
ROA	-0.343	-0.521	-0.121	-1.906
	(0.22)	(0.90)	(0.15)	(2.04)
RETURNS	-0.056**	-0.392***	0.160***	-3.679***
	(0.03)	(0.04)	(0.03)	(0.38)
VOLATILITY	-1.191***	0.783***	-0.162	7.201***
	(0.15)	(0.27)	(0.12)	(1.92)
IGW	-0.017	-0.169***	-0.340***	12.999***
	(0.06)	(0.06)	(0.04)	(0.83)
NIAI	-0.198***	-0.344***	0.100**	-3.309***
	(0.05)	(0.07)	(0.05)	(0.69)
EIGD	0.101*	-0.263***	0.220***	-3.687***
	(0.05)	(0.09)	(0.04)	(0.61)
NASACQ	-0.062	-0.902**	-0.057	-7.291***
	(0.21)	(0.35)	(0.18)	(2.56)
LN(MRKT)	0.265***	0.003	0.129***	-1.226*
	(0.07)	(0.10)	(0.04)	(0.69)
LN(FRMSTR)	-0.516***	0.541***	0.008	-2.926**
	(0.10)	(0.17)	(0.07)	(1.26)
LN(CORPGOV)	0.178***	-0.295***	-0.437***	-3.542***
	(0.04)	(0.07)	(0.06)	(0.56)
LN(BRND)	-0.111***	-0.019	-0.045***	1.114***
	(0.01)	(0.02)	(0.01)	(0.19)
LN(FINPOS)	0.283***	-0.097	0.245***	3.324***
	(0.05)	(0.07)	(0.04)	(0.60)
LN(REGACC)	-0.155***	-0.056	-0.003	0.482
	(0.03)	(0.04)	(0.02)	(0.38)
IFRS72008x LN(FINPOS)	0.011	-0.051	-0.033	-0.131
	(0.03)	(0.04)	(0.02)	(0.29)
IFRS72008	-0.105	0.636**	0.303	4.793*
	(0.24)	(0.31)	(0.21)	(2.53)

Table 7.17 – OLS regression results for companies in France reporting before and after IFRS7 (2008)

Constant	-0.019	0.864**	2.358***	-37.237***
	(0.32)	(0.44)	(0.32)	(4.05)
R-squared	0.153	0.246	0.483	0.634
Degrees of freedom	2007	2007	2007	2008
Number of observations	2028	2028	2028	2029
*	p<0.10,	** p<0.05,	*** p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2008) in France.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72008xLN(FINPOS)_{it} + \alpha_{20} IFRS72008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.16.

Table 7.18 – OLS regression results for all sample companies in Germany reporting before and after IFRS7 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.067***	0.020	0.006	
	(0.02)	(0.03)	(0.02)	
ln(SIZE)	0.051**	-0.042	0.135***	-2.291***
	(0.02)	(0.04)	(0.01)	(0.44)
ln(AGE)	-0.103***	0.156***	0.240***	-1.234**
	(0.03)	(0.05)	(0.03)	(0.49)
BM	0.008	-0.100***	-0.115***	1.312***
	(0.01)	(0.02)	(0.01)	(0.21)
DE	-0.039**	0.095***	-0.020**	0.902***
	(0.02)	(0.03)	(0.01)	(0.19)
ROA	-0.240	-0.927***	-0.186	-4.478
	(0.25)	(0.29)	(0.21)	(2.75)
RETURNS	-0.392***	-0.114**	0.156***	-4.710***
	(0.04)	(0.05)	(0.04)	(0.75)
VOLATILITY	-0.377**	-0.399	2.655***	-29.256***
	(0.19)	(0.27)	(0.27)	(4.99)
IGW	-0.174***	-0.494***	-0.030	-16.706***
	(0.05)	(0.07)	(0.04)	(1.20)
NIAI	0.264	-1.230***	0.114	15.539***
	(0.17)	(0.20)	(0.12)	(2.96)
EIGD	0.194	0.768***	0.607***	-2.666**
	(0.22)	(0.15)	(0.09)	(1.05)
NASACQ	0.674***	1.915***	0.341**	-5.082
	(0.24)	(0.37)	(0.14)	(3.83)
LN(MRKT)	-0.265*	0.007	0.207**	-6.240**
	(0.16)	(0.24)	(0.10)	(2.59)
LN(FRMSTR)	-0.202	0.009	-0.164	2.163
	(0.20)	(0.25)	(0.14)	(3.16)
LN(CORPGOV)	0.012	-0.748***	-0.074	7.726***
	(0.07)	(0.11)	(0.07)	(1.36)
LN(BRND)	-0.011	-0.012	-0.013	-0.940*
	(0.03)	(0.05)	(0.03)	(0.53)
LN(FINPOS)	0.489***	0.454***	-0.142	-14.532***
	(0.16)	(0.17)	(0.11)	(2.25)
LN(REGACC)	0.058	0.242***	-0.001	14.601***
	(0.06)	(0.09)	(0.04)	(1.00)
IFRS72008x LN(FINPOS)	-0.125	-0.364***	-0.064	2.032*
	(0.08)	(0.09)	(0.05)	(1.23)
IFRS72008	1.084	3.305***	0.570	-14.059
	(0.68)	(0.83)	(0.41)	(10.99)

Table 7.18 – OLS regression results for all sample companies in Germany reporting before and after IFRS7 (2008)

Constant	-1.384*	1.359	-1.379***	83.552***
	(0.72)	(0.97)	(0.42)	(11.32)
R-squared	0.186	0.261	0.443	0.416
Degrees of freedom	1369	1369	1369	1370
Number of observations	1390	1390	1390	1391
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2008) in Germany.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72008xLN(FINPOS)_{it} + \alpha_{20} IFRS72008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.16.

Table 7.19 – OLS regression results for German mandatory adopters reporting before and after IFRS7 (2008)

	MFE **Mean** **β/se**	**MFA** **Mean** **β/se**	**MFD** **β/se**	**NOA** **β/se**
ln(NOA)	0.014	0.267	0.178***	
	(0.17)	(0.17)	(0.07)	
ln(SIZE)	0.213***	0.093*	0.053**	-0.200
	(0.04)	(0.05)	(0.02)	(0.43)
ln(AGE)	-0.444***	0.077	0.471***	-0.493
	(0.06)	(0.08)	(0.03)	(0.49)
BM	0.238***	0.093***	-0.015	-0.552**
	(0.03)	(0.03)	(0.01)	(0.22)
DE	-0.102	0.366***	0.445***	1.258*
	(0.07)	(0.10)	(0.04)	(0.69)
ROA	-0.499**	-0.734*	1.148***	-1.353
	(0.25)	(0.37)	(0.21)	(3.19)
RETURNS	-1.197***	-0.573***	0.091**	-4.539***
	(0.09)	(0.12)	(0.04)	(0.66)
VOLATILITY	-3.629***	0.712	1.260***	-4.428
	(0.43)	(0.45)	(0.21)	(3.89)
IGW	-0.969***	-1.133***	-0.348***	-9.642***
	(0.19)	(0.25)	(0.08)	(1.60)
NIAI	7.368***	2.490***	-0.830**	10.915*
	(0.73)	(0.89)	(0.34)	(6.21)
EIGD	0.086	-0.085	0.119	-6.059***
	(0.22)	(0.22)	(0.10)	(1.33)
NASACQ	0.285	1.271**	0.239	8.429***
	(0.32)	(0.59)	(0.18)	(3.00)
LN(MRKT)	1.347***	-0.352	0.405***	0.787
	(0.29)	(0.35)	(0.13)	(2.88)
LN(FRMSTR)	-5.635***	-2.318***	-1.607***	26.630***
	(0.56)	(0.57)	(0.26)	(4.39)
LN(CORPGOV)	-0.901***	0.049	-0.094	-0.751
	(0.22)	(0.25)	(0.12)	(2.25)
LN(BRND)	0.592***	0.047	0.283***	-5.308***
	(0.13)	(0.15)	(0.07)	(1.10)
LN(FINPOS)	4.418***	2.088***	0.909***	-25.631***
	(0.40)	(0.47)	(0.21)	(2.94)
LN(REGACC)	0.144	0.272*	0.258***	6.298***
	(0.13)	(0.14)	(0.06)	(1.22)
IFRS72008xLN(FINPOS)	-0.449***	-0.841***	-0.471***	-0.064
	(0.13)	(0.15)	(0.07)	(1.19)
IFRS72008	4.114***	7.657***	4.210***	5.685
	(1.21)	(1.36)	(0.63)	(10.76)

Table 7.19 – OLS regression results for German mandatory adopters reporting before and after IFRS7 (2008)

Constant	-0.321	-0.893	-3.286***	20.956*
	(1.23)	(1.33)	(0.63)	(11.01)
R-squared	0.501	0.472	0.744	0.761
Degrees of freedom	531	531	531	532
Number of observations	552	552	552	553
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2008) in Germany for companies that mandatorily adopted IFRS after 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72008xLN(FINPOS)_{it} + \alpha_{20} IFRS72008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.16.

Table 7.20 – OLS regression results for German voluntary adopters reporting before and after IFRS7 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.003	-0.091**	0.071***	
	(0.02)	(0.04)	(0.03)	
ln(SIZE)	-0.088***	-0.191***	0.150***	-4.857***
	(0.03)	(0.05)	(0.02)	(0.39)
ln(AGE)	-0.247***	0.308***	0.122***	-2.394***
	(0.03)	(0.07)	(0.03)	(0.53)
BM	0.064***	-0.220***	-0.087***	0.921***
	(0.02)	(0.04)	(0.02)	(0.29)
DE	-0.002	0.132***	0.008	-0.705***
	(0.01)	(0.03)	(0.01)	(0.20)
ROA	-0.565	0.191	0.094	-14.891***
	(0.52)	(0.65)	(0.39)	(5.11)
RETURNS	-0.253***	0.106*	0.086*	-0.984
	(0.04)	(0.06)	(0.05)	(0.83)
VOLATILITY	0.170	-0.803	4.274***	-78.615***
	(0.33)	(0.59)	(0.42)	(5.05)
IGW	-1.012***	-0.559*	0.506***	-63.880***
	(0.18)	(0.31)	(0.17)	(2.17)
NIAI	1.126***	-0.800**	0.504***	18.304***
	(0.18)	(0.32)	(0.15)	(3.01)
EIGD	0.924***	3.143***	0.259*	-9.238***
	(0.34)	(0.44)	(0.13)	(2.36)
NASACQ	0.801**	0.154	0.079	-6.038*
	(0.39)	(0.41)	(0.23)	(3.13)
LN(MRKT)	-0.646***	0.400	0.640***	-22.527***
	(0.20)	(0.25)	(0.17)	(2.75)
LN(FRMSTR)	1.203***	-1.260***	-0.014	-7.236*
	(0.27)	(0.38)	(0.24)	(3.94)
LN(CORPGOV)	0.322***	-0.975***	0.094	5.448***
	(0.09)	(0.16)	(0.08)	(1.42)
LN(BRND)	-0.056	0.320***	-0.117***	4.940***
	(0.04)	(0.07)	(0.04)	(0.63)
LN(FINPOS)	-0.884***	0.302	-0.759***	2.434
	(0.20)	(0.35)	(0.18)	(2.81)
LN(REGACC)	0.173*	0.677***	-0.174**	23.042***
	(0.10)	(0.16)	(0.08)	(1.35)
IFRS72008x LN(FINPOS)	0.037	0.215	0.029	3.453**
	(0.08)	(0.14)	(0.06)	(1.38)
IFRS72008	-0.344	-1.816	-0.251	-28.271**
	(0.69)	(1.25)	(0.51)	(12.05)

Table 7.20 – OLS regression results for German voluntary adopters reporting before and after IFRS7 (2008)

Constant	1.550* (0.93)	9.900*** (1.63)	-1.022 (0.63)	143.024*** (12.92)
R-squared	0.262	0.318	0.457	0.701
Degrees of freedom	819	819	819	820
Number of observations	840	840	840	841
* p<0.10, ** p<0.05, *** p<0.01				

The above table represents the empirical results from a period before and after the adoption of IFRS7 (2008) in Germany for companies that voluntarily adopted IFRS before 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72008xLN(FINPOS)_{it} + \alpha_{20} IFRS72008_{it} + \varepsilon_{it}$$

Variables as described at Table 7.16.

The results show that analysts' forecasts for UK firms and German mandatory adopters with greater disclosure quantity about corporate and business performance and financial position are associated with lower absolute forecast error after the adoption of IFRS7 (2008) relative to the before period. This is demonstrated by the coefficients for the interaction term IFRS72008xLN(FINPOS) that are negative and statistically significant while there is no empirical evidence for the interaction term IFRS72008xLN(FINPOS) for French firms and German voluntary adopters.

It should be noted the there are some signs of improvement in the accuracy of analysts' forecasts for German voluntary adopters as well. Before the implementation of IFRS7 (2008) analysts' forecasts with greater disclosure quantity about corporate and business performance and financial position are associated with higher absolute forecast error. The picture changed after the IFRS7 revision, as the forecasts for the same companies (Table A4.29 - A4.30 in Appendix 4) are associated with lower absolute forecast error (statistically significant at the 10% level). The situation is totally different for analysts' forecasts of French firms as higher LN(FINPOS) is associated with lower MFA before the adoption of IFRS7 (2008) but with higher MFA in the post period. Nevertheless, none of the above changes are supported by the interaction term IFRS72008xLN(FINPOS) that is not statistically significant.

A considerably similar picture is observed in the case of IFRS7 (2008) and its association with analysts' forecast dispersion. The coefficient on the interaction term IFRS72008xLN(FINPOS) with forecast dispersion is negative and statistically significant for analysts' forecasts of UK companies and German mandatory adopters and shows that the adoption of IFRS7 (2008) is probably related to lower forecast dispersion in the period after the standard implementation relative to the period before. That is not again the case for analysts' forecasts of German voluntary adopters and French companies as there is not sufficient empirical evidence.

Looking at the results for analyst following, it can be suggested that greater disclosure quantity about corporate and business performance and financial position is associated with higher number of analyst estimations after the implementation of IFRS7 (2008) relative to the period before for German voluntary adopters but with lower number of analyst estimations for UK firms. In fact, the results in the appendix show that before IFRS7 (2008) analysts' forecasts of UK firms with greater disclosure quantity about corporate and business performance and financial position are associated with higher number of analyst estimations but with lower number of analyst estimations in the post IFRS7 (2008) adoption period. Also, the results show that analysts' forecasts of German mandatory adopters with greater disclosure quantity about corporate and business performance and financial position are related to lower number of analyst estimations during both periods contrary to those of French companies and German voluntary adopters with greater disclosure quantity about corporate and business performance and financial position that are related to higher number of analyst estimations.

Possibly as a response to the financial crisis, the IASB demanded the reclassification of financial derivatives out of the fair-value-through-profit-or-loss in order to help companies to avoid a potential tremendous impact on their earnings via financial derivatives. Also, it demanded enhanced disclosures about fair value hedge accounting and presentation at the segment level. Several subsequent changes provided clarifications on the fair value disclosures of financial instruments, established a three-level hierarchy for fair value measurements and demanded extensive disclosure for each measurement and a maturity analysis for derivative financial liabilities.

Looking at the results for absolute forecast error and forecast dispersion, it can be observed that analysts' forecasts of UK firms and German mandatory adopters are the groups that have lower absolute forecast error after the implementation of IFRS7 (2008). This observation is probably related to the IFRS7 (2008) further enhancement of the fair value treatment as well as to the additional disclosures regarding the measurement of financial instruments and the impact of the marked to market financial instruments to the profit and loss statement.

In the market based UK economy the revision of IFRS7 possibly made a positive contribution to the market's stability as the results suggest that analysts' forecasts of companies with greater disclosure quantity about financial performance and position were likely to have improved earnings forecast accuracy. Analysts' forecasts of German mandatory adopters were more likely to have lower absolute forecast error after the revision of IFRS7 (2008) probably because this group of companies had lower financial reporting incentives relatively to German voluntary adopters and they proceeded to enhancements and clarifications about financial instruments. Lastly, it is possible that IFRS7 (2008) demanded a higher level of knowledge about financial instruments as both UK companies and German mandatory adopters were likely to have lower number of analyst estimations after the IFRS7 (2008) implementation relative to the period before.

7.5. The adoption of IFRS8 (2006)

7.21 – OLS regression results for companies in the UK reporting before and after IFRS8 2006

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.036***	0.010	-0.647***	
	(0.01)	(0.01)	(0.05)	
ln(SIZE)	0.015***	0.004	-0.055***	1.826***
	(0.00)	(0.00)	(0.02)	(0.07)
ln(AGE)	-0.038***	0.005	0.863***	0.350***
	(0.01)	(0.01)	(0.03)	(0.12)
BM	0.004***	-0.000	0.021***	0.063***
	(0.00)	(0.00)	(0.00)	(0.02)
DE	0.008***	-0.000	-0.066***	-0.493***
	(0.00)	(0.00)	(0.01)	(0.04)
ROA	-0.355***	-0.572***	-0.611**	4.514***
	(0.08)	(0.09)	(0.26)	(0.91)
RETURNS	-0.104***	0.017	0.066	-2.260***
	(0.01)	(0.02)	(0.05)	(0.19)
VOLATILITY	0.117*	0.939***	-3.141***	-6.394***
	(0.06)	(0.07)	(0.25)	(0.86)
IGW	-0.045***	-0.150***	-0.314***	-0.452
	(0.02)	(0.02)	(0.08)	(0.31)
NIAI	0.305***	0.325***	-0.004	5.088***
	(0.05)	(0.06)	(0.15)	(0.51)
EIGD	-0.063***	-0.100***	0.557***	1.198***
	(0.02)	(0.03)	(0.10)	(0.39)
NASACQ	0.005	-0.265***	0.637*	-1.616
	(0.04)	(0.04)	(0.34)	(1.26)
LN(MRKT)	0.014	-0.146***	-0.492***	-5.335***
	(0.02)	(0.03)	(0.16)	(0.58)
LN(FRMSTR)	0.203***	-0.139***	-0.865***	2.880***
	(0.04)	(0.04)	(0.23)	(0.87)
LN(CORPGOV)	-0.116***	0.233***	0.887***	2.038***
	(0.02)	(0.03)	(0.11)	(0.50)
LN(BRND)	-0.032***	-0.039***	0.249***	3.080***
	(0.01)	(0.01)	(0.04)	(0.16)
LN(FINPOS)	-0.119***	0.130***	0.780***	0.052
	(0.03)	(0.03)	(0.17)	(0.73)
LN(REGACC)	-0.011	0.019**	-0.260***	-0.356
	(0.01)	(0.01)	(0.06)	(0.25)
IFRS82006x LN(FINPOS)	0.149***	-0.414***	-1.284***	-3.959***
	(0.06)	(0.08)	(0.27)	(1.03)

7.21 – OLS regression results for companies in the UK reporting before and after IFRS8 2006

IFRS82006x				
LN(FRMSTR)	-0.146***	0.258***	0.463*	2.762***
	(0.05)	(0.09)	(0.25)	(0.95)
IFRS82006	-0.094	1.451***	7.666***	14.656***
	(0.13)	(0.23)	(0.81)	(2.91)
Constant	0.185**	-0.752***	-0.616	-27.235***
	(0.09)	(0.12)	(0.66)	(2.69)
R-squared	0.069	0.136	0.189	0.429
Degrees of freedom	6530	6530	6530	6531
Number of observations	6552	6552	6552	6553
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS8 2006 in the UK.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS82006xLN(FINPOS)_{it} + \alpha_{20} IFRS82006xLN(FRMSTR)_{it} + \alpha_{21} IFRS82006_{it} + \varepsilon_{it}$$

Variables are described below:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(*ln(SIZE))* is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE))* is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW) is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

LN(FRMSTR) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(IFRS82006)xLN(FINPOS)) is an interaction term computed by multiplying ***IFRS872006*** with ***LN(FINPOS).***

(IFRS82006xLN(FRMSTR)) is an interaction term computed by multiplying ***IFRS82006*** with ***LN(FRMSTR).***

(IFRS82006) is an indicator variable = 1 if firm i uses IFRS8 2006 in year *t*, and 0 otherwise.

Table 7.22 – OLS regression results for companies in France reporting before and after IFRS8 2006

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.023	-0.211***	-0.165***	
	(0.05)	(0.04)	(0.03)	
ln(SIZE)	0.039***	-0.050***	-0.044***	4.853***
	(0.01)	(0.01)	(0.01)	(0.12)
ln(AGE)	-0.051	0.140***	-0.144***	1.291***
	(0.03)	(0.04)	(0.02)	(0.37)
BM	0.009*	0.011	-0.077***	0.178**
	(0.00)	(0.01)	(0.01)	(0.09)
DE	-0.012	0.038***	-0.118***	0.252***
	(0.02)	(0.01)	(0.02)	(0.08)
ROA	-0.523***	-0.959	-0.226	-4.428**
	(0.17)	(0.60)	(0.16)	(1.79)
RETURNS	-0.097***	-0.309***	0.143***	-4.216***
	(0.02)	(0.03)	(0.02)	(0.28)
VOLATILITY	-0.810***	1.094***	-0.334***	5.368***
	(0.12)	(0.19)	(0.09)	(1.57)
IGW	-0.042	-0.199***	-0.352***	8.037***
	(0.03)	(0.03)	(0.03)	(0.67)
NIAI	-0.066*	-0.176***	0.040	-5.421***
	(0.04)	(0.05)	(0.04)	(0.70)
EIGD	0.089*	-0.182*	0.220***	-3.511***
	(0.05)	(0.10)	(0.04)	(0.58)
NASACQ	-0.207	-0.584***	-0.038	-0.217
	(0.15)	(0.22)	(0.15)	(2.34)
LN(MRKT)	0.074	-0.015	0.113***	-0.379
	(0.05)	(0.08)	(0.04)	(0.62)
LN(FRMSTR)	-0.246***	0.508***	0.390***	-4.247***
	(0.08)	(0.14)	(0.08)	(1.15)
LN(CORPGOV)	0.050*	-0.149***	-0.419***	-1.555***
	(0.03)	(0.04)	(0.04)	(0.50)
LN(BRND)	-0.078***	-0.036**	-0.039***	1.205***
	(0.01)	(0.01)	(0.01)	(0.17)
LN(FINPOS)	0.183***	-0.180***	0.009	2.860***
	(0.04)	(0.07)	(0.04)	(0.68)
LN(REGACC)	-0.055***	-0.045	-0.014	0.419
	(0.02)	(0.03)	(0.02)	(0.33)
IFRS82006xLN(FINPOS)	0.096*	0.174**	0.259***	0.804
	(0.05)	(0.08)	(0.07)	(0.91)
IFRS82006xLN(FRMSTR)	-0.148**	-0.260***	-0.424***	-1.965*
	(0.07)	(0.10)	(0.10)	(1.11)
IFRS82006	0.441*	0.747***	1.358***	13.798***
	(0.26)	(0.27)	(0.26)	(2.87)

Table 7.22 – OLS regression results for companies in France reporting before and after IFRS8 2006

Constant	0.040	0.070	1.919***	-49.451***
	(0.24)	(0.32)	(0.26)	(3.23)
R-squared	0.097	0.235	0.389	0.570
Degrees of freedom	2894	2894	2894	2895
Number of observations	2816	2816	2816	2817
*	p<0.10, **	p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS8 2006 in France.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS82006xLN(FINPOS)_{it} + \alpha_{20} IFRS82006xLN(FRMSTR)_{it} + \alpha_{21} IFRS82006_{it} + \varepsilon_{it}$$

Variables as described at Table 7.21.

Table 7.23 – OLS regression results for all sample companies in Germany reporting before and after IFRS8 2006

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.038***	-0.005	-0.013	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.046***	-0.072***	0.109***	-1.391***
	(0.02)	(0.03)	(0.01)	(0.38)
ln(AGE)	-0.081***	0.006	0.104***	-0.884*
	(0.03)	(0.04)	(0.03)	(0.47)
BM	0.009	-0.043***	-0.082***	1.243***
	(0.01)	(0.01)	(0.01)	(0.17)
DE	-0.016	0.050***	-0.006	0.528***
	(0.01)	(0.02)	(0.01)	(0.14)
ROA	0.214	-1.836***	0.406	-4.529*
	(0.23)	(0.37)	(0.26)	(2.50)
RETURNS	-0.362***	-0.256***	0.125***	-4.969***
	(0.03)	(0.04)	(0.03)	(0.55)
VOLATILITY	-0.374**	1.061***	2.936***	-17.752***
	(0.16)	(0.24)	(0.25)	(4.49)
IGW	-0.127***	-0.430***	-0.243***	-13.210***
	(0.04)	(0.05)	(0.04)	(0.90)
NIAI	0.308**	-0.311**	0.520***	10.909***
	(0.13)	(0.15)	(0.08)	(2.21)
EIGD	-0.232	0.714***	0.523***	-3.662***
	(0.17)	(0.11)	(0.08)	(0.95)
NASACQ	0.205*	0.797***	0.232***	2.897
	(0.12)	(0.21)	(0.08)	(2.56)
LN(MRKT)	-0.435***	0.181	0.198**	-4.399*
	(0.13)	(0.19)	(0.09)	(2.32)
LN(FRMSTR)	0.009	0.230	-0.391***	-6.955**
	(0.14)	(0.19)	(0.11)	(3.13)
LN(CORPGOV)	0.056	-0.236***	0.218***	8.931***
	(0.05)	(0.07)	(0.06)	(1.06)
LN(BRND)	-0.028	-0.029	-0.106***	-0.575
	(0.03)	(0.04)	(0.03)	(0.52)
LN(FINPOS)	0.286***	-0.498***	-0.001	-6.319***
	(0.10)	(0.11)	(0.08)	(2.16)
LN(REGACC)	-0.011	0.109	-0.071*	13.082***
	(0.04)	(0.07)	(0.04)	(0.81)
IFRS82006xLN(FINPOS)	0.260	0.770***	-0.245	-4.760*
	(0.16)	(0.23)	(0.15)	(2.86)
IFRS82006xLN(FRMSTR)	-0.094	-0.614***	0.270*	5.870**
	(0.15)	(0.21)	(0.15)	(2.81)
IFRS82006	-1.482***	-1.390**	-0.023	-5.821
	(0.44)	(0.55)	(0.30)	(8.90)

Table 7.23 – OLS regression results for all sample companies in Germany reporting before and after IFRS8 2006

Constant	0.186	3.738***	-1.327***	53.423***
	(0.41)	(0.59)	(0.33)	(8.93)
R-squared	0.166	0.265	0.418	0.382
Degrees of freedom	1862	1862	1862	1863
Number of observations	1884	1884	1884	1885
*	p<0.10, **	p<0.05, ***	p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS8 2006 in Germany.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS82006xLN(FINPOS)_{it} + \alpha_{20} IFRS82006xLN(FRMSTR)_{it} + \alpha_{21} IFRS82006_{it} + \varepsilon_{it}$$

Variables as described at Table 7.21.

Table 7.24 – OLS regression results for German mandatory adopters reporting before and after IFRS8 2006

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	-0.327***	-0.511***	-0.136***	
	(0.12)	(0.11)	(0.04)	
ln(SIZE)	0.213***	-0.031	0.065***	0.042
	(0.03)	(0.04)	(0.02)	(0.41)
ln(AGE)	-0.278***	-0.039	0.337***	0.714
	(0.04)	(0.07)	(0.03)	(0.51)
BM	0.128***	0.022	-0.024**	-0.254
	(0.02)	(0.02)	(0.01)	(0.17)
DE	-0.132***	0.025	0.273***	2.333***
	(0.05)	(0.08)	(0.04)	(0.55)
ROA	0.136	-3.225***	-0.030	6.561**
	(0.28)	(0.51)	(0.27)	(2.94)
RETURNS	-0.811***	-0.698***	-0.050	-3.629***
	(0.07)	(0.08)	(0.03)	(0.49)
VOLATILITY	-1.986***	1.183***	1.574***	6.993**
	(0.30)	(0.45)	(0.20)	(3.31)
IGW	-0.262*	-0.976***	-0.274***	-9.362***
	(0.13)	(0.19)	(0.09)	(1.45)
NIAI	3.167***	2.602***	-0.263	3.806
	(0.54)	(0.81)	(0.33)	(5.87)
EIGD	0.112	-0.022	0.269**	-12.612***
	(0.24)	(0.19)	(0.11)	(1.15)
NASACQ	0.361**	0.699**	-0.012	0.597
	(0.17)	(0.35)	(0.13)	(2.10)
LN(MRKT)	0.819***	-0.251	0.530***	-4.484*
	(0.25)	(0.34)	(0.12)	(2.59)
LN(FRMSTR)	-2.346***	-1.002*	-1.314***	29.957***
	(0.41)	(0.58)	(0.25)	(5.13)
LN(CORPGOV)	-0.652***	0.202	-0.014	4.389*
	(0.19)	(0.20)	(0.11)	(2.37)
LN(BRND)	-0.081	0.158	0.314***	-8.374***
	(0.09)	(0.16)	(0.07)	(0.92)
LN(FINPOS)	1.845***	0.719**	0.487**	-26.295***
	(0.28)	(0.36)	(0.20)	(3.68)
LN(REGACC)	0.116	0.233*	0.210***	8.796***
	(0.10)	(0.12)	(0.05)	(0.87)
IFRS82006xLN(FINPOS)	0.011	-0.724***	-0.146	-6.073**
	(0.17)	(0.22)	(0.13)	(2.88)
IFRS82006xLN(FRMSTR)	0.119	0.283	-0.132	0.926
	(0.15)	(0.20)	(0.11)	(2.72)
IFRS82006	-0.931	4.260***	2.479***	51.165***
	(0.87)	(1.05)	(0.51)	(10.55)

Table 7.24 – OLS regression results for German mandatory adopters reporting before and after IFRS8 2006

Constant	0.850	2.751***	-2.268***	-11.334
	(0.56)	(0.86)	(0.31)	(10.66)
R-squared	0.358	0.463	0.622	0.705
Degrees of freedom	686	686	686	687
Number of observations	708	708	708	709
*	p<0.10,	** p<0.05,	*** p<0.01	

The above table represents the empirical results from a period before and after the adoption of IFRS8 2006 in Germany for companies that mandatorily adopted IFRS after 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS82006xLN(FINPOS)_{it} + \alpha_{20} IFRS82006xLN(FRMSTR)_{it} + \alpha_{21} IFRS82006_{it} + \varepsilon_{it}$$

Variables as described at Table 7.21.

Table 7.25 – OLS regression results for German voluntary adopters reporting before and after IFRS8 2006

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.051***	0.014	0.017	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.013	-0.105***	0.089***	-1.400***
	(0.02)	(0.02)	(0.01)	(0.45)
ln(AGE)	-0.188***	0.151***	0.026	-1.280**
	(0.03)	(0.06)	(0.02)	(0.56)
BM	0.012	-0.093***	-0.060***	0.652***
	(0.01)	(0.02)	(0.01)	(0.24)
DE	-0.036***	0.096***	0.008	-0.371**
	(0.01)	(0.02)	(0.01)	(0.17)
ROA	-0.580	1.508***	1.773***	0.474
	(0.35)	(0.41)	(0.41)	(4.25)
RETURNS	-0.286***	-0.166***	0.127***	-4.128***
	(0.03)	(0.05)	(0.03)	(0.70)
VOLATILITY	0.370*	1.099***	3.350***	-4.060
	(0.20)	(0.40)	(0.25)	(6.27)
IGW	-0.407***	-0.126	-0.100	-21.458***
	(0.11)	(0.22)	(0.08)	(2.33)
NIAI	0.427***	0.145	0.656***	9.450***
	(0.13)	(0.16)	(0.10)	(2.29)
EIGD	-0.434***	1.280***	0.201***	9.227***
	(0.16)	(0.20)	(0.07)	(1.40)
NASACQ	0.235	-0.351**	-0.053	-5.119*
	(0.16)	(0.16)	(0.13)	(2.71)
LN(MRKT)	-0.342**	0.384*	0.151	-8.153***
	(0.14)	(0.21)	(0.11)	(2.90)
LN(FRMSTR)	0.072	-0.321	-0.121	-15.148***
	(0.15)	(0.20)	(0.13)	(3.52)
LN(CORPGOV)	0.040	-0.199***	0.260***	4.451***
	(0.05)	(0.07)	(0.05)	(1.00)
LN(BRND)	0.022	0.059	-0.249***	6.900***
	(0.03)	(0.05)	(0.03)	(0.71)
LN(FINPOS)	0.166	-0.092	0.003	-1.988
	(0.11)	(0.13)	(0.09)	(2.41)
LN(REGACC)	0.038	0.004	-0.178***	17.932***
	(0.05)	(0.07)	(0.04)	(0.90)
IFRS82006xLN(FINPOS)	-0.280	1.525***	-1.357***	12.743***
	(0.24)	(0.44)	(0.26)	(4.78)
IFRS82006xLN(FRMSTR)	0.284	-1.396***	1.358***	-12.238**
	(0.23)	(0.41)	(0.28)	(4.78)
IFRS82006	-0.031	-1.259	0.541	-5.586
	(0.46)	(0.81)	(0.39)	(10.15)

Table 7.25 – OLS regression results for German voluntary adopters reporting before and after IFRS8 2006

Constant	0.283	2.689***	-1.862***	75.582***
	(0.43)	(0.54)	(0.34)	(10.78)
R-squared	0.219	0.265	0.494	0.429
Degrees of freedom	1490	1490	1490	1491
Number of observations	1522	1522	1522	1523
*	p<0.10,	** p<0.05,	***	p<0.01

The above table represents the empirical results from a period before and after the adoption of IFRS8 2006 in Germany for companies that voluntarily adopted IFRS before 2005.

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS82006xLN(FINPOS)_{it} + \alpha_{20} IFRS82006xLN(FRMSTR)_{it} + \alpha_{21} IFRS82006_{it} + \varepsilon_{it}$$

Variables as described at Table 7.21.

The adoption of IFRS8 resulted in increases in the quantity of segmental reporting and required a higher degree of management disclosures. The adoption of IFRS8 was therefore likely to increase the disclosure quantity proxies for firm strategy, product market performance, performance of business strategy model (LN(FRMSTR)) as well as financial position and performance (LN(FINPOS)) categories. Both disclosure variables are used to evaluate the impact of the IFRS8 adoption on analysts' earnings forecasts. The below inferences should be treated with care as the implementation of IFRS8 (2006) coincides at a high degree with the implementation of IFRS7 (2008). Both standards were effective for periods starting after 01/01/2009 and the correlation matrix shows a correlation of 0.44 between IFRS7 (2008) and IFRS8 (2006).

As explained in Chapter 5, the key differences between IFRS8 Operating Segments and its predecessor IAS14 can be concentrated on the following categories:

- Entities that IFRS8 applies to
- Definition of operating segments
- Reported information on operating segments
- Measurement of information reported for operating segments

Disclosure quantity for firm strategy, product market performance, performance of business strategy model

Looking at Table 7.21, the interaction term IFRS82006xLN(FRMSTR) for absolute forecast error is positive and statistically significant and demonstrates that the adoption of IFRS8 Operating Segments by UK companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model is related to analysts' forecasts with higher MFA after the IFRS8 implementation relative to the period before. This is supported by the results presented in the appendix showing that before IFRS8 (2006), analysts' forecasts of UK companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model had lower absolute forecast error, but after the adoption of IFRS8 (2006) those forecasts are related to higher absolute forecast error.

On the contrary as Table 7.22 and Table 7.25 show, the coefficient on the interaction term IFRS82006xLN(FRMSTR) for German voluntary adopters and for French companies is negative and statistically significant and indicates that analysts' forecasts of companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model are associated with lower absolute forecast error. It should be noted that after the implementation of IFRS8 Operating Segments, analysts' forecasts of French companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model are related to lower absolute forecast error and that is the case for German mandatory adopters as well although the interaction term is not statistically significant.

The interaction term IFRS82006xLN(FRMSTR) for forecast dispersion is negative and statistically significant for analysts' forecasts of French companies but positive and statistically significant for German voluntary adopters and is not statistically significant neither for UK companies nor for German mandatory adopters.

A possible explanation for the observed lower absolute forecast error for analysts' forecasts of French and German companies is likely to be the change on the basis of the reported segmental information. Under IAS14 the reported information was based on the financial information in the financial statements but under IFRS8 the segmental reporting is based on the information that the management uses to efficiently manage the on going business PwC (2008). Hence, it can be suggested that in the esoteric bank-based environments of France and Germany, a higher disclosed amount of insider information is beneficial for the analysts in understanding the business segments and the revenue generating units. Also, the fact that IFRS8 applies to entities that intend to sell equity or debt securities to a public market regardless if they will be traded or not could be another explanation for the lower absolute forecast error of analysts' forecasts of French and German firms with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model.

An explanation for the higher absolute forecast error of analysts' forecasts of UK firms with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model after the implementation of IFRS8 (2006), could be that the management disclosures as well as the measurement of segmental information based on the management views contain an element of insider information that is perceived as of inferior quality in the market-based UK environment. As it can be observed below, the analysts' forecasts of UK firms are likely to have lower absolute forecast error with higher quantity of disclosure proxies for financial performance and position after the implementation of IFRS8 (2006). This probably means that extensive explanations for the measurement of the segmental information is beneficial for UK firms.

The results show that UK companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model have higher number of analyst estimations as the coefficient is positive and statistically significant but German voluntary adopters are likely to have lower number as the coefficient is negative and statistically significant after the implementation of IFRS8 (2006) relative to the period before.

Disclosure quantity for corporate and business performance and financial position

The empirical results in Table 7.21 and Table 7.24 show that analysts' forecasts of UK companies and German mandatory adopters with greater disclosure quantity about corporate and business performance and financial position have lower absolute forecast error after the adoption of IFRS8 (2006) relative to the period before, as the coefficients on the interaction term are negative and statistically significant for UK firms and for German mandatory adopters. That is not the case for analysts' forecasts of French companies and German voluntary adopters, as companies with greater disclosure quantity about corporate and business performance and financial position have higher absolute forecast error after the adoption of IFRS8 (2006) relative to the period before, as the coefficients on the interaction terms are positive and statistically significant for French companies and German voluntary adopters.

The results also demonstrate that the coefficient on the interaction term IFRS82006xLN(FINPOS) for forecast dispersion is negative and statistically significant for UK companies and for German voluntary adopters, showing that analysts are likely to have less dispersion in their forecasts for companies with greater disclosure quantity about corporate and business performance and financial position after the implementation of IFRS8 (2006) relative to the period before. On the contrary, the interaction term is not statistically significant for German mandatory adopters, while for French firms it is positive and statistically significant.

The above results show that after the adoption of IFRS8, Operating Segments, analysts' forecasts of UK companies with greater disclosure quantity about corporate and business performance and financial position have lower absolute forecast error and forecast dispersion relative to the period before while French firms have higher absolute forecast error and higher forecast dispersion. Also, there is an observed difference between German firms, as analysts' forecasts of German mandatory adopters have lower absolute forecast error with greater disclosure quantity about corporate and business performance and financial position while German voluntary adopters with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model.

Throughout this chapter it is interesting to see that the there are two groups of companies that consistently have similar results: one (UK and German mandatory firms) related to improvements with greater disclosure quantity about corporate and business performance and financial position and another (French and German voluntary firms) related to improvements with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model. For the first group, it is possible that the observed improvements in analysts' earnings forecast accuracy are related to the additional specific financial information required by IFRS8 on a) the identification of segments and b) the measurement of such financial information while the observed improvements for the second group are related to the additional management information as mentioned further above.

The coefficient on the interaction term IFRS82006xLN(FINPOS) is negative and statistically significant and indicates that for UK companies and for German mandatory adopters, greater disclosure quantity about corporate and business performance and financial position is related to lower analyst following after IFRS8 (2006) relative to the period before.

On the contrary, there is no empirical evidence for French firms while German voluntary adopters with greater disclosure quantity about corporate and business performance and financial position have higher number of analyst estimations after the implementation of IFRS8 (2006) relative to the period before.

Disclosure quantity of market risk, industry analysis and competitive forces

Looking at the empirical results before the adoption of IFRS8 Operating Segments, analysts' forecasts of French companies with greater disclosure quantity about market risk, industry analysis and competitive forces have higher absolute forecast error but post IFRS8 (2006) there is not empirical evidence that this association remains. Also, although there is not empirical evidence before IFRS8 (2006) for analysts' forecasts of UK companies, after the implementation of IFRS8 UK companies with greater disclosure quantity about market risk, industry analysis and competitive forces are associated with lower absolute forecast error. Thus, it can be suggested that the adoption of IFRS8 for firms with greater disclosure quantity about market risk, industry analysis and competitive forces is related to lower absolute forecast error possibly because of the additional quantitative and qualitative disclosures about the firm segments' exposure to market conditions.

IFRS8, Operating Segments brought a substantial increase in information regarding a company's operating segments depending on products/services and geographical areas. The requirements for the measurement of the segment information as well as the extensive disclosure for identification factors and types of products and services for each segment are expected to considerably affect the disclosure proxies for "firm strategy, product market performance, performance of business strategy model".

Looking at the above results, it can be suggested that the implementation of IFRS8 (2006) was likely to improve the analysts' predictability and reduce their forecast dispersion for French firms and German mandatory adopters with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model. Improvements in forecast accuracy could be related to IFRS8, Operating Segments for German voluntary adopters as well although with lower analyst following and higher forecast dispersion.

It can be suggested that in the bank-based environments of France and Germany, a higher disclosed amount of insider information required by IFRS8 is beneficial for the analysts in understanding the business segments and the revenue generating units. On the contrary, UK companies in the market-based UK environment are at least not likely to see any improvements in the quality of the analysts' forecasts for firms with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model after the implementation of IFRS8 2006 probably because of the non-audited management information.

Inevitably, the disclosure proxies for "corporate and business performance and financial position" were likely to be affected as well by the implementation of IFRS 8 Operating Segments. As demonstrated in the case of IFRS7 (2008), analysts providing estimations for UK companies have improved forecast accuracy with greater disclosure quantity about corporate and business performance and financial position. Taking into account the fact that IFRS7 (2008) and IFRS8 (2006) have simultaneous effective dates, with considerable caution it can be suggested that IFRS8 (2006) is related to improvements in the analysts' information environment in the UK and Germany. As it is demonstrated above, firms in these countries have lower absolute forecast error and forecast dispersion after the adoption of IFRS8 (2006) relative to the period before but with lower analyst following as well. It is possible that the observed improvements for are related to the additional specific financial information required by IFRS8 on a) the identification of operating segments and b) the measurement of such financial information.

7.6. Alternative tests

Similar to Chapter 6, several tests are employed as alternative checks of the empirical results. The aim is to investigate the relationships using alternative models to ensure that they still hold under different conditions. We implemented various tests by transforming the dependent variables NOA, MFA, MFD using their natural logarithm. Also, we employed fixed effects regressions that took into account specific firm, time period and industry effects; factors that could potentially affect the empirical results. We also used logistic regression models as alternative tests to consider the possibility that the relationship is not linear.

We also tested our models by using stepwise regressions where the independent variables were added one by one. The results showed that the coefficients were not likely to change significantly under the different model specifications.

In summary, the significance of the fixed effects and logistic models do not indicate that alternative specifications of the models are a better fit for the data. Our empirical results showed that the OLS models had consistently and significantly higher R-squares than fixed effects models. This suggests that the effects of omitted variables in the OLS models are not significant. This is also evidenced by the normality of the OLS residuals. Examples of the alternative tests are presented in Appendix 5.

7.7. Consolidated results

The tables below present the consolidated results for all hypotheses and key variables of Chapter 7. Tables 7.26 - 7.29 presents the results for Monthly Absolute Forecast Error (Monthly Forecast Accuracy) and Tables 7.30 - 7.33 presents the results for Monthly Forecast Dispersion. N/S implies a relationship with no statistical significance, N/A implies "not applicable", "negative" implies a negative statistically significant relationship and "positive" implies a positive statistically significant relationship. "Interaction" refers to the sign of the coefficient of the relative interaction term.

Table 7.26 Consolidated results for Monthly Forecast Accuracy - IFRS3

Monthly Absolute Forecast Error	UK	France	German Voluntary adopters	German Mandatory adopters
IFRS3 (2008) Goodwill intensity	Positive Interaction	N/S Interaction	Negative Interaction	Positive Interaction
IFRS3 (2008) Size of acquisitions	N/S Interaction	Negative Interaction	Negative Interaction	N/S Interaction
IFRS3 (2010) Goodwill intensity	Negative Interaction	Positive Interaction	Positive Interaction	Positive Interaction
IFRS3 (2010) Size of acquisitions	N/S Interaction	Positive Interaction	Negative Interaction	N/S Interaction

Table 7.27 Consolidated results for Monthly Forecast Accuracy - IFRS7 (2005)				
Monthly Absolute Forecast Error	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS7 (2005) Quantity of disclosure about performance and financial position	**N/S Interaction**	**N/S Interaction**	**Positive Interaction**	**N/S Interaction**

Table 7.28 Consolidated results for Monthly Forecast Accuracy - IFRS7 (2008)				
Monthly Absolute Forecast Error	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS7 (2008) Quantity of disclosure about performance and financial position	**Negative Interaction**	**N/S Interaction**	**N/S Interaction**	**Negative Interaction**

Table 7.29 Consolidated results for Monthly Forecast Accuracy - IFRS8 (2006)				
Mean Absolute Forecast Error	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS8 (2006) Quantity of disclosure about performance and financial position	**Negative Interaction**	**Positive Interaction**	**Positive Interaction**	**Positive Interaction**
IFRS8 (2006) Quantity of disclosure for firm strategy, product market performance, performance of business strategy model	**Positive Interaction**	**Negative Interaction**	**Negative Interaction**	**N/S Interaction**

Table 7.30 Consolidated results for Monthly Forecast Dispersion - IFRS3				
Monthly Forecast Dispersion	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS3 (2008) Goodwill intensity	**N/S Interaction**	**Positive Interaction**	**N/S Interaction**	**Positive Interaction**
IFRS3 (2008) Size of acquisitions	**Positive Interaction**	**Negative Interaction**	**Positive Interaction**	**N/S Interaction**
IFRS3 (2010) Goodwill intensity	**N/S Interaction**	**Negative Interaction**	**N/S Interaction**	**N/S Interaction**
IFRS3 (2010) Size of acquisitions	**Positive Interaction**	**Positive Interaction**	**Positive Interaction**	**Negative Interaction**

Table 7.31 Consolidated results for Monthly Forecast Dispersion - IFRS7 (2005)				
Monthly Forecast Dispersion	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS7 (2005) Quantity of disclosure about performance and financial position	**Negative Interaction**	**N/S Interaction**	**N/S Interaction**	**Positive Interaction**

Table 7.32 Consolidated results for Monthly Forecast Dispersion - IFRS7 (2008)				
Monthly Forecast Dispersion	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS7 (2008) Quantity of disclosure about performance and financial position	**Negative Interaction**	**N/S Interaction**	**N/S Interaction**	**Negative Interaction**

Table 7.33 Consolidated results for Monthly Forecast Dispersion - IFRS8 (2006)				
Monthly Forecast Dispersion	**UK**	**France**	**German Voluntary adopters**	**German Mandatory adopters**
IFRS8 (2006) Quantity of disclosure about performance and financial position	**Negative Interaction**	**Positive Interaction**	**Negative Interaction**	**N/S Interaction**
IFRS8 (2006) Quantity of disclosure for firm strategy, product market performance, performance of business strategy model	**N/S Interaction**	**Negative Interaction**	**Positive Interaction**	**N/S Interaction**

7.8. Conclusion

In summary, it can be suggested that the IASB revisions on IFRS3 Business Combinations, IFRS7 Financial Instruments and IFRS8 Operating Segments had an asymmetric effect on the analysts' information environment for UK, French and German companies. Furthermore, the analysis in this chapter uncovered possible patterns across companies in the three countries on the analysts' earnings forecasts after the implementation of new accounting standards and disclosure requirements.

The adoption of IFRS3 (2008) demanded the expense of acquisitions costs, income statement recognition of changes in the fair values of contingent considerations and increased disclosure about acquisitions. These changes have been probably beneficial for analysts' forecast accuracy for analysts' forecasts of French firms and corporations that voluntarily adopted IFRS in Germany but detrimental to those of UK companies and German mandatory adopters. The subsequent changes in IFRS3 (2010) regarding acquiree share based payment awards, contingent consideration payments and restatements for past business combinations and measurement of the non-controlling interest were expected to have an impact in the information environment. The empirical results show that analysts' forecasts for UK companies have lower absolute forecast error contrary to French and German firms with the exception of German voluntary adopters with higher acquisitions intensity.

The implementation of IFRS7 Financial Instruments resulted in a substantial increase in quantitative and qualitative information regarding a corporation's financial instruments such as financial derivatives and the firm's exposure to market, liquidity and credit risk. The empirical results show that analysts' forecasts of UK and French companies have improved earnings forecast accuracy while those of German firms have higher absolute forecast error probably due to the financial instruments complexity and the bank based structure of the German economy. During the financial crisis of 2007/2008, the IASB possibly aimed to provide more stability in the market and issued the revision of IFRS7 Financial Instruments.

These changes in fair value measurements and in disclosure for financial derivatives resulted in a considerable increase in the disclosure quantity of financial performance and position that probably have been beneficial for the analysts' information environment. Indeed, the analysts' forecast accuracy probably is higher for the majority of analysts' forecasts of UK, French and German firms.

Finally, the implementation of IFRS8 Operating Segments brought a considerable increase in the quantity of information regarding a firm's operating segments depending on its geographical reach, product and service lines. The main differences of IFRS8 relative to its predecessor IAS14 could be summarised in the following categories: entities that IFRS8 applies to, definition of operating segments, reported information on operating segments and measurement of information reported for operating segments. These disclosures possibly affected both the disclosure quantity of firm strategy and product performance as well as of financial performance and position. The empirical results show a diverse impact and suggest that following the adoption of IFRS8 Operating Segments, analysts' forecasts of French and German companies with greater disclosure quantity about firm strategy and product performance have higher earnings forecast accuracy. On the other side, analysts' forecasts of UK companies with increased disclosure quantity of financial performance have higher earnings forecast accuracy after the implementation of IFRS8 Operating Segments.

The above interpretations should be treated with cautiousness but they probably depict part of the impact of the IASB changes on IFRS accounting standards and corporate disclosure requirements on the analysts' information environment after (2005). In most cases, it can be argued that the accounting standard changes issued by the IASB resulted in higher financial statements comparability and harmonisation, enhanced transparency and lower information asymmetry.

However, the empirical results show that fundamental differences across different countries still remain and that the enhancement and harmonisation of financial reporting standards may not be solely enough to improve the information environment between market participants.

8. Conclusions

8.1. The Scope of the Thesis

The thesis presents the results of a research project on the impact of IFRS adoption on the analysts' information environment in the UK, France and Germany through an evaluation of specific IFRSs and corporate disclosure. The impact of IFRS adoption on the information asymmetry between firms and outsiders is measured through properties of analysts' earnings forecasts. The study expands on the mandatory IFRS adoption period in Europe and investigates the impact of the revisions of IFRS standards during the late 2000s. The findings of the study confirmed the arguments by authors in the existing academic literature that IFRS adoption generally improves earnings quality, but that when analysed in more depth, the effects of IFRS adoption are diverse, multi-dimensional and asymmetric.

Our research contributes to the literature in a number of ways. We extend the existing published results on IFRS adoption by concentrating on factors that are identified by both professional and academic writers as being associated with accounting quality. We therefore focus on the effects of specific IFRSs on goodwill, intangible assets and acquisitions. In addition, we contribute evidence on the effect of corporate disclosure quantity on the information environment during this period. For this purpose we developed a new approach to assessing the impact of corporate disclosure, which involved the creation of a customised dictionary to analyse the quantities of corporate disclosures under six different headings on a monthly basis (see Appendix 3).

In the next section we highlight the main implications of our findings and the results of our empirical analysis.

8.2. Results

8.2.1. IFRS adoption, corporate disclosure and analysts' information environment

Impact of IFRS adoption on analysts' forecast accuracy

The empirical results for the period after IFRS adoption indicate that the analysts' absolute forecast error is lower only in the case of German mandatory adopters and it appears to be higher for UK and French companies. The results for the UK and French companies are consistent with the findings of Brown et al. (2013), who did not find any improvements in forecast accuracy after IFRS adoption. A probable explanation for the observed improvements in absolute forecast error for analysts' forecasts for German companies is the high enforcement environment of the country in conjunction with the high GAAP-IFRS differences (Byard et al., 2011). The empirical results for the German mandatory adopters are also consistent with the implications of Horton et al. (2013) and Tan et al. (2011) as this group of companies was forced to adopt IFRS, had higher GAAP-IFRS differences and operates in a high enforcement environment.

Impact of IFRS adoption on analysts' forecast dispersion

The results showed that forecast dispersion is increased for earnings forecasts for UK and French companies after IFRS adoption but reduced for earnings forecasts for German companies. Hence, the results are only partly consistent with the expectations of Ball (2006) that IFRS can potentially bring higher volatility to analysts' earnings forecasts Due to the extensive use of fair value under IFRS and the timely disclosure of economic events. The different effect in Germany may arise from the observed increases in analyst following of German companies post IFRS adoption, that could affect the results in several ways. Such an increase arises from improved financial statement comparability or from higher demand for analyst estimations due to more interest from small investors and international investors (Ball, 2006), or by the attraction of foreign analysts (Tan et al. 2011).

In summary, the results provide evidence to support the contention that the adoption of IFRS has been a factor for the reduction of information asymmetry between insiders and outsiders in firms listed in the UK, France and Germany.

Accounting standards

IFRS3 Business Combinations changed the accounting rules for goodwill and business combinations. The IASB moved from the amortisation of goodwill at a constant rate to an annual impairment test, and required increased disclosure about current and past business combinations. Opponents of this change suggested that goodwill is poorly reported under IFRS and that a higher proportion of goodwill in the balance sheet could increase uncertainty about a company's earnings (FT, 2010). Proponents of goodwill impairment charges suggested that the new accounting rules have a higher information content and transmit valuable information to investors and financial analysts (Chalmers et al., 2012; Cheong et al., 2010). Our empirical results demonstrate that post IFRS adoption analysts' absolute forecast error and forecast dispersion are lower for firms with higher goodwill intensity in all groups except German voluntary adopters. It is probable therefore that the shift from goodwill amortisation to goodwill impairment played a constructive role in the observed improvements in the analysts' information environment. Also, since higher goodwill intensity is usually associated with increased goodwill arising from acquisitions, another possible explanation for the results is that IFRS3 results in more complete disclosure about business combinations and acquisitions. The results for goodwill are consistent with Chalmers et al. (2012) and Cheong et al. (2010) who used data from the Pacific area and found that earnings forecasts for firms with higher goodwill intensity had lower absolute forecast error post IFRS adoption.

In addition to considering firms with a high intensity of goodwill, our models also include estimates of the level of goodwill impairments charged in the years in question. While opponents of goodwill impairment state that the abolition of a constant rate amortisation of goodwill is likely to cause uncertainty to analysts (FT, 2010) our empirical results show that higher goodwill impairments were related to improved analysts' forecast accuracy.

Our results similar to those by Chalmers et al. (2012) imply that goodwill impairments and related disclosures contain a higher information content than amortisation and that they are comprehended as signals for firm economic performance by analysts. However, we also find that analysts' earnings forecasts have higher forecast dispersion for firms with higher levels of goodwill impairment and therefore we suggest that this information is not absorbed symmetrically by all analysts.

Beyond the changes for goodwill, IFRS3 required increased disclosure about business combinations and acquisitions. Hence, a greater volume of acquisitions could increase the information content of the firm's disclosures.

Our results show that post mandatory IFRS adoption, higher size of acquisitions are related to lower absolute forecast error but the same effect is not observed in forecast dispersion. Therefore, it is suggested that the new accounting rules in IFRS3 improve the information environment overall, but create more differences between analysts and decrease the homogeneity of their forecasts. We suggest that despite the fact that regulations for acquisitions demand increased disclosure, the new accounting standards for acquisitions are possibly not fully comprehended by all analysts or that it is not possible to measure the effects of some of these rules. We also suggest that the new standards may provide managers with flexibility to manipulate earnings. Our results for acquisitions are similar with our results for goodwill intensity. Hence, we argue that for firms with higher goodwill intensity and acquisitions, disclosure under IFRS3 communicates valuable information about the company's future economic performance but not all analysts are able to utilise that information effectively.

Our results relating to the effect of intangible assets are mixed. We find lower levels of analysts' forecast dispersion in firms with higher levels of intangibles in all countries. In addition, for French firms, higher levels of intangibles are related to lower absolute forecast errors post IFRS adoption. However, for UK and German firms, higher earnings' forecast errors are associated with higher levels of intangibles post IFRS adoption.

We suggest that the results may be related to the lower levels of financial reporting enforcement applied in France, in comparison to the UK and Germany. We also argue that it is possible that IFRS rules for intangibles, stricter relative to the previous rules under French GAAP, limit the flexibility of managers to manage earnings through the capitalisation/expenses of intangibles.

In summary the empirical results provide evidence to support the idea that IFRS accounting rules for goodwill and mergers and acquisitions have had a positive effect on analysts' forecast accuracy, although the effect is more pronounced for mandatory adopters and depends to some extent on country characteristics. Similarly, the results show that under IFRS, intangible assets are still likely to cause uncertainty to financial analysts and increase the forecast dispersion but that high levels of intangible assets in a firm can also be associated with increased analyst following. Hence, we suggest that the IFRS rules for intangibles have had a positive impact in some cases, particularly in countries such as France where domestic GAAP-IFRS differences are high.

Corporate disclosure

Advocates of IFRS adoption suggest that the IFRS corporate disclosure requirements are likely to improve the transparency, reliability and comparability of financial statements (Ball, 2006). During our sample period, the adoption of IFRS in conjunction with other concurrent developments such as the Transparency Directive resulted in a substantial increase in the quantity of information disclosed by firms. Although it is hard to distinguish whether IFRS or TD was responsible for any observed improvements in disclosure, most of this study's firms were already complying with the TD requirements.

Hence, it can be argued with that this study's sample and data are isolating the effect of IFRS adoption to the highest degree possible for these countries. In order to address the question of which category of information is more valuable for financial analysts, our disclosure analysis distinguished between 6 categories of disclosure (Chapter 5.) and the empirical results provide an insight into their relationship with IFRS adoption and their role in the information environment.

The empirical results show that, post IFRS adoption, greater disclosure quantity of financial performance and position is related to lower absolute forecast error for UK and French firms but not for German firms. However, our findings show that greater disclosure about financial performance and position is associated with higher forecast dispersion for all groups and periods except German voluntary adopters. French companies and German voluntary adopters with greater disclosure about financial performance and position also have higher analyst following. We also suggest that the higher forecast dispersion post IFRS adoption could be related to the high French GAAP-IFRS differences, since the previous trends understood by analysts might no longer persist. Another explanation could be that French analysts have a more difficult job to understand the effect of IFRS on French firms, particularly in an environment with lower enforcement than in other countries. Also, we suggest that an increase in analyst following after IFRS adoption for UK firms is related to increased comparability perhaps by attracting more foreign analysts.

Our findings for German voluntary adopters are consistent with Kim and Shi (2012) and Glaum et al. (2013) who found that forecasts for German voluntary adopters with greater disclosure quantity about their financial performance, have lower forecast dispersion. We suggest that this occurs because these companies have higher incentives for high quality reporting relative to mandatory adopters, and obtain benefits from greater comparability with foreign firms that adopted IFRS. This is confirmed by looking at the findings for companies adopting IFRS mandatorily, where firms with a greater quantity of disclosure about corporate and business performance and financial position have lower analyst following and higher forecast dispersion.

The empirical results for the rest of the disclosure categories (Chapter 5) show that different types of information are not likely to systematically affect the analysts' information environment across different groups and countries. We suggest that high financial information quantity is not always associated with high financial information quality. Analysts, and the market, appear to derive useful information from specific categories of disclosure only. For example, the empirical results show that increased information quantity about the firms' operations and strategy is not beneficial to earnings forecasts of UK and French firms.

For these groups, analysts probably tend to rely more on the disclosures about financial performance and position in company announcements and reports. However, in Germany analysts seem to give more weighting to the firm strategy and operations disclosures.

An interesting picture is observed when looking at the results for the quantity of disclosures regarding the economy and market conditions. In the uncertain times post mandatory IFRS adoption, analysts seem to react differently with such disclosures. For analysts' forecasts of French and UK firms, greater disclosure quantity regarding the condition of the market and the economy is related to lower absolute forecast errors. For analysts' forecasts of UK companies, a potential explanation is that increased disclosure quantity about the market conditions is beneficial for analysts due to the market-based type of the UK economy. For analysts' forecasts of French companies we suggest that the results are related to improvements in information quality probably because of the adoption of IFRS. On the contrary, the results for analysts' forecasts of German companies show that the analyst following is reduced and forecasts have higher dispersion for firms with higher disclosure quantity about the market conditions probably because of the bank-based type of the German economy.

The rest disclosure categories uncover further differences between the three countries. Regarding disclosure quantity of corporate governance and human capital, our results show that post IFRS adoption analyst following is higher for companies with higher disclosure quantity of this category. The results for analysts' forecasts of French firms show that increased information quantity about the company's managers and human capital is related to lower absolute forecast error and lower forecast dispersion. This is possibly related to weight given to insider information and the lower legal enforcement (compared to UK and Germany) in France. We argue that greater information quantity about the managers and corporate governance is likely to bring greater transparency. On the contrary, for analysts' forecasts of UK and German companies with greater information quantity about the company's managers and human capital is related to higher absolute forecast errors and higher forecast dispersion.

We argue that this could be related to the possible higher directors' remuneration in shares that could magnify the impact of the IFRS2 share-based payments on the financial statements. Overall, post IFRS adoption the number of analyst estimations is greater for all firms with greater quantity of disclosure about human and organisational capital, management performance, corporate governance and leadership.

Our results show that post IFRS adoption, analysts' forecasts of French companies with higher intangible assets intensity and greater disclosure quantity of market recognition, power and consistency of brand have lower absolute forecast error. Hence, we argue that under IFRS, the timely recognition and disclosure of advertising costs and marketing expenses is likely to be related to positive effects to the analysts' forecast accuracy, forecast dispersion and analyst following. Hence, we suggest that greater disclosure quantity of corporate brand strategy and marketing is likely to reveal information about the firms' investment in advertising and marketing and therefore limit the analysts' uncertainty about the potential use of such costs to manipulate future earnings.

In summary, our corporate disclosure analysis suggests that narrative and financial reporting under IFRS is likely to increase the comparability and transparency of financial statements but that its effect is asymmetric across the three countries. In fact, analysts following UK and French companies with higher disclosure about their financial position and performance make more accurate forecasts but also more dispersed earnings forecasts post IFRS adoption. In contrast, analysts following German companies with higher disclosure about their corporate strategy and operations make more accurate and less dispersed earnings forecasts and these companies also have higher analyst following.

8.2.2. Accounting standards and disclosure requirements: Changes in the post IFRS era and their impact on the analysts' information environment

Our empirical analysts expanded to the post IFRS adoption era and investigated the impact of the IASB revisions on IFRS3 Business Combinations, IFRS7 Financial Instruments and IFRS8 Operating Segments. We argue that these revisions had an asymmetric effect on the firms' information environment in the UK, France and Germany.

IFRS3 Business Combinations

IFRS3, Business Combinations, underwent two revisions in 2008 and 2010. We assess the impact of the revisions through our variables for goodwill and size of acquisitions intensity.

IFRS3 (2008)

Goodwill

Our results show that the implementation of IFRS3 was related to higher absolute forecast error for German mandatory adopters with higher goodwill intensity and lower absolute forecast error for German voluntary adopters with the same characteristics. An explanation for German voluntary adopters could be the less complex measurement of goodwill arising from acquisitions under IFRS3 (2008). We do note though that this could increase management's discretion. Hence, we argue that the management incentives could be one of the reasons for the higher absolute forecast error of analysts' forecasts for German mandatory adopters with higher goodwill intensity.

Our findings also show that UK and French companies with higher goodwill intensity have lower absolute forecast error before and after the implementation of IFRS3 (2008). Our results also show increased forecast dispersion with higher goodwill intensity after the IFRS3 (2008) implementation for analysts' forecasts of French companies and German mandatory adopters. Similarly to the above, the higher flexibility given to managers is probably responsible for this observation.

Size of acquisitions

The revision of IFRS3 (2008) required the various acquisition costs (such as legal, accounting, valuation, consulting, advisory) to be expensed instead of capitalised. This could impacts the profit and loss statement and provide the opportunity to the management for earnings manipulation. Thus we argue that this option could in theory increase the analysts' uncertainty about future profits and therefore increase the absolute forecast error of their forecasts. Also, the IFRS3 (2008) revision permitted the recognition of any changes in the fair values of contingent considerations by acquisitions on the income statement.

Furthermore, IFRS3 (2008) required increased disclosure for acquisitions. The additional information and the timely recognition of changes in fair values could be related to lower absolute forecast error of analysts' forecasts. This is probably the case for analysts' forecasts of French companies and German voluntary adopters with higher acquisitions show that the implementation of IFRS3 (2008) is related to lower absolute forecast error. However, analysts' forecasts of UK companies and German mandatory adopters are related to higher absolute forecast error relative to the period before the implementation of IFRS3 (2008). We also found that French firms with higher acquisitions have analysts' forecasts with lower forecast dispersion as well but reduced number of analysts' estimations after the implementation of IFRS3 (2008) relative to the period before.

Hence, we suggest that a smaller number of analysts with more specialised knowledge or more private information are providing earnings' forecasts for French companies with higher acquisitions.

The possession of private information by part of the analysts could be a possible explanation for the observations for UK companies as the implementation of IFRS3 (2008) for UK companies with higher acquisitions is related to an increase in absolute forecast error and forecast dispersion of analysts' forecasts and a reduction in analyst following.

IFRS3 (2010)

Our results show that analysts' forecasts of UK companies with higher goodwill intensity have lower absolute forecast error after the adoption of IFRS3 (2010). On the contrary analysts' forecasts of French and German companies with higher goodwill intensity have higher absolute forecast error after the adoption of IFRS3 (2010) relative to the period before. Also, we found that the analysts' forecasts of French companies with higher goodwill intensity have higher forecast dispersion as well after the implementation of IFRS3 (2010).

We argue that accumulated goodwill from past acquisitions is indicative of a firm's activity in acquisitions and therefore goodwill intensity would be a relative measure of such activity. The IFRS3 (2010) allows the adjustment of business combination costs when the payment of a contingent consideration is probable and can be measured reliably (KPMG, 2010). Based on our findings we agree with IFRIC's proposals that the restatements of IFRS3 (2010) could be related to increased financial statements' comparability for analysts' forecasts of UK companies but not for those of French and German companies (Deloitte, 2013).

We also investigated the possible relation of IFRS3 (2010) with acquisitions. Our findings show that analysts' forecasts of French companies with higher acquisitions have higher absolute forecast error. We also found that analysts' forecasts of all firms except German mandatory adopters with higher acquisitions were associated with higher forecast dispersion. Analysts' forecasts of German mandatory adopters with higher acquisitions have lower absolute forecast error and dispersion after the adoption of IFRS3 (2010).

We argue that a potential explanation for the negative observations could be related to restatements for past business combinations or to increased uncertainty about the contingent considerations and whether their payment is actually possible and measured reliably.

IFRS7 Financial Instruments

IFRS7 (2005)

The implementation of IFRS7 Financial Instruments resulted in a substantial increase in quantitative and qualitative information regarding a corporation's financial instruments such as financial derivatives and the firm's exposure to market, liquidity and credit risk. Our results show that the adoption of IFRS7 Financial Instruments for analysts' forecasts of all firms with greater disclosure quantity about market risk, industry analysis and competitive forces, with the exception of German mandatory adopters, are related to higher absolute forecast error. We argue that a potential explanation is the increased disclosure for market risks, as IFRS7 required a sensitivity analysis for market risks affecting the firm at the reporting period such as prices, currency and interest rate risks. The requirements of IFRS7 included the methods and assumptions as well as the impact to the profit and loss statement. Hence, we suggest that companies with greater exposure to the above risks could potentially provide greater disclosures and magnify the analysts' uncertainty about the impact of market risks on the companies' future profits.

Our findings show that analysts' forecasts for companies with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model were related to lower absolute forecast error for UK and German firms. We argue that this is possibly related to the increased disclosure of the capital management strategy and the relevant quantitative and qualitative information about the firms' choices, targets and procedures to manage capital. We further suggest that that IFRS7 requirements for further narrative disclosures for a) credit risk, market risk, and liquidity risk and b) the management's policies, objectives, methods and procedures for risk management and measurement could possibly be related to the observed lower absolute forecast error.

Also we found that the adoption of IFRS7 Financial Instruments is related to lower absolute forecast error for analysts' forecasts of French firms with greater disclosure quantity about financial performance and position.

On the contrary, analysts' forecasts of UK and German firms had lower absolute forecast error with greater disclosure quantity about firm strategy, product market performance and performance of business strategy model.

IFRS7 (2008)

During the times of the financial crisis, the IASB required the reclassification of financial derivatives out of the fair-value-through-profit-or-loss. This action could be interpreted as a step to help companies to avoid a potential significant impact on their earnings due to financial derivatives. Also, the IASB required extensive disclosures about fair value hedge accounting and presentation at the segment level. Subsequent changes required clarifications on the fair value disclosures of financial instruments, established a three-level hierarchy for fair value measurements and demanded extensive disclosure for each measurement and a maturity analysis for derivative financial liabilities.

Our results show that analysts' forecasts of UK firms and German mandatory adopters had lower absolute forecast error after the implementation of IFRS7 (2008). We argue that this possibly related to the IFRS7 (2008) fair value treatment and to the enhanced disclosures regarding the a) measurement of financial instruments and b) the effect of the marked to market financial instruments to the income statement.

We argue that revision of IFRS7 (2008) possibly had a positive impact to the UK market's stability because our empirical results suggest that analysts' forecasts of companies with greater disclosure quantity about financial performance and position had lower absolute forecast error. We also argue that the lower absolute forecast error of analysts' forecasts of German mandatory adopters was related to enhanced disclosures and clarifications about financial derivatives.

Also, we suggest that IFRS7 (2008) possibly required a higher level of specialism and knowledge about financial instruments as both UK companies and German mandatory adopters had lower analyst following after the implementation of IFRS7 (2008).

In summary, our empirical results show that earnings forecasts for firms in the UK and in France were likely to have improved forecast accuracy while German firms were likely to have higher absolute forecast error. This may be due to the bank-based structure of the German economy and the complexity of the financial instruments that this entails. During the financial crisis of 2007/2008, the IASB aimed to provide more stability in the market and issued the revision of IFRS7 Financial Instruments. These changes in fair value measurements and in disclosure for financial derivatives resulted in a considerable increase in the disclosure quantity of financial performance and position that have been beneficial for the analysts' information environment. Indeed, the absolute forecast error was lower for earnings forecasts for firms in the UK, France and Germany except for the small group of German voluntary adopters.

IFRS8 Operating Segments

IFRS8, Operating Segments, resulted to a considerable increase in information regarding a company's operating segments with details regarding products/services and geographical areas. We expected that the IFRS8 requirements for a) the measurement of the segmental information and b) disclosure for identification factors and types of products and services for each segment would have an impact to the disclosure quantity of "firm strategy, product market performance, performance of business strategy model".

Our results show that the adoption of IFRS 8 (2006) is related to lower absolute forecast error and forecast dispersion for analysts' forecasts of French firms and German mandatory adopters with greater disclosure quantity about firm strategy, product market performance, performance of business strategy model. Also, we found that analysts forecasts of German voluntary adopters had lower absolute forecast error but with lower number of analyst estimations and higher forecast dispersion.

We argue that the above observations for France and Germany are related to the increased disclosure of firm information regarding the business segments and the revenue generating units under IFRS8. However, this effect was not observed in the UK. We suggest that this may be because in the UK the debate about the use of the "through the eyes of management" approach in IFRS8 was very contentious and ultimately lead to questions being asked in parliament about the adoption of the new standard. This may have resulted is analysts having less confidence in the effectiveness of the IFRS disclosures.

We also considered the impact of IFRS8 (2006) on the disclosure proxies for "corporate and business performance and financial position". Similarly to IFRS7 (2008), analysts' forecasts for UK companies with greater disclosure quantity about corporate and business performance and financial position had lower absolute forecast error.

We argue that IFRS8 (2006) adoption is related to lower absolute forecast error forecast dispersion for analysts' forecasts of UK and German firms with greater disclosure quantity about corporate and business performance and financial position. For the same groups, we also found that IFRS8 (2006) is related to lower analyst following. Hence, we argue that the above observations imply that the enhanced disclosures under IFRS8 on the identification of operating segments and the measurement of such financial information add value to the analysts' information environment but require high analysts' specialism to embed it to their forecasts.

Overall, the implementation of IFRS8, Operating segments, brought a considerable increase in the quantity of information regarding a firm's operating segments based on its geographical reach, product and service lines. These disclosures affected both the quantity of disclosures concerning firm strategy and product performance, as well as of financial performance and position. The empirical results show a diverse impact and suggest that following the adoption of IFRS8, Operating Segments, earnings forecasts for French and German companies with greater disclosure quantity of firm strategy and product performance had improved forecast accuracy. In contrast, forecasts for UK companies with more disclosure quantity about financial performance had lower absolute forecast error.

In most cases, it can be argued that the changes by the IASB resulted in higher comparability of financial statements, enhanced transparency and lower information asymmetry. However, our empirical results show that the changes in IFRS result in an asymmetric impact across countries.

Fundamental differences across countries still remain and it appears likely that the enhancement and harmonisation of financial reporting standards alone may not be enough to improve financial reporting quality and therefore the information environment between market participants.

8.3 Contributions to the literature

The authors of existing academic studies have used various techniques to quantify corporate disclosure. Frequently, disclosure proxies derive either from quantitative models using analysts' forecasts, or from secondary data used to compile disclosure indices or primary data extracted from annual reports using manual techniques. Authors of other studies (Kothari, 2009; Loughran and McDonald, 2011) used custom dictionaries to assess the tone in the majority of a firm's disclosure material. Subsequent studies (Brown and Tucker, 2011, Lehavy et al., 2011; Muslu et al., 2014) have also tended to use custom dictionaries and automated techniques to analyse corporate disclosure.

However, to the best of the writer's knowledge, none of the existing studies on IFRS adoption have included the use of a custom dictionary to evaluate the impact of corporate disclosure on the analysts' information environment. We assume that any improvements in the analysts' information environment that are associated with an increase in the quantity of corporate disclosure are also related to higher disclosure quality brought by IFRS adoption. We further suggest with caution that such increase in corporate disclosure quality is reflected not only to the notes of financial statements but also to the rest corporate disclosure in annual reports and corporate announcements.

In this thesis a new custom dictionary is developed which adopts the disclosure categories developed by Kothari et al. (2009): a) market risk, industry analysis and competitive forces, b) firm strategy, product market performance, performance of business strategy model c) human and organisational capital, management performance, corporate governance and leadership, d) market recognition, power and consistency of brand, e) corporate and business performance and financial position, f) government regulation, accounting regulation, disclosure practices affecting the firm. Our analysis uses hand-collected primary data and in total, the analysis includes over 120 million words contained in over 28,000 company announcements and over 2,800 annual and quarterly reports. The magnitude of the qualitative data demonstrates the advantage of the automated dictionary analysis. Such holistic disclosure analysis would be practically impossible to be completed by the researcher using manual coding within reasonable time.

Our analysis distinguishes from other studies by measuring the quantity of information disclosed each month and subsequently adding these measures incrementally until the last month of the financial year. Using this approach we a) investigate if high information quantity implies high information quality, and b) test the relationship between the monthly corporate disclosure and the monthly evolution of analysts' earnings forecasts. Our approach and custom dictionary can be replicated and further adapted to be used in a variety of research projects in accounting and finance research.

We have contributed to the literature by providing evidence for the impact of corporate disclosure on properties of analysts' forecasts. We also identified patterns, showing that analysts' absolute forecast error is lower for UK and French companies with higher disclosure about their financial position and performance and for German companies with higher disclosure about their corporate strategy and operations. We evaluated the impact of specific IFRS accounting standards under IFRS in Europe. In addition we assessed the impact of goodwill, goodwill impairment, acquisitions and intangible assets on properties of analysts' forecasts in Europe.

Our findings were consistent with studies from the Pacific area and show that the IFRS accounting rules for goodwill and mergers and acquisitions were related to lower absolute forecast error. Also, we found that intangible assets under IFRS are related to lower absolute forecast error and increased analyst following but also to increased forecast dispersion.

We expanded our evaluation on the impact of IFRS adoption and contributed to the literature by demonstrating the effects of changes made to IFRS3, Business combinations, IFRS7, Financial Instruments and IFRS8, Operating Segments. The results on the impact of IFRS3 (2008) show that all firms except German mandatory adopters with higher goodwill intensity have lower absolute forecast error after the implementation of IFRS3 (2008). Also, our empirical results demonstrated that the changes to rules for disclosure of financial instruments under IFRS7 resulted to lower absolute forecast error for firms through greater disclosure quantity of financial performance and position.

We found that following the adoption of IFRS8, Operating Segments, analysts' forecasts for French and German companies with greater disclosure quantity of firm strategy and product performance had lower absolute forecast error. That was not the case for UK companies that had analysts' forecasts with lower absolute forecast error with greater disclosure quantity of financial performance and position.

8.4. Limitations of the research project

This research methodology and its inferences are subject to several limitations either due to assumptions that needed to be taken or due to data constraints. In order to conduct an in-depth analysis of narrative disclosures for individual firms, we selected a smaller number of companies than is typical in the literature, but we collected a substantial amount of data for each company. In addition, as is typical in this kind of study, a number of companies were eliminated from the sample due to their industry or insufficient data.

These decisions may increase the explanatory power of the models but could result to selection bias and could limit the generalisability of the study's implications. The sample is also disproportionate and has a higher number of UK companies than French and German companies together. The wider range of size of companies in the UK sample could influence the results.

The inferences for the hypotheses related to goodwill are subject to certain assumptions regarding the impact of goodwill impairment on analysts' forecasts. Since, the earnings forecasts on the I/B/E/S are restated so that they don't include goodwill impairments, any empirical association between goodwill impairment and forecast accuracy should be treated as evidence of signals about the economic performance of a firm rather than as evidence of a direct impact on the company earnings as reported at the financial statements. Also, before IFRS adoption, under UK GAAP goodwill impairment was permitted as an alternative to goodwill amortisation.

We chose not to distinguish between the companies that used either accounting policy in order to capture the effect of IFRS3 after goodwill impairment became mandatory for all firms.

The reliability of disclosure data is challenged firstly by the data availability, as it can't be suggested with confidence that a complete population of corporate announcements transmitted to outsiders were available for collection. On top of that, the research design of the new disclosure methodology takes an holistic view and it may therefore miss effects that correspond to specific sections of corporate disclosure. The new custom dictionary and the approach to generating the disclosure proxies concentrates purely on the quantity of information rather than trying to represent information quality directly.

This has the advantage of being a more objective measure. The weakness of this approach is that it probably aggregates disclosure proxies that do not have equal importance for the firm or the analysts. For example, if two announcements provide information about two separate business activities that could affect the company earnings, one could refer to an increase of £1m and another to a reduction of £50m.

With respect to the disclosure analysis, both of these disclosures would be given equal weighting on the grounds that the quantitative effect would be conveyed to analysts from a different information source. In addition, purely narrative disclosures are all given an equal weighting regardless of whether their effect on the firm is profound or slight.

The objective of the disclosure analysis is to identify if greater information transmitted by a firm led to more accurate earnings forecasts by analysts, therefore implying that such information was valuable to analysts. If this is the case, then we assume that an increase in disclosure quality is implied by an increase in quantity. In addition, the dictionary method is not able to assess whether the increase in disclosure quality arises from the firm's compliance with mandatory requirements or from additional voluntary disclosure.

In any study of the effect of changes made to accounting standards it is necessary to make some assumptions about the point at which the effect takes place. In the case of our methodology, this problem is compounded by the requirement to aggregate the quantity of disclosures made throughout the accounting period, where in some cases the standards were changed during the period. For example, the disclosure scores for the first month of a firm's financial year derived from the annual report could derive from financial statements prepared under UK GAAP. However, the first quarterly report could be prepared under IFRS, making it hard to determine to which accounting standards the cumulative disclosures correspond.

The assumption we made was that analysts, investors and stakeholders are probably a) aware of the IFRS adoption or standard implementation in advance b) well informed about the impact of the change through IFRS restatements and company announcements c) informed through other channels of information. Thus we assume that all disclosure scores in a given financial year are likely to reflect the accounting standards under which the financial year-end earnings are reported.

This approach is consistent with studies of the effect of accounting standards changes on share prices, which tend to assume that the effects are compounded into share prices in advance of the production of the first balance sheet under the new regime.

Finally, the inferences in the examination of the impact of IFRS7, Financial Instruments and IFRS8, Operating Segments should be treated with caution. The reason is the concurrent implementation of IFRS7 (2008) and IFRS8 (2006) and the holistic research design of the study that make it difficult to distinguish between the two.

The custom dictionary and text analysis method are designed to analyse large pieces of corporate disclosure beyond the notes to financial statements. Hence, although the method captures disclosure proxies in non-regulated fields, IFRS7 (2008), Financial Instruments and IFRS8 (2006), Operating Segments, both became effective from 01/01/2009. Both standards affected the firms' corporate disclosure and we selected to include both in our analysis. The results for and disclosure quantity proxies for financial and business performance should be treated with caution though as the correlation matrix shows a coefficient of 0.44.

We manually coded the data using the annual reports, hence, there is a risk that the above standards overlap and our results can't distinguish the effect of each standard.

IFRS8 (2006) Operating Segments is likely to affect both disclosure categories of financial and business performance and firm strategy, product market performance, performance of business strategy model. However, if we had to choose only one we would suggest that IFRS7 (2008) is more likely to affect disclosure quantity proxies for financial and business performance as this disclosure category contains words such as "debt", "derivative", "financial instrument", "debenture".

Also, we would suggest that IFRS8 (2006) is more likely to affect disclosure quantity proxies for firm strategy, product market performance, performance of business strategy model as this disclosure category contains proxies such as "product", "service", "customers", "revenue" as well as "operating segment" and "sales".

8.5 Implications, suggestions for improvements and further research

Implications

This research project has several implications for various fields such as academic research, financial analysts, banks and other financial institutions, tax authorities, accounting standard setters and governments.

Research

This research project has several implications for academic research both in terms of methodology and contribution to the relevant literature. Firstly, we developed a new custom dictionary to quantify the information communicated by firms to outsiders through corporate reports and announcements. This approach can help academics to quantify disclosures made by firms across different categories using disclosure information from various sources. Further specific custom dictionaries can be based on this model to investigate the effect of specific disclosures, accounting standards and so on.

Also, we examined the properties of analysts' forecasts on a monthly basis and tested an approach between the monthly corporate disclosure quantity and the monthly evolution of analysts' forecasts. This approach could be used by researchers to investigate the relationship between forecasts and the disclosure information quantity throughout the financial year, rather than using methods that exclude several intra-year forecasts.

Our empirical results on IFRS3 provide empirical evidence on the application of the IFRS rules for goodwill, goodwill impairments, intangibles and acquisitions in Europe. Also, we investigated the impact of the IFRS7 and IFRS8 revisions on the relationship between the quantity of corporate disclosure and analysts' forecasts. The empirical results and methodology from this project can be adopted by researchers to test further samples and future accounting standard revisions.

Analysts

Financial analysts can use the empirical results from this project to inform their expectations about firms with specific characteristics and economic events. Analysts can use our findings for goodwill and expect that goodwill impairments will be associated with a higher information content and therefore lead to more accurate forecasts. Similarly, our findings for acquisitions show that although acquisitions diffuse useful information to the market, some analysts may need to gain access to further information from the firms. Also, analysts can expect to form more accurate projections for companies with a higher intangible assets intensity in France but less accurate for similar companies in the UK and Germany.

On top of the above, analysts can use our disclosure model and create portfolios of disclosure quantity to classify firms according to their respective scores. Then analysts can expect to form more accurate projections for firms with greater quantity of disclosure about corporate and business performance in the UK and France but not for Germany.

Similarly, the rest empirical results for our control variables as well as the extended investigation of IFRS3, IFRS7 and IFRS8 can help financial analysts to form expectations about the accuracy of their forecasts according to each firm's characteristics.

Banks, credit rating agencies and other financial institutions

Banks and other financial institutions such as credit rating agencies can use the findings of our research to make error allowances in their valuation and credit analysis models. Banks and consultancies extensively use analysts' forecasts as inputs for their valuation models and the empirical results on which firm characteristics lead to more or less accurate forecasts can increase the power and reliability of their models.

Accounting standard setters

The implications of our findings can help accounting standard setters such as IASB and the FASB to amend or create accounting standards. For example, our findings may inform the accounting standard setters that the rules for goodwill and acquisitions apply homogeneously in most countries by that the rules for other intangibles may need refinement and the allowance of more flexibility in each jurisdiction.

Also, our results show that in several areas fundamental differences across countries remain and that the development and harmonisation of financial reporting standards alone are not sufficient to increase the quality of financial information. Instead of changing accounting standards, authorities may consider to proceed to measures improving the level of enforcement and adoption of accounting standards.

Governments and tax authorities

The empirical results from this project as well as the research design and custom dictionary could be used by government agencies and tax authorities to identify companies with lower earnings quality that could entail substantial tax risks (either from non-compliance or tax avoidance) or other financial regulation breaches. Also, our empirical results could be used to inform current and past transfer pricing cases. For example, our results could be used for reference in the assessment of whether the arm's length principle has been present in cases involving acquisitions and connected party transactions involving debt financing and intra group loan relationships.

Suggestions for improvements

We suggest that our empirical analysis could be replicated using samples of firms in other European countries. Such analysis could support our findings for the role of intangibles under IFRS and their effect on analysts' forecasts. Our results for intangibles could be further tested against larger data sets using samples of extended time frames and higher number of companies, to gain more confidence about the findings.

The research design of an alternative custom dictionary could use principal component analysis or exploratory factor analysis to identify which words and word stems were likely to fall under each category. Another option would be to construct mutually exclusive disclosure categories so that no disclosure proxy falls under two categories. This would make the interpretation of the results clearer but may not be such a good representation of the nature of the individual categories. Another alternative would be to create a custom application using algorithms and artificial intelligence to analyse text in corporate reports and derive the relevant scores.

Future work could include other means of communication with analysts and the public such as conference calls with analysts. Also, the researchers could use complete disclosure data sets for each firm by obtaining them from databases or the firms themselves. Another refinement would be to clear out all standing information and boiler-plate disclosures from the firm's reports which would reduce the noise to the disclosure analysis.

US data

Studies using US data have the advantage of using EDGAR, the filings and forms tool by the US Securities and Exchange Commission (SEC, 2016). The database has a wealth of company reports and announcements that are ready to be used for analysis. Hence, our custom dictionary could be further adapted for disclosure analysis using US data. Also, other professional databases requiring subscription could potentially facilitate the data collection process.

Cost of capital and stock prices

Future work could further build on our disclosure analysis and Kothari et al. (2009) and use custom dictionaries to assess the impact of disclosure quantity on the implied cost of capital. Such a project could provide answers to the question about whether greater disclosure quantity lowers the risk for investors, as reflected by lower implied cost of capital.

Other work could include the assessment of the impact of disclosure quantity on company stock prices. Such analysis could range from short-term event studies to medium term 3, 6, 9, 12 months returns and investigate which type of information is value relevant and affects the volatility of stock prices. Another suggestion would be to combine our custom dictionary with dictionaries for sentiment analysis (Loughran and McDonald, 2011) to investigate which combination would lead to stock price increases or decreases. The results of such projects could be applied in practice using self-constructed algorithms to predict real time stock price movements on a large scale basis.

Earnings management

Our empirical models and custom dictionary could be further adapted using earnings management proxies (Barth et al., 2008; Christensen et al., 2008) to assess the possible association between corporate disclosure quantity and earnings management.

Directors' share dealings

Future studies could exploit the custom dictionary to analyse the relationship between specific corporate disclosures and directors' share dealings. Such studies could assess the impact of accounting standard changes on financial statements' comparability from the insiders' point of view such as in Brochet et al. (2011).
In particular it would be interesting to examine the possible association between insiders' dealings activity and the quantity of disclosures for human and organisational capital, management performance, corporate governance and leadership.

Tax risks

Our research design and custom dictionary could be further adapted to be used in studies by the OECD, the European Union, tax authorities and government finance departments. The development of custom dictionaries for specific industries and for the assessment of tax risks could assist government organisations to predict tax risks arising from non-compliance and tax avoidance using disclosure analysis. Such analysis in conjunction with accounting and financial data could help governments to increase tax revenue and reduce the time to collect it.

IFRS accounting standards

The empirical models and custom dictionary developed in this thesis could be further adapted to research the impact of other accounting standards on analysts' forecasts, implied cost of capital, value relevance, earnings management and so on. The advantage of automated analysis is that the researchers can capture and assess the disclosure in the whole population of business reports.

In addition, we suggest that tailored custom dictionaries could be developed to assess the impact of other recent accounting standards such as IFRS 12, Disclosure of Interests in Other Entities, IFRS 13, Fair Value Measurement, IFRS 15, Revenue from Contracts with Customers and IFRS16, Accounting for Leases.

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Volume II

Appendix

Table A.1 Contents - Appendix	
Table of Contents Appendix	390
Appendix 1. Correlation Matrix	391 - 395
Appendix 2. Winsorisation	396
Appendix 3. Beattie (2004) framework and Custom Dictionary	397 - 416
Appendix 4. Supplementary tests of Chapter 7.	417 - 477
Appendix 5. Alternative tests	478 - 490

Appendix 1. Correlation Matrix

This appendix presents the correlation matrix of the variables used in the thesis.

Table A1.1 Correlation Matrix

	MFE Mean	MFA Mean	MFD	NOA	ln(SIZE)	ln(AGE)	IGW	BM	DE	ROA	NIAI	EIGD	RETURNS	NASACQ
MFEMean	1													
MFAMean	0.0234	1												
MFD	-0.0747	0.2614	1											
NOA	0.1584	0.0047	-0.0623	1										
ln(SIZE)	0.1325	-0.1896	0.0367	0.3173	1									
ln(AGE)	-0.0424	-0.0117	0.2157	0.0139	0.0144	1								
IGW	0.0332	-0.1238	-0.1457	-0.1332	-0.1359	-0.2123	1							
BM	0.0034	-0.2207	-0.3052	0.166	0.2563	0.0503	-0.1126	1						
DE	0.0154	0.0899	0.0122	-0.042	0.1453	-0.1644	0.0597	-0.2064	1					
ROA	0.0615	-0.3116	-0.1103	-0.0162	0.1026	0.0162	0.0978	0.4634	-0.3553	1				
NIAI	0.1206	-0.095	0.0444	0.0115	0.1532	-0.0526	0.409	-0.19	-0.0466	0.1166	1			
EIGD	-0.0643	0.2594	0.1657	-0.1237	-0.1631	0.0969	0.0567	-0.0768	0.1405	-0.2573	-0.0641	1		
RETURNS	-0.2629	-0.2082	0.0788	-0.2202	0.0143	0.049	0.0028	0.1393	-0.0206	0.1248	-0.0745	-0.1011	1	
NASACQ	0.0893	-0.0491	-0.0665	-0.0107	0.0658	-0.0676	0.253	0.0438	-0.0524	0.2682	0.343	-0.0679	-0.0789	1
VOLATILITY	-0.0774	0.2835	0.3237	0.0337	-0.1861	-0.0167	-0.1838	-0.0817	-0.0219	-0.1784	-0.2764	0.0809	0.0424	-0.2102
LN(MRKT)	-0.0068	0.0511	0.1344	0.2539	0.2576	-0.0447	0.0434	-0.2629	0.0884	-0.183	0.1279	-0.0737	-0.1963	-0.0447
LN(FRMSTR)	0.0304	0.0366	0.1369	0.2847	0.3502	-0.0404	0.073	-0.2295	0.145	-0.1658	0.1467	-0.0456	-0.2185	-0.01
LN(CORPGOV)	0.0417	0.0001	0.1403	0.3683	0.3778	0.0491	0.0861	-0.136	0.1198	-0.1499	0.0792	-0.0723	-0.2183	-0.06
LN(BRND)	0.0488	-0.0669	-0.1055	0.2966	0.4482	-0.2511	-0.0993	0.0879	0.1617	-0.0827	0.0896	-0.1307	-0.2157	-0.0455
LN(FINPOS)	0.0444	0.0542	0.1683	0.2566	0.2895	0.0081	0.119	-0.2985	0.2014	-0.223	0.1749	0.0016	-0.2092	-0.0311
LN(REGACC)	0.0605	0.0144	0.1208	0.4362	0.3915	-0.0259	0.1447	-0.1662	0.091	-0.1553	0.1532	-0.1265	-0.1313	0.0355
MANDGxIFRS	0.021	0.0063	0.0336	0.2806	0.1669	0.0369	0.2725	0.0716	-0.0851	0.0897	0.0024	0.0002	-0.0716	0.1525
VOLUGxIFRS	0.036	0.0041	0.1359	-0.008	-0.0074	0.0505	-0.2155	-0.1284	0.0643	-0.0149	0.2249	-0.0753	-0.0711	-0.047
IGWxIFRS	0.0262	-0.1111	-0.097	-0.0074	-0.0192	-0.1523	0.8047	-0.1001	0.0423	0.0763	0.4042	0.0123	-0.0752	0.2596
EIGDxIFRS	-0.0334	0.2234	0.1615	-0.0592	-0.1171	0.0841	0.0526	-0.0598	0.1311	-0.2175	-0.0109	0.8263	-0.153	-0.0624
NASACQxIFRS	0.0988	-0.0296	-0.0258	0.0615	0.071	-0.0291	0.2276	0.013	-0.0435	0.2314	0.3803	-0.0853	-0.0831	0.9083
NIAIxIFRS	0.1052	-0.0752	0.0835	0.0906	0.184	-0.0341	0.2927	-0.1599	-0.0613	0.1188	0.9285	-0.0698	-0.0994	0.3393
LN(FINPOS)xIFRS	0.0615	0.0156	0.1934	0.2827	0.1725	0.0938	0.0403	-0.0865	-0.0001	0.0558	0.257	-0.079	-0.1615	0.0911
IFRS32008xIGW	-0.0441	-0.07	-0.0109	0.0922	0.0765	-0.0514	0.2872	0.0115	-0.0201	0.0492	0.1675	-0.0541	0.0864	0.0244
IFRS32008xNASACQ	-0.0222	-0.0404	-0.0047	0.1008	0.0727	-0.0726	0.0967	0.0195	-0.0449	0.0371	0.2235	-0.0299	-0.0261	0.2585
IFRS32010xIGW	0.0166	-0.0921	-0.0193	0.1029	0.0395	-0.0644	0.2796	-0.0445	-0.0266	0.0357	0.1197	-0.0539	-0.111	-0.0215
IFRS32010xNASACQ	0.0113	-0.0624	0.0332	0.0706	0.0566	-0.0737	0.1974	-0.0213	0.0145	0.0214	0.0435	-0.0365	-0.0309	0.0432
IFRS72005xLN(FINPOS)	0.1427	0.0867	0.0638	-0.0035	0.0721	0.0209	0.0027	0.028	0.0487	0.0539	0.1331	0.0861	-0.3517	0.0299
IFRS72008xLN(FINPOS)	-0.0733	0.0658	0.1498	0.2612	0.115	0.0118	0.0532	-0.0477	-0.0423	-0.0699	0.1391	-0.1082	0.138	-0.0727
IFRS82006xLN(FINPOS)	0.0931	0.22	0.241	0.1231	0.0786	0.0486	0.0275	-0.0656	0.0114	-0.1076	0.0979	0.0585	-0.0468	0.009
IFRS82006xLN(FRMSTR)	0.0929	0.2181	0.2395	0.1242	0.0806	0.0476	0.0273	-0.0647	0.0105	-0.1071	0.0975	0.0559	-0.0459	0.0082
MANDG	0.0068	0.0146	-0.0952	0.1903	0.1614	-0.0656	0.262	0.164	-0.147	0.0756	-0.1037	-0.0569	0.0454	0.1037
VOLUG	-0.0068	-0.0146	0.0952	-0.1903	-0.1614	0.0656	-0.262	-0.164	0.147	-0.0756	0.1037	0.0569	-0.0454	-0.1037
IFRS	0.0612	0.0109	0.1855	0.2717	0.1586	0.0933	0.0317	-0.0718	-0.0132	0.073	0.2538	-0.0839	-0.1511	0.0999
IFRS32008	-0.0958	-0.0247	0.0674	0.1885	0.1154	0.0092	0.058	0.0042	-0.0535	0.0237	0.0972	-0.0719	0.1362	-0.041
IFRS32010	0.0518	-0.111	0.0644	0.2097	0.0419	0	0.0335	-0.0967	-0.0721	0.031	0.0504	-0.0683	-0.2735	-0.1007
IFRS72005	0.1409	0.0823	0.0609	-0.0033	0.0699	0.0195	0.0012	0.0328	0.0429	0.0614	0.136	0.0816	-0.3492	0.0326
IFRS72008	-0.0716	0.0682	0.1492	0.2596	0.1104	0.0096	0.0522	-0.0463	-0.0454	-0.0705	0.1418	-0.1085	0.1371	-0.0696
IFRS82006	0.0913	0.2172	0.2383	0.1205	0.0731	0.0478	0.0263	-0.063	0.0075	-0.1042	0.099	0.0562	-0.0492	0.0128

Table A1.1 Correlation Matrix (continued)

	VOLATILITY	LN(MRKT)	LN(FRMSTR)	LN(CORPGOV)	LN(BRND)	LN(FINPOS)	LN(REAGC)	MANDGxIFRS	VOLUGxIFRS	IGWxIFRS	EIGDxIFRS	NASACQxIFRS	NIAIxIFRS	LN(FINPOS)xIFRS
VOLATILITY	1													
LN(MRKT)	0.097	1												
LN(FRMSTR)	0.0909	0.9744	1											
LN(CORPGOV)	0.0403	0.9012	0.916	1										
LN(BRND)	-0.1185	0.6773	0.6701	0.6654	1									
LN(FINPOS)	0.1121	0.9253	0.9573	0.885	0.5698	1								
LN(REGACC)	0.1195	0.8196	0.8624	0.8386	0.509	0.8487	1							
MANDGxIFRS	0.0273	0.3522	0.3858	0.3698	0.0281	0.356	0.4734	1						
VOLUGxIFRS	-0.1513	0.0453	0.0305	0.0784	0.2108	0.0622	-0.0648	-0.5587	1					
IGWxIFRS	-0.2347	0.1936	0.2303	0.2629	0.044	0.2559	0.2882	0.4249	-0.0348	1				
EIGDxIFRS	0.0625	0.0146	0.0492	0.0293	-0.0397	0.0998	0.0056	0.0782	0.0269	0.0946	1			
NASACQxIFRS	-0.1768	-0.0186	0.0203	-0.0242	-0.031	0.0059	0.0834	0.2086	0.0171	0.3246	-0.0537	1		
NIAIxIFRS	-0.2891	0.2049	0.224	0.172	0.1621	0.2318	0.2186	0.0801	0.3351	0.4743	0.0118	0.4182	1	
LN(FINPOS)xIFRS	-0.125	0.4545	0.4734	0.5047	0.2933	0.481	0.45	0.3945	0.5393	0.3942	0.1134	0.2178	0.4571	1
IFRS32008xIGW	-0.0836	0.1671	0.1847	0.2227	0.1109	0.1769	0.2451	0.1696	-0.0148	0.3622	-0.0322	0.0445	0.195	0.1639
IFRS32008xNASACQ	-0.1138	0.04	0.0644	0.0631	0.0635	0.0347	0.1104	0.0774	-0.003	0.1299	-0.02	0.2857	0.2334	0.0741
IFRS32010xIGW	-0.1035	0.1783	0.1877	0.2377	0.1275	0.1858	0.2318	0.1515	-0.0139	0.3478	-0.0351	-0.0064	0.1446	0.1483
IFRS32010xNASACQ	-0.0882	0.1312	0.1285	0.1682	0.0865	0.1139	0.1681	0.1505	-0.0561	0.2428	-0.0249	0.057	0.0605	0.0953
IFRS72005xLN(FINPOS)	-0.074	0.1419	0.1594	0.1482	0.0933	0.1416	0.0834	0.1606	0.1454	0.1166	0.1688	0.071	0.1967	0.3225
IFRS72008xLN(FINPOS)	0.1012	0.369	0.3552	0.3879	0.2421	0.3562	0.3591	0.1961	0.1214	0.1739	-0.0592	-0.0378	0.2044	0.3526
IFRS82006xLN(FINPOS)	0.0329	0.1993	0.2037	0.2117	0.0882	0.2193	0.2069	0.2135	0.0743	0.1339	0.1307	0.0454	0.1568	0.305
IFRS82006x LN(FRMSTR)	0.0317	0.2011	0.2052	0.2132	0.0909	0.2197	0.2084	0.214	0.0738	0.1337	0.1276	0.0446	0.1565	0.305
MANDG	0.1905	0.1909	0.2257	0.1854	-0.0866	0.1797	0.3463	0.7253	-0.7702	0.2007	0.0193	0.0804	-0.1434	-0.1169
VOLUG	-0.1905	-0.1909	-0.2257	-0.1854	0.0866	-0.1797	-0.3463	-0.7253	0.7702	-0.2007	-0.0193	-0.0804	0.1434	0.1169
IFRS	-0.1418	0.4029	0.4199	0.4573	0.2636	0.4255	0.401	0.3758	0.5587	0.386	0.1082	0.2277	0.4545	0.9971
IFRS32008	0.037	0.2604	0.2621	0.3052	0.1701	0.2548	0.2881	0.1245	0.0916	0.1421	-0.0381	-0.0165	0.1418	0.2421
IFRS32010	0.0169	0.2888	0.2908	0.3441	0.2245	0.2755	0.2874	0.1139	0.0871	0.1108	-0.0359	-0.0818	0.0928	0.229
IFRS72005	-0.0781	0.1316	0.1484	0.1385	0.0889	0.1288	0.0731	0.1552	0.1505	0.1151	0.1636	0.0739	0.1996	0.3215
IFRS72008	0.0967	0.3563	0.3417	0.3768	0.2354	0.342	0.3462	0.1889	0.1281	0.1729	-0.0595	-0.0344	0.2071	0.3514
IFRS82006	0.0282	0.1871	0.1907	0.2001	0.081	0.2055	0.1928	0.2067	0.0806	0.1327	0.1281	0.0495	0.158	0.3039

	IFRS32008xIGW	IFRS32008xNASACQ	IFRS32010xIGW	IFRS32010xNASACQ	IFRS72005xLN(FINPOS)	IFRS72008xLN(FINPOS)	IFRS82006xLN(FINPOS)	IFRS82006xLN(FRMSTR)	MANDG	VOLUG	IFRS	IFRS32008	IFRS32010	IFRS72005
IFRS32008xIGW	1													
IFRS32008xNASACQ	0.3911	1												
IFRS32010xIGW	-0.0562	-0.0272	1											
IFRS32010xNASACQ	-0.036	-0.0174	0.6822	1										
IFRS72005xLN(FINPOS)	-0.1315	-0.0636	-0.1188	-0.0759	1									
IFRS72008xLN(FINPOS)	0.4625	0.2183	-0.0532	-0.0663	-0.2852	1								
IFRS82006xLN(FINPOS)	0.0363	-0.0494	-0.109	-0.0697	0.1459	0.4433	1							
IFRS82006x LN(FRMSTR)	0.0374	-0.0493	-0.109	-0.0697	0.1452	0.4448	0.9999	1						
MANDG	0.0806	0.0348	0.0713	0.0941	-0.0082	0.0197	0.0522	0.0527	1					
VOLUG	-0.0806	-0.0348	-0.0713	-0.0941	0.0082	-0.0197	-0.0522	-0.0527	-1	1				
IFRS	0.153	0.074	0.1359	0.0879	0.3231	0.3318	0.2965	0.2964	-0.1352	0.1352	1			
IFRS32008	0.6747	0.3264	-0.0834	-0.0533	-0.1949	0.6846	0.0444	0.0454	0.0048	-0.0048	0.2268	1		
IFRS32010	-0.0882	-0.0427	0.6374	0.4075	-0.1863	-0.0458	-0.171	-0.171	0	0	0.2112	-0.1308	1	
IFRS72005	-0.1316	-0.0637	-0.1188	-0.076	0.9993	-0.2854	0.1438	0.143	-0.0133	0.0133	0.3233	-0.1951	-0.1864	1
IFRS72008	0.4608	0.2229	-0.0556	-0.0668	-0.2855	0.9992	0.4457	0.4472	0.0131	-0.0131	0.3321	0.6829	-0.0508	-0.2857
IFRS82006	0.0324	-0.0497	-0.1091	-0.0697	0.147	0.4392	0.9992	0.9991	0.0459	-0.0459	0.2967	0.0386	-0.1711	0.1453

Table A1.1 Correlation Matrix (continued)

	IFRS7 2008	IFRS8 2006
IFRS72008	1	
IFRS82006	0.4425	1

The above variables are computed as:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(ln(SIZE)) is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW) is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(MANDG) is an indicator variable that takes the value of 1 if the company is a German mandatory adopter and 0 otherwise.

(VOLUG) is an indicator variable that takes the value of 1 if the company is a German voluntary adopter and 0 otherwise.

(IFRS) is an indicator variable = 1 if firm i reports under IFRS in year *t*, and 0 otherwise. For voluntary adopters in Germany it represents the financial year of 2005; when IFRS was mandated in the EU.

(MANDGxIFRS) is an interaction term computed by multiplying ***(MANDG)*** with ***(IFRS).***

(VOLUGxIFRS) is an interaction term computed by multiplying ***(VOLUG)*** with ***(IFRS).***

(IGWxIFRS) is an interaction term computed by multiplying ***(IGW)*** with ***(IFRS).***

(EIGDxIFRS) is an interaction term computed by multiplying ***(EIGD)*** with ***(IFRS).***

(NASACQxIFRS) is an interaction term computed by multiplying ***(NASACQ)*** with ***(IFRS).***

(*NIAIxIFRS*) is an interaction term computed by multiplying ***(NIAI)*** with ***(IFRS).***

(LN(FINPOS)xIFRS) is an interaction term computed by multiplying ***(LN(FINPOS))*** with ***(IFRS).***

(IFRS32008xIGW) is an interaction term computed by multiplying (***IFRS32008)*** with (***IGW).***

(IFRS32008xNASACQ) is an interaction term computed by multiplying (***IFRS32008)*** with (***NASACQ).***

(IFRS32008) is an indicator variable = 1 if firm i uses IFRS3 (2008) in year *t*, and 0 otherwise.

(IFRS32010xIGW) is an interaction term computed by multiplying (***IFRS32008)*** with (***IGW).***

(IFRS32010xNASACQ) is an interaction term computed by multiplying (***IFRS32008)*** with (***NASACQ).***

(IFRS32010) is an indicator variable = 1 if firm i uses IFRS3 (2010) in year *t*, and 0 otherwise.

(IFRS72005xLN(FINPOS)) is an interaction term computed by multiplying (***IFRS72005)*** with (***LN(FINPOS)).***

(IFRS72005) is an indicator variable = 1 if firm i uses IFRS7 (2005) in year *t*, and 0 otherwise.

(IFRS72008xLN(FINPOS)) is an interaction term computed by multiplying ***IFRS72008*** with (***LN(FINPOS)).***

(IFRS72008) is an indicator variable = 1 if firm i uses IFRS7 (2008) in year *t*, and 0 otherwise.

(IFRS82006)xLN(FINPOS)) is an interaction term computed by multiplying (***IFRS872006)*** with (***LN(FINPOS).***

(IFRS82006xLN(FRMSTR)) is an interaction term computed by multiplying (***IFRS82006)*** with (***LN(FRMSTR)).***

(IFRS82006) is an indicator variable = 1 if firm i uses IFRS8 (2006) in year *t*, and 0 otherwise.

Appendix 2. Winsorisation

Table A2.1 - Winsorisation		
The issue of outliers is addressed by winsorising at the 1st and 99th percentile for all continuous variables. The following boundaries are estimated for each continuous variable.		
Variable	**99%**	**1%**
MFE MEAN	1.81	-1.62
MFA MEAN	3.16	0.00
MFD	5.67	0.02
NOA	36.00	2.77
ln(SIZE)	18.54	13.16
ln(AGE)	3.89	2.40
IGW	1.06	0.00
BM	25.11	-10.96
DE	8.40	-8.21
ROA	0.31	-0.16
NIAI	0.50	0.00
EIGD	0.99	-0.81
RETURNS	1.38	-0.69
NASACQ	0.31	0.00
VOLATILITY	0.52	0.15
MRKT	6788.83	513.77
FRMSTR	11532.05	977.89
CORPGOV	7902.17	647.42
BRND	1709.50	49.28
FINPOS	15643.51	1153.00
REGACC	1743.57	64.58

Appendix 3. Beattie (2004) framework and Custom Dictionary

Table A3.1 - Beattie et al. (2004) Disclosure Framework and Dictionary Reconciliation
Note: Each category that is irrelevant or not captured by the custom dictionary because it appears vague is marked as "X".

Category in Custom Dictionary	Category in Beattie's (2004) framework
2	BD Business description
2	BUS General development of business
2	PROD Principal products/services
1	MKT Principal markets and market segments
X	PRO Processes
1	MAC Types of macroeconomic activity that management believes are closely correlated with business revenues or expenses
2	PAT Description of important patents, trademarks, licenses, franchises, etc.
5	PROPS Location, nature, capacity and utilization of physical properties
2	RELA Major contractual relationships
1	INP Key inputs
6	REG Existing and proposed laws and regulations that could impact business significantly
2	DIST Distribution and delivery methods
1	IND Industry
X	SEAS Seasonality and cyclicality
5	FIN Financial information
5	PROF Profit and profitability measures, including EPS
5	SAL Sales
5	CF Cashflow
5	OTH Other
5	DEBT Debt

Table A3.1 - Beattie et al. (2004) Disclosure Framework and Dictionary Reconciliation

Category in Custom Dictionary	Category in Beattie's (2004) framework
5	GEAR Gearing
5	INT Interest
5	TAX Tax
5	CAPEX Capital expenditure
5	WC Working capital
5	INTCOV Interest cover
5	DIV Dividends
5	PENS Pensions
3	MA Management analysis
1	MKT Reasons for change in market acceptance
5	PROF Reasons for change in profitability
1	MAC Identity and past effect of key macroeconomic trends
X	OTH Reasons for change, other
X	UNU Identity, effect of unusual or nonrecurring transactions and events
5	RAT Reasons for change in ratios
5	LIQ Reasons for change in liquidity and financial flexibility
6	REG Identity and past effect of key regulatory trends
5	FPOS Reasons for change in financial position
2	INN Reasons for change in innovation
1	SOC Identity and past effect of key social trends
1	TECH Identity and past effect of key technological trends
1	POL Identity and past effect of key political trends
1	DEM Identity and past effect of key demographic trends
3	MS Management and shareholder information
3	MGT Identity and background of directors and executive management

Table A3.1 - Beattie et al. (2004) Disclosure Framework and Dictionary Reconciliation	
Category in Custom Dictionary	Category in Beattie's (2004) framework
3	SH Identity and number of shares owned by major owners; number of shares owned by directors, management and employees, each as a group
3	RELA Transactions and relationships among related parties
3	COMP Types and amount of director and executive management compensation and methods of computation
X	DIS Nature of disagreements with former business advisors
2	OP Operating data
1,2,5	REV Revenues e.g. level and changes in units and prices, market share
3,5	COST Costs, e.g. number of employees, average compensation per employee
3	EMP Employee involvement and fulfilment, e.g. level and changes in employee satisfaction
2	PRODY Productivity, e.g. input/output ratio
3	RES Amount and quality of key resources, including human resources, e.g. average age
X	MAT Volume and prices of materials used
4	QUAL Quality e.g. customer satisfaction, % defects, backlog
2	INN Innovation, e.g.% current production designed in period
3	TIME Time required to perform key activities, e.g. production, delivery, new product development
X	OUT Outlets
5	FL Forward-looking information
2	PLAN Activities and plans to meet broad objectives and business strategy
2	RISK Nature and cause of risks
2	OPP Nature and cause of opportunities
3	FACINT Factors that management believes must be present, occurring within the busines
2	OTH Non-specific evaluation of future outcomes/performance

Table A3.1 - Beattie et al. (2004) Disclosure Framework and Dictionary Reconciliation	
Category in Custom Dictionary	Category in Beattie's (2004) framework
1	FACEXT Factors that management believes must be present, occurring outside the business
2	DIFF Identity of major differences between actual business performance and previously disclosed opportunities, risks and management plans
2,5	EFF Effects of opportunities and risks on future core earnings and cash flows
X	NOT Not Jenkins
3	EMP Employees
X	OTHLINK Link to another part of the annual report or other source
4	COM Business and local community
6	STD Accounting standards and impact
1	ENV Environmental
2	CUS Customers
3	OTHTH Thanks to/recognition of support of/expression of appreciation of stakeholder group/directors
6	POL Accounting policies and impact
X	CHYE Change in financial year-end
1	SUP Suppliers
X	BOS
2	OBJ Broad objectives, quantified where practical
2	STRAT Principal strategies to achieve objectives
1,2	CONSIS Discussion of consistency of strategy with key trends
1	Industry structure
1	COMP Intensity of industry competition, dispersion of competitors and identity of major competitors; measures of intensity of competition, e.g. relative price changes, customer switches
1,2	CUS Bargaining power of customers, extent of dispersion, including concentration measure identity of dominant customers; measures of relative bargaining power, e.g. recent price changes

Table A3.1 - Beattie et al. (2004) Disclosure Framework and Dictionary Reconciliation	
Category in Custom Dictionary	Category in Beattie's (2004) framework
1,2	SUP Bargaining power of resource providers; identity of types of major resource and related suppliers; for each type, availability of supply; measures of relative bargaining power, e.g. recent price changes

Table A3.2 – Custom dictionary				
Dictionary Code	**Disclosure Categories**			
1	markt	Market risk, industry analysis and competitive forces		
2	frmstr	Firm strategy, product market performance, performance of business strategy model		
3	corpgov	Human and organisational capital, management performance, corporate governance and leadership		
4	brnd	Market recognition, power and consistency of brand		
5	finpos	Corporate and business performance and financial position		
6	regacc	Government regulation, accounting regulation, disclosure practices		
aasb	6			
access	1			
account deficit	1			
account surplus	1			
accountability	2			
accountancy regulation	6			
accounting law	6			
accounting laws	6			
accounting legislation	6			
accounting legislations	6			
accounting policies	6			
accounting policy	6			
accounting practice	6			
accounting practices	6			
accounting principle	6			
accounting principles	6			
accounting requirement	6			

Table A3.2 – Custom dictionary (continued)				
accounting requirements	6			
accounting standard	6			
accounting standards	6			
accounting system	5			
accounting systems	5			
accrual*	5			
accrued income	5			
acquisition*	2			
actuarial gain	5			
actuarial gains	5			
actuarial loss	5			
actuarial losses	5			
ad budget	4			
ad spend	4			
advancement*	3			
advertis*	4			
advertising allocation	4			
advertising allocations	4			
advertising budget	4			
advertising spend	4			
advertiz*	4			
advertizing allocation	4			
advertizing allocations	4			
advertizing budget	4			
advertizing spend	4			
agreement*	2			
alliance*	1	2		
amf	6			
amortis*	5			
amortiz*	5			
announcement*	4			
antitrust	6			
apprentice*	3			
asset*	2	5		
assurance	3			
audit*	3			

Table A3.2 – Custom dictionary (continued)				
authorit*	6			
awareness	4			
balance sheet	5			
barrier*	1			
board	3			
bond*	5			
bonus*	3			
borrowing*	5			
brand*	1	4		
budget deficit	1			
budget surplus	1			
building*	5			
business*	2			
buyer*	1	2		
cafc	6			
call option	5			
call options	5			
capacit*	1			
capital	1	2	5	
career*	3			
cash	5			
cash flow	5			
ceo*	3			
cfo*	3			
cgu*	2	5		
chairman*	3			
channel*	1	4		
character	4			
cnc	6			
commerce	6			
commercial code	6			
commercial paper	5			
commercial papers	5			
communit*	4			
compensation*	3			
competence*	2			

Table A3.2 – Custom dictionary (continued)				
competition*	1			
competitive*	1			
competitor*	1			
complementar*	2			
compliance	6			
concentration*	1			
confidence	4			
congress	6			
consortium	2			
consumer right	6			
consumer rights	6			
consumer*	1	2	4	
coo	3			
corporat*	3			
corporate image	4			
cost*	1	2	5	
coupon payment	5			
coupon payments	5			
covenant*	2			
credit*	5			
crisis	1			
csr	2	3		
cultur*	3			
currenc*	1	5		
customer*	1	2	4	
cva	5			
debenture*	5			
debt*	5			
deferred income	5			
deflat*	1			
demerger*	2			
demographic*	1			
deposit*	5			
depreciat*	5			
deregulation	6			
derivative*	5			

Table A3.2 – Custom dictionary (continued)				
development*	3			
direct	4			
director*	3			
disclosure*	3			
discount rate	5			
discount rates	5			
discover*	2			
disposal*	2	5		
distribution*	2			
dividend*	5			
domestic demand	1			
domestic demands	1			
dominant	1			
durability	4			
earning*	5			
ebit*	5			
ec directive	6			
ecj	6			
economic*	1			
economy	1			
efficiency gain	2	5		
efficiency gains	2	5		
emerging economies	1			
emerging economy	1			
employee*	3			
employment	1			
enacted	6			
entrant*	1			
entry	2			
environment*	1			
eps	5			
equipment	2	5		
equit*	2	5		
euribor	1			
eurobond*	5			
european commission	6			

Table A3.2 – Custom dictionary (continued)				
european council	6			
european councils	6			
eva	5			
exchange commission	6			
exchange rate	5			
exchange rates	5			
executive officer	3			
executive officers	3			
executive*	3			
exit	1			
expan*	3			
expen*	5			
experience*	3			
expert*	6			
exploration*	2			
export*	1	2		
fda	6			
federal	6			
feedback	3	4		
financial condition	2	5		
financial instrument	2	5		
financial instruments	2	5		
financial obligation	2	5		
financial obligations	2	5		
financial officer	3			
financial officers	3			
financial performance	2	5		
financial position	2	5		
financial reporting	5	6		
financial statement	5			
financial statements	5			
financing activities	2	5		
financing activity	2	5		
first mover	1			
fixed income	5			
forecast*	5			

Table A3.2 – Custom dictionary (continued)				
foreign demand	1			
foreign exchange	1	5		
forward contract	5			
forward contracts	5			
franchise*	2			
frs*	6			
fsa	6			
ftc	6			
gaap*	6			
gdp	1			
gearing	5			
general meeting	3			
globalisation	1			
globalization	1			
goal	3			
goodwill	5			
governance	3			
government*	1			
green field	2			
gross	5			
growth	1	2	3	
hearings	6			
hedg*	5			
hgb*	6			
hmrc	6			
hyperinflation	1			
ias*	6			
iasb	6			
iasc	6			
icmm	6			
ifric	6			
ifrs*	6			
image	4			
impair*	5			
incentive*	3			
income from	5			

Table A3.2 – Custom dictionary (continued)				
income statement	5			
industr*	1	6		
inflation*	1			
information	3			
innovat*	2			
input	1			
insider buy	5			
insider sell	5			
intangible*	5			
integration	1			
integrity	4			
interest rate	1	5		
interest rates	1	5		
internal control	3			
internal controls	3			
international mobility	3			
international trade	1			
internet	4			
internship*	3			
interpretations committee	6			
inventories	5			
inventory	5			
investing activities	2	5		
investing activity	2	5		
investment*	2			
investor*	1	2	3	
ipo	5			
job rotation	3			
joint	2			
jurisdiction*	6			
land*	5			
law*	6			
layoff*	3			
lead*	2	3		
lease agreement	5			
lease agreements	5			

Table A3.2 – Custom dictionary (continued)				
lease contract	5			
lease contracts	5			
lease obligation	5			
lease obligations	5			
lease payment	5			
lease payments	5			
lease transfer	5			
lease transfers	5			
legal	6			
legislat*	6			
lending*	5			
lever*	5			
liabilit*	5			
libor	1			
licen*	4	2		
liquidity	5			
litigation*	1			
loan*	5			
lobby*	6			
logistics	2			
macroeconomic*	1			
management*	3			
manager*	3			
mandate*	3			
margin*	5			
market	1			
marketing*	4			
markets	1			
media	4			
media budget	4			
media spend	4			
medicaid	6			
medicare	6			
merchandising*	2			
merchandizing*	2			
merger*	2			

Table A3.2 – Custom dictionary (continued)				
minority interest	2	5		
minority interests	2	5		
model*	2			
monitor*	2			
name*	4			
national council	6			
net	5			
newspaper*	4			
objective*	3			
operating activities	2			
operating activity	2			
operating income	5			
operating lease	5			
operating leases	5			
operating officer	3			
operating officers	3			
operating result	5			
operating results	5			
operating segment	2	5		
operating segments	2	5		
operational efficiency	2			
operational excellence	2			
operational productivity	2			
opportunit*	2			
order book	2			
outsourcing	2	3		
overdraft*	5			
overhead*	5			
oversight*	3			
owner*	3			
partner*	2	1		
patent*	2			
patient right	6			
patient rights	6			
payable*	5			
payroll*	3			

Table A3.2 – Custom dictionary (continued)				
pcg*	6			
pension*	3	5		
performance	2	3	5	
personnel	3			
plant	2	5		
political	1			
price*	1	2	5	
private consumption	1			
privatisation*	2			
privatization*	2			
product*	1	2		
profit*	1	2	3	5
projected	3			
projections	3			
promotion*	4			
propert*	2	5		
prospectus	5			
provision*	5			
public offering	5			
public offerings	5			
purchase*	1			
put option	5			
put options	5			
quality	1	2	3	4
quarterly	5			
r&d	2			
radio	4			
rating*	5			
receivable*	5			
recession*	1			
recognition*	4			
record	3			
recruitment*	3			
redundan*	3			
regulat*	1	2	3	6
relationship	2			

Table A3.2 – Custom dictionary (continued)				
release*	4			
renumeration	3			
reporting standard	6			
reporting standards	6			
reputation	4			
research	2			
reserve*	5			
resource*	2			
responsibilit*	3			
retain	3			
retention	3			
retirement*	3			
return on	5			
revenue*	2			
risk management	5			
risk*	2			
rivalr*	1			
roa	5			
roce	5			
roe	5			
roi	5			
salar*	3			
sales	2	5		
satisfaction	4			
scale*	1			
scorecard	3			
sec	6			
sector*	1			
securities	5			
segment*	1			
service*	2			
share	2	5		
share capital	5			
shareholder	3			
shareholder return	2	3	5	
shareholder returns	2	3	5	

Table A3.2 – Custom dictionary (continued)				
shareholders	3			
shareholders' funds	5			
shares	2	5		
social	1			
socioeconomic*	1			
solution	2			
solvency	5			
special interest	6			
staff	3			
stock*	5			
strateg*	2			
strength	4			
stretch	4			
subsidiar*	2			
substitute*	1			
supervisory board	3			
supplier*	1	2		
supply chain	2			
supply chains	2			
sustainability	2			
swap agreement	5			
swap agreements	5			
swap contract	5			
swap contracts	5			
swap instrument	5			
swap instruments	5			
switching	1			
synerg*	2	1		
takeover*	2			
tangible*	5			
tax*	5			
teamwork	3			
technolog*	1			
television	4			
tender offer	5			
tender offers	5			

Table A3.2 – Custom dictionary (continued)				
term borrowing	5			
term borrowings	5			
term note	5			
term notes	5			
testimon*	6			
trade act	6			
trade acts	6			
trade commission	6			
trademark*	4			
trading act	6			
trading acts	6			
trading practice	3			
trading practices	3			
trading rule	6			
trading rules	6			
training	3			
transaction cost	5			
transaction costs	5			
transaction*	5			
transparen*	3			
trial	2			
trust	4			
trusted name	4			
turnover	2	5		
uncompetitive	1			
unemployment	1			
valuation*	5			
value*	1	2	3	5
vat	1	6		
venture*	1	2		
vocational contract	3			
vocational contracts	3			
volume	1			
voting right	3			
voting rights	3			
wage*	3			

Table A3.2 – Custom dictionary (continued)				
warrant	5			
warrants	5			
watchdog	6			
workforce	3			
working capital	5			
write down	5			
write downs	5			
write off	5			
write offs	5			

Appendix 4. Supplementary tests of Chapter 7.

Chapter 7 - Ordinary Least Squares

The results in this section present the empirical results before and after the adoption of each standard and are complementary to Tables 7.1 – 7.25 of Chapter 7.

For the reader's convenience, we set out the variables' description, regression model and tables' description below before the relevant tables.

The regression model is:

$$\begin{aligned}\boldsymbol{Dependent\ variable} &= \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} \\ &+ \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} \\ &+ \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} \\ &+ \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} \\ &+ \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \varepsilon_{it}\end{aligned}$$

The variables in Appendix 4. are defined as follows:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(*ln(SIZE))* is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW) is the goodwill intensity measured as gross goodwill over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(MANDG) is an indicator variable that takes the value of 1 if the company is a German mandatory adopter and 0 otherwise.

(VOLUG) is an indicator variable that takes the value of 1 if the company is a German voluntary adopter and 0 otherwise.

(IFRS) is an indicator variable = 1 if firm i reports under IFRS in year *t*, and 0 otherwise. For voluntary adopters in Germany it represents the financial year of 2005; when IFRS was mandated in the EU.

(MANDGxIFRS) is an interaction term computed by multiplying ***(MANDG)*** with ***(IFRS).***

(VOLUGxIFRS) is an interaction term computed by multiplying ***(VOLUG)*** with ***(IFRS).***

(IGWxIFRS) is an interaction term computed by multiplying ***(IGW)*** with ***(IFRS).***

(EIGDxIFRS) is an interaction term computed by multiplying ***(EIGD)*** with ***(IFRS).***

(NASACQxIFRS) is an interaction term computed by multiplying ***(NASACQ)*** with ***(IFRS).***

(*NIAIxIFRS*) is an interaction term computed by multiplying ***(NIAI)*** with ***(IFRS).***

(LN(FINPOS)xIFRS) is an interaction term computed by multiplying ***(LN(FINPOS))*** with ***(IFRS).***

(IFRS32008xIGW) is an interaction term computed by multiplying (***IFRS32008)*** with (***IGW).***

(IFRS32008xNASACQ) is an interaction term computed by multiplying (***IFRS32008)*** with (***NASACQ).***

(IFRS32008) is an indicator variable = 1 if firm i uses IFRS3 (2008) in year *t*, and 0 otherwise.

(IFRS32010xIGW) is an interaction term computed by multiplying (***IFRS32008)*** with (***IGW).***

(IFRS32010xNASACQ) is an interaction term computed by multiplying (***IFRS32008)*** with (***NASACQ).***

(IFRS32010) is an indicator variable = 1 if firm i uses IFRS3 (2010) in year *t*, and 0 otherwise.

(IFRS72005xLN(FINPOS)) is an interaction term computed by multiplying (***IFRS72005)*** with (***LN(FINPOS)).***

(IFRS72005) is an indicator variable = 1 if firm i uses IFRS7 (2005) in year *t*, and 0 otherwise.

(IFRS72008xLN(FINPOS)) is an interaction term computed by multiplying (***IFRS72008)*** with (***LN(FINPOS)).***

(IFRS72008) is an indicator variable = 1 if firm i uses IFRS7 (2008) in year *t*, and 0 otherwise.

(IFRS82006)xLN(FINPOS)) is an interaction term computed by multiplying (***IFRS872006)*** with (***LN(FINPOS)).***

(IFRS82006xLN(FRMSTR)) is an interaction term computed by multiplying (***IFRS82006)*** with (***LN(FRMSTR)).***

(IFRS82006) is an indicator variable = 1 if firm i uses IFRS8 2006 in year *t*, and 0 otherwise.

For IFRS3 (2008):

Table A4.1 – Ordinary Least Squares regression results for UK companies reporting before IFRS3 (2008)
Table A4.2 – Ordinary Least Squares regression results for UK companies reporting under IFRS3 (2008)
Table A4.3 – Ordinary Least Squares regression results for French companies reporting before IFRS3 (2008)
Table A4.4 – Ordinary Least Squares regression results for French companies reporting under IFRS3 (2008)
Table A4.5 – Ordinary Least Squares regression results for all German companies reporting before IFRS3 (2008)
Table A4.6 – Ordinary Least Squares regression results for all German companies reporting under IFRS3 (2008)
Table A4.7 – Ordinary Least Squares regression results for German mandatory adopters reporting before IFRS3 (2008)
Table A4.8 – Ordinary Least Squares regression results for German mandatory adopters reporting after IFRS3 (2008)
Table A4.9 – Ordinary Least Squares regression results for German voluntary adopters reporting before IFRS3 (2008)
Table A4.10 – Ordinary Least Squares regression results for German voluntary adopters reporting under IFRS3 (2008)

For IFRS3 (2010):

Table A4.11 – Ordinary Least Squares regression results for UK companies reporting before IFRS3 (2010)
Table A4.12 – Ordinary Least Squares regression results for UK companies reporting after IFRS3 (2010)
Table A4.13 – Ordinary Least Squares regression results for French companies reporting before IFRS3 (2010)
Table A4.14 – Ordinary Least Squares regression results for French companies reporting after IFRS3 (2010)

Table A4.15 – OLS regression results for all German companies reporting before IFRS3 (2010)
Table A4.16 – Ordinary Least Squares regression results for all German companies reporting after IFRS3 (2010)
Table A4.17 – OLS regression results for German mandatory adopters reporting before IFRS3 (2010)
Table A4.18 – OLS regression results for German mandatory adopters reporting after IFRS3 (2010)
Table A4.19 – OLS regression results for German voluntary adopters reporting before IFRS3 (2010)
Table A4.20 – OLS regression results for German voluntary adopters reporting after IFRS3 (2010)

For IFRS7 (2005):

Table A4.21 – OLS regression results for UK companies reporting before IFRS7 (2005)
Table A4.22 – OLS regression results for UK companies reporting after IFRS7 (2005)
Table A4.23 – OLS regression results for French companies reporting before IFRS7 (2005)
Table A4.24 – OLS regression results for French companies reporting after IFRS7 (2005)
Table A4.25 – OLS regression results for all German companies reporting before IFRS7 (2005)
Table A4.26 – OLS regression results for all German companies reporting after IFRS7 (2005)
Table A4.27 – OLS regression results for German mandatory adopters reporting before IFRS7 (2005)
Table A4.28 – OLS regression results for German mandatory adopters reporting after IFRS7 (2005)
Table A4.29 – OLS regression results for German voluntary adopters reporting before IFRS7 (2005)
Table A4.30 – OLS regression results for German voluntary adopters reporting after IFRS7 (2005)

For IFRS7 (2008):

Table A4.31 – OLS regression results for UK companies reporting before IFRS7 (2008)
Table A4.32 – OLS regression results for UK companies reporting after IFRS7 (2008)
Table A4.33 – OLS regression results for French companies reporting before IFRS7 (2008)
Table A4.34 – OLS regression results for French companies reporting after IFRS7 (2008)
Table A4.35 – OLS regression results for all German companies reporting before IFRS7 (2008)
Table A4.36 – OLS regression results for all German companies reporting under IFRS7 (2008)
Table A4.37 – OLS regression results for German mandatory adopters reporting before IFRS7 (2008)
Table A4.38 – OLS regression results for German mandatory adopters reporting after IFRS7 (2008)
Table A4.39 – OLS regression results for German voluntary adopters reporting before IFRS7 (2008)
Table A4.40 – OLS regression results for German voluntary adopters reporting under IFRS7 (2008)

For IFRS8 (2006):

Table A4.41 – OLS regression results for UK companies reporting before IFRS8 (2006)
Table A4.42 – OLS regression results for UK companies reporting after IFRS8 (2006)
Table A4.43 – OLS regression results for French companies reporting before IFRS8 (2006)
Table A4.44 – OLS regression results for French companies reporting after IFRS8 (2006)
Table A4.45 – OLS regression results for all German companies reporting before IFRS8 (2006)
Table A4.46 – OLS regression results for all German companies reporting after IFRS8 (2006)
Table A4.47 – OLS regression results for all German mandatory adopters reporting before IFRS8 (2006)
Table A4.48 – OLS regression results for all German mandatory adopters reporting after IFRS8 (2006)
Table A4.49 – OLS regression results for all German voluntary adopters reporting before IFRS8 (2006)

Table A4.50 – OLS regression results for all German voluntary adopters reporting after IFRS8 (2006)

Table A4.1 – Ordinary Least Squares regression results for UK companies reporting before IFRS3 (2008)				
	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.037***	0.034**	-0.498***	
	(0.01)	(0.02)	(0.05)	
ln(SIZE)	0.003	-0.008	-0.128***	1.789***
	(0.00)	(0.00)	(0.02)	(0.09)
ln(AGE)	-0.032***	0.001	0.946***	0.668***
	(0.01)	(0.01)	(0.04)	(0.15)
IGW	-0.021	-0.136***	-0.235**	1.584***
	(0.02)	(0.02)	(0.10)	(0.37)
BM	0.003***	-0.001	0.007	0.055***
	(0.00)	(0.00)	(0.00)	(0.02)
DE	0.006***	0.001	-0.046***	-0.394***
	(0.00)	(0.00)	(0.01)	(0.04)
ROA	-0.135*	-0.628***	-0.534*	4.263***
	(0.07)	(0.09)	(0.28)	(1.04)
NIAI	0.157***	0.310***	0.023	4.650***
	(0.04)	(0.08)	(0.18)	(0.57)
EIGD	-0.040*	-0.109***	0.251***	0.629
	(0.02)	(0.04)	(0.10)	(0.43)
RETURNS	-0.110***	0.048**	0.025	-1.047***
	(0.01)	(0.02)	(0.06)	(0.22)
NASACQ	0.077**	-0.260***	-0.945***	-4.937***
	(0.04)	(0.05)	(0.31)	(1.44)
VOLATILITY	0.101	0.960***	-2.744***	-4.780***
	(0.07)	(0.08)	(0.30)	(1.09)
LN(MRKT)	-0.027	-0.052**	-0.863***	-4.117***
	(0.02)	(0.02)	(0.19)	(0.70)
LN(FRMSTR)	0.169***	-0.201***	-0.685***	0.933
	(0.05)	(0.07)	(0.26)	(0.91)
LN(CORPGOV)	-0.091***	0.234***	1.460***	4.401***
	(0.02)	(0.03)	(0.13)	(0.56)
LN(BRND)	-0.022***	-0.046***	0.257***	2.977***
	(0.01)	(0.01)	(0.05)	(0.19)
LN(FINPOS)	-0.062**	0.110**	0.656***	1.044
	(0.03)	(0.05)	(0.18)	(0.67)
LN(REGACC)	-0.007	-0.002	-0.374***	-1.671***
	(0.01)	(0.01)	(0.06)	(0.27)
Constant	0.160*	-0.493***	-1.625**	-39.981***
	(0.08)	(0.11)	(0.66)	(2.66)
R-squared	0.051	0.130	0.195	0.367
Degrees of freedom	4853	4853	4853	4854
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.2 – Ordinary Least Squares regression results for UK companies reporting under IFRS3 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.051**	0.056**	-1.546***	
	(0.02)	(0.02)	(0.17)	
ln(SIZE)	0.038***	0.053***	-0.105*	1.683***
	(0.01)	(0.01)	(0.06)	(0.18)
ln(AGE)	-0.071***	0.038***	0.840***	0.247
	(0.01)	(0.01)	(0.08)	(0.27)
IGW	-0.266***	-0.099***	-1.007***	-5.726***
	(0.04)	(0.04)	(0.20)	(0.62)
BM	0.005**	0.004***	0.069***	0.192***
	(0.00)	(0.00)	(0.01)	(0.04)
DE	0.019**	-0.004	-0.204***	-1.122***
	(0.01)	(0.00)	(0.03)	(0.10)
ROA	-0.974***	-0.840***	-1.735**	-13.630***
	(0.16)	(0.16)	(0.74)	(2.14)
NIAI	1.045***	1.070***	-0.360	7.155***
	(0.19)	(0.19)	(0.33)	(1.32)
EIGD	-0.306***	-0.048	2.904***	1.307***
	(0.04)	(0.03)	(0.21)	(0.44)
RETURNS	-0.086***	-0.025*	0.605***	-0.944*
	(0.02)	(0.02)	(0.14)	(0.52)
NASACQ	-1.188***	-1.230***	5.967***	-29.495***
	(0.29)	(0.29)	(1.27)	(4.36)
VOLATILITY	0.278*	1.484***	-4.162***	-5.586***
	(0.15)	(0.14)	(0.52)	(2.01)
LN(MRKT)	-0.233***	-0.335***	-0.071	-13.074***
	(0.07)	(0.07)	(0.51)	(1.46)
LN(FRMSTR)	0.573***	0.345***	-0.088	12.667***
	(0.11)	(0.10)	(0.55)	(1.83)
LN(CORPGOV)	-0.004	0.233***	-1.213***	-6.997***
	(0.04)	(0.04)	(0.30)	(1.36)
LN(BRND)	-0.068***	0.018	0.740***	5.914***
	(0.01)	(0.01)	(0.12)	(0.40)
LN(FINPOS)	-0.256***	-0.371***	0.042	-1.962
	(0.07)	(0.06)	(0.35)	(1.34)
LN(REGACC)	-0.110***	-0.038	0.200	3.546***
	(0.04)	(0.03)	(0.18)	(0.70)
Constant	-0.229	-0.229	11.503***	9.920**
	(0.17)	(0.17)	(1.41)	(4.66)
R-squared	0.353	0.446	0.351	0.452
Degrees of freedom	1013	1013	1013	1014

* p<0.10, ** p<0.05, *** p<0.01

Table A4.3 – Ordinary Least Squares regression results for French companies reporting before IFRS3 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.229***	-0.116**	-0.136***	
	(0.05)	(0.05)	(0.04)	
ln(SIZE)	0.051***	-0.034**	-0.079***	4.805***
	(0.01)	(0.01)	(0.01)	(0.16)
ln(AGE)	-0.081*	0.156***	-0.282***	1.415***
	(0.04)	(0.04)	(0.03)	(0.51)
IGW	0.115***	-0.196***	-0.393***	7.186***
	(0.04)	(0.04)	(0.04)	(0.83)
BM	0.007	0.003	-0.078***	-0.172*
	(0.00)	(0.01)	(0.01)	(0.10)
DE	0.087***	0.039***	-0.125***	0.373***
	(0.01)	(0.01)	(0.02)	(0.09)
ROA	-0.709***	-2.783***	-0.108	-12.788***
	(0.17)	(0.28)	(0.19)	(2.04)
NIAI	-0.195***	-0.223***	0.003	-7.685***
	(0.04)	(0.07)	(0.05)	(0.91)
EIGD	0.118**	-0.679***	0.233***	-4.728***
	(0.05)	(0.12)	(0.06)	(0.57)
RETURNS	-0.111***	-0.247***	0.180***	-2.134***
	(0.02)	(0.03)	(0.03)	(0.31)
NASACQ	-0.269*	-0.064	-0.084	1.119
	(0.15)	(0.22)	(0.18)	(2.72)
VOLATILITY	-0.566***	0.966***	-0.703***	3.672**
	(0.15)	(0.17)	(0.11)	(1.83)
LN(MRKT)	0.261***	0.269***	0.046	1.313*
	(0.06)	(0.05)	(0.05)	(0.70)
LN(FRMSTR)	-0.336***	0.085	0.429***	-6.159***
	(0.08)	(0.09)	(0.10)	(1.36)
LN(CORPGOV)	-0.037	-0.161***	-0.503***	-0.322
	(0.03)	(0.03)	(0.05)	(0.62)
LN(BRND)	-0.057***	-0.086***	-0.036**	1.090***
	(0.01)	(0.02)	(0.01)	(0.23)
LN(FINPOS)	0.218***	-0.066	0.084*	4.044***
	(0.04)	(0.05)	(0.05)	(0.72)
LN(REGACC)	-0.102***	0.002	-0.042	-1.212***
	(0.02)	(0.03)	(0.03)	(0.36)
Constant	0.427*	0.060	3.379***	-52.941***
	(0.23)	(0.28)	(0.27)	(3.29)
R-squared	0.165	0.373	0.429	0.524
Degrees of freedom	2009	2009	2009	2010

* p<0.10, ** p<0.05, *** p<0.01

Table A4.4 – Ordinary Least Squares regression results for French companies reporting under IFRS3 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.281***	-0.264***	-0.118***	
	(0.05)	(0.08)	(0.04)	
ln(SIZE)	0.038	-0.277***	0.095***	3.804***
	(0.02)	(0.05)	(0.01)	(0.29)
ln(AGE)	-0.064*	0.021	0.078***	1.326*
	(0.04)	(0.08)	(0.03)	(0.70)
IGW	-0.053	-0.507***	-0.074	15.487***
	(0.09)	(0.18)	(0.06)	(1.69)
BM	-0.126***	0.110**	-0.148***	2.261***
	(0.02)	(0.05)	(0.01)	(0.33)
DE	-0.048	-0.211***	0.030	1.398**
	(0.03)	(0.08)	(0.03)	(0.55)
ROA	0.239	2.526**	-0.233	3.287
	(0.25)	(1.03)	(0.18)	(3.54)
NIAI	-0.235**	0.157	-0.399***	-3.942***
	(0.10)	(0.24)	(0.07)	(1.33)
EIGD	0.242***	1.243***	0.582***	-3.130*
	(0.09)	(0.23)	(0.09)	(1.84)
RETURNS	0.140***	-0.921***	0.122***	-1.699**
	(0.05)	(0.15)	(0.04)	(0.75)
NASACQ	1.569***	-14.319***	0.333	-37.020***
	(0.48)	(1.71)	(0.29)	(9.39)
VOLATILITY	-1.269***	-1.641**	0.313*	-3.394
	(0.24)	(0.66)	(0.16)	(3.58)
LN(MRKT)	0.132	-1.157***	0.155**	7.372***
	(0.13)	(0.28)	(0.07)	(1.45)
LN(FRMSTR)	-0.623***	1.724***	-0.283***	-11.995***
	(0.19)	(0.43)	(0.10)	(2.52)
LN(CORPGOV)	0.512***	0.560***	0.173***	-6.668***
	(0.07)	(0.19)	(0.06)	(1.22)
LN(BRND)	-0.044*	-0.128***	-0.060***	0.569*
	(0.02)	(0.05)	(0.01)	(0.33)
LN(FINPOS)	0.029	-0.497**	0.091*	8.141***
	(0.08)	(0.22)	(0.05)	(1.33)
LN(REGACC)	0.044	-0.597***	-0.179***	0.121
	(0.05)	(0.11)	(0.03)	(0.92)
Constant	-1.029**	4.989***	-0.499**	-27.587***
	(0.44)	(1.04)	(0.25)	(7.14)
R-squared	0.477	0.503	0.478	0.705
Degrees of freedom	473	473	473	474

* p<0.10, ** p<0.05, *** p<0.01

Table A4.5 – Ordinary Least Squares regression results for all German companies reporting before IFRS3 (2008)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.055***	0.020	0.018	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.055***	-0.130***	0.059***	-1.353**
	(0.02)	(0.04)	(0.01)	(0.54)
ln(AGE)	-0.106***	-0.051	-0.084***	-0.677
	(0.03)	(0.06)	(0.03)	(0.63)
IGW	-0.202***	-0.754***	-0.521***	-11.814***
	(0.06)	(0.08)	(0.04)	(1.15)
BM	0.001	-0.058***	-0.061***	0.946***
	(0.01)	(0.02)	(0.01)	(0.19)
DE	-0.029**	-0.003	-0.008	0.475***
	(0.01)	(0.02)	(0.01)	(0.16)
ROA	0.438	-1.892***	0.894***	-8.022**
	(0.27)	(0.40)	(0.27)	(3.31)
NIAI	0.646***	0.269	0.810***	11.745***
	(0.17)	(0.19)	(0.11)	(2.76)
EIGD	-0.198	0.560***	0.587***	-4.700***
	(0.18)	(0.13)	(0.09)	(1.02)
RETURNS	-0.283***	-0.337***	0.130***	-5.236***
	(0.03)	(0.05)	(0.03)	(0.71)
NASACQ	0.106	0.660***	0.030	3.092
	(0.13)	(0.24)	(0.08)	(2.89)
VOLATILITY	-0.446**	0.885**	2.643***	-10.844
	(0.23)	(0.36)	(0.23)	(6.89)
LN(MRKT)	-0.791***	-0.469	0.409***	-4.259
	(0.21)	(0.34)	(0.12)	(3.47)
LN(FRMSTR)	0.102	0.061	-0.615***	-5.022
	(0.21)	(0.29)	(0.13)	(4.03)
LN(CORPGOV)	0.325***	0.407***	0.446***	8.938***
	(0.09)	(0.11)	(0.07)	(1.64)
LN(BRND)	-0.011	-0.046	-0.248***	-0.284
	(0.04)	(0.06)	(0.03)	(0.75)
LN(FINPOS)	0.459***	0.234	0.028	-8.591***
	(0.10)	(0.16)	(0.07)	(2.10)
LN(REGACC)	-0.009	-0.011	-0.002	12.937***
	(0.05)	(0.08)	(0.04)	(0.99)
Constant	-1.617***	1.013	-1.312***	53.166***
	(0.43)	(0.63)	(0.33)	(10.05)
R-squared	0.185	0.281	0.476	0.325
Degrees of freedom	1267	1267	1267	1268

* p<0.10, ** p<0.05, *** p<0.01

Table A4.6 – Ordinary Least Squares regression results for all German companies reporting under IFRS3 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.111***	-0.225***	-0.105***	
	(0.04)	(0.06)	(0.04)	
ln(SIZE)	0.041	-0.217***	0.172***	0.608
	(0.05)	(0.06)	(0.02)	(1.05)
ln(AGE)	-0.244***	0.098*	0.328***	0.115
	(0.05)	(0.05)	(0.05)	(1.22)
IGW	0.442***	-0.428**	0.536***	-13.191***
	(0.15)	(0.18)	(0.13)	(3.47)
BM	0.089***	-0.029	-0.146***	3.054***
	(0.03)	(0.03)	(0.02)	(0.42)
DE	-0.274***	0.182**	-0.335***	2.586**
	(0.08)	(0.09)	(0.04)	(1.23)
ROA	-3.802***	-3.490**	-5.449***	8.764
	(1.19)	(1.60)	(0.76)	(11.73)
NIAI	-0.684	0.628	-1.049***	10.867
	(0.44)	(0.56)	(0.27)	(9.78)
EIGD	-0.421	2.597***	0.245	-36.896**
	(0.79)	(0.82)	(0.52)	(15.52)
RETURNS	-0.028	-0.303**	0.418***	-13.065***
	(0.12)	(0.13)	(0.10)	(2.17)
NASACQ	0.178	-0.638	2.131***	9.738
	(0.34)	(0.44)	(0.46)	(8.95)
VOLATILITY	0.056	2.630***	3.388***	1.677
	(0.54)	(0.59)	(0.92)	(12.37)
LN(MRKT)	0.071	0.230	-0.181	6.874
	(0.27)	(0.33)	(0.18)	(4.60)
LN(FRMSTR)	-0.528	1.476***	-0.147	-19.509**
	(0.47)	(0.49)	(0.40)	(9.45)
LN(CORPGOV)	-0.032	-0.244	-0.068	15.931***
	(0.15)	(0.16)	(0.20)	(3.73)
LN(BRND)	-0.087	-0.121**	0.242***	-1.361
	(0.05)	(0.06)	(0.07)	(1.13)
LN(FINPOS)	0.831***	-2.188***	0.207	0.359
	(0.29)	(0.34)	(0.29)	(7.26)
LN(REGACC)	-0.155	0.392***	-0.060	5.254**
	(0.10)	(0.10)	(0.16)	(2.30)
Constant	-1.789	8.967***	-2.974**	-34.892
	(1.14)	(1.54)	(1.25)	(23.04)
R-squared	0.363	0.511	0.586	0.433
Degrees of freedom	293	293	293	294

* p<0.10, ** p<0.05, *** p<0.01

Table A4.7 – Ordinary Least Squares regression results for German mandatory adopters reporting before IFRS3 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.148	-0.355***	-0.087*	
	(0.12)	(0.11)	(0.05)	
ln(SIZE)	0.178***	-0.187***	0.006	1.584**
	(0.05)	(0.06)	(0.02)	(0.72)
ln(AGE)	-0.227**	0.107	-0.009	1.421
	(0.10)	(0.14)	(0.06)	(1.03)
IGW	-0.624***	-1.388***	-0.579***	-10.904***
	(0.20)	(0.23)	(0.09)	(2.10)
BM	0.171***	0.007	-0.047***	-0.291
	(0.02)	(0.02)	(0.01)	(0.20)
DE	-0.065	0.252**	0.181***	5.710***
	(0.07)	(0.11)	(0.04)	(0.49)
ROA	0.647	-3.186***	0.670**	12.092***
	(0.48)	(0.52)	(0.28)	(3.79)
NIAI	5.478***	1.549	-0.669	1.707
	(0.83)	(1.04)	(0.42)	(8.40)
EIGD	0.208	-0.439*	0.644***	-12.736***
	(0.28)	(0.26)	(0.11)	(1.69)
RETURNS	-0.854***	-0.795***	0.052	-4.550***
	(0.08)	(0.09)	(0.04)	(0.67)
NASACQ	0.446*	1.110**	0.704***	7.355**
	(0.25)	(0.47)	(0.16)	(3.22)
VOLATILITY	-3.046***	0.449	1.124***	21.138***
	(0.58)	(0.72)	(0.30)	(7.44)
LN(MRKT)	1.710***	-0.542	0.539***	4.365
	(0.33)	(0.52)	(0.17)	(3.76)
LN(FRMSTR)	-4.824***	-1.050	-1.417***	22.118***
	(0.58)	(0.80)	(0.27)	(6.88)
LN(CORPGOV)	-0.083	1.163***	0.653***	-2.612
	(0.34)	(0.41)	(0.16)	(4.77)
LN(BRND)	0.189	0.065	0.069	-7.524***
	(0.13)	(0.22)	(0.08)	(1.55)
LN(FINPOS)	2.982***	0.475	0.476***	-28.770***
	(0.38)	(0.44)	(0.18)	(4.05)
LN(REGACC)	0.175	0.220	0.027	11.288***
	(0.13)	(0.16)	(0.06)	(1.04)
Constant	-1.686**	2.432**	-1.921***	9.379
	(0.79)	(0.96)	(0.33)	(9.97)
R-squared	0.386	0.512	0.636	0.615
Degrees of freedom	437	437	437	438

* p<0.10, ** p<0.05, *** p<0.01

Table A4.8 – Ordinary Least Squares regression results for German mandatory adopters reporting after IFRS3 (2008)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.043	-0.226***	0.126	
	(0.17)	(0.07)	(0.08)	
ln(SIZE)	-1.436***	0.923***	0.376***	-6.162*
	(0.15)	(0.12)	(0.11)	(3.64)
ln(AGE)	-0.776***	0.462***	0.622***	-4.757***
	(0.10)	(0.07)	(0.05)	(1.64)
IGW	-4.629***	2.673***	0.688	-29.192*
	(0.66)	(0.52)	(0.45)	(16.20)
BM	0.529***	-0.337***	-0.250***	3.591**
	(0.09)	(0.06)	(0.05)	(1.45)
DE	1.307***	-0.724***	-0.299***	8.895**
	(0.21)	(0.14)	(0.11)	(3.62)
ROA	.	.	.	.
	.	.	.	.
NIAI	18.966***	-10.987***	-5.580***	101.114
	(2.73)	(2.12)	(1.84)	(63.72)
EIGD	16.643***	-8.721***	-4.560***	147.987***
	(2.90)	(1.80)	(1.51)	(51.28)
RETURNS	-0.461	-0.027	1.180***	-9.598*
	(0.38)	(0.22)	(0.20)	(5.72)
NASACQ	-8.459***	4.909***	2.962***	-40.778*
	(1.20)	(0.87)	(0.75)	(21.62)
VOLATILITY	-12.593***	8.133***	2.207*	-94.962**
	(1.77)	(1.39)	(1.16)	(37.46)
LN(MRKT)	-0.168	0.211	-0.151	-11.012
	(0.44)	(0.27)	(0.30)	(9.35)
LN(FRMSTR)	-0.258	0.474	-1.258**	38.408**
	(0.87)	(0.71)	(0.55)	(16.73)
LN(CORPGOV)	-2.211**	0.694	0.763**	-30.361**
	(0.86)	(0.54)	(0.35)	(11.97)
LN(BRND)	1.928***	-1.228***	-0.212	6.492
	(0.24)	(0.20)	(0.21)	(4.96)
LN(FINPOS)	0.216	-0.370	0.664**	-10.192
	(0.45)	(0.37)	(0.31)	(8.01)
LN(REGACC)	0.540***	-0.187	0.187**	-2.312
	(0.20)	(0.15)	(0.09)	(4.68)
Constant	32.256***	-16.431***	-8.252**	235.647*
	(5.62)	(4.02)	(3.20)	(120.59)
R-squared	0.769	0.831	0.958	0.774
Degrees of freedom	114	114	114	115

* p<0.10, ** p<0.05, *** p<0.01

Table A4.9 – Ordinary Least Squares regression results for German voluntary adopters reporting before IFRS3 (2008)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.059***	0.035**	0.043***	
	(0.01)	(0.02)	(0.01)	
ln(SIZE)	0.013	-0.155***	0.072***	-1.270**
	(0.02)	(0.04)	(0.01)	(0.60)
ln(AGE)	-0.179***	0.133**	-0.039*	-1.404**
	(0.04)	(0.06)	(0.02)	(0.59)
IGW	-0.420***	0.176	-0.002	-8.337***
	(0.12)	(0.26)	(0.08)	(2.24)
BM	-0.022**	-0.101***	-0.032***	1.016***
	(0.01)	(0.02)	(0.01)	(0.28)
DE	-0.035***	0.053***	-0.009*	-0.117
	(0.01)	(0.02)	(0.01)	(0.17)
ROA	-0.214	1.283***	1.245***	6.593
	(0.37)	(0.43)	(0.43)	(4.50)
NIAI	0.551***	0.575***	0.592***	8.679***
	(0.16)	(0.20)	(0.10)	(2.93)
EIGD	-0.304*	0.936***	0.066	4.155***
	(0.16)	(0.20)	(0.07)	(1.30)
RETURNS	-0.172***	-0.201***	0.124***	-5.751***
	(0.03)	(0.06)	(0.03)	(0.88)
NASACQ	0.295*	-0.673***	-0.226*	-9.600***
	(0.17)	(0.19)	(0.13)	(2.94)
VOLATILITY	0.223	0.956*	2.743***	28.982***
	(0.21)	(0.49)	(0.22)	(7.81)
LN(MRKT)	-0.736***	-0.491	0.344**	-5.495
	(0.18)	(0.34)	(0.14)	(3.81)
LN(FRMSTR)	0.286*	-0.002	0.048	-13.490***
	(0.17)	(0.25)	(0.14)	(3.88)
LN(CORPGOV)	0.093	0.276***	0.241***	1.531
	(0.06)	(0.08)	(0.06)	(1.23)
LN(BRND)	0.152***	0.041	-0.361***	6.725***
	(0.04)	(0.06)	(0.03)	(0.87)
LN(FINPOS)	0.164	0.414**	-0.212**	-3.167
	(0.11)	(0.19)	(0.09)	(2.14)
LN(REGACC)	0.024	-0.076	-0.090**	17.743***
	(0.05)	(0.08)	(0.04)	(0.95)
Constant	0.501	0.405	-2.011***	64.131***
	(0.44)	(0.45)	(0.35)	(12.29)
R-squared	0.244	0.248	0.502	0.388
Degrees of freedom	1145	1145	1145	1146

* p<0.10, ** p<0.05, *** p<0.01

Table A4.10 – Ordinary Least Squares regression results for German voluntary adopters reporting under IFRS3 (2008)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.352	-0.718***	0.004	
	(0.22)	(0.11)	(0.06)	
ln(SIZE)	0.299***	-0.075	0.284***	-2.246***
	(0.08)	(0.07)	(0.05)	(0.64)
ln(AGE)	-1.643***	-0.822	-1.069***	-12.243**
	(0.50)	(0.57)	(0.41)	(5.24)
IGW	0.658	-8.575***	-0.738	-98.870***
	(2.01)	(1.27)	(0.67)	(8.79)
BM	0.110	-1.453***	-0.385***	-1.004
	(0.17)	(0.19)	(0.11)	(1.38)
DE	-0.115	-0.235	-0.001	-1.130
	(0.12)	(0.18)	(0.15)	(1.14)
ROA	-9.341***	-14.611***	-8.993***	-41.400
	(2.76)	(4.38)	(2.86)	(28.54)
NIAI	2.771	5.718**	4.144**	53.937**
	(2.44)	(2.45)	(1.70)	(23.47)
EIGD	31.849***	-8.777	18.013**	150.485
	(8.83)	(13.82)	(8.97)	(110.41)
RETURNS	0.206	0.190	-0.221	2.536
	(0.23)	(0.30)	(0.34)	(2.63)
NASACQ	-3.901	-26.651***	-6.628***	-73.567*
	(4.56)	(4.09)	(2.13)	(41.14)
VOLATILITY	3.061	-13.550***	4.688*	-124.713***
	(2.51)	(3.45)	(2.52)	(20.22)
LN(MRKT)	1.175	-8.031***	-2.335**	-34.220***
	(1.46)	(1.67)	(0.97)	(11.04)
LN(FRMSTR)	1.647	3.498**	5.279***	20.437
	(1.53)	(1.60)	(1.88)	(16.35)
LN(CORPGOV)	0.790	0.821	2.736***	12.258**
	(0.61)	(0.78)	(0.92)	(5.80)
LN(BRND)	-1.439***	0.608	-0.845**	-1.773
	(0.26)	(0.46)	(0.42)	(3.09)
LN(FINPOS)	-0.803	2.740**	-2.217	-13.078
	(0.76)	(1.37)	(1.36)	(8.19)
LN(REGACC)	-0.694	-0.988	-2.146***	28.708***
	(0.64)	(0.69)	(0.64)	(5.67)
Constant	-11.653***	21.516***	-11.548***	98.840***
	(3.04)	(3.38)	(3.75)	(19.80)
R-squared	0.584	0.761	0.653	0.908
Degrees of freedom	161	161	161	162
* p<0.10, ** p<0.05, *** p<0.01				

IFRS3 (2010)

Table A4.11 – Ordinary Least Squares regression results for UK companies reporting before IFRS3 (2010)							
	MFE Mean		**MFA Mean**		**MFD**		**NOA**
	β/se		**β/se**		**β/se**		**β/se**
ln(NOA)	0.051**		0.056**		-1.546***		
	(0.02)		(0.02)		(0.17)		
ln(SIZE)	0.038***		0.053***		-0.105*		1.683***
	(0.01)		(0.01)		(0.06)		(0.18)
ln(AGE)	-0.071***		0.038***		0.840***		0.247
	(0.01)		(0.01)		(0.08)		(0.27)
IGW	-0.266***		-0.099***		-1.007***		-5.726***
	(0.04)		(0.04)		(0.20)		(0.62)
BM	0.005**		0.004***		0.069***		0.192***
	(0.00)		(0.00)		(0.01)		(0.04)
DE	0.019**		-0.004		-0.204***		-1.122***
	(0.01)		(0.00)		(0.03)		(0.10)
ROA	-0.974***		-0.840***		-1.735**		-13.630***
	(0.16)		(0.16)		(0.74)		(2.14)
NIAI	1.045***		1.070***		-0.360		7.155***
	(0.19)		(0.19)		(0.33)		(1.32)
EIGD	-0.306***		-0.048		2.904***		1.307***
	(0.04)		(0.03)		(0.21)		(0.44)
RETURNS	-0.086***		-0.025*		0.605***		-0.944*
	(0.02)		(0.02)		(0.14)		(0.52)
NASACQ	-1.188***		-1.230***		5.967***		-29.495***
	(0.29)		(0.29)		(1.27)		(4.36)
VOLATILITY	0.278*		1.484***		-4.162***		-5.586***
	(0.15)		(0.14)		(0.52)		(2.01)
LN(MRKT)	-0.233***		-0.335***		-0.071		-13.074***
	(0.07)		(0.07)		(0.51)		(1.46)
LN(FRMSTR)	0.573***		0.345***		-0.088		12.667***
	(0.11)		(0.10)		(0.55)		(1.83)
LN(CORPGOV)	-0.004		0.233***		-1.213***		-6.997***
	(0.04)		(0.04)		(0.30)		(1.36)
LN(BRND)	-0.068***		0.018		0.740***		5.914***
	(0.01)		(0.01)		(0.12)		(0.40)
LN(FINPOS)	-0.256***		-0.371***		0.042		-1.962
	(0.07)		(0.06)		(0.35)		(1.34)
LN(REGACC)	-0.110***		-0.038		0.200		3.546***
	(0.04)		(0.03)		(0.18)		(0.70)
Constant	-0.229		-0.229		11.503***		9.920**
	(0.17)		(0.17)		(1.41)		(4.66)
R-squared	0.353		0.446		0.351		0.452
Degrees of freedom	1013		1013		1013		1014
*	p<0.10,	**	p<0.05,	***	p<0.01		

Table A4.12 – Ordinary Least Squares regression results for UK companies reporting after IFRS3 (2010)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.161***	-0.138**	-1.216***	
	(0.06)	(0.06)	(0.26)	
ln(SIZE)	0.047***	-0.004	0.223***	1.770***
	(0.01)	(0.01)	(0.07)	(0.19)
ln(AGE)	-0.014	-0.021	0.502***	1.009***
	(0.01)	(0.01)	(0.12)	(0.39)
IGW	0.221***	-0.267***	-0.318	-3.338***
	(0.05)	(0.05)	(0.23)	(0.84)
BM	0.043***	-0.029**	0.187***	0.828***
	(0.01)	(0.01)	(0.05)	(0.10)
DE	-0.021	0.016	-0.209***	-1.872***
	(0.01)	(0.01)	(0.06)	(0.13)
ROA	-2.122***	1.583**	-1.752	-12.629***
	(0.54)	(0.63)	(1.51)	(3.28)
NIAI	0.423***	-0.306***	0.194	9.674***
	(0.08)	(0.06)	(0.36)	(1.17)
EIGD	0.070	-0.190*	0.315	0.765
	(0.09)	(0.11)	(0.51)	(1.52)
RETURNS	-0.237***	-0.085	-0.541	-7.878***
	(0.07)	(0.08)	(0.34)	(0.96)
NASACQ	0.008	-0.346*	9.752***	-3.582
	(0.15)	(0.19)	(1.24)	(2.68)
VOLATILITY	0.164	0.191	-3.882***	-6.013***
	(0.15)	(0.19)	(0.72)	(2.17)
LN(MRKT)	0.641***	-0.427***	-0.623	-17.315***
	(0.10)	(0.11)	(0.54)	(1.54)
LN(FRMSTR)	-0.806***	0.685***	0.224	25.550***
	(0.14)	(0.18)	(0.77)	(1.79)
LN(CORPGOV)	-0.446***	0.357***	0.032	-13.744***
	(0.10)	(0.11)	(0.42)	(1.18)
LN(BRND)	-0.029	-0.037	0.213	6.141***
	(0.02)	(0.03)	(0.18)	(0.53)
LN(FINPOS)	0.601***	-0.536***	-0.307	-5.826***
	(0.09)	(0.11)	(0.38)	(1.27)
LN(REGACC)	-0.028	0.007	-0.262	3.751***
	(0.06)	(0.07)	(0.29)	(0.89)
Constant	-0.732**	0.144	6.306***	14.522***
	(0.33)	(0.35)	(1.91)	(5.29)
R-squared	0.412	0.288	0.310	0.580
Degrees of freedom	629	629	629	630
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.13 – Ordinary Least Squares regression results for French companies reporting before IFRS3 (2010)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.281***	-0.264***	-0.118***	
	(0.05)	(0.08)	(0.04)	
ln(SIZE)	0.038	-0.277***	0.095***	3.804***
	(0.02)	(0.05)	(0.01)	(0.29)
ln(AGE)	-0.064*	0.021	0.078***	1.326*
	(0.04)	(0.08)	(0.03)	(0.70)
IGW	-0.053	-0.507***	-0.074	15.487***
	(0.09)	(0.18)	(0.06)	(1.69)
BM	-0.126***	0.110**	-0.148***	2.261***
	(0.02)	(0.05)	(0.01)	(0.33)
DE	-0.048	-0.211***	0.030	1.398**
	(0.03)	(0.08)	(0.03)	(0.55)
ROA	0.239	2.526**	-0.233	3.287
	(0.25)	(1.03)	(0.18)	(3.54)
NIAI	-0.235**	0.157	-0.399***	-3.942***
	(0.10)	(0.24)	(0.07)	(1.33)
EIGD	0.242***	1.243***	0.582***	-3.130*
	(0.09)	(0.23)	(0.09)	(1.84)
RETURNS	0.140***	-0.921***	0.122***	-1.699**
	(0.05)	(0.15)	(0.04)	(0.75)
NASACQ	1.569***	-14.319***	0.333	-37.020***
	(0.48)	(1.71)	(0.29)	(9.39)
VOLATILITY	-1.269***	-1.641**	0.313*	-3.394
	(0.24)	(0.66)	(0.16)	(3.58)
LN(MRKT)	0.132	-1.157***	0.155**	7.372***
	(0.13)	(0.28)	(0.07)	(1.45)
LN(FRMSTR)	-0.623***	1.724***	-0.283***	-11.995***
	(0.19)	(0.43)	(0.10)	(2.52)
LN(CORPGOV)	0.512***	0.560***	0.173***	-6.668***
	(0.07)	(0.19)	(0.06)	(1.22)
LN(BRND)	-0.044*	-0.128***	-0.060***	0.569*
	(0.02)	(0.05)	(0.01)	(0.33)
LN(FINPOS)	0.029	-0.497**	0.091*	8.141***
	(0.08)	(0.22)	(0.05)	(1.33)
LN(REGACC)	0.044	-0.597***	-0.179***	0.121
	(0.05)	(0.11)	(0.03)	(0.92)
Constant	-1.029**	4.989***	-0.499**	-27.587***
	(0.44)	(1.04)	(0.25)	(7.14)
R-squared	0.477	0.503	0.478	0.705
Degrees of freedom	473	473	473	474
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.14 – Ordinary Least Squares regression results for French companies reporting after IFRS3 (2010)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.130*	-0.443***	0.001	
	(0.07)	(0.08)	(0.03)	
ln(SIZE)	0.092***	0.067***	0.043***	4.760***
	(0.02)	(0.02)	(0.01)	(0.38)
ln(AGE)	-0.033	-0.155**	0.312***	-1.282
	(0.06)	(0.07)	(0.02)	(0.84)
IGW	-0.252***	0.217***	-0.270***	18.383***
	(0.06)	(0.08)	(0.05)	(2.39)
BM	0.137***	0.179***	-0.180***	0.565
	(0.02)	(0.03)	(0.01)	(0.50)
DE	-0.349***	-0.018	0.043***	-1.085***
	(0.02)	(0.03)	(0.01)	(0.33)
ROA	-5.246***	-3.474***	-1.746***	1.477
	(0.67)	(0.77)	(0.35)	(8.62)
NIAI	-0.302***	-0.573***	-0.214***	-10.061***
	(0.08)	(0.12)	(0.07)	(1.82)
EIGD	0.299***	0.366***	-0.101**	0.376
	(0.09)	(0.09)	(0.04)	(1.10)
RETURNS	-0.682***	-0.655***	0.591***	-0.805
	(0.09)	(0.10)	(0.06)	(2.06)
NASACQ	-5.636***	-2.815***	2.001***	-65.719***
	(0.72)	(0.77)	(0.41)	(13.43)
VOLATILITY	0.740***	0.764**	0.856***	29.742***
	(0.27)	(0.32)	(0.20)	(5.18)
LN(MRKT)	-0.839***	-0.118	0.332***	-10.279***
	(0.12)	(0.16)	(0.09)	(2.07)
LN(FRMSTR)	0.911***	0.203	-0.424***	10.419***
	(0.18)	(0.23)	(0.11)	(3.23)
LN(CORPGOV)	-0.216***	-0.136**	0.159***	-4.669***
	(0.06)	(0.07)	(0.04)	(1.54)
LN(BRND)	0.059**	0.013	-0.023	1.582***
	(0.02)	(0.03)	(0.02)	(0.45)
LN(FINPOS)	0.111	0.263***	0.066	1.638
	(0.07)	(0.09)	(0.04)	(1.39)
LN(REGACC)	-0.207***	-0.231***	-0.183***	-3.824***
	(0.05)	(0.06)	(0.03)	(1.04)
Constant	0.018	0.118	-0.816***	-23.968***
	(0.55)	(0.63)	(0.24)	(8.60)
R-squared	0.772	0.679	0.651	0.674
Degrees of freedom	377	377	377	378

* p<0.10, ** p<0.05, *** p<0.01

Table A4.15 – OLS regression results for all German companies reporting before IFRS3 (2010)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.131***	-0.220***	-0.113***	
	(0.04)	(0.06)	(0.04)	
ln(SIZE)	0.060	-0.212***	0.166***	0.529
	(0.05)	(0.06)	(0.02)	(1.05)
ln(AGE)	-0.123**	0.128**	0.284***	-0.414
	(0.05)	(0.05)	(0.05)	(1.19)
IGW	0.630***	-0.380*	0.469***	-13.935***
	(0.15)	(0.20)	(0.13)	(3.63)
PER	-0.014***	-0.004	0.005***	0.061*
	(0.00)	(0.00)	(0.00)	(0.04)
BM	0.163***	-0.011	-0.172***	2.733***
	(0.03)	(0.03)	(0.02)	(0.46)
DE	-0.238***	0.192**	-0.348***	2.421*
	(0.07)	(0.09)	(0.04)	(1.24)
ROA	-4.984***	-3.790**	-5.025***	13.736
	(1.19)	(1.82)	(0.84)	(11.98)
NIAI	-0.667	0.632	-1.055***	10.736
	(0.44)	(0.56)	(0.26)	(9.68)
EIGD	-1.653**	2.285**	0.686	-31.465*
	(0.82)	(0.90)	(0.57)	(16.34)
RETURNS	0.032	-0.288**	0.396***	-13.256***
	(0.10)	(0.14)	(0.09)	(2.23)
NASACQ	0.458	-0.567	2.031***	8.454
	(0.35)	(0.45)	(0.45)	(8.91)
VOLATILITY	-0.021	2.610***	3.416***	1.892
	(0.46)	(0.58)	(0.92)	(12.39)
LN(MRKT)	0.507*	0.340	-0.337*	5.003
	(0.29)	(0.40)	(0.19)	(4.99)
LN(FRMSTR)	-2.116***	1.073	0.421	-12.638
	(0.55)	(0.67)	(0.48)	(10.89)
LN(CORPGOV)	-0.489***	-0.360	0.096	17.792***
	(0.17)	(0.23)	(0.21)	(3.92)
LN(BRND)	0.130**	-0.066	0.164**	-2.287*
	(0.06)	(0.07)	(0.07)	(1.21)
LN(FINPOS)	1.891***	-1.920***	-0.172	-4.160
	(0.32)	(0.35)	(0.33)	(8.24)
LN(REGACC)	0.159	0.471***	-0.173	3.871*
	(0.11)	(0.14)	(0.17)	(2.24)
Constant	-1.281	9.096***	-3.156**	-37.025
	(1.09)	(1.59)	(1.27)	(23.02)
R-squared	0.460	0.514	0.595	0.436
Degrees of Fr.	292	292	292	293
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.16 – Ordinary Least Squares regression results for all German companies reporting after IFRS3 (2010)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.005	0.010	-0.194***	
	(0.02)	(0.02)	(0.05)	
ln(SIZE)	-0.102***	-0.139***	0.283***	-2.934***
	(0.03)	(0.03)	(0.03)	(1.02)
ln(AGE)	0.236***	0.145***	0.605***	-4.575***
	(0.05)	(0.04)	(0.07)	(1.40)
IGW	-0.107*	-0.171***	0.165**	-19.273***
	(0.06)	(0.06)	(0.08)	(3.43)
PER	-0.003	-0.023***	0.005	0.297*
	(0.00)	(0.00)	(0.01)	(0.16)
BM	-0.188***	-0.083**	-0.222***	2.547***
	(0.04)	(0.03)	(0.03)	(0.95)
DE	-0.108***	-0.040*	-0.186***	6.522***
	(0.03)	(0.02)	(0.04)	(1.09)
ROA	1.441***	-0.502*	-1.303***	32.427**
	(0.36)	(0.30)	(0.38)	(15.94)
NIAI	-0.075	1.149***	-0.624	22.346**
	(0.28)	(0.29)	(0.44)	(11.23)
EIGD	-0.778	3.100***	-0.429	81.182***
	(0.71)	(0.61)	(0.67)	(20.42)
RETURNS	-0.690***	-0.004	0.562***	-16.893***
	(0.07)	(0.06)	(0.11)	(3.06)
NASACQ	4.314***	0.993	5.634***	-42.528
	(0.87)	(0.75)	(1.34)	(36.58)
VOLATILITY	-2.232***	-0.435	4.981***	-38.769**
	(0.47)	(0.43)	(0.59)	(16.80)
LN(MRKT)	-0.502***	0.250	-0.251	-7.146
	(0.18)	(0.16)	(0.22)	(6.31)
LN(FRMSTR)	0.690***	-0.182	0.044	12.484
	(0.15)	(0.14)	(0.47)	(9.30)
LN(CORPGOV)	0.249***	0.095	-0.056	3.761
	(0.09)	(0.07)	(0.14)	(3.14)
LN(BRND)	0.118***	0.141***	0.261***	-3.821***
	(0.03)	(0.03)	(0.05)	(1.15)
LN(FINPOS)	-0.693***	-0.960***	-0.203	-18.074**
	(0.25)	(0.24)	(0.27)	(6.99)
LN(REGACC)	0.112	0.611***	-0.063	21.042***
	(0.14)	(0.13)	(0.13)	(3.45)
Constant	2.626**	4.973***	-3.563***	54.205**
	(1.08)	(1.02)	(1.10)	(27.42)
R-squared	0.566	0.519	0.773	0.535
Degrees of freedom	266	266	266	267

* p<0.10, ** p<0.05, *** p<0.01

Table A4.17 – OLS regression results for German mandatory adopters reporting before IFRS3 (2010)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.043	-0.226***	0.126	
	(0.17)	(0.07)	(0.08)	
ln(SIZE)	-1.436***	0.923***	0.376***	-6.162*
	(0.15)	(0.12)	(0.11)	(3.64)
ln(AGE)	-0.776***	0.462***	0.622***	-4.757***
	(0.10)	(0.07)	(0.05)	(1.64)
IGW	-4.629***	2.673***	0.688	-29.192*
	(0.66)	(0.52)	(0.45)	(16.20)
BM	0.529***	-0.337***	-0.250***	3.591**
	(0.09)	(0.06)	(0.05)	(1.45)
DE	1.307***	-0.724***	-0.299***	8.895**
	(0.21)	(0.14)	(0.11)	(3.62)
ROA	.	.	.	.
	.	.	.	.
NIAI	18.966***	-10.987***	-5.580***	101.114
	(2.73)	(2.12)	(1.84)	(63.72)
EIGD	16.643***	-8.721***	-4.560***	147.987***
	(2.90)	(1.80)	(1.51)	(51.28)
RETURNS	-0.461	-0.027	1.180***	-9.598*
	(0.38)	(0.22)	(0.20)	(5.72)
NASACQ	-8.459***	4.909***	2.962***	-40.778*
	(1.20)	(0.87)	(0.75)	(21.62)
VOLATILITY	-12.593***	8.133***	2.207*	-94.962**
	(1.77)	(1.39)	(1.16)	(37.46)
LN(MRKT)	-0.168	0.211	-0.151	-11.012
	(0.44)	(0.27)	(0.30)	(9.35)
LN(FRMSTR)	-0.258	0.474	-1.258**	38.408**
	(0.87)	(0.71)	(0.55)	(16.73)
LN(CORPGOV)	-2.211**	0.694	0.763**	-30.361**
	(0.86)	(0.54)	(0.35)	(11.97)
LN(BRND)	1.928***	-1.228***	-0.212	6.492
	(0.24)	(0.20)	(0.21)	(4.96)
LN(FINPOS)	0.216	-0.370	0.664**	-10.192
	(0.45)	(0.37)	(0.31)	(8.01)
LN(REGACC)	0.540***	-0.187	0.187**	-2.312
	(0.20)	(0.15)	(0.09)	(4.68)
Constant	32.256***	-16.431***	-8.252**	235.647*
	(5.62)	(4.02)	(3.20)	(120.59)
R-squared	0.769	0.831	0.958	0.774
Degrees of freedom	114	114	114	115
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.18 – OLS regression results for German mandatory adopters reporting after IFRS3 (2010)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.076	-0.149***	0.466***	
	(0.05)	(0.04)	(0.11)	
ln(SIZE)	-0.204***	0.157***	-0.090	8.951***
	(0.04)	(0.03)	(0.10)	(2.50)
ln(AGE)	0.045	-0.079**	1.159***	-11.835***
	(0.04)	(0.04)	(0.13)	(3.49)
IGW	-0.227	0.174	-1.116**	31.036**
	(0.18)	(0.15)	(0.56)	(12.64)
BM	-0.584***	0.440***	0.391**	-10.112**
	(0.06)	(0.06)	(0.18)	(4.87)
DE	-0.515***	0.289**	1.856***	-29.421***
	(0.14)	(0.12)	(0.39)	(10.35)
ROA	0.586	-0.990*	8.946***	-122.712**
	(0.65)	(0.56)	(1.83)	(52.96)
NIAI	0.156	0.128	-2.425	-67.239**
	(0.50)	(0.43)	(1.71)	(33.29)
EIGD	.	.	.	.
	.	.	.	.
RETURNS	-0.012	-0.097	0.417**	-7.362
	(0.07)	(0.08)	(0.20)	(4.91)
NASACQ	.	.	.	.
	.	.	.	.
VOLATILITY	-6.249***	4.681***	1.526	17.413
	(0.29)	(0.24)	(0.96)	(21.01)
LN(MRKT)	-2.449***	1.919***	0.649	-28.735
	(0.26)	(0.26)	(0.75)	(20.37)
LN(FRMSTR)	2.254***	-1.943***	-1.400	64.160**
	(0.40)	(0.39)	(1.22)	(30.33)
LN(CORPGOV)	-0.564***	0.396**	1.738***	-45.196***
	(0.21)	(0.18)	(0.60)	(16.56)
LN(BRND)	0.273***	-0.145***	-0.658***	-2.143
	(0.05)	(0.04)	(0.17)	(3.75)
LN(FINPOS)	0.003	0.084	-0.025	-16.969*
	(0.13)	(0.13)	(0.41)	(9.42)
LN(REGACC)	0.204***	-0.138***	0.047	7.214*
	(0.05)	(0.05)	(0.13)	(4.14)
Constant	8.466***	-5.288***	-10.209***	138.587**
	(0.76)	(0.77)	(2.36)	(63.19)
R-squared	0.952	0.944	0.956	0.833
Degrees of freedom	103	103	103	104

* p<0.10, ** p<0.05, *** p<0.01

Table A4.19 – OLS regression results for German voluntary adopters reporting before IFRS3 (2010)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.352	-0.718***	0.004	
	(0.22)	(0.11)	(0.06)	
ln(SIZE)	0.299***	-0.075	0.284***	-2.246***
	(0.08)	(0.07)	(0.05)	(0.64)
ln(AGE)	-1.643***	-0.822	-1.069***	-12.243**
	(0.50)	(0.57)	(0.41)	(5.24)
IGW	0.658	-8.575***	-0.738	-98.870***
	(2.01)	(1.27)	(0.67)	(8.79)
BM	0.110	-1.453***	-0.385***	-1.004
	(0.17)	(0.19)	(0.11)	(1.38)
DE	-0.115	-0.235	-0.001	-1.130
	(0.12)	(0.18)	(0.15)	(1.14)
ROA	-9.341***	-14.611***	-8.993***	-41.400
	(2.76)	(4.38)	(2.86)	(28.54)
NIAI	2.771	5.718**	4.144**	53.937**
	(2.44)	(2.45)	(1.70)	(23.47)
EIGD	31.849***	-8.777	18.013**	150.485
	(8.83)	(13.82)	(8.97)	(110.41)
RETURNS	0.206	0.190	-0.221	2.536
	(0.23)	(0.30)	(0.34)	(2.63)
NASACQ	-3.901	-26.651***	-6.628***	-73.567*
	(4.56)	(4.09)	(2.13)	(41.14)
VOLATILITY	3.061	-13.550***	4.688*	-124.713***
	(2.51)	(3.45)	(2.52)	(20.22)
LN(MRKT)	1.175	-8.031***	-2.335**	-34.220***
	(1.46)	(1.67)	(0.97)	(11.04)
LN(FRMSTR)	1.647	3.498**	5.279***	20.437
	(1.53)	(1.60)	(1.88)	(16.35)
LN(CORPGOV)	0.790	0.821	2.736***	12.258**
	(0.61)	(0.78)	(0.92)	(5.80)
LN(BRND)	-1.439***	0.608	-0.845**	-1.773
	(0.26)	(0.46)	(0.42)	(3.09)
LN(FINPOS)	-0.803	2.740**	-2.217	-13.078
	(0.76)	(1.37)	(1.36)	(8.19)
LN(REGACC)	-0.694	-0.988	-2.146***	28.708***
	(0.64)	(0.69)	(0.64)	(5.67)
Constant	-11.653***	21.516***	-11.548***	98.840***
	(3.04)	(3.38)	(3.75)	(19.80)
R-squared	0.584	0.761	0.653	0.908
Degrees of freedom	161	161	161	162
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.20 – OLS regression results for German voluntary adopters reporting after IFRS3 (2010)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.301**	-0.283***	0.066	12.950***
	(0.12)	(0.10)	(0.14)	(0.84)
ln(SIZE)	-0.227	-0.536***	-0.146	2.688**
	(0.15)	(0.12)	(0.21)	(1.16)
ln(AGE)	0.607**	0.136	-0.818***	2.035
	(0.25)	(0.22)	(0.30)	(1.57)
IGW	-1.497*	-3.441***	-1.804	-4.727
	(0.81)	(0.66)	(1.27)	(6.82)
BM	0.112	0.676***	0.903***	-3.201**
	(0.16)	(0.13)	(0.33)	(1.59)
DE	-0.015	-0.050	-0.520***	1.405**
	(0.07)	(0.06)	(0.12)	(0.57)
ROA	-9.376**	-14.671***	-23.862**	91.187***
	(4.09)	(3.55)	(9.41)	(30.00)
NIAI	-0.715	-4.715***	-8.092***	20.911*
	(1.14)	(1.03)	(2.81)	(10.83)
EIGD	-8.892*	-22.477***	-24.603**	65.575
	(4.86)	(4.26)	(10.01)	(41.08)
RETURNS	-0.181	-1.075**	-0.512	-9.271***
	(0.57)	(0.49)	(0.64)	(2.90)
NASACQ	-1.796	159.143***	322.293***	-876.642**
	(32.53)	(27.42)	(79.37)	(343.41)
VOLATILITY	-5.846	-20.723***	-17.754**	16.585
	(3.91)	(3.31)	(7.80)	(35.73)
LN(MRKT)	-1.162***	-0.948**	2.579***	-12.803***
	(0.44)	(0.40)	(0.93)	(3.52)
LN(FRMSTR)	2.191**	0.861	-5.646***	23.353***
	(0.88)	(0.73)	(2.15)	(6.67)
LN(CORPGOV)	-0.354	-0.870**	-0.088	1.152
	(0.41)	(0.36)	(0.66)	(2.78)
LN(BRND)	0.329	-0.286	-1.040***	3.404*
	(0.29)	(0.25)	(0.33)	(1.74)
LN(FINPOS)	-1.681***	-0.176	3.993***	-14.195***
	(0.56)	(0.47)	(1.48)	(5.38)
LN(REGACC)	0.409	0.673*	-0.464	-1.171
	(0.43)	(0.37)	(0.54)	(3.13)
Constant	8.700	21.585***	12.608	-64.048
	(5.44)	(4.68)	(8.59)	(40.16)
R-squared	0.761	0.740	0.900	0.990
Degrees of freedom	149	149	149	149
*	p<0.10, **	p<0.05, ***	p<0.01	

IFRS7 (2005)

Table A4.21 – OLS regression results for UK companies reporting before IFRS7 (2005)				
	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.041***	0.037***	-0.521***	
	(0.01)	(0.01)	(0.07)	
ln(SIZE)	0.002	-0.009	-0.044	2.813***
	(0.00)	(0.01)	(0.03)	(0.14)
ln(AGE)	-0.008	0.012**	0.954***	0.274
	(0.01)	(0.01)	(0.05)	(0.22)
IGW	0.072***	0.020	-0.224	2.347***
	(0.03)	(0.03)	(0.16)	(0.58)
BM	0.004***	-0.004***	-0.012	-0.068***
	(0.00)	(0.00)	(0.01)	(0.03)
DE	0.018***	-0.008***	-0.006	-0.729***
	(0.00)	(0.00)	(0.02)	(0.08)
ROA	-0.021	-0.228*	0.325	5.822***
	(0.11)	(0.12)	(0.48)	(1.87)
NIAI	0.106**	-0.050	-1.236***	0.682
	(0.04)	(0.03)	(0.26)	(1.14)
EIGD	-0.132*	-0.501***	0.272	-0.192
	(0.07)	(0.18)	(0.27)	(1.01)
RETURNS	-0.141***	-0.058***	-0.322**	-2.948***
	(0.02)	(0.02)	(0.13)	(0.49)
NASACQ	0.137**	-0.105*	0.230	-1.895
	(0.06)	(0.05)	(0.41)	(1.99)
VOLATILITY	-0.305***	0.640***	-2.107***	-6.587***
	(0.11)	(0.10)	(0.47)	(1.75)
LN(MRKT)	-0.128***	0.045	-1.506***	-5.653***
	(0.03)	(0.04)	(0.29)	(1.10)
LN(FRMSTR)	0.412***	-0.133*	-0.660*	-1.299
	(0.08)	(0.08)	(0.39)	(1.52)
LN(CORPGOV)	-0.177***	0.049	1.584***	6.608***
	(0.03)	(0.03)	(0.20)	(0.91)
LN(BRND)	0.003	-0.028***	0.247***	2.951***
	(0.01)	(0.01)	(0.06)	(0.26)
LN(FINPOS)	-0.172***	0.071	0.922***	-3.393***
	(0.05)	(0.05)	(0.29)	(1.10)
LN(REGACC)	-0.005	0.007	-0.103	1.302***
	(0.02)	(0.01)	(0.11)	(0.44)
Constant	0.397***	-0.100	-3.361***	-21.975***
	(0.13)	(0.11)	(1.19)	(4.38)
R-squared	0.132	0.176	0.200	0.379
Degrees of freedom	2177	2177	2177	2178
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.22 – OLS regression results for UK companies reporting after IFRS7 (2005)				
	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.070***	0.012	-0.877***	
	(0.03)	(0.02)	(0.10)	
ln(SIZE)	0.001	-0.017***	-0.068**	1.425***
	(0.01)	(0.01)	(0.03)	(0.13)
ln(AGE)	-0.055***	0.029**	0.869***	0.754***
	(0.01)	(0.01)	(0.06)	(0.20)
IGW	-0.081**	-0.097***	-0.255*	2.269***
	(0.04)	(0.04)	(0.15)	(0.59)
BM	0.001	0.001	0.050***	0.091***
	(0.00)	(0.00)	(0.01)	(0.03)
DE	-0.005**	-0.003*	-0.088***	-0.300***
	(0.00)	(0.00)	(0.02)	(0.05)
ROA	-0.217**	-0.566***	-1.805***	9.918***
	(0.10)	(0.10)	(0.40)	(1.22)
NIAI	0.130***	0.153***	0.399*	1.398
	(0.05)	(0.04)	(0.23)	(0.89)
EIGD	-0.021	-0.014	0.714***	0.969
	(0.03)	(0.04)	(0.13)	(0.60)
RETURNS	-0.021	0.013	-0.592***	-3.344***
	(0.02)	(0.02)	(0.11)	(0.43)
NASACQ	0.063	-0.122***	-0.979**	-1.369
	(0.05)	(0.04)	(0.47)	(2.02)
VOLATILITY	0.415***	0.946***	-3.589***	-5.717***
	(0.11)	(0.13)	(0.48)	(1.61)
LN(MRKT)	0.030	-0.049	-0.246	-6.678***
	(0.04)	(0.04)	(0.29)	(0.95)
LN(FRMSTR)	0.102	-0.232***	-1.639***	1.340
	(0.07)	(0.09)	(0.38)	(1.24)
LN(CORPGOV)	-0.063	0.316***	1.600***	2.600***
	(0.05)	(0.06)	(0.19)	(0.74)
LN(BRND)	-0.058***	-0.033***	0.141*	2.580***
	(0.01)	(0.01)	(0.08)	(0.26)
LN(FINPOS)	-0.036	0.022	0.685***	3.712***
	(0.04)	(0.05)	(0.23)	(0.95)
LN(REGACC)	-0.008	0.064***	-0.202*	0.966**
	(0.02)	(0.02)	(0.11)	(0.45)
Constant	0.032	-0.534***	0.396	-40.687***
	(0.15)	(0.18)	(0.97)	(4.13)
R-squared	0.054	0.164	0.272	0.401
Degrees of freedom	1937	1937	1937	1938
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.23 – OLS regression results for French companies reporting before IFRS7 (2005)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.171**	-0.046	-0.131***	
	(0.07)	(0.06)	(0.04)	
ln(SIZE)	0.038**	-0.039**	-0.072***	5.946***
	(0.02)	(0.02)	(0.02)	(0.28)
ln(AGE)	-0.073	0.233***	-0.397***	1.719**
	(0.06)	(0.06)	(0.05)	(0.85)
IGW	-0.116***	-0.373***	-0.186***	4.807***
	(0.04)	(0.05)	(0.03)	(0.91)
BM	0.002	-0.006	-0.028***	-0.092
	(0.01)	(0.01)	(0.01)	(0.16)
DE	0.045**	-0.074***	0.093***	1.972***
	(0.02)	(0.03)	(0.02)	(0.46)
ROA	-0.751***	-2.356***	1.158***	2.523
	(0.28)	(0.39)	(0.39)	(4.73)
NIAI	0.036	0.245***	-0.114	-12.856***
	(0.08)	(0.08)	(0.11)	(1.84)
EIGD	-0.141	-0.974***	-0.140	-6.746**
	(0.17)	(0.22)	(0.15)	(3.06)
RETURNS	-0.193***	-0.255***	0.126**	-7.673***
	(0.05)	(0.06)	(0.05)	(0.80)
NASACQ	-0.977***	-0.089	0.792**	-8.014
	(0.23)	(0.20)	(0.33)	(6.53)
VOLATILITY	-0.282	1.333***	-0.629***	18.597***
	(0.21)	(0.24)	(0.17)	(3.48)
LN(MRKT)	-0.057	0.041	-0.327***	4.546***
	(0.05)	(0.05)	(0.07)	(1.34)
LN(FRMSTR)	0.074	0.173	1.324***	-11.994***
	(0.11)	(0.11)	(0.18)	(2.57)
LN(CORPGOV)	-0.131***	0.044	-0.455***	1.245
	(0.04)	(0.04)	(0.06)	(0.89)
LN(BRND)	-0.039	-0.138***	0.003	-0.027
	(0.02)	(0.03)	(0.03)	(0.40)
LN(FINPOS)	-0.068	0.184***	-0.510***	4.898***
	(0.07)	(0.06)	(0.10)	(1.53)
LN(REGACC)	0.086**	-0.227***	0.009	-0.724
	(0.04)	(0.04)	(0.04)	(0.74)
Constant	1.433***	-1.318***	2.817***	-70.247***
	(0.43)	(0.49)	(0.42)	(5.90)
R-squared	0.174	0.357	0.367	0.493
Degrees of freedom	869	869	869	870
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.24 – OLS regression results for French companies reporting after IFRS7 (2005)				
	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	-0.289***	-0.321***	-0.233***	
	(0.05)	(0.07)	(0.05)	
ln(SIZE)	0.017	0.006	-0.018	4.162***
	(0.02)	(0.03)	(0.02)	(0.24)
ln(AGE)	-0.192***	0.075	-0.319***	2.038***
	(0.07)	(0.09)	(0.04)	(0.68)
IGW	0.517***	-0.078	-0.290***	12.036***
	(0.09)	(0.12)	(0.07)	(1.29)
BM	0.017	0.065**	-0.139***	0.035
	(0.02)	(0.03)	(0.01)	(0.23)
DE	0.100***	0.123***	-0.076***	0.444***
	(0.01)	(0.02)	(0.01)	(0.12)
ROA	0.669**	-4.002***	0.861***	0.208
	(0.33)	(0.51)	(0.26)	(3.84)
NIAI	-0.310***	-0.782***	-0.117*	-3.551***
	(0.07)	(0.18)	(0.06)	(1.22)
EIGD	-0.062	-0.917***	-0.063	-5.351***
	(0.06)	(0.17)	(0.06)	(0.71)
RETURNS	-0.093*	-0.566***	0.085**	-3.428***
	(0.05)	(0.07)	(0.03)	(0.83)
NASACQ	-1.036***	0.590*	0.115	-1.575
	(0.16)	(0.31)	(0.14)	(2.41)
VOLATILITY	-0.644***	0.568***	-0.986***	9.611***
	(0.20)	(0.21)	(0.13)	(2.97)
LN(MRKT)	0.223**	0.273***	0.101*	-1.847**
	(0.11)	(0.10)	(0.06)	(0.91)
LN(FRMSTR)	-0.276**	0.435**	0.072	-2.311
	(0.13)	(0.18)	(0.12)	(1.72)
LN(CORPGOV)	-0.196***	-0.387***	-0.410***	-5.584***
	(0.06)	(0.09)	(0.08)	(0.88)
LN(BRND)	-0.037	-0.071**	-0.055***	1.459***
	(0.02)	(0.03)	(0.02)	(0.30)
LN(FINPOS)	0.298***	-0.187**	0.190***	3.820***
	(0.06)	(0.09)	(0.04)	(0.84)
LN(REGACC)	-0.132***	0.061	0.005	1.259**
	(0.03)	(0.06)	(0.03)	(0.56)
Constant	1.869***	-0.355	3.583***	-29.602***
	(0.45)	(0.53)	(0.37)	(6.09)
R-squared	0.247	0.508	0.571	0.639
Degrees of fr.	797	797	797	798
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.25 – OLS regression results for all German companies reporting before IFRS7 (2005)				
	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.082***	-0.123***	-0.084***	
	(0.02)	(0.02)	(0.03)	
ln(SIZE)	0.018	0.037	0.082***	6.131***
	(0.02)	(0.03)	(0.03)	(0.64)
ln(AGE)	0.170***	-0.326***	-0.216***	3.207***
	(0.03)	(0.05)	(0.04)	(0.95)
IGW	0.238***	-0.280***	-0.774***	11.235***
	(0.07)	(0.09)	(0.07)	(1.98)
BM	-0.027**	0.067***	-0.066***	1.769***
	(0.01)	(0.02)	(0.01)	(0.40)
DE	0.028***	-0.060***	-0.026*	2.173***
	(0.01)	(0.01)	(0.01)	(0.28)
ROA	0.065	-1.985***	2.651***	59.754***
	(0.38)	(0.49)	(0.88)	(10.01)
NIAI	0.149	-0.751**	0.354	-71.618***
	(0.24)	(0.30)	(0.28)	(7.27)
EIGD	-1.411***	0.487***	0.419***	2.467
	(0.07)	(0.09)	(0.11)	(1.83)
RETURNS	-0.048	-0.742***	-0.169	-18.656***
	(0.07)	(0.11)	(0.12)	(1.85)
NASACQ	-0.182	0.406***	0.453**	21.671***
	(0.12)	(0.16)	(0.19)	(4.60)
VOLATILITY	-0.576	6.812***	4.480***	84.207***
	(0.43)	(0.64)	(0.79)	(9.07)
LN(MRKT)	-0.496**	1.607***	0.340	54.718***
	(0.21)	(0.27)	(0.30)	(6.74)
LN(FRMSTR)	-0.432**	-1.123***	-0.773***	-48.943***
	(0.20)	(0.24)	(0.27)	(6.53)
LN(CORPGOV)	-0.120*	-0.029	0.483***	-4.043*
	(0.07)	(0.10)	(0.09)	(2.15)
LN(BRND)	0.212***	-0.230***	-0.269***	-1.220
	(0.05)	(0.05)	(0.06)	(1.38)
LN(FINPOS)	1.148***	-0.467***	0.293***	-14.209***
	(0.14)	(0.17)	(0.09)	(3.58)
LN(REGACC)	-0.312***	0.172**	-0.010	14.987***
	(0.05)	(0.07)	(0.05)	(1.22)
Constant	-1.866***	1.086**	-1.970***	-62.269***
	(0.38)	(0.51)	(0.60)	(11.15)
R-squared	0.622	0.773	0.600	0.580
Degrees of freedom	475	475	475	476
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.26 – OLS regression results for all German companies reporting after IFRS7 (2005)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.094***	0.232***	0.037*	
	(0.03)	(0.03)	(0.02)	
ln(SIZE)	0.156***	0.307***	0.051**	-6.090***
	(0.04)	(0.05)	(0.02)	(0.73)
ln(AGE)	-0.289***	-0.046	0.088***	-0.451
	(0.05)	(0.09)	(0.03)	(0.75)
IGW	-0.377***	-0.472***	-0.348***	-18.416***
	(0.09)	(0.12)	(0.06)	(1.82)
BM	0.032	-0.083***	-0.088***	0.086
	(0.02)	(0.02)	(0.01)	(0.26)
DE	-0.090***	-0.008	-0.005	0.435**
	(0.02)	(0.03)	(0.01)	(0.21)
ROA	-0.434	-1.923***	0.932***	1.609
	(0.35)	(0.44)	(0.19)	(4.63)
NIAI	0.279	-1.750***	0.392*	16.608***
	(0.31)	(0.51)	(0.21)	(5.61)
EIGD	0.276	1.193***	0.678***	-7.820***
	(0.23)	(0.15)	(0.10)	(1.42)
RETURNS	-0.500***	-0.457***	0.200***	-2.574**
	(0.07)	(0.08)	(0.05)	(1.08)
NASACQ	0.339	2.015***	-0.205	-14.638**
	(0.28)	(0.33)	(0.16)	(6.42)
VOLATILITY	-1.805***	-1.267***	1.682***	-35.007***
	(0.33)	(0.39)	(0.26)	(7.41)
LN(MRKT)	-0.730*	0.927	0.065	-31.104***
	(0.37)	(0.57)	(0.20)	(5.52)
LN(FRMSTR)	0.311	-1.006*	-0.394*	26.809***
	(0.43)	(0.59)	(0.21)	(5.79)
LN(CORPGOV)	-0.259	-1.097***	0.191	12.301***
	(0.18)	(0.35)	(0.14)	(3.74)
LN(BRND)	-0.199***	-0.071	-0.137***	1.926**
	(0.07)	(0.09)	(0.04)	(0.94)
LN(FINPOS)	0.930***	1.069***	0.115	-19.847***
	(0.22)	(0.24)	(0.11)	(3.12)
LN(REGACC)	-0.041	-0.055	0.132***	15.546***
	(0.09)	(0.12)	(0.05)	(1.33)
Constant	-2.763***	-3.147***	-0.809*	125.075***
	(0.72)	(0.96)	(0.47)	(11.75)
R-squared	0.324	0.379	0.564	0.465
Degrees of fr.	545	545	545	546

* p<0.10, ** p<0.05, *** p<0.01

Table A4.27 – OLS regression results for German mandatory adopters reporting before IFRS7 (2005)				
	MFE	**MFA**		
	Mean	**Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.182*	-0.367*	-0.368***	
	(0.11)	(0.21)	(0.11)	
ln(SIZE)	0.487***	0.447*	0.211**	0.781
	(0.14)	(0.27)	(0.10)	(1.98)
ln(AGE)	2.059***	0.344	-0.433	-12.562
	(0.74)	(1.47)	(0.50)	(11.05)
IGW	2.324	10.522**	1.000	33.822
	(2.53)	(5.10)	(1.80)	(36.33)
BM	0.754	2.427**	0.325	7.929
	(0.52)	(1.04)	(0.36)	(6.48)
DE	-0.638***	-0.538	-0.024	5.344*
	(0.22)	(0.43)	(0.15)	(2.98)
ROA	-3.900	-58.107***	-1.200	-118.498
	(10.08)	(20.25)	(7.48)	(137.46)
NIAI	13.223***	-22.803***	-4.016	-263.523***
	(3.54)	(6.49)	(3.56)	(84.80)
EIGD	53.226	151.258*	62.814**	1064.705**
	(39.52)	(78.97)	(28.31)	(527.05)
RETURNS	-1.362**	-1.128	-1.181***	-18.765**
	(0.52)	(1.01)	(0.41)	(8.78)
NASACQ	0.131	0.537*	0.890***	29.452***
	(0.22)	(0.31)	(0.25)	(5.90)
VOLATILITY	13.082*	-46.946***	-2.764	-300.901**
	(7.19)	(14.35)	(6.24)	(120.78)
LN(MRKT)	3.242**	5.757*	1.656	9.352
	(1.53)	(3.04)	(1.11)	(22.64)
LN(FRMSTR)	-2.217	-5.196*	-1.393	10.064
	(1.36)	(2.70)	(1.11)	(24.68)
LN(CORPGOV)	-3.474**	-4.759*	-0.797	8.908
	(1.34)	(2.65)	(0.92)	(17.44)
LN(BRND)	1.205***	1.003	0.007	-16.763**
	(0.45)	(0.88)	(0.35)	(7.91)
LN(FINPOS)	0.642	2.515**	0.446	-15.819
	(0.59)	(1.19)	(0.55)	(10.54)
LN(REGACC)	0.179	-0.399**	0.103	5.891**
	(0.11)	(0.18)	(0.12)	(2.75)
Constant	-12.897***	13.461***	0.126	92.242***
	(1.17)	(1.91)	(1.43)	(27.13)
R-squared	0.795	0.947	0.742	0.874
Degrees of fr.	137	137	137	138
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.28 – OLS regression results for German mandatory adopters reporting after IFRS7 (2005)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.337	0.445**	-0.250**	
	(0.21)	(0.20)	(0.10)	
ln(SIZE)	-0.237*	-0.124	-0.044	-1.299
	(0.12)	(0.13)	(0.05)	(0.96)
ln(AGE)	0.600*	2.288***	0.213	1.046
	(0.35)	(0.36)	(0.15)	(2.09)
IGW	-1.800***	-0.802**	-0.566***	-10.789***
	(0.28)	(0.32)	(0.11)	(2.29)
BM	0.211***	0.001	-0.133***	-2.172***
	(0.06)	(0.07)	(0.03)	(0.34)
DE	-0.373***	1.319***	0.336***	0.878
	(0.11)	(0.15)	(0.06)	(1.08)
ROA	-0.206	0.353	2.441***	5.435
	(0.46)	(0.58)	(0.33)	(5.21)
NIAI	14.533***	-0.791	-2.251***	-26.236**
	(1.61)	(1.87)	(0.71)	(10.47)
EIGD	-1.057**	-3.747***	0.513***	-7.364***
	(0.45)	(0.47)	(0.19)	(2.73)
RETURNS	-1.464***	-0.946***	0.383***	-1.788**
	(0.15)	(0.14)	(0.06)	(0.89)
NASACQ	1.858***	-2.405***	0.764***	30.027***
	(0.69)	(0.54)	(0.29)	(6.20)
VOLATILITY	-10.424***	3.669***	0.972**	-6.944
	(0.91)	(1.00)	(0.47)	(9.43)
LN(MRKT)	1.019	-3.609***	0.733*	-2.797
	(0.97)	(0.81)	(0.40)	(6.49)
LN(FRMSTR)	-13.901***	-2.060	-1.335**	32.617***
	(1.23)	(1.47)	(0.62)	(10.06)
LN(CORPGOV)	-2.878***	-4.083***	0.399	-11.854
	(0.98)	(1.12)	(0.40)	(7.35)
LN(BRND)	3.991***	2.507***	0.435	1.056
	(0.67)	(0.78)	(0.32)	(4.31)
LN(FINPOS)	11.726***	4.019***	0.344	-20.592***
	(1.06)	(1.23)	(0.55)	(7.86)
LN(REGACC)	-0.535***	1.035***	0.023	1.296
	(0.17)	(0.24)	(0.09)	(1.77)
Constant	14.335***	15.380***	-2.387	58.630**
	(3.47)	(3.66)	(1.52)	(24.30)
R-squared	0.760	0.768	0.845	0.819
Degrees of freedom	209	209	209	210
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.29 – OLS regression results for German voluntary adopters reporting before IFRS7 (2005)

	MFE Mean	MFA Mean	MFD	NOA
	β/se	β/se	β/se	β/se
ln(NOA)	0.051***	-0.076***	0.009	
	(0.01)	(0.02)	(0.02)	
ln(SIZE)	0.085***	-0.026	0.008	5.578***
	(0.03)	(0.03)	(0.02)	(0.47)
ln(AGE)	-0.058*	-0.028	0.029	-5.123***
	(0.03)	(0.04)	(0.04)	(0.90)
IGW	0.315**	0.944***	0.093	12.977***
	(0.13)	(0.27)	(0.11)	(2.31)
BM	0.034***	0.021	-0.088***	2.765***
	(0.01)	(0.02)	(0.01)	(0.34)
DE	-0.018**	0.066***	0.019**	-1.692***
	(0.01)	(0.02)	(0.01)	(0.23)
ROA	-2.096***	2.855***	3.717***	-8.085
	(0.47)	(0.65)	(0.69)	(8.47)
NIAI	-0.095	1.710***	1.234***	-56.979***
	(0.28)	(0.28)	(0.29)	(6.81)
EIGD	-0.918***	0.747***	0.358***	0.910
	(0.14)	(0.13)	(0.09)	(1.67)
RETURNS	-0.013	-0.622***	0.109*	-11.600***
	(0.06)	(0.13)	(0.06)	(1.40)
NASACQ	0.386**	-1.659***	-0.632**	14.369***
	(0.19)	(0.28)	(0.24)	(4.48)
VOLATILITY	0.624**	4.835***	2.318***	109.509***
	(0.30)	(0.87)	(0.48)	(7.48)
LN(MRKT)	0.203	0.473*	-0.591***	12.073**
	(0.17)	(0.28)	(0.17)	(5.11)
LN(FRMSTR)	-0.681***	-0.090	0.490***	-20.387***
	(0.12)	(0.16)	(0.14)	(4.37)
LN(CORPGOV)	-0.052	0.191***	0.379***	2.881**
	(0.06)	(0.07)	(0.06)	(1.28)
LN(BRND)	0.015	-0.374***	-0.196***	-0.231
	(0.04)	(0.09)	(0.05)	(1.22)
LN(FINPOS)	0.586***	-0.487**	-0.052	-8.061***
	(0.14)	(0.22)	(0.09)	(2.86)
LN(REGACC)	-0.153**	0.183*	-0.081	19.520***
	(0.07)	(0.10)	(0.05)	(1.22)
Constant	-1.260*	0.298	-0.983*	-70.842***
	(0.70)	(0.67)	(0.53)	(11.82)
R-squared	0.386	0.486	0.587	0.618
Degrees of freedom	653	653	653	654

* p<0.10, ** p<0.05, *** p<0.01

Table A4.30 – OLS regression results for German voluntary adopters reporting after IFRS7 (2005)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.096***	-0.031	0.062**	
	(0.03)	(0.06)	(0.03)	
ln(SIZE)	-0.004	-0.025	0.083**	-9.366***
	(0.04)	(0.08)	(0.04)	(0.44)
ln(AGE)	-0.366***	0.233**	-0.031	-0.449
	(0.03)	(0.09)	(0.04)	(0.68)
IGW	-0.493	-4.023***	0.006	-80.189***
	(0.33)	(1.05)	(0.30)	(3.67)
BM	-0.033**	-0.187***	-0.037*	0.682**
	(0.01)	(0.03)	(0.02)	(0.33)
DE	-0.074***	0.052*	-0.043***	0.300
	(0.01)	(0.03)	(0.01)	(0.23)
ROA	-1.391***	-2.607***	-0.064	-21.005***
	(0.35)	(0.64)	(0.37)	(7.74)
NIAI	0.204	0.258	-0.117	34.022***
	(0.34)	(0.58)	(0.27)	(5.25)
EIGD	0.310	3.521***	-0.581***	-6.011**
	(0.37)	(0.40)	(0.11)	(2.91)
RETURNS	-0.039	-0.128*	0.047	-0.663
	(0.03)	(0.07)	(0.07)	(0.92)
NASACQ	1.071***	2.621***	-0.105	4.056
	(0.25)	(0.48)	(0.22)	(5.66)
VOLATILITY	0.567	-5.889***	1.996***	-84.141***
	(0.37)	(1.72)	(0.45)	(6.45)
LN(MRKT)	-1.833***	2.120***	0.196	-12.696***
	(0.24)	(0.65)	(0.26)	(4.49)
LN(FRMSTR)	2.800***	-3.766***	0.040	-29.381***
	(0.30)	(1.16)	(0.31)	(5.75)
LN(CORPGOV)	-0.271	-0.437	-0.342**	8.245**
	(0.21)	(0.34)	(0.17)	(3.47)
LN(BRND)	0.103*	0.146	-0.278***	5.837***
	(0.05)	(0.10)	(0.08)	(1.06)
LN(FINPOS)	-0.742***	1.113**	0.049	8.363**
	(0.18)	(0.51)	(0.17)	(3.74)
LN(REGACC)	0.000	0.660***	0.146*	24.919***
	(0.08)	(0.23)	(0.08)	(1.24)
Constant	0.131	6.166***	-0.169	229.521***
	(0.84)	(2.04)	(0.83)	(13.26)
R-squared	0.669	0.515	0.636	0.800
Degrees of freedom	317	317	317	318
* p<0.10, ** p<0.05, *** p<0.01				

IFRS7 (2008)

Table A4.31 – OLS regression results for UK companies reporting before IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.070***	0.012	-0.877***	
	(0.03)	(0.02)	(0.10)	
ln(SIZE)	0.001	-0.017***	-0.068**	1.425***
	(0.01)	(0.01)	(0.03)	(0.13)
ln(AGE)	-0.055***	0.029**	0.869***	0.754***
	(0.01)	(0.01)	(0.06)	(0.20)
IGW	-0.081**	-0.097***	-0.255*	2.269***
	(0.04)	(0.04)	(0.15)	(0.59)
BM	0.001	0.001	0.050***	0.091***
	(0.00)	(0.00)	(0.01)	(0.03)
DE	-0.005**	-0.003*	-0.088***	-0.300***
	(0.00)	(0.00)	(0.02)	(0.05)
ROA	-0.217**	-0.566***	-1.805***	9.918***
	(0.10)	(0.10)	(0.40)	(1.22)
NIAI	0.130***	0.153***	0.399*	1.398
	(0.05)	(0.04)	(0.23)	(0.89)
EIGD	-0.021	-0.014	0.714***	0.969
	(0.03)	(0.04)	(0.13)	(0.60)
RETURNS	-0.021	0.013	-0.592***	-3.344***
	(0.02)	(0.02)	(0.11)	(0.43)
NASACQ	0.063	-0.122***	-0.979**	-1.369
	(0.05)	(0.04)	(0.47)	(2.02)
VOLATILITY	0.415***	0.946***	-3.589***	-5.717***
	(0.11)	(0.13)	(0.48)	(1.61)
LN(MRKT)	0.030	-0.049	-0.246	-6.678***
	(0.04)	(0.04)	(0.29)	(0.95)
LN(FRMSTR)	0.102	-0.232***	-1.639***	1.340
	(0.07)	(0.09)	(0.38)	(1.24)
LN(CORPGOV)	-0.063	0.316***	1.600***	2.600***
	(0.05)	(0.06)	(0.19)	(0.74)
LN(BRND)	-0.058***	-0.033***	0.141*	2.580***
	(0.01)	(0.01)	(0.08)	(0.26)
LN(FINPOS)	-0.036	0.022	0.685***	3.712***
	(0.04)	(0.05)	(0.23)	(0.95)
LN(REGACC)	-0.008	0.064***	-0.202*	0.966**
	(0.02)	(0.02)	(0.11)	(0.45)
Constant	0.032	-0.534***	0.396	-40.687***
	(0.15)	(0.18)	(0.97)	(4.13)
R-squared	0.054	0.164	0.272	0.401
Degrees of freedom	1937	1937	1937	1938
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.32 – OLS regression results for UK companies reporting after IFRS7 (2008)

	MFE Mean	MFA Mean	MFD	NOA
	β/se	β/se	β/se	β/se
ln(NOA)	0.009	-0.088*	-1.158***	
	(0.02)	(0.05)	(0.15)	
ln(SIZE)	0.038***	0.042***	0.053	1.533***
	(0.01)	(0.01)	(0.04)	(0.11)
ln(AGE)	-0.031***	0.000	0.862***	0.545***
	(0.01)	(0.01)	(0.06)	(0.20)
IGW	-0.080***	-0.217***	-0.515***	-4.538***
	(0.03)	(0.03)	(0.13)	(0.48)
BM	0.009***	0.006**	0.042***	0.292***
	(0.00)	(0.00)	(0.01)	(0.03)
DE	0.014***	0.007	-0.155***	-1.042***
	(0.00)	(0.00)	(0.02)	(0.08)
ROA	-1.168***	-0.881***	1.440***	-6.384***
	(0.20)	(0.25)	(0.54)	(1.49)
NIAI	0.689***	0.726***	-0.069	6.448***
	(0.09)	(0.14)	(0.25)	(0.83)
EIGD	-0.251***	-0.141***	1.196***	1.900***
	(0.03)	(0.04)	(0.23)	(0.47)
RETURNS	-0.113***	0.073***	0.663***	-1.884***
	(0.02)	(0.03)	(0.07)	(0.27)
NASACQ	-0.402***	-1.072***	8.824***	-6.641***
	(0.12)	(0.15)	(0.92)	(1.99)
VOLATILITY	0.254**	1.131***	-3.583***	-7.533***
	(0.11)	(0.13)	(0.40)	(1.35)
LN(MRKT)	0.053	-0.593***	-1.034***	-11.614***
	(0.05)	(0.08)	(0.32)	(0.92)
LN(FRMSTR)	0.151**	0.491***	0.538	17.479***
	(0.07)	(0.12)	(0.41)	(1.10)
LN(CORPGOV)	-0.105***	0.307***	-0.099	-7.397***
	(0.04)	(0.05)	(0.21)	(0.80)
LN(BRND)	-0.030***	-0.008	0.546***	5.413***
	(0.01)	(0.02)	(0.09)	(0.27)
LN(FINPOS)	-0.018	-0.300***	-0.674***	-5.489***
	(0.05)	(0.08)	(0.25)	(0.80)
LN(REGACC)	-0.125***	-0.017	-0.004	2.007***
	(0.02)	(0.03)	(0.13)	(0.43)
Constant	-0.324**	0.258	9.045***	4.559
	(0.13)	(0.27)	(0.96)	(3.05)
R-squared	0.162	0.194	0.270	0.471
Degrees of freedom	2381	2381	2381	2382

* p<0.10, ** p<0.05, *** p<0.01

Table A4.33 – OLS regression results for French companies reporting before IFRS7 (2008)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.289***	-0.321***	-0.233***	
	(0.05)	(0.07)	(0.05)	
ln(SIZE)	0.017	0.006	-0.018	4.162***
	(0.02)	(0.03)	(0.02)	(0.24)
ln(AGE)	-0.192***	0.075	-0.319***	2.038***
	(0.07)	(0.09)	(0.04)	(0.68)
IGW	0.517***	-0.078	-0.290***	12.036***
	(0.09)	(0.12)	(0.07)	(1.29)
BM	0.017	0.065**	-0.139***	0.035
	(0.02)	(0.03)	(0.01)	(0.23)
DE	0.100***	0.123***	-0.076***	0.444***
	(0.01)	(0.02)	(0.01)	(0.12)
ROA	0.669**	-4.002***	0.861***	0.208
	(0.33)	(0.51)	(0.26)	(3.84)
NIAI	-0.310***	-0.782***	-0.117*	-3.551***
	(0.07)	(0.18)	(0.06)	(1.22)
EIGD	-0.062	-0.917***	-0.063	-5.351***
	(0.06)	(0.17)	(0.06)	(0.71)
RETURNS	-0.093*	-0.566***	0.085**	-3.428***
	(0.05)	(0.07)	(0.03)	(0.83)
NASACQ	-1.036***	0.590*	0.115	-1.575
	(0.16)	(0.31)	(0.14)	(2.41)
VOLATILITY	-0.644***	0.568***	-0.986***	9.611***
	(0.20)	(0.21)	(0.13)	(2.97)
LN(MRKT)	0.223**	0.273***	0.101*	-1.847**
	(0.11)	(0.10)	(0.06)	(0.91)
LN(FRMSTR)	-0.276**	0.435**	0.072	-2.311
	(0.13)	(0.18)	(0.12)	(1.72)
LN(CORPGOV)	-0.196***	-0.387***	-0.410***	-5.584***
	(0.06)	(0.09)	(0.08)	(0.88)
LN(BRND)	-0.037	-0.071**	-0.055***	1.459***
	(0.02)	(0.03)	(0.02)	(0.30)
LN(FINPOS)	0.298***	-0.187**	0.190***	3.820***
	(0.06)	(0.09)	(0.04)	(0.84)
LN(REGACC)	-0.132***	0.061	0.005	1.259**
	(0.03)	(0.06)	(0.03)	(0.56)
Constant	1.869***	-0.355	3.583***	-29.602***
	(0.45)	(0.53)	(0.37)	(6.09)
R-squared	0.247	0.508	0.571	0.639
Degrees of freedom	797	797	797	798

* p<0.10, ** p<0.05, *** p<0.01

Table A4.34 – OLS regression results for French companies reporting after IFRS7 (2008)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.268***	-0.407***	-0.225***	
	(0.04)	(0.06)	(0.05)	
ln(SIZE)	0.019	-0.131***	-0.003	4.410***
	(0.02)	(0.02)	(0.01)	(0.19)
ln(AGE)	0.053	0.036	0.120***	0.541
	(0.04)	(0.05)	(0.03)	(0.53)
IGW	-0.200***	-0.177***	-0.347***	12.901***
	(0.07)	(0.07)	(0.06)	(1.09)
BM	-0.097***	0.037*	-0.139***	0.482**
	(0.02)	(0.02)	(0.02)	(0.21)
DE	-0.061***	0.028*	-0.182***	0.146
	(0.02)	(0.01)	(0.03)	(0.09)
ROA	-0.921***	2.823***	-1.064***	-1.545
	(0.29)	(0.92)	(0.24)	(2.62)
NIAI	-0.205***	-0.382***	0.189***	-4.304***
	(0.06)	(0.06)	(0.06)	(0.86)
EIGD	0.260***	0.325***	0.253***	-2.188***
	(0.06)	(0.07)	(0.04)	(0.79)
RETURNS	-0.027	-0.268***	0.116***	-3.501***
	(0.03)	(0.04)	(0.04)	(0.44)
NASACQ	2.229***	-3.833***	-2.578***	-37.088***
	(0.72)	(0.96)	(0.48)	(5.49)
VOLATILITY	-1.313***	-0.250	0.371**	1.060
	(0.23)	(0.42)	(0.17)	(2.74)
LN(MRKT)	0.251**	0.125	-0.055	-1.028
	(0.11)	(0.12)	(0.07)	(1.02)
LN(FRMSTR)	-0.543***	-0.044	0.339***	-2.477
	(0.15)	(0.17)	(0.12)	(1.80)
LN(CORPGOV)	0.430***	-0.131**	-0.394***	-1.960**
	(0.06)	(0.07)	(0.08)	(0.79)
LN(BRND)	-0.134***	-0.053**	-0.028*	0.948***
	(0.02)	(0.03)	(0.01)	(0.26)
LN(FINPOS)	0.148**	0.221***	0.101	2.700***
	(0.06)	(0.07)	(0.06)	(0.90)
LN(REGACC)	-0.180***	-0.139***	-0.094***	-0.708
	(0.04)	(0.05)	(0.03)	(0.56)
Constant	-0.940***	3.227***	1.745***	-32.364***
	(0.32)	(0.51)	(0.34)	(4.23)
R-squared	0.315	0.318	0.526	0.642
Degrees of freedom	1193	1193	1193	1194

* p<0.10, ** p<0.05, *** p<0.01

Table A4.35 – OLS regression results for all German companies reporting before IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.094***	0.232***	0.037*	
	(0.03)	(0.03)	(0.02)	
ln(SIZE)	0.156***	0.307***	0.051**	-6.090***
	(0.04)	(0.05)	(0.02)	(0.73)
ln(AGE)	-0.289***	-0.046	0.088***	-0.451
	(0.05)	(0.09)	(0.03)	(0.75)
IGW	-0.377***	-0.472***	-0.348***	-18.416***
	(0.09)	(0.12)	(0.06)	(1.82)
BM	0.032	-0.083***	-0.088***	0.086
	(0.02)	(0.02)	(0.01)	(0.26)
DE	-0.090***	-0.008	-0.005	0.435**
	(0.02)	(0.03)	(0.01)	(0.21)
ROA	-0.434	-1.923***	0.932***	1.609
	(0.35)	(0.44)	(0.19)	(4.63)
NIAI	0.279	-1.750***	0.392*	16.608***
	(0.31)	(0.51)	(0.21)	(5.61)
EIGD	0.276	1.193***	0.678***	-7.820***
	(0.23)	(0.15)	(0.10)	(1.42)
RETURNS	-0.500***	-0.457***	0.200***	-2.574**
	(0.07)	(0.08)	(0.05)	(1.08)
NASACQ	0.339	2.015***	-0.205	-14.638**
	(0.28)	(0.33)	(0.16)	(6.42)
VOLATILITY	-1.805***	-1.267***	1.682***	-35.007***
	(0.33)	(0.39)	(0.26)	(7.41)
LN(MRKT)	-0.730*	0.927	0.065	-31.104***
	(0.37)	(0.57)	(0.20)	(5.52)
LN(FRMSTR)	0.311	-1.006*	-0.394*	26.809***
	(0.43)	(0.59)	(0.21)	(5.79)
LN(CORPGOV)	-0.259	-1.097***	0.191	12.301***
	(0.18)	(0.35)	(0.14)	(3.74)
LN(BRND)	-0.199***	-0.071	-0.137***	1.926**
	(0.07)	(0.09)	(0.04)	(0.94)
LN(FINPOS)	0.930***	1.069***	0.115	-19.847***
	(0.22)	(0.24)	(0.11)	(3.12)
LN(REGACC)	-0.041	-0.055	0.132***	15.546***
	(0.09)	(0.12)	(0.05)	(1.33)
Constant	-2.763***	-3.147***	-0.809*	125.075***
	(0.72)	(0.96)	(0.47)	(11.75)
R-squared	0.324	0.379	0.564	0.465
Degrees of freedom	545	545	545	546
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.36 – OLS regression results for all German companies reporting under IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.052**	-0.167***	-0.126***	
	(0.02)	(0.04)	(0.03)	
ln(SIZE)	-0.005	-0.251***	0.214***	-1.230**
	(0.03)	(0.04)	(0.02)	(0.55)
ln(AGE)	0.029	0.160***	0.368***	-3.028***
	(0.04)	(0.04)	(0.04)	(0.60)
IGW	0.146*	-0.635***	0.281***	-17.582***
	(0.09)	(0.11)	(0.07)	(1.83)
BM	0.034	0.022	-0.162***	3.519***
	(0.02)	(0.03)	(0.02)	(0.31)
DE	-0.080**	0.290***	-0.131***	2.435***
	(0.04)	(0.06)	(0.03)	(0.52)
ROA	-1.373***	-0.512	-1.527***	-18.496***
	(0.42)	(0.53)	(0.33)	(5.18)
NIAI	0.308	-0.217	-0.286	26.637***
	(0.24)	(0.26)	(0.22)	(4.48)
EIGD	-1.659***	1.902***	0.115	6.024
	(0.30)	(0.52)	(0.24)	(9.07)
RETURNS	-0.416***	0.038	0.054	-5.585***
	(0.05)	(0.06)	(0.06)	(0.83)
NASACQ	0.697*	1.720***	1.364***	-6.252*
	(0.39)	(0.64)	(0.29)	(3.65)
VOLATILITY	0.830**	-0.322	3.599***	-15.465**
	(0.34)	(0.43)	(0.36)	(6.32)
LN(MRKT)	0.235	0.149	0.248*	-0.874
	(0.20)	(0.23)	(0.13)	(2.71)
LN(FRMSTR)	-0.720***	0.692**	-0.508***	-5.401
	(0.24)	(0.28)	(0.18)	(3.85)
LN(CORPGOV)	0.266***	-0.479***	-0.067	7.746***
	(0.10)	(0.12)	(0.08)	(1.38)
LN(BRND)	0.101***	-0.226***	0.163***	-1.909***
	(0.03)	(0.05)	(0.04)	(0.65)
LN(FINPOS)	0.074	-0.737***	-0.104	-8.859***
	(0.17)	(0.18)	(0.14)	(2.97)
LN(REGACC)	0.084	0.304**	0.032	13.654***
	(0.10)	(0.13)	(0.07)	(1.63)
Constant	-0.047	7.140***	-1.758***	49.528***
	(0.80)	(1.04)	(0.62)	(11.17)
R-squared	0.186	0.355	0.518	0.414
Degrees of freedom	807	807	807	808
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.37 – OLS regression results for German mandatory adopters reporting before IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.337	0.445**	-0.250**	
	(0.21)	(0.20)	(0.10)	
ln(SIZE)	-0.237*	-0.124	-0.044	-1.299
	(0.12)	(0.13)	(0.05)	(0.96)
ln(AGE)	0.600*	2.288***	0.213	1.046
	(0.35)	(0.36)	(0.15)	(2.09)
IGW	-1.800***	-0.802**	-0.566***	-10.789***
	(0.28)	(0.32)	(0.11)	(2.29)
BM	0.211***	0.001	-0.133***	-2.172***
	(0.06)	(0.07)	(0.03)	(0.34)
DE	-0.373***	1.319***	0.336***	0.878
	(0.11)	(0.15)	(0.06)	(1.08)
ROA	-0.206	0.353	2.441***	5.435
	(0.46)	(0.58)	(0.33)	(5.21)
NIAI	14.533***	-0.791	-2.251***	-26.236**
	(1.61)	(1.87)	(0.71)	(10.47)
EIGD	-1.057**	-3.747***	0.513***	-7.364***
	(0.45)	(0.47)	(0.19)	(2.73)
RETURNS	-1.464***	-0.946***	0.383***	-1.788**
	(0.15)	(0.14)	(0.06)	(0.89)
NASACQ	1.858***	-2.405***	0.764***	30.027***
	(0.69)	(0.54)	(0.29)	(6.20)
VOLATILITY	-10.424***	3.669***	0.972**	-6.944
	(0.91)	(1.00)	(0.47)	(9.43)
LN(MRKT)	1.019	-3.609***	0.733*	-2.797
	(0.97)	(0.81)	(0.40)	(6.49)
LN(FRMSTR)	-13.901***	-2.060	-1.335**	32.617***
	(1.23)	(1.47)	(0.62)	(10.06)
LN(CORPGOV)	-2.878***	-4.083***	0.399	-11.854
	(0.98)	(1.12)	(0.40)	(7.35)
LN(BRND)	3.991***	2.507***	0.435	1.056
	(0.67)	(0.78)	(0.32)	(4.31)
LN(FINPOS)	11.726***	4.019***	0.344	-20.592***
	(1.06)	(1.23)	(0.55)	(7.86)
LN(REGACC)	-0.535***	1.035***	0.023	1.296
	(0.17)	(0.24)	(0.09)	(1.77)
Constant	14.335***	15.380***	-2.387	58.630**
	(3.47)	(3.66)	(1.52)	(24.30)
R-squared	0.760	0.768	0.845	0.819
Degrees of freedom	209	209	209	210
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.38 – OLS regression results for German mandatory adopters reporting after IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.665***	0.266	-0.080	
	(0.16)	(0.19)	(0.08)	
ln(SIZE)	0.156***	0.306***	0.182***	1.797***
	(0.04)	(0.08)	(0.03)	(0.59)
ln(AGE)	-0.457***	-0.028	0.450***	-1.174*
	(0.05)	(0.05)	(0.03)	(0.63)
IGW	0.145	0.515*	-0.447***	-8.710***
	(0.18)	(0.30)	(0.13)	(2.96)
BM	0.038	-0.244***	-0.003	1.083***
	(0.04)	(0.05)	(0.02)	(0.41)
DE	-0.493***	-0.890***	0.440***	2.322*
	(0.12)	(0.15)	(0.06)	(1.19)
ROA	-5.052***	-5.422***	2.288***	18.004**
	(0.69)	(0.75)	(0.29)	(7.01)
NIAI	4.567***	-0.117	-0.947*	9.289
	(0.76)	(1.14)	(0.52)	(11.18)
EIGD	-2.196**	-0.858	0.737*	-14.678*
	(0.86)	(0.65)	(0.42)	(7.89)
RETURNS	-0.516***	0.270***	-0.095**	-5.802***
	(0.07)	(0.07)	(0.04)	(0.74)
NASACQ	-0.070	3.858***	0.636**	-0.101
	(0.45)	(1.02)	(0.30)	(3.06)
VOLATILITY	0.773*	3.802***	-0.230	-18.500***
	(0.42)	(0.55)	(0.25)	(5.80)
LN(MRKT)	1.614***	-0.954**	-0.244	1.065
	(0.34)	(0.47)	(0.22)	(3.85)
LN(FRMSTR)	-2.962***	0.046	-1.587***	8.424
	(0.44)	(0.52)	(0.29)	(5.94)
LN(CORPGOV)	-1.106***	-0.061	-0.411***	-0.341
	(0.18)	(0.33)	(0.15)	(2.97)
LN(BRND)	0.083	-0.137	0.190***	-5.336***
	(0.11)	(0.12)	(0.07)	(1.20)
LN(FINPOS)	1.382***	0.422	1.282***	-7.809**
	(0.30)	(0.31)	(0.18)	(3.56)
LN(REGACC)	0.686***	-0.225	0.117	3.092**
	(0.11)	(0.21)	(0.08)	(1.36)
Constant	1.112	1.372	1.844***	8.394
	(1.04)	(1.18)	(0.62)	(12.68)
R-squared	0.508	0.524	0.826	0.719
Degrees of freedom	305	305	305	306
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.39 – OLS regression results for German voluntary adopters reporting before IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.096***	-0.031	0.062**	
	(0.03)	(0.06)	(0.03)	
ln(SIZE)	-0.004	-0.025	0.083**	-9.366***
	(0.04)	(0.08)	(0.04)	(0.44)
ln(AGE)	-0.366***	0.233**	-0.031	-0.449
	(0.03)	(0.09)	(0.04)	(0.68)
IGW	-0.493	-4.023***	0.006	-80.189***
	(0.33)	(1.05)	(0.30)	(3.67)
BM	-0.033**	-0.187***	-0.037*	0.682**
	(0.01)	(0.03)	(0.02)	(0.33)
DE	-0.074***	0.052*	-0.043***	0.300
	(0.01)	(0.03)	(0.01)	(0.23)
ROA	-1.391***	-2.607***	-0.064	-21.005***
	(0.35)	(0.64)	(0.37)	(7.74)
NIAI	0.204	0.258	-0.117	34.022***
	(0.34)	(0.58)	(0.27)	(5.25)
EIGD	0.310	3.521***	-0.581***	-6.011**
	(0.37)	(0.40)	(0.11)	(2.91)
RETURNS	-0.039	-0.128*	0.047	-0.663
	(0.03)	(0.07)	(0.07)	(0.92)
NASACQ	1.071***	2.621***	-0.105	4.056
	(0.25)	(0.48)	(0.22)	(5.66)
VOLATILITY	0.567	-5.889***	1.996***	-84.141***
	(0.37)	(1.72)	(0.45)	(6.45)
LN(MRKT)	-1.833***	2.120***	0.196	-12.696***
	(0.24)	(0.65)	(0.26)	(4.49)
LN(FRMSTR)	2.800***	-3.766***	0.040	-29.381***
	(0.30)	(1.16)	(0.31)	(5.75)
LN(CORPGOV)	-0.271	-0.437	-0.342**	8.245**
	(0.21)	(0.34)	(0.17)	(3.47)
LN(BRND)	0.103*	0.146	-0.278***	5.837***
	(0.05)	(0.10)	(0.08)	(1.06)
LN(FINPOS)	-0.742***	1.113**	0.049	8.363**
	(0.18)	(0.51)	(0.17)	(3.74)
LN(REGACC)	0.000	0.660***	0.146*	24.919***
	(0.08)	(0.23)	(0.08)	(1.24)
Constant	0.131	6.166***	-0.169	229.521***
	(0.84)	(2.04)	(0.83)	(13.26)
R-squared	0.669	0.515	0.636	0.800
Degrees of freedom	317	317	317	318
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.40 – OLS regression results for German voluntary adopters reporting under IFRS7 (2008)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.014	0.080	-0.060	
	(0.06)	(0.10)	(0.05)	
ln(SIZE)	-0.100*	-0.321***	0.267***	-2.648***
	(0.06)	(0.07)	(0.04)	(0.49)
ln(AGE)	-0.143**	0.153*	0.203***	-1.058
	(0.07)	(0.09)	(0.06)	(0.93)
IGW	-0.675**	0.869	0.227	-61.238***
	(0.29)	(0.53)	(0.24)	(2.49)
BM	0.202***	-0.040	-0.241***	2.301***
	(0.05)	(0.07)	(0.05)	(0.59)
DE	0.037	0.364***	-0.167***	-1.313**
	(0.06)	(0.08)	(0.05)	(0.63)
ROA	-2.754**	2.944*	0.077	-73.052***
	(1.10)	(1.53)	(0.91)	(9.52)
NIAI	1.076**	0.132	0.287	6.123
	(0.42)	(0.49)	(0.35)	(4.53)
EIGD	-2.350***	2.467**	1.827***	-32.318***
	(0.66)	(1.06)	(0.54)	(6.56)
RETURNS	-0.491***	0.160**	0.040	-0.528
	(0.06)	(0.07)	(0.08)	(0.85)
NASACQ	0.647	-0.207	0.453	5.692
	(0.56)	(0.43)	(0.44)	(4.88)
VOLATILITY	0.135	1.524	5.518***	-94.317***
	(0.79)	(1.10)	(0.63)	(6.84)
LN(MRKT)	-0.645**	0.634*	0.492**	-28.111***
	(0.30)	(0.38)	(0.24)	(2.57)
LN(FRMSTR)	1.733***	0.537	-1.293***	4.124
	(0.62)	(0.78)	(0.44)	(6.27)
LN(CORPGOV)	0.666***	-0.431**	0.379***	-0.173
	(0.15)	(0.17)	(0.12)	(1.98)
LN(BRND)	-0.156*	-0.235*	0.135	5.445***
	(0.09)	(0.12)	(0.09)	(1.14)
LN(FINPOS)	-1.149**	-1.048*	0.478	4.816
	(0.50)	(0.56)	(0.39)	(4.52)
LN(REGACC)	-0.291	-0.005	-0.366**	23.250***
	(0.21)	(0.28)	(0.15)	(1.96)
Constant	-0.229	8.454***	-4.135***	78.542***
	(1.51)	(1.75)	(1.01)	(14.76)
R-squared	0.227	0.417	0.536	0.799
Degrees of freedom	485	485	485	486
* p<0.10, ** p<0.05, *** p<0.01				

IFRS8 (2006)

Table A4.41 – OLS regression results for UK companies reporting before IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.037***	0.023**	-0.666***	
	(0.01)	(0.01)	(0.06)	
ln(SIZE)	0.002	-0.011***	-0.022	2.088***
	(0.00)	(0.00)	(0.02)	(0.10)
ln(AGE)	-0.044***	0.013**	0.917***	0.616***
	(0.01)	(0.01)	(0.04)	(0.16)
IGW	-0.003	-0.103***	-0.410***	1.504***
	(0.02)	(0.02)	(0.11)	(0.46)
BM	0.002**	-0.002***	0.010*	0.054***
	(0.00)	(0.00)	(0.01)	(0.02)
DE	0.002	-0.006***	-0.044***	-0.496***
	(0.00)	(0.00)	(0.01)	(0.05)
ROA	-0.036	-0.424***	-0.521*	6.976***
	(0.08)	(0.09)	(0.31)	(1.20)
NIAI	0.075**	0.051*	-0.337*	2.731***
	(0.03)	(0.03)	(0.18)	(0.67)
EIGD	-0.020	-0.234***	0.420***	0.059
	(0.03)	(0.05)	(0.12)	(0.56)
RETURNS	-0.102***	-0.027**	-0.514***	-4.011***
	(0.01)	(0.01)	(0.07)	(0.28)
NASACQ	0.135***	-0.050	-0.261	-0.174
	(0.04)	(0.03)	(0.31)	(1.47)
VOLATILITY	-0.172**	0.702***	-2.665***	-6.418***
	(0.08)	(0.07)	(0.34)	(1.19)
LN(MRKT)	-0.040	-0.002	-1.389***	-5.050***
	(0.02)	(0.02)	(0.20)	(0.77)
LN(FRMSTR)	0.290***	-0.169***	-0.519**	0.458
	(0.05)	(0.05)	(0.26)	(1.04)
LN(CORPGOV)	-0.133***	0.145***	1.490***	5.061***
	(0.03)	(0.03)	(0.14)	(0.61)
LN(BRND)	-0.019***	-0.034***	0.316***	2.575***
	(0.01)	(0.01)	(0.05)	(0.20)
LN(FINPOS)	-0.155***	0.053**	0.719***	-0.016
	(0.03)	(0.03)	(0.18)	(0.79)
LN(REGACC)	0.005	0.042***	-0.210***	-0.316
	(0.01)	(0.01)	(0.07)	(0.32)
Constant	0.429***	-0.178*	-2.243***	-35.457***
	(0.09)	(0.09)	(0.75)	(3.22)
R-squared	0.052	0.158	0.226	0.376
Degrees of freedom	3833	3833	3833	3834
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.42 – OLS regression results for UK companies reporting after IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.029	-0.060	-0.866***	
	(0.02)	(0.05)	(0.13)	
ln(SIZE)	0.034***	0.032***	-0.042	1.649***
	(0.01)	(0.01)	(0.04)	(0.11)
ln(AGE)	-0.037***	0.001	0.848***	0.091
	(0.01)	(0.01)	(0.06)	(0.19)
IGW	-0.082***	-0.179***	-0.315***	-3.660***
	(0.03)	(0.03)	(0.12)	(0.45)
BM	0.004***	0.002	0.036***	-0.015
	(0.00)	(0.00)	(0.01)	(0.04)
DE	0.021***	0.010***	-0.107***	-0.418***
	(0.00)	(0.00)	(0.02)	(0.09)
ROA	-0.860***	-0.693***	0.084	1.683
	(0.15)	(0.18)	(0.45)	(1.47)
NIAI	0.660***	0.677***	-0.098	7.218***
	(0.09)	(0.13)	(0.24)	(0.86)
EIGD	-0.169***	0.027	0.978***	3.281***
	(0.03)	(0.04)	(0.17)	(0.54)
RETURNS	-0.120***	0.058**	0.497***	-1.022***
	(0.02)	(0.03)	(0.07)	(0.25)
NASACQ	-0.419***	-1.089***	8.497***	-4.628**
	(0.12)	(0.14)	(0.89)	(2.03)
VOLATILITY	0.382***	1.176***	-3.518***	-6.829***
	(0.10)	(0.12)	(0.37)	(1.25)
LN(MRKT)	0.060	-0.506***	0.210	-9.685***
	(0.04)	(0.07)	(0.30)	(0.87)
LN(FRMSTR)	0.068	0.360***	-1.005**	11.871***
	(0.07)	(0.10)	(0.39)	(1.11)
LN(CORPGOV)	-0.086***	0.292***	0.237	-4.026***
	(0.03)	(0.05)	(0.19)	(0.77)
LN(BRND)	-0.044***	-0.017	0.173**	4.592***
	(0.01)	(0.02)	(0.08)	(0.24)
LN(FINPOS)	-0.003	-0.251***	-0.309	-3.871***
	(0.04)	(0.08)	(0.24)	(0.78)
LN(REGACC)	-0.075***	0.018	0.057	1.468***
	(0.02)	(0.03)	(0.12)	(0.41)
Constant	-0.200	0.271	9.078***	2.139
	(0.12)	(0.25)	(0.90)	(2.98)
R-squared	0.151	0.171	0.233	0.416
Degrees of freedom	2681	2681	2681	2682
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.43 – OLS regression results for French companies reporting before IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.232***	-0.152***	-0.165***	
	(0.05)	(0.06)	(0.03)	
ln(SIZE)	0.071***	-0.005	-0.064***	5.141***
	(0.02)	(0.02)	(0.01)	(0.17)
ln(AGE)	-0.177***	0.128**	-0.379***	1.627***
	(0.05)	(0.05)	(0.03)	(0.56)
IGW	0.055	-0.222***	-0.280***	6.096***
	(0.04)	(0.04)	(0.03)	(0.82)
BM	0.004	-0.011	-0.061***	0.181
	(0.00)	(0.01)	(0.01)	(0.11)
DE	0.081***	0.076***	-0.060***	0.384***
	(0.01)	(0.02)	(0.01)	(0.12)
ROA	-0.266	-2.578***	0.367*	-11.245***
	(0.18)	(0.30)	(0.22)	(2.33)
NIAI	-0.169***	-0.278***	-0.095**	-8.156***
	(0.05)	(0.08)	(0.05)	(1.03)
EIGD	0.098*	-1.010***	0.107*	-5.864***
	(0.05)	(0.17)	(0.06)	(0.69)
RETURNS	-0.133***	-0.272***	0.057**	-4.518***
	(0.03)	(0.04)	(0.02)	(0.38)
NASACQ	-0.386***	-0.076	0.098	5.456**
	(0.11)	(0.23)	(0.13)	(2.50)
VOLATILITY	-0.572***	1.124***	-0.764***	5.269**
	(0.16)	(0.19)	(0.11)	(2.07)
LN(MRKT)	0.064	0.269***	0.075	0.726
	(0.06)	(0.05)	(0.05)	(0.79)
LN(FRMSTR)	-0.246***	0.083	0.385***	-6.475***
	(0.08)	(0.09)	(0.09)	(1.45)
LN(CORPGOV)	-0.081***	-0.189***	-0.403***	-1.178*
	(0.03)	(0.04)	(0.04)	(0.69)
LN(BRND)	-0.004	-0.092***	-0.038**	1.162***
	(0.01)	(0.02)	(0.02)	(0.25)
LN(FINPOS)	0.173***	-0.027	-0.039	4.191***
	(0.04)	(0.05)	(0.04)	(0.73)
LN(REGACC)	-0.003	-0.006	0.028	-0.057
	(0.02)	(0.03)	(0.02)	(0.41)
Constant	1.016***	-0.263	3.407***	-55.596***
	(0.26)	(0.33)	(0.27)	(3.94)
R-squared	0.163	0.422	0.417	0.538
Degrees of freedom	1589	1589	1589	1590
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.44 – OLS regression results for French companies reporting after IFRS8 (2006)

	MFE Mean β/se	**MFA Mean β/se**	**MFD β/se**	**NOA β/se**
ln(NOA)	0.286***	-0.423***	-0.224***	
	(0.04)	(0.05)	(0.05)	
ln(SIZE)	-0.001	-0.102***	0.020	4.542***
	(0.01)	(0.02)	(0.01)	(0.18)
ln(AGE)	0.124***	0.047	0.096***	0.601
	(0.04)	(0.05)	(0.03)	(0.49)
IGW	-0.194***	-0.191***	-0.272***	12.244***
	(0.06)	(0.07)	(0.05)	(1.04)
BM	-0.081***	0.017	-0.163***	0.419**
	(0.02)	(0.02)	(0.02)	(0.21)
DE	-0.067***	0.038**	-0.172***	0.188*
	(0.02)	(0.01)	(0.03)	(0.10)
ROA	-0.865***	2.601***	-1.069***	4.783
	(0.26)	(0.90)	(0.24)	(2.92)
NIAI	-0.084	-0.344***	0.132**	-2.665***
	(0.06)	(0.06)	(0.06)	(0.94)
EIGD	0.218***	0.341***	0.275***	-2.402***
	(0.06)	(0.07)	(0.04)	(0.77)
RETURNS	-0.102***	-0.231***	0.157***	-3.606***
	(0.03)	(0.03)	(0.04)	(0.40)
NASACQ	1.430**	-2.731***	-1.152**	-23.950***
	(0.64)	(0.74)	(0.52)	(5.52)
VOLATILITY	-0.990***	-0.156	0.484***	7.734***
	(0.20)	(0.35)	(0.16)	(2.72)
LN(MRKT)	0.169	-0.004	-0.083	-2.211**
	(0.10)	(0.11)	(0.07)	(0.98)
LN(FRMSTR)	-0.350**	-0.012	0.381***	-3.902**
	(0.15)	(0.17)	(0.13)	(1.81)
LN(CORPGOV)	0.332***	0.015	-0.286***	-2.156***
	(0.06)	(0.06)	(0.07)	(0.79)
LN(BRND)	-0.135***	-0.043*	-0.045***	0.972***
	(0.02)	(0.02)	(0.01)	(0.25)
LN(FINPOS)	0.111*	0.153**	0.035	3.008***
	(0.07)	(0.07)	(0.06)	(0.91)
LN(REGACC)	-0.189***	-0.141***	-0.137***	0.906
	(0.04)	(0.04)	(0.03)	(0.59)
Constant	-0.811***	2.848***	1.375***	-26.677***
	(0.31)	(0.48)	(0.31)	(4.20)
R-squared	0.296	0.304	0.499	0.615
Degrees of freedom	1289	1289	1289	1290

* p<0.10, ** p<0.05, *** p<0.01

Table A4.45 – OLS regression results for all German companies reporting before IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.053***	0.035***	0.019	
	(0.01)	(0.01)	(0.01)	
ln(SIZE)	0.009	-0.047*	0.054***	-1.131*
	(0.02)	(0.03)	(0.02)	(0.67)
ln(AGE)	-0.217***	-0.346***	-0.110***	-1.875**
	(0.05)	(0.05)	(0.04)	(0.75)
IGW	-0.191***	-0.608***	-0.521***	-11.491***
	(0.07)	(0.08)	(0.06)	(1.18)
BM	0.005	-0.030***	-0.057***	0.608***
	(0.01)	(0.01)	(0.01)	(0.19)
DE	-0.043***	-0.083***	-0.026***	0.316
	(0.01)	(0.01)	(0.01)	(0.19)
ROA	0.163	-2.197***	0.924***	6.397*
	(0.24)	(0.41)	(0.29)	(3.26)
NIAI	0.852***	0.512***	0.665***	3.235
	(0.15)	(0.16)	(0.12)	(3.27)
EIGD	-0.656***	1.093***	0.154	0.516
	(0.18)	(0.16)	(0.10)	(1.35)
RETURNS	-0.129***	-0.066**	0.147***	-7.059***
	(0.02)	(0.03)	(0.03)	(0.78)
NASACQ	-0.337***	0.535***	0.172*	3.195
	(0.11)	(0.16)	(0.10)	(2.59)
VOLATILITY	-0.604***	1.537***	2.533***	-37.804***
	(0.22)	(0.38)	(0.26)	(8.03)
LN(MRKT)	-1.338***	-0.491**	-0.040	4.248
	(0.18)	(0.22)	(0.14)	(4.46)
LN(FRMSTR)	0.974***	0.666***	-0.239	-15.994***
	(0.17)	(0.19)	(0.16)	(4.81)
LN(CORPGOV)	0.011	0.169**	0.391***	10.060***
	(0.09)	(0.09)	(0.08)	(1.80)
LN(BRND)	0.044	-0.097***	-0.224***	-1.276
	(0.04)	(0.03)	(0.03)	(0.92)
LN(FINPOS)	0.515***	-0.145	0.257***	-7.772***
	(0.09)	(0.11)	(0.07)	(2.49)
LN(REGACC)	-0.200***	-0.169***	-0.138***	14.335***
	(0.04)	(0.06)	(0.03)	(1.16)
Constant	-0.634	1.812***	-1.627***	66.955***
	(0.41)	(0.54)	(0.38)	(12.07)
R-squared	0.327	0.457	0.472	0.388
Degrees of freedom	847	847	847	848
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.46 – OLS regression results for all German companies reporting after IFRS8 (2006)

	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.078***	-0.121***	-0.080***	
	(0.02)	(0.03)	(0.02)	
ln(SIZE)	0.108***	-0.149***	0.195***	-2.379***
	(0.03)	(0.05)	(0.02)	(0.49)
ln(AGE)	0.024	0.041	0.303***	-2.520***
	(0.04)	(0.06)	(0.04)	(0.61)
IGW	0.272***	-0.845***	0.149**	-18.636***
	(0.08)	(0.11)	(0.06)	(1.74)
BM	-0.011	0.092**	-0.152***	4.353***
	(0.02)	(0.04)	(0.02)	(0.34)
DE	-0.120***	0.458***	-0.096***	3.321***
	(0.03)	(0.06)	(0.02)	(0.44)
ROA	-1.272***	-1.898***	-1.373***	-23.348***
	(0.40)	(0.59)	(0.32)	(4.91)
NIAI	-0.170	0.291	-0.093	33.994***
	(0.22)	(0.30)	(0.18)	(3.76)
EIGD	0.043	-0.191	0.671***	-10.531***
	(0.22)	(0.14)	(0.10)	(1.43)
RETURNS	-0.647***	-0.514***	0.051	-5.360***
	(0.06)	(0.09)	(0.05)	(0.72)
NASACQ	0.933***	-0.201	0.269	-10.788**
	(0.24)	(0.45)	(0.17)	(4.97)
VOLATILITY	1.012***	0.078	3.538***	-3.082
	(0.29)	(0.48)	(0.35)	(5.93)
LN(MRKT)	0.152	0.410	0.199	-3.790
	(0.18)	(0.27)	(0.12)	(2.84)
LN(FRMSTR)	-0.933***	-0.157	-0.153	1.958
	(0.27)	(0.34)	(0.18)	(3.89)
LN(CORPGOV)	0.198**	-0.460***	-0.050	10.334***
	(0.09)	(0.13)	(0.07)	(1.41)
LN(BRND)	0.081**	-0.183***	0.066	-2.184***
	(0.04)	(0.06)	(0.04)	(0.68)
LN(FINPOS)	0.474***	-0.396*	-0.347***	-15.114***
	(0.16)	(0.21)	(0.12)	(2.67)
LN(REGACC)	0.058	0.505***	0.021	13.422***
	(0.08)	(0.11)	(0.06)	(1.29)
Constant	-2.065***	5.990***	-1.350***	58.319***
	(0.66)	(0.89)	(0.51)	(10.17)
R-squared	0.250	0.342	0.499	0.399
Degrees of freedom	999	999	999	1000
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.47 – OLS regression results for all German mandatory adopters reporting before IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	-0.100	-0.539***	-0.272***	
	(0.10)	(0.17)	(0.08)	
ln(SIZE)	0.013	-0.060	0.083***	2.066***
	(0.03)	(0.05)	(0.02)	(0.74)
ln(AGE)	-0.175*	-0.482***	-0.066	-0.617
	(0.10)	(0.15)	(0.08)	(1.09)
IGW	0.047	-1.420***	-0.794***	-16.470***
	(0.16)	(0.29)	(0.15)	(2.21)
BM	0.124***	-0.056*	-0.042***	-0.178
	(0.02)	(0.03)	(0.01)	(0.19)
DE	-0.390***	0.651***	0.401***	6.645***
	(0.09)	(0.15)	(0.08)	(1.04)
ROA	-0.460	-1.922***	0.917***	16.485***
	(0.36)	(0.62)	(0.34)	(4.41)
NIAI	4.081***	-5.269***	-1.641***	-6.832
	(0.77)	(1.21)	(0.54)	(10.50)
EIGD	13.446*	51.069***	13.984**	218.856**
	(7.67)	(12.02)	(6.08)	(85.18)
RETURNS	-0.303***	-0.657***	-0.158*	-3.286***
	(0.09)	(0.17)	(0.09)	(0.89)
NASACQ	-0.310	2.960***	1.183***	25.622***
	(0.22)	(0.49)	(0.24)	(3.73)
VOLATILITY	-1.936***	-0.255	1.314***	10.961
	(0.48)	(0.86)	(0.38)	(7.84)
LN(MRKT)	-0.003	-0.972*	0.637***	11.546**
	(0.31)	(0.53)	(0.23)	(5.18)
LN(FRMSTR)	-0.979*	0.948	-1.050**	-3.708
	(0.52)	(0.88)	(0.41)	(9.84)
LN(CORPGOV)	0.160	-0.362	0.173	9.664**
	(0.23)	(0.43)	(0.18)	(4.87)
LN(BRND)	-0.139	0.287	-0.015	-6.075***
	(0.14)	(0.22)	(0.10)	(2.19)
LN(FINPOS)	1.025***	0.847*	0.432*	-19.026***
	(0.24)	(0.46)	(0.22)	(4.12)
LN(REGACC)	-0.017	-0.694***	0.021	11.877***
	(0.09)	(0.17)	(0.09)	(1.17)
Constant	-0.149	2.869***	-1.693***	-23.636***
	(0.53)	(0.82)	(0.36)	(7.05)
R-squared	0.437	0.679	0.562	0.809
Degrees of freedom	269	269	269	270
*	p<0.10, **	p<0.05, ***	p<0.01	

Table A4.48 – OLS regression results for all German mandatory adopters reporting after IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.167	0.001	-0.114	
	(0.19)	(0.17)	(0.09)	
ln(SIZE)	0.274***	0.030	0.094***	1.436**
	(0.06)	(0.08)	(0.04)	(0.58)
ln(AGE)	-0.723***	-0.588***	0.329***	1.183**
	(0.08)	(0.11)	(0.04)	(0.54)
IGW	-0.647**	-1.661***	-0.299*	2.519
	(0.29)	(0.45)	(0.15)	(2.73)
BM	-0.045	0.010	0.090***	1.569***
	(0.06)	(0.06)	(0.03)	(0.41)
DE	-0.882***	-0.586***	0.380***	6.753***
	(0.12)	(0.17)	(0.07)	(0.91)
ROA	-6.003***	-8.991***	-0.310	36.596***
	(0.74)	(1.18)	(0.53)	(5.34)
NIAI	9.469***	11.051***	0.288	-46.644***
	(1.28)	(1.70)	(0.64)	(10.95)
EIGD	0.743***	0.486*	0.136	-13.257***
	(0.25)	(0.28)	(0.12)	(1.31)
RETURNS	-1.203***	-0.912***	-0.094*	-6.214***
	(0.11)	(0.15)	(0.05)	(0.71)
NASACQ	0.852*	0.378	-0.824***	-6.878**
	(0.45)	(0.80)	(0.26)	(2.86)
VOLATILITY	-1.922***	3.134***	1.343***	-4.808
	(0.59)	(1.01)	(0.45)	(4.84)
LN(MRKT)	1.101***	-0.400	0.864***	16.237***
	(0.34)	(0.46)	(0.20)	(3.24)
LN(FRMSTR)	-4.760***	-3.015***	-2.306***	34.978***
	(0.70)	(0.71)	(0.38)	(5.62)
LN(CORPGOV)	-1.886***	0.010	-0.137	-10.498***
	(0.27)	(0.34)	(0.15)	(3.13)
LN(BRND)	0.658***	0.394**	0.448***	-11.806***
	(0.17)	(0.18)	(0.09)	(1.22)
LN(FINPOS)	3.542***	1.258***	0.838***	-33.057***
	(0.45)	(0.47)	(0.25)	(3.14)
LN(REGACC)	0.671***	0.892***	0.166	3.912**
	(0.18)	(0.28)	(0.11)	(1.57)
Constant	6.701***	11.978***	0.215	-16.446
	(1.54)	(2.21)	(0.75)	(13.53)
R-squared	0.593	0.518	0.686	0.706
Degrees of freedom	401	401	401	402
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.49 – OLS regression results for all German voluntary adopters reporting before IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.058***	-0.005	0.020*	
	(0.01)	(0.01)	(0.01)	
ln(SIZE)	0.054**	-0.025	0.050***	-0.493
	(0.02)	(0.02)	(0.01)	(0.68)
ln(AGE)	-0.275***	-0.158***	-0.014	-2.208***
	(0.05)	(0.05)	(0.03)	(0.81)
IGW	-0.384***	0.290	0.134	6.147**
	(0.13)	(0.29)	(0.10)	(2.59)
BM	0.002	-0.022**	-0.053***	0.910**
	(0.01)	(0.01)	(0.01)	(0.35)
DE	-0.046***	-0.003	-0.011**	0.113
	(0.01)	(0.02)	(0.01)	(0.18)
ROA	-0.756**	1.168***	1.984***	22.694***
	(0.34)	(0.39)	(0.43)	(6.06)
NIAI	0.626***	0.689***	0.578***	0.539
	(0.17)	(0.18)	(0.13)	(3.44)
EIGD	-0.401***	1.214***	0.166**	4.339***
	(0.15)	(0.18)	(0.07)	(1.61)
RETURNS	-0.210***	-0.190***	0.163***	-6.644***
	(0.03)	(0.06)	(0.03)	(1.02)
NASACQ	0.128	-0.699***	-0.364***	-10.515***
	(0.13)	(0.15)	(0.13)	(3.34)
VOLATILITY	0.429**	2.062***	2.363***	23.033**
	(0.18)	(0.44)	(0.25)	(10.93)
LN(MRKT)	-0.295*	-0.279	-0.439***	-4.372
	(0.16)	(0.22)	(0.13)	(5.10)
LN(FRMSTR)	0.030	0.341**	0.461***	-12.303***
	(0.14)	(0.16)	(0.15)	(4.58)
LN(CORPGOV)	-0.016	0.245***	0.342***	3.057**
	(0.05)	(0.06)	(0.05)	(1.21)
LN(BRND)	0.026	-0.180***	-0.257***	5.105***
	(0.04)	(0.05)	(0.04)	(1.27)
LN(FINPOS)	0.226*	-0.217	-0.033	-6.870***
	(0.12)	(0.16)	(0.09)	(2.58)
LN(REGACC)	-0.006	0.045	-0.118***	18.408***
	(0.06)	(0.09)	(0.04)	(1.12)
Constant	0.030	0.674	-1.724***	60.516***
	(0.47)	(0.45)	(0.41)	(13.48)
R-squared	0.332	0.376	0.529	0.379
Degrees of freedom	893	893	893	894
* p<0.10, ** p<0.05, *** p<0.01				

Table A4.50 – OLS regression results for all German voluntary adopters reporting after IFRS8 (2006)				
	MFE Mean	**MFA Mean**	**MFD**	**NOA**
	β/se	**β/se**	**β/se**	**β/se**
ln(NOA)	0.004	0.061	-0.032	
	(0.03)	(0.06)	(0.03)	
ln(SIZE)	-0.101**	-0.206***	0.214***	-2.950***
	(0.04)	(0.07)	(0.03)	(0.42)
ln(AGE)	-0.155***	0.186**	0.256***	-2.902***
	(0.05)	(0.09)	(0.06)	(0.86)
IGW	-0.441*	0.334	0.212	-66.125***
	(0.23)	(0.43)	(0.19)	(2.16)
BM	0.186***	-0.072	-0.190***	2.360***
	(0.05)	(0.07)	(0.04)	(0.63)
DE	0.021	0.492***	-0.088**	-1.558***
	(0.05)	(0.08)	(0.04)	(0.57)
ROA	-2.956***	-2.472**	1.118*	-47.034***
	(0.85)	(0.98)	(0.68)	(7.76)
NIAI	1.322***	-0.446	0.483	17.305***
	(0.41)	(0.55)	(0.33)	(4.39)
EIGD	-0.942*	0.112	1.511***	-2.797
	(0.48)	(0.89)	(0.45)	(7.57)
RETURNS	-0.470***	-0.138	-0.007	-1.524*
	(0.06)	(0.10)	(0.07)	(0.80)
NASACQ	0.356	-1.017**	-0.322	-1.129
	(0.38)	(0.41)	(0.31)	(3.46)
VOLATILITY	0.831*	-1.363*	4.826***	-63.020***
	(0.45)	(0.79)	(0.48)	(6.74)
LN(MRKT)	-0.416*	0.251	0.638***	-25.716***
	(0.23)	(0.27)	(0.20)	(2.66)
LN(FRMSTR)	1.471***	0.524	-0.630	-2.210
	(0.54)	(0.74)	(0.39)	(6.65)
LN(CORPGOV)	0.673***	-0.452**	0.054	5.158***
	(0.12)	(0.19)	(0.11)	(1.64)
LN(BRND)	-0.157**	-0.177	0.047	4.963***
	(0.07)	(0.13)	(0.08)	(1.15)
LN(FINPOS)	-1.233***	-0.264	-0.348	5.411
	(0.39)	(0.58)	(0.30)	(4.37)
LN(REGACC)	-0.142	-0.436**	-0.042	23.443***
	(0.13)	(0.19)	(0.11)	(1.75)
Constant	-0.290	6.430***	-1.898**	67.603***
	(0.96)	(1.32)	(0.76)	(11.87)
R-squared	0.224	0.443	0.517	0.794
Degrees of freedom	581	581	581	582
*	p<0.10, **	p<0.05, ***	p<0.01	

Appendix 5. Alternative tests

In this appendix we include examples of alternative tests using fixed effects and logistic regressions. Full results for the alternative specifications of the models are available from the author by request. In Appendix 5 we include the following alternative tests:

Table A5.1 – Fixed effects regression results for German voluntary adopters reporting under IFRS (2003-2011)

Table A5.2 – Logistic regression results for UK companies reporting before and after IFRS adoption (2003-2011)

Table A5.3 – Fixed effects regression results for UK companies reporting before and after IFRS3 (2008)

Table A5.4 – Logistic regression results for all German companies reporting before and after IFRS3 (2008)

Table A5.5 – Logistic regression results for German voluntary adopters reporting before and after IFRS7 (2008)

The variables in Appendix 5. are defined as follows:

(MFE Mean) is the percentage difference between the analysts' mean earnings per share forecast each month and the reported earnings per share at the end of the financial year.

(MFA Mean) is the absolute value of ***(MFE Mean)***.

(MFD) is the standard deviation of all analysts' earnings forecasts in each month.

(ln(NOA)) is the number of analyst estimations each month for EPS FY1.

(ln(SIZE)) is the log of firm i's market capitalisation at the end of each fiscal year.

(*ln(AGE)*) is the firm's age measured as the natural logarithm of the number of valid annual return observations from Datastream.

(BM) is the Market to Book ratio.

(DE) *is* the Debt to Equity ratio.

(ROA) is the Return on Assets ratio.

(RETURNS) is the percentage change of the stock price at the end of each fiscal year.

(VOLATILITY) is the stock price volatility over the company's fiscal year.

(IGW) is the goodwill intensity measured as over total assets.

(*NIAI*) is the intangible assets intensity; measured as net intangible assets over total assets.

(EIGD) is measures goodwill impairments scaled by EBITDA.

(NASACQ) measures net assets from acquisitions scaled by total assets.

(LN(MRKT)) = the natural logarithm of the cumulative disclosure proxies for market risk, industry analysis and competitive forces, over the company's fiscal year.

(LN(FRMSTR)) = the natural logarithm of the cumulative disclosure proxies for firm strategy, product market performance, performance of business strategy model, over the company's fiscal year.

(LN(CORPGOV)) = the natural logarithm of the cumulative disclosure proxies for human and organisational capital, management performance, corporate governance and leadership, over the company's fiscal year.

(LN(BRND)) = the natural logarithm of the cumulative disclosure proxies for market recognition, power and consistency of brand, over the company's fiscal year.

(LN(FINPOS)) = the natural logarithm of the cumulative disclosure proxies for corporate and business performance and financial position, over the company's fiscal year.

(LN(REGACC)) = the natural logarithm of the cumulative disclosure proxies for government regulation, accounting regulation, disclosure practices, over the company's fiscal year.

(IFRS) is an indicator variable = 1 if firm i reports under IFRS in year *t*, and 0 otherwise. For voluntary adopters in Germany it represents the financial year of 2005; when IFRS was mandated in the EU.

(IGWxIFRS) is an interaction term computed by multiplying ***(IGW)*** with ***(IFRS).***

(EIGDxIFRS) is an interaction term computed by multiplying ***(EIGD)*** with ***(IFRS).***

(NASACQxIFRS) is an interaction term computed by multiplying ***(NASACQ)*** with ***(IFRS).***

(*NIAIxIFRS*) is an interaction term computed by multiplying ***(NIAI)*** with ***(IFRS).***

(LN(FINPOS)xIFRS) is an interaction term computed by multiplying ***(LN(FINPOS))*** with ***(IFRS).***

(IFRS32008xIGW) is an interaction term computed by multiplying (***IFRS32008)*** with (***IGW).***

(IFRS32008xNASACQ) is an interaction term computed by multiplying (***IFRS32008)*** with (***NASACQ).***

(IFRS32008) is an indicator variable = 1 if firm i uses IFRS3 (2008) in year *t*, and 0 otherwise.

(IFRS72008xLN(FINPOS)) is an interaction term computed by multiplying (***IFRS72008)*** with (***LN(FINPOS)).***

(IFRS72008) is an indicator variable = 1 if firm i uses IFRS7 (2008) in year *t*, and 0 otherwise.

Table A5.1 – Fixed effects regression results for German voluntary adopters reporting under IFRS (2003-2011)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.009	-0.034	0.171***	
	(0.02)	(0.04)	(0.02)	
ln(SIZE)	-0.063**	-0.276***	0.089***	4.750***
	(0.03)	(0.05)	(0.03)	(0.36)
ln(AGE)	.	.	.	.
	.	.	.	.
IGW	-1.183***	0.306	0.265	20.400***
	(0.25)	(0.40)	(0.21)	(2.95)
BM	0.001	-0.047	-0.075***	-2.526***
	(0.02)	(0.03)	(0.02)	(0.22)
DE	-0.081***	-0.012	0.025**	0.048
	(0.01)	(0.02)	(0.01)	(0.14)
ROA	-0.192	-0.137	1.244***	-36.164***
	(0.26)	(0.41)	(0.22)	(2.97)
NIAI	2.657***	4.932***	0.533	55.120***
	(0.83)	(1.34)	(0.70)	(9.62)
EIGD	0.083	0.957***	0.367***	-4.564***
	(0.11)	(0.18)	(0.09)	(1.30)
RETURNS	-0.245***	-0.034	0.112***	-0.506
	(0.03)	(0.04)	(0.02)	(0.31)
NASACQ	-1.319***	-2.400***	-0.571	3.995
	(0.48)	(0.78)	(0.41)	(5.68)
VOLATILITY	0.845**	2.160***	3.593***	2.706
	(0.37)	(0.59)	(0.31)	(4.17)
LN(MRKT)	-0.064	0.722**	-0.056	7.693***
	(0.19)	(0.31)	(0.16)	(2.18)
LN(FRMSTR)	-0.208	0.344	0.691***	-4.811*
	(0.24)	(0.39)	(0.21)	(2.85)
LN(CORPGOV)	-0.108	0.139	0.149**	-0.563
	(0.07)	(0.11)	(0.06)	(0.82)
LN(BRND)	0.165**	-0.410***	-0.239***	1.930**
	(0.08)	(0.13)	(0.07)	(0.94)
LN(FINPOS)	0.188	-1.255***	-0.486***	-2.884
	(0.17)	(0.28)	(0.15)	(2.02)
LN(REGACC)	-0.042	0.252**	-0.143**	-0.059
	(0.07)	(0.11)	(0.06)	(0.79)
IGWxIFRS	-1.108***	-2.278***	-0.211	-22.024***
	(0.21)	(0.34)	(0.18)	(2.45)
EIGDxIFRS	-0.730***	-0.114	-0.107	0.784
	(0.14)	(0.23)	(0.12)	(1.65)

Table A5.1 – Fixed effects regression results for German voluntary adopters reporting under IFRS (2003-2011)

NASACQxIFRS	1.473***	2.534***	0.502	2.637
	(0.50)	(0.80)	(0.42)	(5.86)
NIAIxIFRS	-1.438*	-3.505***	-0.204	-45.400***
	(0.79)	(1.28)	(0.67)	(9.22)
LN(FINPOS)x IFRS	0.079	0.069	0.062	0.193
	(0.06)	(0.10)	(0.05)	(0.76)
IFRS	-0.467	-0.016	-0.468	5.010
	(0.54)	(0.86)	(0.46)	(6.31)
Industry1	.	.	.	.
	.	.	.	.
Industry2	.	.	.	.
	.	.	.	.
Industry3	.	.	.	.
	.	.	.	.
Industry4	.	.	.	.
	.	.	.	.
Industry5	.	.	.	.
	.	.	.	.
Industry6	.	.	.	.
	.	.	.	.
Constant	1.610**	6.150***	-2.575***	-58.200***
	(0.67)	(1.08)	(0.57)	(7.89)
R-squared	0.225	0.158	0.326	0.527
Degrees of freedom	1475	1475	1475	1476
*	p<0.10, **	p<0.05, ***	p<0.01	

The regression model is:

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} IFRS_{it} + \alpha_{25} Industry1_{it} + \alpha_{26} Industry2_{it} + \alpha_{27} Industry3_{it} + \alpha_{28} Industry4_{it} + \alpha_{29} Industry5_{it} + \alpha_{30} Industry6_{it} + \varepsilon_{it}$$

Table A5.2 – Logistic regression results for UK companies reporting before and after IFRS adoption (2003-2011)

	MFA Mean 1%	MFA Mean 5%	MFA Mean 10%	MFA Median 1%	MFA Median 5%	MFA Median 10%
	b/se	b/se	b/se	b/se	b/se	b/se
ln(NOA)	-0.088	-0.244***	-0.076	-0.186*	-0.287***	-0.171**
	(0.10)	(0.06)	(0.07)	(0.10)	(0.07)	(0.07)
ln(SIZE)	-0.067*	0.018	-0.036	-0.038	0.036	-0.041
	(0.04)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)
ln(AGE)	0.183***	0.181***	0.109**	0.254***	0.146***	0.126**
	(0.07)	(0.05)	(0.05)	(0.07)	(0.05)	(0.05)
IGW	0.418	-0.406*	-0.558**	-0.085	-0.647***	-0.431*
	(0.39)	(0.24)	(0.25)	(0.37)	(0.24)	(0.25)
BM	0.022***	0.005	0.004	0.028***	0.011*	0.011*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
DE	-0.118***	-0.101***	-0.084***	-0.122***	-0.107***	-0.078***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
ROA	-0.163	-2.460***	-2.389***	-0.800*	-2.273***	-2.712***
	(0.48)	(0.36)	(0.41)	(0.47)	(0.37)	(0.42)
NIAI	4.284***	0.894	-0.931	1.346	0.679	-1.176*
	(1.55)	(0.64)	(0.74)	(0.87)	(0.64)	(0.71)
EIGD	1.172***	0.075	-0.254	0.342	-0.033	-0.645**
	(0.40)	(0.24)	(0.26)	(0.46)	(0.26)	(0.26)
RETURNS	0.162	0.242***	0.297***	0.251***	0.231***	0.263***
	(0.10)	(0.07)	(0.07)	(0.09)	(0.07)	(0.07)
NASACQ	-0.118	-0.484	-2.422*	-0.021	-0.262	-2.407*
	(1.36)	(0.92)	(1.24)	(1.50)	(0.97)	(1.27)
VOLATILITY	3.517***	3.495***	5.609***	3.447***	3.753***	5.788***
	(0.54)	(0.33)	(0.35)	(0.51)	(0.33)	(0.36)
LN(MRKT)	-0.512	-0.978***	-0.544**	-0.918***	-1.028***	-0.772***
	(0.35)	(0.22)	(0.24)	(0.34)	(0.22)	(0.24)
LN (FRMSTR)	-0.226	0.890***	0.760**	0.500	0.638**	0.725**
	(0.43)	(0.28)	(0.30)	(0.42)	(0.28)	(0.31)
LN (CORPGOV)	0.242	0.368**	0.383**	-0.000	0.429***	0.366**
	(0.23)	(0.15)	(0.18)	(0.22)	(0.15)	(0.18)
LN(BRND)	0.049	0.128**	-0.047	0.089	0.268***	0.014
	(0.08)	(0.06)	(0.06)	(0.08)	(0.06)	(0.06)
LN(FINPOS)	0.990***	-0.239	-0.374	1.037***	-0.028	-0.108
	(0.35)	(0.23)	(0.24)	(0.33)	(0.22)	(0.24)

Table A5.2 – Logistic regression results for UK companies reporting before and after IFRS adoption (2003-2011)

LN (REGACC)	-0.299***	-0.048	0.077	-0.298***	-0.118	0.100
	(0.11)	(0.08)	(0.09)	(0.11)	(0.08)	(0.09)
IGWxIFRS	-0.232	-0.018	-0.115	0.472	0.007	-0.364
	(0.40)	(0.26)	(0.28)	(0.39)	(0.26)	(0.28)
EIGDx IFRS	-1.162***	0.156	0.688**	-0.312	0.546*	0.967***
	(0.45)	(0.29)	(0.32)	(0.50)	(0.31)	(0.32)
NASACQx IFRS	-0.733	-0.531	1.282	-0.629	-0.890	1.592
	(1.52)	(1.05)	(1.35)	(1.63)	(1.09)	(1.38)
NIAIxIFRS	-2.782*	0.095	1.252	-0.513	0.131	1.630**
	(1.60)	(0.68)	(0.78)	(0.94)	(0.68)	(0.75)
LN(FINPOS)xIFRS	0.105	0.108	-0.153	-0.125	0.087	-0.084
	(0.20)	(0.13)	(0.14)	(0.20)	(0.13)	(0.14)
IFRS	-0.998	-1.078	1.148	0.666	-0.958	0.521
	(1.63)	(1.03)	(1.15)	(1.65)	(1.03)	(1.16)
Constant	-1.439	-1.791*	-3.606***	-3.203*	-2.092**	-3.997***
	(1.66)	(1.06)	(1.22)	(1.64)	(1.06)	(1.23)
R-squared	0.0278	0.0400	0.0678	0.0285	0.0441	0.0732
*	p<0.10,	**	p<0.05,	***	p<0.01	

The regression model is:

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IGWxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{20} EIGDxIFRS_{it} + \alpha_{21} NASACQxIFRS_{it} + \alpha_{22} NIAIxIFRS_{it} + \alpha_{23} LN(FINPOS)xIFRS_{it} + \alpha_{24} IFRS_{it} + \varepsilon_{it}$$

Table A5.3 – Fixed effects regression results for UK companies reporting before and after IFRS3 (2008)

	MFE Mean β/se	MFA Mean β/se	MFD β/se	NOA β/se
ln(NOA)	0.059***	-0.043***	0.123***	
	(0.01)	(0.02)	(0.05)	
ln(SIZE)	0.042***	-0.017	0.260***	1.252***
	(0.01)	(0.01)	(0.04)	(0.15)
ln(AGE)	.	.	.	.
	.	.	.	.
IGW	-0.239***	0.153**	0.773***	0.505
	(0.06)	(0.07)	(0.19)	(0.71)
BM	0.004***	-0.002*	-0.009***	0.010
	(0.00)	(0.00)	(0.00)	(0.01)
DE	0.003	0.011***	-0.028***	-0.104***
	(0.00)	(0.00)	(0.01)	(0.03)
ROA	-0.101*	-0.598***	-1.113***	-5.496***
	(0.06)	(0.07)	(0.20)	(0.72)
NIAI	0.559***	0.300***	1.402***	3.606***
	(0.07)	(0.09)	(0.26)	(0.96)
EIGD	-0.058***	-0.061***	-0.013	0.390
	(0.02)	(0.02)	(0.07)	(0.25)
RETURNS	-0.145***	0.022*	0.072**	-0.482***
	(0.01)	(0.01)	(0.04)	(0.13)
NASACQ	0.042	-0.120	-1.080***	-2.696***
	(0.06)	(0.08)	(0.22)	(0.81)
VOLATILITY	-0.235**	0.840***	1.222***	-6.238***
	(0.12)	(0.14)	(0.40)	(1.49)
LN(MRKT)	0.007	0.108	-0.689***	4.768***
	(0.06)	(0.07)	(0.20)	(0.73)
LN(FRMSTR)	-0.160**	-0.271***	1.324***	-0.213
	(0.08)	(0.09)	(0.27)	(1.01)
LN(CORPGOV)	0.069**	0.290***	0.017	3.046***
	(0.03)	(0.04)	(0.11)	(0.41)
LN(BRND)	-0.051**	-0.180***	0.003	-1.165***
	(0.02)	(0.03)	(0.07)	(0.27)
LN(FINPOS)	0.120***	0.163***	-0.307**	0.741
	(0.04)	(0.05)	(0.15)	(0.55)
LN(REGACC)	0.014	-0.080***	-0.396***	-3.772***
	(0.01)	(0.02)	(0.05)	(0.18)
IFRS32008xIGW	-0.167***	0.088*	0.611***	-4.625***
	(0.04)	(0.04)	(0.13)	(0.48)
IFRS32008xNASACQ	-0.242	0.907***	2.952***	8.344**
	(0.29)	(0.35)	(1.01)	(3.75)
IFRS32008	-0.001	-0.053***	-0.245***	3.482***
	(0.01)	(0.02)	(0.04)	(0.16)

Table A5.3 – Fixed effects regression results for UK companies reporting before and after IFRS3 (2008)				
Industry1	.	.	.	.
	.	.	.	.
Industry2	.	.	.	.
	.	.	.	.
Industry3	.	.	.	.
	.	.	.	.
Industry4	.	.	.	.
	.	.	.	.
Industry5	.	.	.	.
	.	.	.	.
Industry6	.	.	.	.
	.	.	.	.
Constant	-0.859***	-0.481*	-3.986***	-36.505***
	(0.22)	(0.27)	(0.79)	(2.90)
R-squared	0.083	0.073	0.070	0.358
Degrees of freedom	5806	5806	5806	5807
* p<0.10, ** p<0.05, *** p<0.01				

The regression model is:

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \alpha_{22} Industry1_{it} + \alpha_{23} Industry2_{it} + \alpha_{24} Industry3_{it} + \alpha_{25} Industry4_{it} + \alpha_{26} Industry5_{it} + \alpha_{27} Industry6_{it} + \varepsilon_{it}$$

Table A5.4 – Logistic regression results for all German companies reporting before and after IFRS3 (2008)

	MFA Mean 1% b/se	MFA Mean 5% b/se	MFA Mean 10% b/se	MFA Median 1% b/se	MFA Median 5% b/se	MFA Median 10% b/se
ln(NOA)	-0.598*	-0.189	-0.240**	-0.715***	-0.281	-0.306**
	(0.32)	(0.18)	(0.12)	(0.27)	(0.18)	(0.13)
ln(SIZE)	0.294	0.142	-0.009	-0.591***	-0.076	-0.024
	(0.24)	(0.14)	(0.12)	(0.21)	(0.15)	(0.12)
ln(AGE)	0.692	0.492*	0.231	0.449	0.750***	0.274
	(0.57)	(0.29)	(0.20)	(0.45)	(0.28)	(0.20)
IGW	-2.588***	-2.894***	-3.303***	-3.724***	-3.574***	-3.235***
	(0.80)	(0.45)	(0.37)	(0.88)	(0.47)	(0.37)
BM	-0.302**	-0.516***	-0.536***	-0.274**	-0.608***	-0.485***
	(0.14)	(0.07)	(0.07)	(0.14)	(0.08)	(0.06)
DE	0.275	0.207**	0.074	0.426***	0.199**	0.147**
	(0.22)	(0.09)	(0.07)	(0.16)	(0.08)	(0.07)
ROA	-11.717***	-3.761**	-3.972***	0.661	-1.178	-4.954***
	(3.38)	(1.57)	(1.33)	(4.89)	(1.79)	(1.43)
NIAI	2.473	0.023	0.357	0.692	-1.600	0.357
	(2.76)	(1.12)	(0.93)	(1.45)	(1.00)	(0.92)
EIGD	21.867**	12.474**	6.700***	30.806***	5.827***	6.901***
	(9.32)	(5.09)	(1.73)	(11.62)	(1.74)	(1.92)
RETURNS	0.127	0.476	0.539**	0.553	0.461	0.357
	(0.47)	(0.31)	(0.23)	(0.56)	(0.32)	(0.24)
NASACQ	3.296	0.479	1.547*	2.884	0.931	2.229***
	(2.27)	(0.86)	(0.80)	(1.79)	(0.86)	(0.82)
VOLATILITY	31.008***	13.802***	5.926***	26.873***	12.107***	8.549***
	(4.55)	(2.81)	(1.87)	(5.14)	(2.61)	(1.92)
LN(MRKT)	-0.429	1.488	0.559	-2.090	3.027***	1.405
	(2.16)	(1.15)	(0.91)	(1.73)	(1.07)	(0.92)
LN(FRMSTR)	5.075*	0.601	1.621	7.244***	-0.402	1.159
	(2.78)	(1.36)	(1.11)	(2.70)	(1.28)	(1.15)
LN(CORPGOV)	0.354	0.791	1.780***	4.416***	1.776***	1.549***
	(1.14)	(0.64)	(0.52)	(1.15)	(0.66)	(0.52)
LN(BRND)	1.039*	-0.237	-0.379*	-0.227	-0.599**	-0.413*
	(0.57)	(0.30)	(0.23)	(0.56)	(0.30)	(0.23)
LN(FINPOS)	-6.275***	-2.536***	-3.182***	-7.724***	-3.271***	-3.726***
	(1.97)	(0.84)	(0.71)	(2.02)	(0.85)	(0.72)
LN(REGACC)	-0.963*	-0.945**	-0.876***	-1.501**	-1.252***	-0.766**
	(0.57)	(0.37)	(0.32)	(0.60)	(0.35)	(0.32)
IFRS32008xIGW	2.762***	1.310**	1.206*	0.756	1.452**	1.493**
	(0.90)	(0.66)	(0.65)	(0.89)	(0.65)	(0.62)

Table A5.4 – Logistic regression results for all German companies reporting before and after IFRS3 (2008)

IFRS32008xNASACQ	4.851	11.629***	0.757	10.080***	10.371***	-2.023
	(3.64)	(4.02)	(3.05)	(3.04)	(3.79)	(2.85)
IFRS32008	-1.256**	-0.499*	-0.180	-1.480***	-0.288	-0.070
	(0.52)	(0.26)	(0.21)	(0.56)	(0.26)	(0.22)
Constant	4.138	2.170	3.732	5.979	4.621	6.499**
	(5.38)	(3.26)	(2.80)	(4.97)	(3.23)	(2.83)
R-squared						
Degrees of freedom						
*	p<0.10,	**	p<0.05,	***	p<0.01	

The regression model is:

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS32008xIGW_{it} + \alpha_{20} IFRS32008xNASACQ_{it} + \alpha_{21} IFRS32008_{it} + \varepsilon_{it}$$

Table A5.5 – Logistic regression results for German voluntary adopters reporting before and after IFRS7 (2008)

	MFA Mean 1% b/se	MFA Mean 5% b/se	MFA Mean 10% b/se	MFA Median 1% b/se	MFA Median 5% b/se	MFA Median 10% b/se
ln(NOA)	1.862**	0.523*	0.095	0.492	0.398	0.172
	(0.73)	(0.30)	(0.23)	(0.59)	(0.33)	(0.26)
ln(SIZE)	-0.124	0.425*	-0.103	-1.874**	-0.285	-0.225
	(0.86)	(0.22)	(0.19)	(0.74)	(0.26)	(0.19)
ln(AGE)	1.796	0.571	0.106	2.676	0.997*	0.392
	(1.43)	(0.43)	(0.33)	(1.73)	(0.60)	(0.36)
IGW	21.056***	3.335	1.691	16.647***	5.363**	4.379**
	(7.60)	(2.26)	(1.79)	(4.33)	(2.43)	(2.09)
BM	-0.522	-1.177***	-1.047***	-0.169	-1.376***	-1.158***
	(0.48)	(0.20)	(0.16)	(1.08)	(0.29)	(0.17)
DE	1.938	0.212	0.368***	2.750**	0.557**	0.613***
	(1.58)	(0.13)	(0.12)	(1.35)	(0.27)	(0.15)
ROA	5.291	-2.608	-5.317*	-10.252	-2.599	-4.456
	(14.27)	(4.17)	(2.99)	(9.29)	(4.58)	(3.01)
NIAI	-1.217	-7.216***	-8.279***	3.840	-8.372***	-8.590***
	(5.14)	(1.91)	(1.69)	(6.33)	(2.18)	(1.69)
EIGD	25.166***	29.569***	25.129**	35.354***	37.009***	29.702**
	(8.98)	(8.48)	(9.77)	(12.42)	(12.16)	(12.18)
RETURNS	0.972	1.792***	1.360***	5.314**	3.203***	1.830***
	(1.02)	(0.55)	(0.35)	(2.37)	(0.89)	(0.41)
NASACQ	5.475	7.644***	9.505***	11.291**	8.984***	9.775***
	(4.47)	(2.63)	(2.33)	(5.25)	(2.50)	(2.33)
VOLATILITY	38.874***	9.387**	2.364	41.703***	11.139***	6.219*
	(9.54)	(3.69)	(3.13)	(8.77)	(3.95)	(3.51)
LN(MRKT)	4.973*	2.517	2.413*	-4.047	-0.748	2.900*
	(2.69)	(1.88)	(1.43)	(3.27)	(2.24)	(1.49)
LN(FRMSTR)	-10.941**	-7.218***	-1.494	12.022**	-0.581	-2.648
	(5.00)	(2.44)	(1.84)	(5.05)	(2.56)	(1.88)
LN(CORPGOV)	-1.487	-1.351	-0.957	1.881*	1.170	0.024
	(1.65)	(0.86)	(0.81)	(1.11)	(0.90)	(0.76)
LN(BRND)	0.492	0.707	0.136	0.645	0.693	0.337
	(1.42)	(0.48)	(0.38)	(1.88)	(0.71)	(0.42)
LN(FINPOS)	9.861***	2.047	-4.537***	-7.150	-0.675	-4.533**
	(3.73)	(2.09)	(1.71)	(5.04)	(2.05)	(1.83)
LN(REGACC)	-5.331**	0.214	0.636	-7.347***	-2.330**	-0.273
	(2.72)	(1.10)	(0.83)	(1.86)	(1.13)	(0.92)
IFRS72008xLN(FINPOS)	-1.634	0.737	1.700**	0.455	-0.103	1.795**
	(1.13)	(0.77)	(0.72)	(1.54)	(0.75)	(0.78)

Table A5.5 – Logistic regression results for German voluntary adopters reporting before and after IFRS7 (2008)

IFRS72008	11.294	-8.285	-15.825**	-6.369	-1.523	-17.047**
	(9.93)	(6.84)	(6.44)	(13.37)	(6.52)	(6.93)
Constant	-8.867	20.557**	40.061***	29.438	19.859**	41.935***
	(17.30)	(9.35)	(7.77)	(19.96)	(7.87)	(8.34)
R-squared						
Degrees of freedom						
*	p<0.10,	**	p<0.05,	***	p<0.01	

The regression model is:

$$\boldsymbol{Dependent\ variable} = \alpha_0 + \alpha_1 ln(NOA)_{it} + \alpha_2 ln(SIZE)_{it} + \alpha_3 ln(AGE)_{it} + \alpha_4 BM_{it} + \alpha_5 DE_{it} + \alpha_6 ROA_{it} + \alpha_7 RETURNS_{it} + \alpha_8 VOLATILITY_{it} + \alpha_9 IGW_{it} + \alpha_{10} NIAI_{it} + \alpha_{11} EIGD_{it} + \alpha_{12} NASACQ_{it} + \alpha_{13} ln(MRKT)_{it} + \alpha_{14} ln(FRMSTR)_{it} + \alpha_{15} ln(CORPGOV)_{it} + \alpha_{16} ln(BRND)_{it} + \alpha_{17} ln(FINPOS)_{it} + \alpha_{18} ln(REGACC)_{it} + \alpha_{19} IFRS72008xLNFINPOS_{it} + \alpha_{20} IFRS72008_{it} + \varepsilon_{it}$$