The Impact of International Financial Reporting Standards on Earnings Quality: EU Evidence

A thesis submitted for the Degree of Doctor of Philosophy

By

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Declaration

This thesis titled “The Impact of International Financial Reporting Standards on Earnings Quality: EU Evidence” is submitted for the Degree of Doctor of Philosophy in the Department of Economic and Finance, College of Business, Arts and Social Sciences at Brunel University London.

I, H. Mohamad, the undersigned, hereby declare that the research work in this thesis was carried out in accordance with the Regulations of Brunel University London. The work presented in this thesis is original, except where indicated in the text by special reference. The research has not formed the basis for any submission of any other degree. The views expressed in this thesis are those of the author.

The above–titled thesis has not been presented to any other University for award either in the United Kingdom or overseas.

Housam Mohamad

Dedication

Dedicated to my family

Abstract

Earnings have numerous properties that can be investigated, including earnings smoothness, abnormal accruals after modelling the accruals process and asymmetric timely loss and gain recognition. In latest decades, as earnings are the main source of firm-specific information for investors, earnings quality has become a significant focus in the financial accounting field. Moreover, high-quality financial reporting helps investors improve decisions and better evaluate firm performance because capital markets depend on the credibility of financial accounting information.

The aim of this study investigates the impact of the mandatory adoption of IFRS on earnings quality in term of earnings management and accounting conservatism in consideration of eleven European countries (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and the United Kingdom) as a sample study. Then to test whether investors could predict a company's future performance efficiently based on deferred tax expense as one of the accruals components before and after the mandatory adoption of IFRS.

Since the mandatory adoption of International Financial Reporting Standards (IFRS) required by the European Union (EU) Parliament, numerous research studies have examined whether earnings management has been reduced due to the mandatory adoption. Chapter two of this study examines whether the board of directors is more effective in constraining earnings management after the mandatory application of IFRS. More specifically, the study explored ways that two board characteristics, board independence and the existence of an audit committee, have impacted earnings management since 2005. The empirical results with eleven European countries (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and the United Kingdom) showed evidence of an inverse relationship between the strength of corporate governance and the extent of earnings management. This negative association suggests that firms that apply IFRS with a high level of corporate governance standards are less likely to be involved in earnings management. This study indicates that board independence and the existence of audit committees play important and effective

roles in reducing earnings management after the introduction of IFRS. The results also provide evidence that the internationally uniformed accounting regulatory framework significantly contributes to the effectiveness of the two corporate governance mechanisms.

Chapter three examines the impact of the mandatory IFRS adoption on the asymmetrically timely gain and loss recognition (accounting conservatism). The findings provide evidence of the importance of the mandatory adoption of IFRS in increasing of accounting conservatism in pooled samples and separate samples.

Chapter four investigates whether investors could predict a company's future performance efficiently based on deferred tax expense as one of the accruals components before and after the mandatory adoption of IFRS. Moreover, whether or not the predictions could be generalised to other European countries was examined. The results imply that an accrual anomaly exists in pooled samples before and after mandatory IFRS adoption and the study prove that deferred tax expense as a determinant factor of accounting accruals is overweighed by stocks prices before and after IFRS adoptions.

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Chapter 1

Introduction

1.1. Properties of Earnings

Earnings have several properties that can be examined, including earnings smoothness, abnormal accruals after modelling the accruals process and asymmetric timely loss and gain recognition, etc.

In recent decades, as earnings are the core source of firm-specific information for investors, earnings quality has become an important focus in the financial accounting field. Furthermore, high-quality financial reporting helps investors improve decisions and better evaluate firm performance because capital markets depend on the credibility of financial accounting information (Gaio and Raposo, 2011).

The importance of accounting information can be described in three ways. First, information asymmetry amongst investors should be limited to financial accounting information to reduce the liquidity risk. Second, useful information should be provided by financial accounting. This information should be delivered directly to investors and managers who make decisions regarding investment opportunities and should indirectly determine stock prices, which could decrease estimation risk. Third, corporate control mechanisms should include useful information about financial accounting, which also decreases estimation risks (Bushman and Smith, 2001).

Earnings are thoroughly evaluated by financial market members, primarily by analysts and investors. As reported earnings have been identified as the main source of firm-specific information in recent studies (Francis et al., 2003), they play a crucial role in

indicating future cash flows in addition to their informative role, which predicts a firm's economic performance (Dechow et al., 1998; Dechow, 1994).

Although there are several studies that have researched earning quality using a limited subset of properties of earnings or a single property of earnings, earning quality has an inherent measurement difficulty and the potential effects of omitted variables should be mitigated (Bushman and Smith, 2001). The measurement of earnings quality has a wide range and is classified into two groups: market-based attributes and accounting-based attributes (Francis et al., 2004). Market-based earnings attributes include conservatism, timeliness and relevance. These attributes are measured using both market data and accounting data, assuming that economic income can be reflected by the function of earnings that proxies as stock returns. Accounting earnings attributes consist of accruals quality, predictability, persistence and smoothness. To measure these attributes, accounting information assumed that the function of earnings is to allocate cash flows to the correct financial period based on accruals. Consequently, the allocation of cash flows can be affected by a higher quality of earnings. Based on previous research (Francis et al., 2004), it was assumed that poor earnings quality is related to higher values of different measures. Therefore, a negative relationship between earnings quality and its measures was predicted.

As discussed in several previous studies, earnings quality is negatively correlated with earnings management because the existence of earnings manipulation (earnings management) reflects the poverty of earnings quality. Discretionary accruals were used to detect earnings management, and corporate governance variables were utilised for IFRS adoption in terms of earnings management.

The main aim of this study examines the incremental impact of the mandatory adoption of IFRS in 2005 on earning quality. In particular, study investigate the incremental impact of corporate governance on earning quality due to the mandatory adoption of IFRS in 2005 in term of earnings management in consideration of eleven European countries (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and the United Kingdom) as a sample study. Furthermore, the incremental impact of the

mandatory adoption of IFRS on the accounting conservatism. Then to test whether investors could predict a company's future performance efficiently based on deferred tax expense as one of the accruals components before and after the mandatory adoption of IFRS.

Chapter two investigates whether the board of directors is more effective in constraining earnings management after the mandatory application of IFRS. More specifically, the study indicates ways that two board characteristics, board independence and the existence of an audit committee, have impacted earnings management since 2005. The negative relationship between the strength of corporate governance and the extent of earnings management has been presented in the empirical results. This negative association suggests that firms that apply IFRS with a high level of corporate governance standards are less likely to be involved in earnings management. This study indicates that board independence and the existence of audit committees play important and effective roles in reducing earnings management after the introduction of IFRS.

The incremental impact of the mandatory IFRS adoption on the asymmetrically timely gain and loss recognition (accounting conservatism) has been investigated in chapter three. The empirical results show evidence of the increasing of accounting conservatism in pooled samples and separate samples after the mandatory adoption of IFRS in 2005.

Chapter four examines if investors could predict a company's future performance efficiently based on deferred tax expense as one of the accruals components before and after the mandatory adoption of IFRS and whether this forecasting can be generalised to companies in the other European countries. The results suggest that investors overweight the deferred tax expense in pooled samples before and after the mandatory adoption of IFRS.

1.2. Research Objectives

The general goal of this study was to adapt a comprehensively used model from the literature to measure and improve the quality of accounting earnings, particularly after the

mandatory adoption of IFRS in 2005. In addition, this study illustrates the usefulness of the new model in discovering the weaknesses and problems that have been documented in previous approaches.

There were several objectives for this research. First, a general review is provided of earnings quality in terms of earnings management to clarify the main accruals models and methods that can be applied to detect and measure earnings manipulations. Then, by employing corporate governance structures, this study demonstrates that the new model is more useful in decreasing earnings management after the mandatory adoption of IFRS and highlights the weaknesses and main issues with previous approaches. The empirical results imply that board independence and audit committees still play an important role in constraining earnings management after IFRS adoption. The results suggest that there is a stronger effectiveness of board independence and audit committees in constraining earnings management after IFRS adoption. In addition, the study indicates that accounting conservatism will increase due to IFRS adoption in the majority of the sample leads to higher quality of earnings. Moreover, the empirical results present that market overweight the deferred tax expense as a determinant factor of accruals and the existence of an accruals anomaly in most code law countries and common law countries is shown.

Real data that was taken from listed firms in 11 European stock markets (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and United Kingdom) was applied.

1.3. The impact of the Mandatory International Financial Reporting Standard Adoption on Earnings Quality

Interestingly, after the mandatory international financial reporting standard (IFRS) adoption in 2005, several new studies have been published in the accounting literature. The majority of these studies examined the impact of IFRS adoption on earnings quality. Relevance and reliability are considered key factors of the qualitative characteristic based

on the Conceptual Framework, which demonstrates the usefulness of accounting information in making economic decisions.

Generally, accounting information is relevant when it impacts decisions made by users and assists in future forecasting or in correcting past judgments. Accounting information is reliable because it can be determined based on faithful representation as well as without undue error or bias (Houqe et al., 2012). Current studies have proposed that strong legal enforcement, strong investor protection and a common law legal system are essential factors of high-quality financial statement numbers (Ball et al., 2000; Ball et al., 2003; Nabar and Boonlert U-Thai, 2007; Francis and Wang, 2008; Daske et al., 2008, 2000, 2006; Leuz et al., 2003). In addition to these factors, the adoption of IFRS, which was issued by the International Accounting Standards Board (IASB), is considered a fundamental determinant of the quality of accounting information. More than 100 countries now require the adoption of IFRS, including EU countries, New Zealand, Australia and several developing countries, which has led to a significant decline in national accounting differences, resulting in substantial differences in earnings quality (Houqe, et al., 2012).

The impact of international governance arrangements (political, judicial, regulatory and corporate) on earnings quality has been addressed by the current international accounting literature. Studies have shown that earnings quality is a common function of the quality of accounting standards, which is represented by IFRS, and investor protections. Thus, countries that have not adopted IFRS and that have a lower protection of investors are more likely to experience poor earnings quality, which requires managerial discretion. Moreover, even with high-quality accounting standards, managerial discretion (earnings management) could obstruct the production of high-quality accounting numbers in an organisation. Political-socio corruption is more likely to occur due to accounting corruption. Therefore, reliable and clean accounting information is rare in an environment with a low protection of investors (Houqe et al., 2012).

This study examines literature that has investigated the impact of the mandatory IFRS adoption on earnings quality in terms of earnings management, timeless loss and gain recognition and accrual anomaly.

1.3.1. Earnings Management and Corporate Governance

The European Union (EU) Parliament passed a regulation that required all firms listed in the EU stock markets to adopt international financial reporting standard (IFRS) when preparing consolidated and simple accounts for the fiscal year beginning after 1 January 2005 (Soderstrom and Sun, 2007). The aims of the mandatory IFRS adoption were to improve the quality of standards and to develop corporate accounting practices (Tangelo and Vanstraelen, 2005). Therefore, after the mandatory adoption of IFRS, firms listed in the European stock markets encountered major changes in their accounting disclosure rules that tend to improve the quality of financial reports.

Furthermore, several studies have introduced evidence that the mandatory adoption of IFRS can reduce and restrain the magnitude of earnings management, particularly by adopting a higher quality of accounting standards (Barth et al., 2008). A considerable variation in earnings quality and economic efficiency could be observed across EU countries even before the mandatory requirement. Numerous studies have focused on country-level corporate governance mechanisms, such as different cultures and legal systems, the existence and enforcement of laws and other influential determinants that affect reported financial information quality (Houqe et al., 2012).

Reported earnings play a significant role in firms' valuations. It is the intercept and decode to formulate an opinion and translate it into a decision. In other words, it is the image of the manager and the mirror of the firm.

Managers of companies recognise the importance of income figures, so they share the positive numbers and avoid sharing negative one. Managers have flexibility in calculating the earnings numbers. In addition, they use inherited earnings figures to manipulate the earnings according to the firm's interests.

According to the matching accounting principle, expenses are usually recognised and recorded before revenues occur. Therefore, the accruals system allows for recognising revenues in the period they are earned and matching them with related expenses rather than recording all expenses in one financial period and reporting all revenues and earnings in the subsequent financial year. Thus, the performance of companies is measured more accurately by appropriate matching. Earnings manipulation can occur when managers use the accruals system to obtain the earnings figure needed to achieve their objectives.

Detecting earnings management is an important task that has been researched in the last few decades. So the question stands here, how a researcher can study this behaviour of managers and detects it and constrains it as much as they can. Several methods have been used in previous studies to detect earnings management, and the primary purpose was to understand the incentives and motives of earnings manipulation. By identifying incentives, earnings management can be researched in a specific context. Thus, for simplicity, researchers have narrowed the focus to motives. In the past, some studies have researched earnings management on an industry level. Managers' incentives must apply to the entire industry. Then, the detection process begins by examining the reaction of the industry to these incentives, and if any abnormalities are found, they will be considered as earnings management. This method is effective, but examining upward earnings management with supposing that a large number of other companies are manipulating, downward earnings management makes the detection process difficult. Hence, researchers should study incentives and motives that cause managers of firms to manipulate earnings for a similar purpose.

The main factor used to identify earnings management is accruals. Researchers have classified two levels of accruals: the normal level related to nondiscretionary accruals and the abnormal level related to discretionary accruals. The normal accruals (nondiscretionary) are not affected by management's choices, but they are affected by economic circumstances and the environment surrounding the company. Discretionary accruals are affected by managers' decisions and are therefore used to identify and measure earnings management.

Chapter Two examines the correlation between constraining earnings management and the strength of corporate governance in the EU after IFRS adoption. By utilising corporate governance structures, such as the independent director, the audit committee and board effectiveness, this study indicates whether earnings management has decreased within EU countries after IFRS adoption.

1.3.2. Asymmetrically Timely Gain and Loss Recognition

Chapter 3 examines the impact of mandatory IFRS adoption on the asymmetrically timely gain and loss recognition (i.e. accounting conservatism).

As accounting accruals play a major role in earnings manipulation, accounting literature contains numerous studies on this topic. Accounting accruals can be considered a factor that can be used to improve financial reporting and disclosures in terms of asymmetrically timely gains and losses recognition. One obvious method of accounting accrual functions is improving transitory changes in operating cash flows (Dechow, 1994; Dechow, Kothari, and Watts, 1998).

The study investigates the accounting conservatism as one of the earnings quality measurement and we suppose the practice of conservatism in accounting produces higher-quality earnings because conservatism yields lower earnings that are of higher quality (Penman and Zhang, 2002). Furthermore, the study examines whether application of international financial reporting standards (IFRS) is related with higher earrings quality than application of domestic GAAP in term of accounting conservatism.

In this study, the relationship between accruals and cash flow after the mandatory IFRS adoption was determined to identify unrealised gains and losses that were incorporated into reported earnings. Timely gain and loss recognition must occur during revisions in anticipation of future cash flows that are more likely to arise prior to the actual realisation of cash flows and thus require accounting accruals (Ball and Shivakumar, 2005). The nonlinear relationship between cash flows and accruals, which was discussed in Ball and Shivakumar's (2005) study, exists because gains and losses recognition is asymmetric,

and losses are generally recognised in a more timely manner than gains that should be challenged by a linear requirement, which is common in the standard accruals models.

1.3.3. Accrual Anomaly

Slone (1996) confirmed the existence of an accruals anomaly in the US capital market, and he examined this negative correlation between accounting accruals and future stock returns. Hence, an accruals anomaly is described as a negative correlation between future stock returns and accruals. There are several studies that have identified this approach when investors forecast earnings and overestimate accruals (Fama & French, 2008).

Accounting distortions significantly increase in the case of a negative relationship between earnings forecasting and accounting accruals. Therefore, managers tend to manipulate the users of financial statements by using the accruals distortions that could occur due to estimation errors. Consequently, investors will misunderstand the implications of accounting distortions, resulting in significant accruals overweighting stock prices. Accounting distortions play a particularly important role in the underperformance of firms (Papanastasopoulos and Tsiritakis, 2015).

Chapter 4 discusses whether investors would be able to forecast a company's future performance efficiently with a deferred tax expense as one of the accruals components before and after the mandatory adoption of IFRS. Moreover, whether this forecast could be generalised to other European countries was investigated. Accounting accruals have several components, such as depreciation, amortisation and a deferred tax expense, which includes the tax effects of temporary differences between book income (i.e., income reported to shareholders and other external users) and taxable income (i.e., income reported to the tax authorities) (Warfield et al., 2008).

Mishkin (1983) tests were applied for 10 European countries (both code law and common law countries) to determine whether investors value the abnormal accruals rationally in terms of the deferred tax expense as an accruals component in consideration of the impact of country-level accounting and institutional structures on the existence of an accruals anomaly. The impact of the mandatory adoption of IFRS was examined as well. The

results show the existence of an accruals anomaly in the majority of the sample in terms of the deferred tax expense as an accruals component due to the impact of a country-wide accounting structured system.

1.4. Background

1.4.1. Abnormal Accruals and Modelling the Accrual Process

Accruals have been classified into normal and abnormal accruals in previous researched after directly modelling the accruals process (Dechow et al., 2010). Since most studies have utilised abnormal accruals from accruals models as a measure of earnings quality, abnormal accruals have been used as a proxy for earnings quality in nearly all determinants and consequences categories. In terms of differentiating between abnormal and normal accruals, researchers have shown that abnormal accruals capture distortions made by earnings management or compliance with the accounting rules, while normal accruals reflect fundamental performance adjustments. Also, several types of research have used discretionary accruals interchangeably with abnormal accruals as a proxy for earnings quality. The general concept is that the abnormal component of accruals reflects a lower quality of earnings when it represents distortions in earnings calculations. In the other words, since a firm with extreme accruals includes extreme abnormal accruals, the correlation increases concerns regarding whether accounting distortions are reflected by abnormal accruals or whether the abnormal accruals are the result of poorly specified accruals models (Dechow et al., 2010).

Therefore, this study investigates the incremental impact of the mandatory adoption of IFRS on earnings quality considering the abnormal accruals (discretionary accruals) as on proxy for earnings management as well as the abnormal component of accruals reflects a lower quality of earnings when it represents distortions in earnings calculations.

1.4.2. Accruals Models

Almost all accruals studies have agreed that Jones' (1991) accruals model has served as a foundation for most accruals models. By identifying abnormal accruals that represent a

distortion and normal accruals that represent adjustments that reflect fundamental performance, studies have distinguished between two types of errors (Type I and Type II errors). Abnormal accruals can be classified by misclassification errors that contain Type I errors when they represent a fundamental performance as a false positive, and normal accruals are classified by Type II errors when they are not false positive (Dechow et al., 2010).

Jones' (1991) model uses working capital accruals and depreciation as a function of property, plant and equipment (PPE), and sales growth. The estimation of Jones' accrual model indicates the relationship between fundamental firm aspects (investment in PPE and sales growth) and accruals. Consequently, the model has a low of the explanatory by just 10% explanation of accruals variation. For example, the accruals process is considerably choice by firm managers and is used to manipulate fundamental performance, supporting the assumption that the residuals represent greater discretion in detecting earnings management. This is consistent with the findings of Xie (2001), who suggested that discretionary accruals (abnormal accruals) have a lower predictive ability for earnings than normal accruals (non-discretionary accruals). Nevertheless, these residuals are negatively correlated with cash flow performance and positively correlated with the performance of earnings (Dechow et al., 1995). In addition, they have a highly positive relationship with total accruals (Dechow et al., 2003). Furthermore, Dechow et al. (2003) indicated that total accruals are generally more effective than discretionary accruals in detecting earnings management in terms of SEC enforcement release, illustrating that using the residuals as a proxy for identifying earnings management in Jones' accruals model is subject to Type II errors.

The modification of Jones' accruals model was published by Dechow et al. (1995), who adjusted it for growth in credit sales to reduce Type II errors. A limitation of Jones' model was that credit sales are easily and repeatedly manipulated. Therefore, the Dechow model increased the ability of Jones' model to yield a residual that is uncorrelated with expected (normal) revenue accruals and introduced better impacts on revenue manipulation; however, the existence of Type I errors still occur in the modified Jones

model and may be more vulnerable to these errors than the original Jones model (Dechow et al., 2010).

The conflict of the relationships between the residuals and the performance of the original Jones accruals model and the modified Jones model was confirmed by Holthausen et al. (1995) and Kothari et al. (2005). Their studies suggested controlling for a normal level of accruals based on ROA (return on assets). According to Kothari et al. (2005), a firm from the same industry that has the similar level of ROA is classified and identified separately. Also, they removed firms that controlled discretionary accruals (residuals) from the sample to obtain performance-matched residuals. Notably, residuals that are obtained in normal accruals models can only explain 10-12% of the variation in accruals. Therefore, Kothari et al.'s (2005) approach can be useful and can add noise to the discretionary accruals measurement, and since the correlated performance is an important concern, this approach would be the most suitable. In addition, considerable discretion can be extracted from performance matching while earnings management accrues.

From another perspective, the crucial importance of the function of matching accruals to cash flows has been reviewed by Dechow and Dichev (2002). Past, current and future cash flows are functions of the accruals model when future cash collections, payments and reserves are expected. Dechow and Dichev (2002) did not attempt to model long-term accruals and their relationship with cash flows; they focused on short-term working capital accruals. Their results indicated that companies with larger standard deviations have larger accruals, less earnings persistence, longer cycles of operation and more accrual, cash flows and earnings validation, resulting in the likelihood of reporting a loss. A limitation of Dechow and Dichev's (2002) model is that it is unsigned and cannot be used to detect distortions accrued by long-term accruals.

1.4.3. Accounting Conservatism

Several studies have proposed that accounting conservatism has existed since the 15th century, and it has been claimed that conservatism in accounting can limit actions that could harm reputations in a multi-period world of exchanges based on reciprocity and on constraining the overstatement of net income and net assets (Dickhaut et al., 2010; Andre

et al., 2012). Moreover, there are four classifications of conservatism suggested by Watts (2003): shareholder litigation, contracting, regulation and taxation. Regarding these classifications, accounting conservatism can constrain managerial opportunism and can counter managerial bias, which is useful for company value, as payments to both shareholders as dividends and to management as compensation could be constrained by conservatism when clear conservatism is used as an effective contracting mechanism. In addition, litigating costs can be limited by conservatism; the present value of a firm's taxes can decrease, and a firm's assets can be overstated. Lastly, political costs decrease due to conservatism when companies overstate net assets, especially for standard setters and regulators (Andre et al., 2012).

"Up to recently, the IASB's and FASB's conceptual frameworks had a place for conservatism or prudence, a dimension of reliability that is one of the four principal qualitative characteristics of financial statements. Paragraph 37 of IASB's Framework for the Preparation and Presentation of Financial Statements [April 2001] states:

The preparers of financial statements do, however, have to contend with the uncertainties that inevitably surround many events and circumstances, such as the collectability of doubtful receivables, the probable useful life of plant and equipment and the number of warranty claims that may occur. Such uncertainties are recognized by the disclosure of their nature and extent and by the exercise of prudence in the preparation of the financial statements. Prudence is the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated" (Andre et al., 2012).

Interestingly, the conceptual framework of the FASB and IASB does not discuss conservatism in chapter one (the objectives of financial information) or chapter two (the qualitative characteristics of financial reporting information) that was adopted in September 2010. Therefore, this framework ignores the role of conservatism as necessary for financial reporting information quality [IASB 2010] and as a vital quality characteristic of financial information that is considered a faithful representation. The role

of conservatism focuses on completeness, neutrality and freedom from errors (Andre et al., 2012).Thus, the IFRS is more principle-based than rule-based. For instance, for the neutrality of IFRS, fair value and impairment testing are used rather than amortisation (IAS 37).

Watts' (2003) studied conservatism in US firms, while the focus of this study was on differences in conservatism across countries in Europe. Ball et al. (2000) evaluated the sample of common law and code law countries from 1985-1995. They found that in common law countries (US, UK, Australia and Canada), accounting income is significantly more timely than in code law countries (France, Germany and Japan) in terms of the effects of international institutional factors of the properties of accounting earnings. According to Ball et al. (2000), the UK has less conservatism than other common law countries. Pope and Walker (1999) discussed the timeliness of income recognition between the UK and the US from 1979-1996. They found that there were more conservatism differences in the UK than in the US regarding the exclusion or inclusion of extraordinary items in the UK. They also suggested that bad news could be provided faster in UK firms than in US firms in terms of UK GAAP, whereas Giner and Rees (2001) did not agree that the UK (common law) had a stronger accounting conservatism than France and Germany (code law) after examining the sample years from 1990 to 1998.

A country's legal system, securities law, political economy and tax regime play a crucial role in determining the differences in accounting conservatism. A study published by Bushman and Piotroski (2006) examined the combined impact of these factors on the level of asymmetric timeliness across 38 countries from 1992 to 2001. They indicated that after controlling for a legal source, countries with high-quality judicial systems have greater conservatism than those with low-quality judicial systems. Furthermore, their results showed that for countries that have a stronger public enforcement from securities law, there is no effect from private enforcement. They also proved that managers may manipulate financial reporting. In terms of political economies, Bushman and Piotroski (2006) also illustrated that conservatism is greater in code law countries than in common law countries. Their results indicate that the tax regime has a mixed and inclusive impact

on accounting conservatism. Moreover, Bushman et al. (2011) found that conservatism was positively related to investment responses regarding declining opportunities but not for increasing investment opportunities by examining the conditional conservatism effectiveness on capital allocation.

In general, numerous studies have researched the effectiveness of mandatory IFRS adoption on earning quality, such as earnings management (Barth et al., 2008) and the cost of equity (Daske et al., 2008; Li, 2010). On the other hand, some studies have examined the impact of IFRS adoption on earnings quality in terms of value relevance (Capkun et al., 2008; Tsalavoutas et al., 2009; Filip, 2010). Interestingly, few studies have examined the effectiveness of IFRS adoption on accounting conservatism. One example is Piot et al. (2011) differentiated between conditional and unconditional conservatism across European countries. They examined accounting conservatism under both the mandatory and voluntary adoption of IFRS as well as the role of the Big 4 auditors, and they found a decrease in accounting conservatism after 2005.

This study examines the incremental effect of the mandatory IFRS adoption in 2005 on accounting conservatism across 11 European countries considering the cash flow from operations as proxy for asymmetrically timely gains and losses recognition.

1.5. Research Contributions

The main contributions of this thesis are summarised as follows:

I. The main aim of this study is to investigate the incremental impact of corporate governance on earning quality due to the mandatory adoption of IFRS in 2005. A new model is introduced that measures and constrain earnings management more accurately and proves that there is a reduction in earnings manipulation. This study addresses the question that whether earnings management is affected by corporate governance within the 11 EU countries after the mandatory adoption of IFRS. The new model was adapted from previous accruals models by adding corporate governance structures,

which illustrate that earnings manipulation, can decrease after the mandatory adoption of IFRS.

II. The study also illustrates the incremental impact of the mandatory adoption of IFRS on accounting conservatism across 11 European countries. Furthermore, it is shown that the differences between the countries depend on their accounting structure systems and legal systems. The main question this chapter address is whether application of international financial reporting standards (IFRS) is related with higher earrings quality than application of domestic GAAP in term of accounting conservatism by applying the Piecewise linear accrual model and considering cash flow from operations as a proxy for asymmetrically timely gain and loss recognition across 11 European countries. In particular, we examine whether the timeliness of the asymmetrical loss recognition will increase with the mandatory IFRS adoption.

III. In addition, the study focuses on whether the deferred tax expense is a determinant factor of accruals in the valuation of securities pricing. Accounting accruals have several components including depreciation, amortization, and deferred tax expense. Deferred tax expense reflects the tax effects of temporary differences between book income (i.e., income reported to shareholders and other external users) and taxable income (i.e., income reported to the tax authorities). The purpose of this research is to investigate whether investors are able to forecast a company's future performance efficiently with deferred tax expense as one of the accruals components and whether this forecasting can be generalised to companies in the other European countries. Also, it is proven that the accruals anomaly can be generalised to most of the European countries in the sample.

1.6. Outline of the Thesis

This research is organised into five chapters. Chapter 1 provides a general background of the study, aims and objectives, the main contributions of the research, and outlines the content of the thesis.

Chapter 2 investigates the relationship between constraining earnings management and the strength of corporate governance in an EU-wide context after IFRS adoption. In the model developed, four proxies were used to detect earnings management, and two board characteristics, board independence and the existence of an audit committee as corporate governance structures, were used in consideration of the mandatory adoption of IFRS. Real data was taken from listed firms in 11 European stock markets (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and the United Kingdom). The sample was tested as pooled data in the first stage, and then the regressions across countries were tested separately.

Chapter 3 examines the impact of the mandatory IFRS adoption on the asymmetrically timely gain and loss recognition (i.e. accounting conservatism). Piecewise linear accruals models were developed to identify the existence of accounting conservatism. Real data was taken from listed firms in 11 European stock markets (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and the United Kingdom). The same procedure described in Chapter Two was used to test the models.

Chapter 4 investigates whether investors would be able to forecast a company's future performance efficiently with a deferred tax expense as one of the accruals components before and after the mandatory adoption of IFRS. Moreover, whether this forecast could be generalised to other European countries is discussed. The Mishkin (1983) tests that were applied for 10 European countries (both code law and common law countries) are also explained in detail.

Chapter 5 summarises the main results of this study. The limitations of this study are also described, and suggestions for future research are presented.

Chapter 2

Earnings Management and Corporate Governance under IFRS: EU Evidence

2.1. Introduction

The European Union (EU) Parliament passed a regulation which requires all companies listed in the EU market to use International Financial Reporting Standards (IFRS) when prepare consolidated and simple account for fiscal year starting after 1 January, 2005 (Soderstrom and Sun, 2007).

The development of accounting standards intends to harmonise corporate accounting practice, and meanwhile to improve the quality of standards to be adopted by the listed companies (Tendeloo and Vanstraelen, 2005). With the mandatory adoption requirement, all the European listed companies faced a major change in their accounting disclosure rules. With the substantial cost and effort involved, it is expected that at least some benefit would be achieved, e.g. the reduction of cost of capital, the increased capital mobility and/or the enhanced constraint in earnings management. Literature of accounting provides international-wide evidence which is in favour of the positive economic consequences (Bushman et al., 2006).

However, although some studies provide evidences that the magnitude of earnings management is reduced by adopting a higher quality of accounting standards (Barth et al., 2008), given the fact the application of IFRS involves considerable managerial judgment and using of private information that leave firms with a substantial amount of discretion (Daske et al., 2008 and Marra et al., 2011), the answer to whether the general improvement of earnings quality has been achieved or not is still inconclusive.

This chapter study examines the incremental impact of corporate governance on earning quality due to the mandatory adoption of IFRS in 2005 in term of earnings management. In particular, this study addresses the question that whether earnings management is affected by corporate governance within the 11 EU countries after the mandatory adoption of IFRS. There is considerable variation in earnings quality and economic efficiency across countries within the EU before the mandatory requirement. With different culture and legal system, whether corporate governance will have impact on the earnings quality within EU countries has not been intensively examined. This is, to the best of our knowledge, the first one to investigate the relationship between the constraining of the earnings management and the strength of corporate governance in an EU wide after the IFRS adoption. Meanwhile with the higher level of disclosure and transparency inherent in IFRS will make monitor more feasible for the independent director and the audit committee, the board effectiveness to constrain the earnings management will be enhanced as a result. Therefore to investigate whether earnings management has been reduced or not and whether it is associated with the change of board effectiveness within the EU countries after IFRS adoption has practical implication.

We find negative relationship between the strength of corporate governance and earnings management after adopting IFRS which suggests that firms with higher level of corporate governance standards are less likely to manipulate their earnings. Our results show that corporate governance structure plays a significant role in deduction earning management. The results show that companies that adopted IFRS voluntarily before 2004 are less likely to manipulate their earnings.

The reminder of the chapter is organised as follows. Literature Review section reviews previous literature that focuses on the relationship between IFRS and earnings management. Methodology section summarizes the research methodology which is followed by the model measurement and analysis the sample selection. The results are presented and discussed in Empirical Result section, whereas the chapter is concluded in the conclusion section.

2.2. Literature Review

Healy and Wahlen (1999, p.368) comment: "earnings management occurs when managers use judgement in the financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers". Consequently, companies that experience earnings manipulations are more likely to reflect higher levels of fraudulent financial reports compared to firms that do not experience earnings management. In last decades with the widely adoption of the IFRS, with the enormous effort and huge cost, whether there are real benefit for the countries that adopted the IFRS is always an interesting issue. There are many studies that have been published to research whether the IFRS affects earnings quality.

2.2.1. International Financial Reporting Standards

In 1973 The International Accounting Standards Committee (IASC) was established then it renamed as the International Accounting Standards Board (IASB). This committee targets to accomplish consistency in the accounting standards used by business and the other companies for financial reporting around the world (Tendeloo and Vanstraelen, 2005). It can be noticed from previous studies that the benefits of the adopting of international accounting standards are considered to be the following: Firstly, the compliance of IFRS will allow to the investors to improve their own financial decision and reduce misunderstanding arising from alternative methods of financial position measurement and performance through countries, thus resulting to a lower cost of capital for firms and a reduced risk for investors (Tendeloo and Vanstraelen, 2005). Secondly, international investment would be encouraged (Tendeloo and Vanstraelen, 2005). Thirdly, there would be more effective allocation of saving worldwide (Street et al., 1999).

Because of the flexibility in the original international accounting standards that contained many alternative treatments, which mostly are descriptive in nature with a continuous

lack of comparability through countries, the international accounting standards face an extensive criticism in the late 1980s. Therefore, the IASC started the comparability project in 1987 (Tendeloo and Vanstraelen, 2005). In 1995, the revised standards are with reduced alternative treatment and increased disclosure requirements (Nobes, 2002). In July, 1995, an agreement has been achieved between the IASC and the International Organisation of Securities Commission (IOSCO) to revisit a list of accounting standards issues. The subsequent Core Standards Project led again to substantial revisions of IAS. In May 2000, the IASC received an endorsement subject from the IOSCO to 'reconciliation where necessary to address substantive outstanding issues at a national or regional level' (IOSCO Press Release, 17 May 2000).The Core Standards Project has brought a wider recognition to IAS around the world.

For an instance, a regulation (1606/200/EC) has been issued by the European Parliament that requires all EU listed Firms to prepare consolidation financial statement based on International Accounting Standards by 2005. In some countries, including Italy, Belgium, Austria, Switzerland, France and Germany, firms were already allowed to prepare consolidated financial statements under IFRS (or US GAAP) before 2005 (Tendeloo and Vanstraelen, 2005).

It could be noticed that, IFRS compliance faces some difficulties in the beginning like, not all businesses that pursue the international investment status that come with the compliance of IFRS are, however, agreeable to fulfil all of the necessities and commitments involved. For example , IAS 1 , Presentation of financial statement , in 1998 financial statements are banned from noting compliance with International Accounting Standards 'unless they comply with all the requirements of each applicable Standard and each applicable Interpretation of the Standing Interpretations Committee' (Street and Gray 2002).

A suggestion that with a high quality standards adoption might be an essential condition for high quality information but not a sufficient condition mentioned by Ball et al. (2003).

2.2.2. Earnings Management: Incentives and Constraints

Most studies investigate to what extent earnings are managed, which will lead us to measure the quality of reported earnings with the intention to 'either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers' (Healy and Wahlen, 1999). Even though accounting decision, organizing transactions and the incentives for earnings management are ample. Managers of the companies intend to manage earnings due to the existence of explicit and implicit contracts, the need for external financing, the political and regulatory environment and the relation between the company and capital market (Vander, 2001).

A number of researches propose that the underlying economic and institutional factors influencing the incentives of managers and auditors are the determinants of the quality of reported financial statement information. As a result, the demand for accounting income varies systemically between common-law and code-law countries (Ball et al, 2000). In common-law countries, which are characterized by high risk of litigation and strong investor protection, arm's length debt and equity markets and a diverse base of investors, accounting information is designed to meet the needs of investors, result in higher demand of accounting income. In code-law countries, capital markets are less active. Relatively the rates of litigation are lower and firms are financed more by banks, other financial organizations and the government as well protection of investor is weak, leads in less public disclosure. Therefore accounting information is planned more to meet other demands like, determination of income tax and dividends payments and decreasing political cost (Ball et al., 2000; La Porta et al., 2000). According to Leuz et al. (2003), code–law countries are dominant by earnings management more than common-law countries. This is because of the benefits (e.g. enhanced liquidity) of the engagement in earnings management appears to outweigh the costs (e.g. litigation) more often in countries with code law which have less protections of investors rights. However, companies with IFRS adoption tend to have less earnings manipulation than non-adopters, because these firms can be predicted to have incentives to report investor-oriented information (Tendeloo and Vanstraelen, 2005). On the other hand, low

enforcement and low litigation risk may encourage firms with low accounting quality to incorrectly sign to be of high quality of accounting by IFRS compliance (Leuz et al., 2003). Apart from accounting standards, both strong investor and creditor protection needs a legal audit committee, monitoring by supervisors (Tendeloo and Vanstraelen, 2005).

2.2.3. The Role of Board of Directors in Constraining Earnings Management

The board of directors is a vital inner control mechanism. They are delegated by shareholders; therefore they are responsible of making decision on behalf of shareholders and monitoring management's action. Although there is a hamper effectiveness of the board, as a controlling mechanism specially when mangers or executives of the company are also members of the board c, which results in possibility of earning manipulated by managers, the board of directors includes the managers as members because they are privy to information necessary for decision making (Marra et al, 2011). The inclusion of managers on the board of directors may cause a conflict of interest and lead to a risk for stockholders' wealth. In order to decrease this risk, boards usually contain independent directors who have neither a business or ownership ties nor management role to the company. These independent directors should have established a strong professional reputation and hold high institutional expertise. Erhardt et al., (2003) and Patelli and Prencipe (2007) provided the supporting evidence that outside directors are effective in reducing agency costs. According to the previous studies, companies' board plays a significant role in monitoring and restraining earnings management when the company's board contains independent directors and an audit committee. The effectiveness of company's board has increased due to the higher level of IFRS disclosure and transparency that in its role makes identifying and controlling the policies of accounting which applied by companies easier for independent directors and audit committee.

2.2.3.1. The effectiveness of independent directors in constraining earnings management

Setia-Atmaja *et al.* (2011) argued that independent directors can play a significant role in controlling earnings management, particularly in monitoring executive management, in enhancing shareholder value, and in reducing management opportunism. Beasley (1996) and Dechow et al. (1996) found that the existence of financial reporting fraud is decreased by outside directors. Besides, Klein (2002) reported a negative relationship between earnings management and independent directors. According to Ebrahim (2007), a significant relationship can be found between board independence and earnings manipulation for more active boards, which is proxied by the frequency of annual board meetings. Peasnell et al. (2005) also found evidence that the decreased earnings management is influenced by external directors.Although most literature supports this negative relationship, Park and Shin (2004) found that the presence of outside directors does not reduce earnings manipulation for Canadian firms.

2.2.3.2. The effectiveness of audit committees in constraining earnings management

The role of audit committee is to monitor financial reporting process and be responsible for the accuracy of financial statements. In fact, the financial reports can be produced by the both external auditors and the internal accounting process (Pricewaterhouse Coopers, 1999). Although the prior empirical studies do not find a clear underlying theory on the role and the effectiveness of the audit committee in constraining earnings management, there are many literature supports the important of audit committee in reducing earning management. Bédard et al. (2004) showed that the proportion to the financial expertise of audit committee members and the indicators of independence decrease the manipulation of earnings. Similarly, Klein (2002) found that audit committee independence does decrease earnings management among U.S. firms, and Xie et al., (2003) showed that earning management is less likely to occur in firms that have an active audit committee. In contrast, Beasley (1996) showed that the financial statements frauds are not significantly affected by audit committee. Besides, Peasnell et al. (2005) found no

relationship between audit committee and upward or downward earnings management among U.K. companies.

2.2.4. IFRS Implementation and Earnings Quality Taking into Account the Effectiveness of the Board

Recent empirical studies provide evidence that after the adoption of IFRS, the disclosure quality has been improved for European companies (Daske and Gebhardt, 2006). Besides, it could be noticed that IFRS adoption is likely to increase equity valuation, increase market liquidity, and declined capital cost (Daske et al., 2008). It can also be seen that, the adoption of IFRS improves the reporting quality in terms of the reduction of earnings management, timely loss recognitions, and value relevance (Barth et al., 2008).

Notwithstanding such results, considerable room for managerial discretion and judgment with using private information is still allowed by international accounting standards, giving firms substantial discretion and leeway to apply earnings management techniques (Marra et al, 2011). Despite of the existence of higher quality standards, a lot of literature also argue that the characteristics of firms play a significant role in how firms apply discretion for earnings management purposes (e.g., Ball and Shivakumar, 2005; Ball et al., 2000; Ball et al., 2003 and Burgstalher et al., 2006).

This study is the first one to cover 11 countries in EU after IFRS adoption in 2005 in term of corporate governance and earnings management .The adoption of IFRS supposed to enhance the effectiveness of independent directors and the presence of an audit committee after IFRS, which in turn should reduce earnings management.

2.3. Research Hypotheses

Since 2005, publicly listed companies in Europe have been required to prepare financial statements in accordance with IFRS (Regulation EC No. 1606/2002). Standards that have been issued by the International Accounting Standards Board (IASB) are intended to increase the financial reporting quality in order to improve the financial market functioning and to benefit investors as well as the standards are designed to improve

corporate transparency and to enhance the comparability of financial statements. In order to achieve these goals, IASB has issued principles-based standards and has taken steps to eliminate accounting alternatives and to require accounting measurements that better reflect a firm's financial position and economic performance. The intent of these guidelines is to limit management's opportunistic behavior when determining accounting figures and to provide investors with information that is more useful for investment decisions (Marra et al, 2011).

Recent empirical studies provide evidence that after the adoption of IFRS, the disclosure quality has been improved for European companies (Daske and Gebhardt, 2006). Besides, it could be noticed that IFRS adoption is likely to increase equity valuation, increase market liquidity, and declined capital cost (Daske et al., 2008). It can also be seen that, the adoption of IFRS improves the reporting quality in terms of the reduction of earnings management, timely loss recognitions, and value relevance (Barth et al., 2008).

The main purpose of this research is to examine whether the adoption of IFRS is associated with high financial reporting quality; and to investigate the possible relationship between corporate governance structure and earnings managements, in particular, whether earnings management will be reduced and controlled by companies that have adopted IFRS considering corporate governance structure. In other words, it is believed that the higher quality and transparency under IFRS will enhance independent directors and audit committee's ability to act as monitor in constraining earnings manipulations (Marra et al, 2011).

There are several studies and models have been developed for separating total accruals into discretionary accruals (abnormal accruals) and non-discretionary (normal accruals) components. As it is well known in the earnings management literature that the most recognised model is Jones (1991) model and the modified –Jones model as suggested in Dechow et al. (1995) that is designed to eliminate the conjectured tendency of the Jones Model to measure discretionary accruals with error when discretion is exercised over revenues. McNichols (2002) assesses the specification of Jones model (Jones, 1991) with

estimation of discretionary accruals that are significantly associated with cash flows. Operating cash flow (CFO) is controlled for current operating performance because discretionary accruals are likely to be misspecified for firms with extreme levels of performance.

Earnings management adopted here is measured in two ways: First, by reported discretionary accruals. Secondly, the correlation between operating cash flow and accruals as proxy of earnings smoothness. Earnings management is a strategy of using accounting techniques to produce financial reports that may allow to companies to manipulate their earnings. Therefore, accounting accruals are the key of earnings manipulations. Total accruals separate into discretionary and non-discretionary components. While the non-discretionary are fixed variables and can be calculated easily, the discretionary accruals allow to companies to manage the reporting earnings, so discretionary accruals are a proxy of detecting earnings management.

The research hypothesises are formulated as followings:

- Hypothesis 1: Firms which have adopted IFRS engage significantly less in earnings management compared to the period when they report under national Generally Accepted Accounting Principles GAAP reporting regimes.

  The quality of financial reporting is dependent on both the quality of accounting standards and the implementation of accounting standards (Tendeloo and Vanstraelen, 2005). By finding evidence and support, Hypothesis 1 can confirm that companies with IFRS have less in earnings management. On the other wards, higher quality of IFRS adoptions, more earnings manipulation constraining and higher quality of Financial Reporting.

- Hypothesis 2: The effectiveness of independent board members in constraining earnings management is higher under IFRS than under national Generally Accepted Accounting Principles (GAAP) reporting regimes.

  Companies that adopted IFRS have higher effectiveness of independent board member in controlling and constraining earnings management than companies

under their GAAP (Marra et al, 2011). Therefore, earnings management in firms with higher proportion of independent directors in their board will be decreased.

- Hypothesis 3: The effectiveness of the audit committee in constraining earnings management is higher under IFRS than under national GAAP reporting regimes.

  Firms that adopted IFRS have higher effectiveness of the presence of audit committee in their board members in controlling and constraining earnings management than companies under their GAAP (Marra et al, 2011).. It can also be expected that adopting high quality of IFRS has larger effect on the reduction of earnings management with existence of audit committee, which plays a significant role in constraining earnings management.

2.4. Methodology

This research examines earnings management by using four proxies: dictionary accruals, the correlation between accruals and operating cash flow (Tendeloo and Vanstraelen, 2005, the abnormal working capital accruals (AWCA) and small positive earnings (SPOS) as proxies for earnings management which are widely used in contemporary accounting research (Marra et al, 2011).

2.4.1. Earnings Management Measures

2.4.1.1. The magnitude of absolute discretionary accruals

The magnitude of absolute discretionary accruals is one of the measures of earnings management. Since only total accruals are stated for individual companies, discretionary accruals need to be estimated. As previous literature suggest, a joint test of earnings management and the expected accruals models used is represented as a test of earnings management (e.g., Dechow et al., 1995; Guay et al., 1996; Kasznik, 1996).

Earnings management can be achieved by various means such as the use of accruals, changes in accounting methods, and changes in capital structure (e.g., debt defeasance, debt-equity swaps).

The study uses absolute discretionary accruals as one of the proxies for earnings management. Larcker et al. (2007) suggest in their study that the flexibility afforded through accrual accounting makes the accrual component of earnings less reliable than the cash flow component of earnings. Total accrual contains two components non-discretionary accruals and discretionary accruals. Since non-discretionary accruals are fixed variables and estimated during event period, the only component of accruals that could be manipulated by mangers is the discretionary accruals

Discretionary accruals are defined as actual total reported accruals less expected normal accruals (Tendeloo and Vanstraelen, 2005). This study uses the cross –sectional Jones model (Jones, 1991) with including operating cash flows in the following model (McNichols, 2002) to estimate discretionary accruals. Specifically, discretionary accruals are estimated as the residuals of the following regression equation:

$$ACC_t = a_0\left(\frac{1}{A_{t-1}}\right) + a_1\Delta REV_t + a_2 GPPE_t + a_3 CFO_t + a_4 CFO_{t+1} + a_5 CFO_{t-1} + \varepsilon_{t+1} \quad (2\text{-}1)$$

Where, ACC_t = Accruals in year t, scaled by lagged total assets defined as net income before extraordinary items that taken from profit and lost statement minus operating cash flow that taken from cash flow statement. A_{t-1} = Natural logarithm of total assets in year t. ΔREV_t = Change in revenues in year t, scaled by lagged total assets. $GPPE_t$ = Gross property, plant and equipment in year t, scaled by lagged total assets. CFO_t =Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets

2.4.1.2. The correlation between total reported accruals and operating cash flow

The second measure of earnings management is the correlation between accruals and operating cash flow. It is always referred as a proxy for earnings smoothness. The economic performance of individual firms could be changed and concealed by insiders who use both real operating decisions and financial reporting choices. By concentrating on insiders' reporting choices, our second earnings management measure captures the degree to which insiders reduced (smooth) the variability of reported earnings by altering

the accounting component of earnings, namely accruals. Cash flow from operations controls for differences in the variability of economic performance across firms (Leuz et al., 2003). Therefore, low values of the coefficient between accruals and operating cash flow indicate that reported earnings are smoothed by insiders who exercise accounting discretion (Tendeloo and Vanstraelen, 2005). Furthermore, a negative relationship between operating cash flow and accruals is essential to accrual accounting and variances in the magnitudes of this correlation indicate difference in the level of earnings smoothing. While majority of earnings management literature suppose earnings are managed for opportunistic reasons, the exercised discretion can also be used to signal private information and thus decrease the asymmetry of information (Subramanyam, 1996). Nevertheless, using accruals to signal firm performance leads to less negative relationship with cash flows that because of accounting systems are more likely to under-react to economic shocks (Leuz et al., 2003).

2.4.1.3. Abnormal working capital accrual

As it well known there are numerous recommended models to estimate non-discretionary accruals and discretionary accruals. For example, Jones-type abnormal accrual measures (Dechow, Sloan and Sweeney, 1995; Jones, 1991; Kothari, Leone and Wasley, 2005) are more common used to measure accruals to detect earnings management. Study employs the DeFond and Park (2001) model to estimate abnormal working capital accruals (AWCA) as a third proxy for earnings management

2.4.1.4. The presence of earnings management aimed at achieving target

The fourth proxy for earnings management attempts to detect the existence of earnings management intended at achieving a target. Previous researches present that a positive-earnings level is set to be as a target for the companies. Furthermore, companies are likely to use the frequency of small positive net income as a metric of earnings management (Barth et al., 2008; Burgstahler and Dichev, 1997; Leuz, Nanda, and Wysocki, 2003). The concept underlying this metric is that small positive earnings are more likely to be reported than negative earnings by managers who try to manipulate earnings especially

when they overcome the zero earnings-level aims. Hence, the fourth proxy for earnings management is SPOS, a dummy variable that assumes a value of 1 if net income scaled by total assets is between 0 and 0.01 (Lang at al., 2003).

2.4.2. Model Variables

We use 4 proxies for earnings management and the study uses many independent variables to examine earnings management. The main variables of interest of this study are (1) IFRS as a dummy variable whether the company has adopted IFRS or not, (2) INDP The percentage of independent directors on the firm's board, and (3) AC audit committee as a dummy variable whether an audit committee is exist in firm's board or not.

Our study includes some control variables to account the differences in earnings management incentives. Firstly, the natural logarithm of total assets (LNASSETS) is a proxy for the size of a company; the study includes it as a proxy variable for political attention (Watts and Zimmerman, 1990). Suggesting companies with large size are more likely to involve in reducing earnings management, because the potential for government scrutiny rises as businesses are more profitable and greater (Watts and Zimmerman, 1990 and Young, 1999).

Secondly, this study includes GEARING ratio which can have influence on earnings management in two ways. Companies with high gearing ratio are more likely to engage in upward earnings management, as according to the debt-equity hypothesis, companies have a need to avoid debt covenant violations (Watts and Zimmerman, 1990; DeFond and Jiambalvo, 1994 and Young, 1999). This means a positive relationship between discretionary accruals and gearing ratio. Alternatively, high gearing may decrease earnings management in financially distressed companies in view of contractual renegotiations as reported by Becker et al. (1998).

Thirdly, operating cash flow (CFO) scaled by lagged total assets is included as a performance measure by considering the relationship between operating cash flow and discretionary accruals. The matching principle states that the negative non-discretionary

accruals can be happed with positive cash flows of which a part will be falsely attributed to income-decreasing discretionary accruals (Dechow et al., 1995 and Young, 1999).To control this possible misspecification, CFO is included in our model.

We estimate a fixed effect regression analysis in our earnings management measures which are used as dependent variables. As well as, we use three main variables (IFRS, INDP and AC), in addition to a number of control variables (LNASSETS and GEARING) as is mentioned above.

The models adopted are shown as following:

$$DACC_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + \varepsilon_t \quad (2\text{-}2)$$

$$ACC_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + a_{12} IFRS_t * CFO_t + \varepsilon_t \quad (2\text{-}3)$$

Where:

Dependent variables

$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets

ACC_t: Accruals in year t, scaled by lagged total assets.

Independent variables

$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)

$BDSZ_t$: The total number of board members.

$INDP_t$:The percentage of independent directors on the firm's board.

AC_t:A dummy variable taking the value of one if an audit committee exists and zero otherwise.

$ACSZ_t$:The size of audit committee.

ACM_t: The meeting of audit committee.

CFO_t:Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.

$LNASSETS_t$: Natural logarithm of total assets in year t .

GEARING_t: Ratio of long-term debt over common equity in year t.

The third proxy aims to identify the level of earnings management. As such, abnormal working capital accruals (AWCA) are expected to be the result of accounting manipulation.

AWCA is calculated separately for each observation as follows:

$$AWCA_t = WC_t - \left[\left(\frac{WC_{t-1}}{S_{t-1}}\right) * S_t\right] \quad (2\text{-}4)$$

Where:

$AWCA_t$: Abnormal working capital accrual in year t;

WC_t : Non-cash working capital accruals in year t, computed as:

(Current assets−cash and short term investments)− (current liabilities−short-term debt);

WC_{t-1} : Working capital at the end of year t−1;

S_t : Sales in year t;

S_{t-1} : Sales in year t−1.

AWCA are scaled by lagged total assets. The absolute value of AWCA is used afterwards because the main objective is to measure the extent of earnings management, regardless of whether it is done to increase or decrease income.

The fourth proxy for earnings management is SPOS, a dummy variable that assumes a value of 1 if net income scaled by lagged total assets is between 0 and 0.01 (Lang at al., 2003).

The study assumes that the effect of independent directors and audit committee in constraining earning management will be higher after the introduction of IFRS. To test the study hypotheses, we examine the changes in the relationship between earnings management proxies (AWCA and SPOS) and corporate governance 'surrogates (INDP and AC). In specific, study runs the regressions with AWCA and SPOS (earnings management measures) as dependent variables while INDP and AC as independent variables, in addition to a number of control variables.

Study's regression run as following:

$$AWCA_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + a_{12} IFRS_t * CFO_t + \varepsilon_t \quad (2\text{-}5)$$

$$SPOS_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + a_{12} IFRS_t * CFO_t + \varepsilon_t \quad (2\text{-}6)$$

Where:

$AWCA_t$: Abnormal working capital accrual in year t, scaled by lagged total assets.

$SPOS_t$: A dummy variable that assumes a value of 1 if net income scaled by lagged total assets is between 0 and 0.01 and 0 otherwise.

$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0)

$BDSZ_t$:The total number of board members.

$INDP_t$:The percentage of independent directors on the firm's board.

AC_t:A dummy variable taking the value of one if an audit committee exists and zero otherwise.

$ACSZ_t$:The size of audit committee.

ACM_t: The meeting of audit committee.

CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.

$LNASSETS_t$: Natural logarithm of total assets in year t.

GEARING_t: Ratio of long-term debt over common equity in year t.

2.4.3. Data and Sample

The sample consists of non-financial companies which are listed on the European Stock Exchange from 1994 to 2012. The study takes the sample from 11 European largest stock markets (Germany, France, Italy, Spain, Sweden, Switzerland, Belgium, Portugal, The Netherlands, Norway and the UK). Study's sample excludes financial institutions because of their specific accounting requirements differ significantly from those of industrial and commercial companies, which prevent them to apply the accounting standards freely (Tendeloo and Vanstraelen, 2005). After clearing the data, the sample comprises 5422 firm –year observations, relating to the period 1994-2012.

All data has been collected from Bloomberg. Accounting and financial data (accrual and operating cash flows) were extracted from official financial statement (Profit or Loss Statement, Financial Positions Statement and Cash Flow Statement). Meanwhile corporate governance data for the sampled firms was collected from the Corporate Governance Reports that each company is required to issue annually. The quality and consistency of the collections process can be guaranteed by using official hard copies of financial statements.

The study targets to test the hypothesis in two stages. First stage, we pooled the sample to test the importance of IFRS and Corporate governance on the earnings management of whole sample. Then in second stage we conduct analysis on a country-to-country analysis to show the impact IFRS and Corporate governance on the earnings management by country.

2.5. Empirical Results

2.5.1. Descriptive Statistics

Table 2-1. Descriptive statistics

	Mean	Median	St Dev	Min	Max
Acc	0.0127	-0.0008	0.1788	-4.5327	1.8871
Dacc	-0.0001	-0.0162	0.1679	-1.7569	1.9105
Ifrs	0.6397	1	0.4801	0	1
Bdsz	5.3382	15	6.2933	5	26
Indp	0.3591	0.8823	0.3961	0	0.9444
Acsz	0.7097	3	1.5689	0	11
Acm	2.1398	25	3.2738	0	100
Ac	0.4162	0	0.4929	0	1
Cfo	0.1608	0.0952	1.5465	-0.9515	3.9782
Lnassets	8.9294	8.8954	1.5883	2.3952	13.5726
Gearing	9.4644	9.4843	2.3998	0	17.0889

Notes:
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$: The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise.
$ACSZ_t$:The size of audit committee.
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t

Table 2-1 presents the descriptive statistic of our sample. The results suggest that the mean of the total number of board members (BDSZ) is 5.338 with values ranging from 5 to 26. It can be noticed from the table that the Mean of the percentage of independent directors (INDP) is 0.359 with values ranging from 0 to 0.9444. Also, results imply that the size of audit committee ($ACSZ_t$) is ranging between 0 and 11. Finally the mean of CFO is 0 .160 and the median is 0.095 with values raging between -0.951 and 3.9782.

2.5.2. Correlation Matrix

Table 2-2. Pearson correlation matrix

	Dacc	Acc	ifrs	Bdsz	Indp	acsz	acm	ac	cfo
dacc	1								
acc	0.9391***	1							
	0								
ifrs	(-0.0628)***	(-0.0457)***	1						
	0	0.0009							
bdsz	(-0.079)***	(-0.0655)***	0.5976***	1					
	0	0	0						
indp	(-0.0614)***	(-0.0523)***	0.6296***	0.9125***	1				
	0	0.0002	0	0					
acsz	(-0.0662)***	(-0.0563)***	0.3202***	0.4443***	0.472***	1			
	0	0	0	0	0				
acm	(-0.0826)***	(-0.0664)***	0.455***	0.6656***	0.6901***	0.4178***	1		
	0	0	0	0	0	0			
ac	(-0.0735)***	(-0.0569)***	0.5965***	0.8174***	0.876***	0.5358***	0.7741***	1	
	0	0	0	0	0	0	0		
cfo	0	(-0.0218)**	-0.0165	(-0.0284)*	-0.0137	-0.0179	(-0.0274)*	-0.0322	1
	1	0.0152	0.2332	0.0395	0.3225	0.1939	0.047	0.0195	
lnassets	(-0.0784)***	(-0.0579)***	0.1695***	0.3231***	0.2428***	0.117***	0.2553***	0.1946***	(-0.0531)***
	0	0	0	0	0	0	0	0	0.0001
gearing	(-0.0496)***	(-0.0445)***	0.0045	0.0198	0.0134	-0.0191	0.009	0.0084	-0.0038
	0.0003	0.0013	0.7437	0.1518	0.3322	0.1672	0.5138	0.5452	0.7808
Ifrs*indp	(-0.0776)***	(-0.0599)***	0.5943***	0.9664***	0.8929***	0.419***	0.6318***	0.7686***	(-0.0282)*
	0	0	0	0	0	0	0	0	0.0412
Ifrs*ac	(-0.0753)***	(-0.0588)***	0.6222***	0.8091***	0.8586***	0.5268***	0.7536***	0.9821***	(-0.0319)**
	0	0	0	0	0	0	0	0	0.021
Ifrs*cfo	-0.0082	-0.0213	0.0447**	0.0088	0.0259*	0.0018	0.001	0.0048	0.9806***
	0.5525	0.1238	0.0012	0.5247	0.0602	0.8935	0.9439	0.7296	0
Ifrs*cfo*indp	-0.0214	(-0.0317)**	0.1084***	0.1447***	0.155***	0.0567***	0.0852***	0.1153***	0.9221***
	0.1217	0.0215	0	0	0	0	0	0	0
Ifrs*cfo*ac	(-0.1115)***	(-0.1031)***	0.3945***	0.4731***	0.5273***	0.3198***	0.4293***	0.6226***	0.0102*
	0	0	0	0	0	0	0	0	0.4601

Table 2-2 (continued)

	lnassets	Gearing	Ifrs*indp	Ifrs*ac	Ifrs*cfo	Ifrs*cfo*indp	Ifrs*cfo*ac
lnassets	1						
gearing	0.0224	1					
	0.1055						
Ifrs*indp	0.3324***	0.0227*	1				
	0	0.0997					
Ifrs*ac	0.1913***	0.0098	0.7852***	1			
	0	0.4783	0				
Ifrs*cfo	(-0.0281)**	-0.0027	0.0079	0.0059	1		
	0.0417	0.8459	0.5684	0.6717			
Ifrs*cfo*indp	0.0036	0.0034	0.1472***	0.1183***	0.9444***	1	
	0.794	0.8054	0	0	0		
Ifrs*cfo*ac	(-0.0376)**	0.0087	0.447***	0.6339***	0.0346**	0.178***	1
	0.0064	0.529	0	0	0.0121	0	

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise.
$ACSZ_t$:The size of audit committee.
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

Table 2-2 reports the Pearson correlation matrix for all variables. It can be observed from the table that DACC and IFRS are negatively related and the correlations are statistically significant at the 1%. A negative relation is also found between DAAC, INDP and AC with significance at the 1%. The results indicate that with regard to the control variables, most correlation signs are consistent with the predictions. It can be observed from the table that the relations between ACC, INDP and AC are all negative and the correlations are significant at the 1%. The relation between ACC and CFO is negative and significant correlation suggesting earnings smoothing. Particularly interest can be drawn to correlations related to variable lnassets (size of the companies). It can be noticed from Table 2-2 that the correlation between lnassets and discretionary accruals is significant, also results present that the size of companies (lnassets) is significantly correlated with independent directors (INDP), and audit committee (AC). These findings suggest that larger companies are more likely to have lower discretionary accruals and higher levels of board independence, to set up audit committees, and to have larger boards of directors.

2.5.3. Results

Table 2-3. Fixed effect Regression models with Discretionary Accruals (Dacc)

Dacc	Coef.	T	P>t
Ifrs	-0.0211	(-4.68)***	0
Bdsz	0.0011	0.85	0.393
Indp	-0.0033	(-1.87)*	0.0918
Acsz	-0.0007	-0.73	0.463
Acm	-0.0007	-0.96	0.336
Ac	-0.0411	(-1.7)*	0.089
Cfo	0.0151	2.78***	0.005
Lnassets	-0.0051	1.78*	0.076
Gearing	-0.0001	1.93*	0.053
Ifrs*indp	-0.0021	(-2.84)**	0.0399
Ifrs*ac	-0.0357	(-1.74)*	0.0642
Ifrs*cfo	-0.0179	(-2.86)***	0.004
Ifrs*cfo*indp	0.0022	1.36	0.173
Ifrs*cfo*ac	-0.0572	(-1.67)*	0.096
_cons	-0.0303	-1.25	0.21
Adj R-squared	0.0197		
Number of obs	5422		
F stat	9.47***		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed).
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise.
$ACSZ_t$:The size of audit committee.
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

Table 2-3 presents the results related to regression model using DACC as the dependent variable. The main focus is whether the coefficients of the variables (IFRS, INDP, and AC) are significant and the interacted items (Ifrs*indp, Ifrs*ac). In particular, a rapidly growing number of academic studies have shed light on the link between the adoption of IFRS and earnings management, it can be noticed from the table that IFRS has a negative relationship with DACC and statistically significant (-0.0211) at the 1% level, suggesting the adoption of IFRS decrease the earnings management which supports the hypothesis.

This result is consistent with (Tendeloo and Vanstraelen, 2005).The coefficient of INDP is negative and significant (-0.0033) at the 10% level. Suggesting increase of the percentage of independent directors reduce earnings management which is in line with (Marra, et al, 2011). Table 2-3 also shows that there is a negative relationship between DACC and AC (-0.0411) and the correlations are significant at 10% level. The results suggest that the audit committee playing a significant role in constraining earnings management policies. The study employs the interaction variables of interest (IFRS*IND) and (IFRS*AC) to test hypothesis 2 and 3. Results show that not only having an independent directors (INDP=-0.0021) but also having an audit committee (AC=0.0357) appears to significantly reduce the level of reported discretionary accruals of companies complying with IFRS, compliant with hypothesis 2 and 3 respectively. Results are consistent with (Marra et al, 2011).

Table 2-4. Fixed effect Regression models with Total Accruals (Acc)

Acc	Coef.	T	P>t
Ifrs	-0.0178	(-3.4)***	0.001
Bdsz	0.0012	0.78	0.435
Indp	-0.0224	(-1.98)**	0.0153
Acsz	-0.0008	-0.68	0.498
Acm	-0.0009	-1.09	0.274
Ac	-0.0261	(-1.97)**	0.0363
Cfo	-0.0183	(-2.89)***	0.004
Lnassets	-0.0015	-0.58	0.559
Gearing	-0.0001	1.31	0.189
Ifrs*indp	0.0044	1.53	0.127
Ifrs*ac	-0.0145	-0.51	0.613
Ifrs*cfo	0.0136	1.86*	0.063
Ifrs*cfo*ind	0.0029	1.98*	0.025
Ifrs*cfo*ac	0.1119	2.88***	0.004
_cons	0.0376	1.55	0.122
Adj R-squared	0.0106		
Number of obs	5422		
F stat	19.25***		

Notes:
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise.
$ACSZ_t$:The size of audit committee.
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t.
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.

Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

Table 2-4 presents the results of the regression when total accruals are used as the dependent variable. It can be seen from Table 2-4 that what is performed for DACC, the analysis is carried out on ACC. The variable IFRS, INDP, and AC are jointly meaningful in explaining a negative relations with ACC (-0.0178,-0.0224 and -0.026 respectively) and the correlations are statistically significant at 1% level for IFRS and at 5% for both INDP and AC. Now the study tests the relationship between accruals and operating cash flow as a measure of earning smoothing (Tendeloo and Vanstraelen, 2005). Testing hypothesis 1 by analysing the interaction variable IFRS*CFO=0.0136. The results reveal that the correlation between operating cash flow and accruals is significantly positive for companies reporting under IFRS comparing with that reporting under GAAP. Suggesting that companies that apply IFRS are engage significantly less in earnings smoothing than companies reporting under GAAP consistent with hypothesis 1.

To test Hypotheses 2 and 3, the interaction variables of interest (IFRS*CFO*IND) and (IFRS*CFO*AC) are included in the regression analysis. It can be noticed from Table 2-4 that having independent directors appears to reduce the increase in earnings smoothing with the adoption of IFRS, since the relationship is significantly positive. The same result is shown by Table 2-4 that having audit committee has a reducing impact on earnings smoothing of companies complying with IFRS and the relationship is significantly positive. Results are consistent with (Tendeloo and Vanstraelen , 2005) who show that having independent directors and audit committee appears to reduce the increase in earnings smoothing with the adoption of IFRS.

Overall, the results reported in Table 2-3 and Table 2-1 supports the validity of study hypothesises that adopted of IFRS and the presence of board independence and an audit committee are constraining earnings management and earnings smoothing.

The following section aims to test the importance of IFRS and corporate governance in constraining earning management by employing other two proxies for earnings management that are commonly used in current accounting research: abnormal working capital accruals (AWCA) and small positive earnings (SPOS).

Table 2-5. Fixed effect Regression models with AWCA

Awca	Coef.	T	P>t
Ifrs	-1.5245	(-2.42)**	0.0155
Bdsz	-0.5637	(-1.78)*	0.075
Indp	-0.0352	1.77*	0.0999
Acsz	-0.4829	(-2.3)**	0.046
Acm	0.1787	1.03	0.305
Ac	-2.3218	(-1.74)*	0.0687
Cfo	-2.1301	-7.06***	0
Lnassets	-1.1356	1.7*	0.09
Gearing	-0.0003	-0.42	0.678
Ifrs*indp	-0.0201	(-1.73)*	0.097
Ifrs*ac	-1.7068	(-1.85)*	0.013
Ifrs*cfo	-2.6409	(-7.15)***	0
Ifrs*cfo*indp	0.8954	2.31**	0.021
Ifrs*cfo*ac	4.6068	6.94***	0
_cons	-1.5425	(-2.01)**	0.045
Adj R-squared	0.0262		
Number of obs	5422		
F stat	10.66***		

Notes:
***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).
$AWCA_t$: Abnormal working capital accrual in year t; scaled by lagged total assets end-of-the-year
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise .
$ACSZ_t$:The size of audit committee .
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

Table 2-5 presents the results related to regression model as AWCA is dependent variable. It also indicates that dummy variable IFRS is significantly related with AWCA, implying that the abnormal working capital accrual decreases after the companies adopt IFRS and reducing earnings management. INDP is negative and statistically significant coefficient (-0.0352). This implies that the existence of independent directors constrains earnings management. Similarly, AC variable is also significantly negative relation with

AWCA at the 10 level (AC=-2.3218) suggesting that the presence of audit committee reduces earnings management.

Furthermore, Table 2-5 indicates that the relationship between independent directors and abnormal accruals, after adopting IFRS, is significantly negative (IFRS*IND=-0.0201) at 10% level. Suggests the earnings management is decreased by increasing the number of independent directors under IFRS. Table 2-5 also shows that the negative relationship between abnormal accruals and the existence of audit committee by complying IFRS, (IFRS*AC= -1.7068) significant level at 10%. Supporting hypothesis 3 that audit committee, under IFRS, constrain earning management.

Table 2-6.Fixed effect Regression models with SPOS

Spos	Coef.	T	P>t
Ifrs	-0.0332	(-3.67)***	0
Bdsz	0.0038	1.44	0.15
Indp	-0.0352	-2.3**	0.0193
Acsz	-0.0006	-0.34	0.736
Acm	-0.0001	-0.11	0.909
Ac	-0.0054	-0.01	0.992
Cfo	-0.0087	-0.8	0.423
Lnassets	-0.0379	6.71***	0
Gearing	-0.0001	1.39	0.165
Ifrs*indp	-0.0041	(-1.83)*	0.041
Ifrs*ac	-0.0045	(-1.75)*	0.061
Ifrs*cfo	-0.0228	(-1.82)*	0.07
Ifrs*cfo*indp	0.00651	1.98**	0.048
Ifrs*cfo*ac	-0.2083	(-3.02)***	0.003
_cons	-0.2809	(-5.77)***	0
Adj R-squared	0.0158		
Number of obs	5422		
F stat	12.116***		

Notes: ***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).

my variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise .
$ACSZ_t$:The size of audit committee .
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t
$SPOS_t$: A dummy my variable that assumes a value of 1 if net income scaled by lagged total assets is between 0 and 0.01
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

Table 2-6 presents the results of SPOS as independent variables .As it can be seen from Table 2-6 that IFRS, INDP and AC are negatively related with SPOS (-0.0332,-0.0352, and -0.0054 respectively). Both IFRS and INPD have significant coefficient whereas AC is insignificant. The negative relationship indicates that firms with adoption of IFRS and with majority of independent directors in their board member and with the existence of audit committee, the earnings management will be controlled and decreased. The important of IFRS introduction can be tested by analysing the interaction variables interest (IFRS*IND and IFRS*AC). Consistently, the results reported in the Table 2-6 show a negative and significant coefficient for both (IFRS*IND=-0.0041) and (IFRS*AC=-0.0045) at 10% level. This confirm that, under IFRS, both presence of independent directors on the firm's board and the existence of audit committee will affect more in constraining earnings management aimed at overcoming the zero-earnings level.

Overall, the results of AWCA and SPOS model are consistent with research hypothesise. Earning management decreased after companies have adopted IFRS in 2005.

Table 2-7.Fixed effect Regression models with Dacc (individual country).

dacc	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway	UK
cons	-0.313	-0.0004	0.0391	0.6958	0.068	-0.1629	-0.5068	0.1179	0.9851	1.1332	-0.0201
	(-2.32)**	-0.03	1.44	2.93***	0.8	(-2.33)**	(-2.75)**	3.56***	3.91***	3.92***	-0.56
ifrs	-0.1746	-0.0145	-0.0017	-0.5203	-0.0229	-0.0159	0.0612	0.0179	-0.3104	0.0096	-0.0439
	(-5.35)***	(-3.73)***	-0.3	(-4.18)***	-1.31	(-1.98)**	-1.49	2.62***	(-1.69)*	1.89*	(-3.21)***
bdsz	-0.0074	0.0004	-0.0006	-0.0162	0.0063	-0.0003	0.0004	-0.0002	0.0062	0.0372	-0.0002
	-1.14	0.54	-0.42	-0.32	1.53	-0.05	0.03	-0.15	0.13	0.62	-0.09
indp	-0.1869	-0.0061	-0.0436	0.0968	-0.0477	-0.0204	-0.0408	0.002	-0.0661	-0.2255	-0.0901
	(-2.27)**	(-2.81)**	(-3.55)***	1.76*	(-1.73)*	(-2.51)*	-1.89*	0.12	-0.19	-0.48	(-2.45)**
acsz	-0.0052	0	0.0005	0.0202	-0.0044	0.0005	-0.0059	0.0021	-0.0011	-0.0097	-0.001
	-1.11	-0.1	0.34	0.66	-1.33	0.14	-0.64	0.96	-0.04	-0.14	-0.61
acm	0.0106	-0.0015	0.0008	0.0203	0.0026	-0.0009	-0.0041	0.0006	0.0072	0.0003	-0.0004
	1.73*	(-2.78)***	2.28**	0.98	0.66	-0.5	-0.47	0.79	0.23	0.01	-0.19
Ac	-0.0771	-0.0872	-0.0099	-0.2008	-0.0311	-0.023	-0.0272	-0.0005	-0.2636	-0.0526	-0.0369
	(-1.99)**	(-2.59)***	-0.48	-0.73	(-1.79)*	(-1.98)**	(-2.23)**	(-2.66)***	(-2.17)**	(-2.09)*	(-1.92)*
cfo	0.3621	0.033	0.0126	-0.0225	0.0592	0.005	0.0175	-0.2299	-0.2575	0.0743	-0.0973
	4.37***	7.42***	0.7	-0.47	0.85	(-3.49)***	0.14	(-6.36)***	-0.51	1.85*	(-2.23)**
lnassets	0.0238	0.0014	-0.0018	-0.0642	-0.0073	0.0188	0.0565	-0.0104	-0.0936	-0.1313	0.0035
	1.77*	0.9	-0.6	(-2.43)**	-0.94	2.8***	2.75***	(-2.6)**	(-3.6)***	(-3.8)***	0.88
gearing	0.0004	0	0	0.0006	0	-0.0001	0	0	-0.0003	-0.0003	0
	5.97***	-1.27	-0.97	2.81***	1.39	(-2.1)**	0.14	1.41	-1.34	-0.62	0.18
Ifrs*indp	-0.0113	0.0097	0.0003	0.0004	0.0082	-0.0067	-0.0311	-0.0033	-0.0162	-0.0011	-0.0011
	(-2.14)**	0.48	0.19	1.64**	1.11	(-1.93)*	(-1.94)**	-1.36	1.67*	-0.01	-1.77*
Ifrs*ac	-0.0702	-0.0779	-0.0105	-0.0198	-0.0912	-0.0618	-0.0003	-0.0032	-0.1964	-0.0221	-0.0273
	-0.89	-0.51	-0.51	-2.93***	(-1.82)*	-1.9*	-2.64***	-0.25	-1.72*	0.03	(-1.97)**
Ifrs*cfo	-1.6609	0.1403	-0.0107	1.3159	0.168	0.3776	0.0975	0.0059	1.1225	-3.9219	0.2489
	(-8.41)***	4.48***	-0.27	1.7*	1.4	3.56***	0.37	0.11	0.73	(-15.87)***	2.99***
Ifrs*cfo*indp	0.1246	-0.0032	-0.0172	0.0125	-0.029	0.0196	-0.004	0.008	-0.2501	0.5066	-0.0159
	4.56***	-0.45	-4.53***	0.09	-1.59	0.48	-0.07	1.57	-0.77	1.27	-1.17
Ifrs*cfo*ac	-0.8465	-0.0507	0.1978	0.097	0.095	-0.4533	0.0455	-0.1181	0.473	0.8102	-0.0111
	(-1.88)*	-0.62	3.03***	0.06	0.57	-1.27	0.07	-1.41	0.17	0.27	-0.1
N	390	528	480	463	464	286	282	283	369	680	1197
Adj-R	0.3108	0.334	0.1036	0.747	0.104	0.1527	0.907	0.1438	0.641	0.3855	0.0124

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise .
$ACSZ_t$:The size of audit committee .
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

It can be noticed that the study's sample has been taken as a pooled data for all companies in11 European stock markets (Germany, France, Italy, Spain, Sweden, Switzerland, Belgium, Portugal, The Netherlands, Norway, and UK). In this section, the sample is taken for each stock market individually.

Table 2-7 presents the results of the regression as DACC dependent variable for each country separately. The purpose of running the model separately is to test whether the coefficients of the test variables (IFRS, INDP and AC, respectively) are significantly different between theses counties. It can be seen from Table 2-7 that IFRS variable has statistically significant coefficient and negative relationship between DACC and IFRS in most country whereas Italy, Sweden, and Belgium show insignificant coefficients of IFRS with negative relationship also. Suggesting the introduction of IFRS can limit the earnings management in the majority if the sample countries which is consistent with hypothesis 1.

Table 2-7 also shows that INDP has a significant coefficient nearly in all stock market except Portugal, The Netherlands, and Norway with negative relationship between DACC and INDP. This results that suggests the presence of a majority of independent directors reduces earnings managements. According to AC, the table implies that DACC and AC correlated negatively for all countries. Since Italy and Spain have insignificant coefficient for AC ,the rest of the sample have statistically significant coefficient of AC which mean that the existing of audit committee has more effect in constraining earnings management policies in those countries. Table 2-7 also shows that the interaction variables IFRS*IND and IFRS*AC have a negative and significant relationship with dacc. Suggesting IFRS compliance could reduce earnings management by existence of independent directors and audit committee.

Table 2-8. Fixed effect Regression models with Acc (individual country)

Acc	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway	UK
Cons	0.055	0.1378	-0.103	3.4713	0.1452	-0.0865	-0.5007	0.5098	1.0633	1.3792	-0.0363
	0.5	2.17	-1.18	5.06***	1.69*	-1.21	(-2.68)***	4.06***	4.12***	4.77***	-1.02
Ifrs	0.2021	-0.0738	-0.0146	-0.2955	-0.027	-0.0067	0.0772	0.0302	-0.316	0.0064	-0.0329
	6.39***	(-4.47)*	(-1.69)*	(-2.01)**	(-1.72)*	(-2.3)**	1.87*	1.06	(-1.73)*	0.06	(-2.44)*
Bdsz	-0.0079	-0.0063	-0.0025	0.0327	0.0065	-0.0058	0.0002	0.0032	0.0126	0.0262	-0.0005
	-1.22	-1.93	-0.4	0.63	1.54	-0.88	0.02	0.64	0.27	0.43	-0.23
Indp	-0.1403	-0.0174	0.1393	0.0915	0.0468	-0.0055	-0.0757	-0.0918	-0.0546	-0.2269	-0.1312
	(-1.78)*	(-1.74)*	2.49**	2.22**	1.98**	(-2.11)**	(-2.53)**	-1.33	(-2.15)**	-0.48	-3.62***
Acsz	-0.004	0.0014	-0.001	0.0242	-0.005	-0.0005	-0.0075	-0.0095	0.0003	0.006	-0.0009
	-0.84	0.68	-0.15	0.77	-1.5	-0.11	-0.82	-1.02	0.01	0.09	-0.61
Acm	0.0083	0.003	-0.0002	0.0175	0.0021	-0.0009	-0.0047	-0.0007	0.0088	0.0125	0.0005
	1.37	1.34	-0.15	0.74	0.54	-0.39	-0.53	-0.24	0.28	0.34	0.22
Ac	0.086	-0.3712	-0.0045	-0.1427	0.036	0.012	0.0507	0.0535	-0.3515	-0.0473	0.0456
	2.13***	(-1.77)*	(-1.85)*	(-0.46)**	1.98**	2.28**	2.42**	1.98*	-0.22	-0.08	2.4**
Cfo	-0.1786	-0.046	-0.0673	-1.9289	-0.0597	0.1575	-0.2464	-0.1731	-0.092	0.0318	-0.2751
	-2.24**	(-2.46)*	-2.82**	-3.24***	-2.85**	1.99**	-1.89*	-1.13	-0.18	1.79*	(-6.4)***
Lnassets	-0.0094	-0.0092	0.0143	-0.3525	-0.0077	0.0108	0.0553	-0.0563	-0.096	-0.1334	0.0064
	-0.88	-1.46	1.56	(-4.46)***	-0.99	1.58	2.65***	(-3.89)***	(-3.6)***	(-3.86)***	1.53
Gearing	0.0003	0	0	0.0007	0	-0.0001	0	0	-0.0003	-0.0003	0
	5.74***	1.75	-0.97	3.01***	1.38	-1.23	0.28	0.23	-1.24	-0.76	0.34
Ifrs*indp	-0.0129	-0.0529	0.0024	-0.0299	0.0076	-0.005	0.0175	-0.0045	0.0098	0.0187	0.0028
	-2.45	-0.62	0.29	-0.49	1.02	-0.56	0.85	-0.43	0.04	0.21	0.44
Ifrs*ac	-0.0653	0.3408	-0.0094	0.1426	-0.0935	0.0673	0.1378	0.0021	0.2731	-0.0333	-0.0417
	-0.84	0.53	-0.1	1.73*	(-1.83)*	0.78	1.72*	1.98**	0.17	-0.05	-1.51
Ifrs*cfo	-1.8991	0.346	0.1139	1.2928	0.2046	0.5419	0.0198	0.0518	1.0964	-3.9194	0.1426
	(-9.75)***	2.6***	1.65*	1.64*	1.68*	4.1***	0.07	-0.22	0.71	(-15.79)***	1.74*
Ifrs*cfo*indp	0.1426	-0.019	-0.0307	0.0055	-0.0309	0.0243	0.0251	0.0026	-0.2425	0.4779	-0.012
	5.21***	-0.63	(-1.75)*	0.03	(-1.67)*	0.47	0.42	0.12	-0.75	1.19	-0.89
Ifrs*cfo*ac	-0.8131	0.1854	-0.1119	0.442	0.0683	-0.6246	-0.233	-0.5902	0.3918	0.7884	0.0512
	(-1.81)*	0.53	-0.37	0.25	0.41	-1.39	-0.36	(-1.65)*	0.15	0.26	0.45
N	390	528	480	463	464	286	282	283	369	680	1197
Adj-R	0.339	0.219	0.376	0.787	0.517	0.505	0.893	0.108	0.645	0.384	0.251

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets.
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise.
$ACSZ_t$:The size of audit committee.
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t.
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

Table 2-8 presents the results of the 11 countries as ACC dependent variables. The results present that the mean variables (IFRS, INDP and ACC) are significantly correlated with total accruals. Consistent with study hypothesises. Also Table 2-8 shows the relationship between total accruals ACC and operating cash flow (CFO) as a measure for earnings smoothing. The results of this regression indicate that the relationship between operating cash flow and total accrual is significant in most countries excluding The Netherlands and Portugal which have insignificant coefficients. To test the earning smoothing under IFRS, study analyses the interaction variable IFRS*CFO. Table 2-8 indicates that positive relationship between ACC and CFO could be noticed through all country except Germany and Norway. Also the coefficient of IFRS*CFO is significant in most country. This finding Suggests that earning smoothing could be engaged significantly less to firms that reporting under IFRS than companies reporting under GAAP.

Table 2-9. Fixed effect Regression models with AWCA (all countries).

awca	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway	UK
cons	0.8328	-0.4142	0.4048	2.7731	-28.1413	0.193	9.5033	0.8438	1.2579	-1.132	-0.3341
	3.08***	(-5.5)***	0.87	6.92***	(-3.23)***	0.36	4.75***	4.49***	2.16**	-0.3	(-6.51)***
ifrs	-0.3505	-0.004	-0.3598	-0.9551	-2.39	-0.1888	-1.9209	0.0596	-0.6179	-0.0474	-0.0778
	-5.36***	-2.18**	-1.43	(-5.05)***	(-1.69)*	(-1.84)*	-.67***	1.18	(-3.37)***	(-0.06)**	(-3.15)***
bdsz	-0.0196	0.0077	-0.0021	-0.004	-0.1582	-0.0137	0.0096	-0.0023	0.028	0.0183	0.0082
	-1.51	1.73*	-0.03	-0.05	-0.47	-0.52	0.08	-0.26	0.62	0.05	2.06**
indp	-0.1153	-0.0379	-0.2814	-0.6797	-5.0255	-0.0041	-2.1676	-0.0673	0.0861	-0.4085	-0.0211
	(-1.97)**	-.89*	(-1.65)**	(-1.78)*	-2.1**	-1.82*	(-1.73)*	-0.55	0.25	-1.73**	-2.62***
acsz	-0.0049	-0.0019	-0.0068	0.0254	-0.1027	-0.005	-0.1473	-0.0119	0.0113	0.0566	-0.0053
	-0.51	-0.7	-0.09	0.55	-0.39	-0.28	-1.63	-0.72	0.4	0.13	(-1.87)*
acm	0.028	0.0009	0.0053	0.0456	0.2768	-0.0012	0.0444	0.0016	-0.0071	0.0055	-0.0047
	2.28**	0.31	0.33	1.43	0.88	-0.13	0.51	0.29	-0.23	0.02	-1.2
ac	-0.0461	-0.7803	-0.1099	-0.3501	-0.2713	-0.2703	-3.2785	-0.0159	0.0662	0.0055	-0.0182
	-1.73*	-1.89*	(-1.81)**	(-1.83)**	(-2.08)**	-1.59	-2.76***	-1.66*	0.04	1.71*	(-1.74)*
cfo	-0.1925	-0.0059	-0.3623	-3.973	-7.1556	0.6559	-2.7736	-0.2746	-0.0158	0.0371	-0.431
	-1.16	-0.24	-0.43	(-55.42)***	-1.27	1.42	(-2.14)**	-1	-0.03	1.84*	(-5.52)***
lnassets	-0.089	0.0419	-0.0367	-0.2202	2.6185	-0.0301	-1.1374	-0.0849	-0.124	0.1036	0.0399
	(-3.31)***	5.44***	-0.81	(-4.92)***	3.24***	-0.55	(-4.79)***	(-3.85)***	(-1.93)*	0.22	6.83***
gearing	0.0004	0	0	0.0012	-0.0016	0.0001	-0.0009	0	-0.0002	0.0007	0
	3.64***	1.79*	-0.05	4.03***	-0.65	0.33	-1	0.07	-0.74	0.21	-1
Ifrs*indp	-0.0237	-0.1016	-0.0285	-0.0419	0.5416	-0.0383	-0.1159	-0.0085	0.0697	-0.0686	-0.0439
	(-2.25)**	-1.88*	-0.35	2.63***	0.9	(-1.76)*	(-1.83)*	(-2.45)**	0.32	-0.12	(-3.89)***
Ifrs*ac	-0.0415	-0.8586	-0.0244	-0.0461	-2.2179	-0.3656	-1.3973	-4.3437	0.0219	0.1176	-0.0987
	(-2.26)**	(-1.98)**	-0.02	-2.24**	-0.54	-1.76*	(-2.27)**	-2.25**	0.01	0.03	-1.95*
Ifrs*cfo	-3.7509	-1.0459	-1.3973	4.3437	24.6705	0.6787	-14.4217	-0.608	3.1853	-13.4477	0.1367
	(-9.48)***	(-5.86)***	-0.78	3.7***	2.56**	1.25	(-5.51)***	-1.45	2.16**	(-8.5)***	0.91
Ifrs*cfo*indp	0.2664	0.0425	-0.034	-0.0912	-2.2083	-0.06	3.9454	0.0227	-0.3103	2.0297	0.0593
	4.86***	1.05	-0.19	-0.41	-1.5	-0.29	6.68***	0.59	-0.96	0.79	2.43**
Ifrs*cfo*ac	-0.9276	0.7382	1.3569	0.8286	6.2952	-0.2083	-46.4326	-0.3981	-0.124	-1.2975	-0.5504
	-1.03	1.58	0.43	0.33	0.47	-0.12	(-7.25)***	-0.63	-0.05	-0.07	(-2.65)***
N	390	528	480	463	464	286	282	283	369	680	1197
Adj-R	0.1349	0.2231	0.145	0.8647	0.364	0.699	0.414	0.191	0.261	0.1094	0.1207

Notes
***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).
$AWCA_t$: Abnormal working capital accrual in year t; scaled by lagged total assets end-of-the-year
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise .
$ACSZ_t$:The size of audit committee .
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t .
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

The results that are presented in Table 2-9 indicate the abnormal working capital (AWCA) as dependent variables. The regression shows that IFRS is significant in most countries except Italy and Portugal. Also we noticed that INDP is statistically significant for all countries excluding Portugal and the Netherlands which have insignificant coefficient with AWCA. Audit committee is correlated significantly with AWAC in most countries but is insignificant for Switzerland and the Netherlands. Interestingly, above results support the study hypothesises that with introduction of IFRS with increasing the number of independent directors and the presence of audit committee, it considerably reduces earnings management in companies.

Table 2-10. Fixed effect Regression models with SPOS (all countries)

Spos	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway	UK
cons	-0.1624	0.1028	-0.3073	-0.2884	-0.8136	-0.4292	-0.2994	-0.5539	-0.5402	-0.0423	-0.0034
	-1.23	0.44	(-1.88)*	(-2.31)**	(-2.46)**	-1.01	(-2.87)***	(-3.91)***	(-4.45)***	-0.74	-0.1
ifrs	-0.0188	-0.0691	-0.0961	-0.0992	-0.0718	-0.0809	-0.0858	-0.0189	0.0748	-0.0082	-0.0352
	-0.37	-2.15**	(-1.67)*	(-2.36)**	(-2.33)**	(-2.1)**	-1.6	-0.26	2.05**	(-2.38)**	(-1.73)*
bdsz	0.024	-0.0121	-0.0018	0.006	-0.005	-0.003	-0.0119	0.0211	0.0292	-0.024	0.0051
	2.17**	-1.01	-0.13	0.37	-0.4	-0.14	-0.7	1.53	1.62	(-1.85)*	1.18
indp	-0.0768	-0.0408	-0.1977	-0.1012	-0.1677	-0.1249	-0.0303	-0.2096	-0.3661	-0.0246	-0.164
	-0.6	-0.35	(-2.53)**	-2.78**	-1.16	(-1.78)*	(-2.15)**	(-2.18)**	-2.65***	(-1.85)*	-2.36**
acsz	0.0044	-0.0017	-0.0365	0.0091	-0.0042	-0.0115	0.0314	-0.0273	0.0195	0.0014	0.0031
	0.53	-0.23	(-2.22)*	0.93	-0.41	-0.82	2.33**	-1.06	1.75*	0.1	1
acm	0.0187	-0.0019	0.0033	-0.0121	0.0067	-0.0101	-0.0022	0.0037	0.0042	0.0171	-0.003
	1.82*	-0.24	0.9	(-1.71)*	0.56	-1.41	-0.19	0.48	0.35	2.15**	-0.77
ac	-0.0888	-0.1814	-0.0068	-0.2525	-0.0409	0.0893	-0.045	-0.0308	-0.1354	-0.106	0.0205
	(-2.7)**	-2.08**	-0.03*	-2.7***	-0.34	2.67**	-0.28	(-2.21)**	-0.22	-0.82	2.65**
cfo	-0.0514	-0.0233	-0.4628	0.0096	0.0386	-0.7792	-0.2859	-1.3288	-0.1718	0.0039	-0.2128
	-0.41	-0.34	(-2.4)**	0.62	0.18	(-2.15)**	-1.63	(-3.17)***	-0.87	0.46	(-2.58)**
lnassets	0.0176	-0.0066	0.0666	0.0427	0.0904	0.0663	0.0498	0.1041	0.069	0.0092	0.0076
	1.37	-0.27	3.92***	3.03***	2.94***	1.55	4.3***	6.43***	5.42***	1.35	2.04**
gearing	0.0003	0	0	0.0002	0.0001	-0.0001	0.0003	0	0.0002	0.0002	0
	3.59***	1.83*	0.07	2.89***	1.49	-0.69	3.24***	1.42	2.14**	2.49**	-0.28
Ifrs*indp	-0.0047	-0.0251	0.0115	-0.0483	-0.0319	-0.0257	-0.1232	-0.0008	0.0119	-0.0122	-0.0208
	-2.51**	-2.08**	0.6	-3.59**	-1.65*	-0.91	-2.44**	-0.03	0.13	-1.65*	-1.84*
Ifrs*ac	-0.0483	-0.1997	-0.0254	-0.1232	-0.0579	0.0814	-0.0091	-0.3833	-0.1525	-0.0801	-0.0868
	-2.37**	-2.09**	-0.11	-2.17**	-1.67*	0.3	-2.36**	-1.78*	-0.25	-1.76*	-1.67*
Ifrs*cfo	-0.0731	-0.4305	0.0372	0.3833	0.0575	0.696	0.1267	0.4201	-0.6866	-0.0181	0.1475
	-0.22	-0.89	0.09	1.48	0.16	1.64	0.36	0.66	-1.15	-0.34	0.9
Ifrs*cfo*indp	-0.0198	-0.1502	-0.0096	-0.0235	0.0045	0.1609	-0.1301	-0.0132	-0.0298	-0.079	-0.0098
	-0.41	-1.37	-0.24	-0.47	0.08	1	-1.65	-0.22	-0.23	-0.92	-0.39
Ifrs*cfo*ac	0.1232	0.9839	-0.1197	-0.9586	-0.3077	-0.7315	0.9714	0.3163	0.8953	0.6107	-0.0129
	0.16	0.78	-0.17	(-1.73)*	-0.61	-0.52	1.08	0.33	0.85	0.94	-0.06
N	390	528	480	463	464	286	282	283	369	680	1197
Adj-R	0.1161	0.317	0.2409	0.2295	0.4297	0.2816	0.2073	0.3191	0.2304	0.849	0.271

Notes
***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).
$SPOS_t$: A dummy my variable that assumes a value of 1 if net income scaled by lagged total assets is between 0 and 0.01
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members.
$INDP_t$:The percentage of independent directors on the firm's board.
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise .
$ACSZ_t$:The size of audit committee .
ACM_t: The meeting of audit committee.
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.
$LNASSETS_t$: Natural logarithm of total assets in year t
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP.
Ifrs*ac: The interaction variable for IFRS dummy and AC.
Ifrs*cfo: The interaction variable for IFRS dummy and CFO.
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP.
Ifrs*cfo*ac: The interaction variable for IFRS dummy, CFO and AC.

The regression in Table 2-10 introduces SPOS as a dependent variable. Table 2-10 indicate that most countries has significant coefficient of IFRS, INDP and AC. It can be noticed that IFRS is insignificant in Germany, Belgium and Portugal whereas INDP is insignificant in Germany, France and Sweden. Noticeably AC has insignificant coefficient in Sweden, Belgium, the Netherlands and Norway. The interaction variables IFRS*IND and IFRS*AC significantly support that the application of IFRS may allow to firms in limiting earning management and reduce the manipulated financial statement which reported by managers.

2.5.4. Robustness tests

In order to further check the robustness of our empirical results, study conduct four additional regression models using more control variable. In particular following Kou et al. (2014) study controls for Chief Executive Officer (CEO) duality when managers taking both chairman of the board and CEO of the company positions can raise the possibility for earnings manipulation as it decreases the monitoring role of the board.

We also control the following variables for firms' variations in size, capital structure, and performance that might affect earnings management, following Kou et al. (2014). LEVERAGE has been found to affect the earnings management and is defined as the total debt divided by total assets. TOBINQ is the proxy for investment opportunities and is the Market value of assets over book value of assets. Assets Growth (AG) is a percentage increase or decrease of total assets by comparing current period with same period prior year. Return on Assets (ROA,) is an indicator of how profitable a company is relative to its total assets and it gives an idea as to how efficient management is at using its assets to generate earnings

The models are defined as follows:

$$\begin{aligned} DACC_t = {} & a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t \\ & + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t \\ & + a_{11} IFRS_t * AC_t + a_{12} DUALITY_t + a_{13} LEVERAGE_t \\ & + a_{14} TOBINQ_t + a_{15} AG_t + a_{16} ROA_t + \varepsilon_t \end{aligned} \tag{2-7}$$

$$ACC_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + a_{12} IFRS_t * CFO_t + a_{13} DUALITY_t + a_{14} LEVERAGE_t + a_{15} TOBINQ_t + a_{16} AG_t + a_{17} ROA_t + \varepsilon_t \quad (2\text{-}8)$$

$$AWCA_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + a_{12} DUALITY_t + a_{13} LEVERAGE_t + a_{14} TOBINQ_t + a_{15} AG_t + a_{16} ROA_t + \varepsilon_t \quad (2\text{-}9)$$

$$SPOS_t = a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t + a_{12} IFRS_t * CFO_t + a_{13} DUALITY_t + a_{14} LEVERAGE_t + a_{15} TOBINQ_t + a_{16} AG_t + a_{17} ROA_t + \varepsilon_t \quad (2\text{-}10)$$

Where:

Dependent variables

$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets

ACC_t: Accruals in year t, scaled by lagged total assets.

$AWCA_t$: Abnormal working capital accrual in year t, scaled by lagged total assets.

$SPOS_t$: A dummy variable that assumes a value of 1 if net income scaled by lagged total assets is between 0 and 0.01 and 0 otherwise.

Independent variables

$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)

$BDSZ_t$: The total number of board members.

$INDP_t$:The percentage of independent directors on the firm's board.

AC_t:A dummy variable taking the value of one if an audit committee exists and zero otherwise.

$ACSZ_t$:The size of audit committee.

ACM_t: The meeting of audit committee.

CFO_t:Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets.

$LNASSETS_t$: Natural logarithm of total assets in year t .

$GEARING_t$: Ratio of long-term debt over common equity in year t.

Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise.

Leverage: calculated as total debt divided by total assets.

TOBINQ: Market value of assets over book value of assets

AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year

ROA: Return on assets: earnings before interests and tax divided by total assets

To test our hypotheses, we run fixed affect regression models (for DACC, ACC, AWCA and SPOS, respectively).

Table 2-11 and Table 2-12 show that the coefficients of the variables (IFRS, INDP, and AC) are significant which is in line with study' hypothesises. As well as the study employs the interaction variables of interest (IFRS*IND) and (IFRS*AC) to test hypotheses 2 and 3. Results present the interacted items (Ifrs*indp=-0.002, Ifrs*ac=0.036) (Ifrs*indp=-0.004, Ifrs*ac=0.013) for Table 2-11 and Table 2-12 respectively, are significant at 5% level which observes that the main results of our

analysis are confirmed. As well as, results show that the level of earnings management of companies is significantly reduced after complying IFRS in 2005.

Our results on firm characteristics indicate that large firms (LNASSETS) or firms with lower leverage ratio (LEVERAGE), and higher Tobin's Q (TOBINQ) are more likely to have a low tendency to manage earnings.

Table 2-11. Fixed effect Regression models with Discretionary Accruals (Dacc)

Dacc	Coef.	T	P>t
Ifrs	-0.021	(-4.66)***	0
Bdsz	0.001	1.97	0.05
Indp	-0.001	-0.08	0.937
Acsz	-0.001	(-1.96)**	0.004
Acm	-0.001	-0.95	0.342
Ac	-0.041	(-1.68)*	0.093
Cfo	0.015	2.77***	0.006
Lnassets	-0.005	1.74*	0.082
Gearing	0.006	1.96**	0.05
Ifrsind	-0.002	(-1.96)**	0.05
Ifrsac	-0.036	1.97**	0.144
Ifrscfo	-0.018	(-2.85)***	0.004
Ifrscfoind	0.002	1.37	0.172
Ifrscfoac	-0.058	(-1.68)*	0.092
CEO_Duality	0.001	1.15	0.251
LEVERAGE	0.046	2.57***	0.001
TOBINQ	-0.014	0.59	0.556
AG	0.008	1.97**	0.016
ROA	-0.011	1.72*	0.072
_cons	-0.035	-1.45	0.147
Adj R-squared	0.212		
Number of obs	5247		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed)
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members
$INDP_t$:The percentage of independent directors on the firm's board
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise
$ACSZ_t$:The size of audit committee
ACM_t: The meeting of audit committee
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets
$LNASSETS_t$: Natural logarithm of total assets in year t

$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP
Ifrs*ac: The interaction variable for IFRS dummy and AC
Ifrs*cfo: The interaction variable for IFRS dummy and CFO
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP
CEO_Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise
LEVERAGE: calculated as total debt divided by total assets
TOBINQ: Market value of assets over book value of assets
AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year
ROA: Return on assets: earnings before interests and tax divided by total assets

Table 2-12. Fixed effect Regression models with Total Accruals (Acc)

Acc	Coef.	T	P>t
Ifrs	-0.018	(-3.46)***	0.001
Bdsz	0.001	0.95	0.343
Indp	-0.029	(-1.8)*	0.072
Acsz	-0.001	-0.47	0.641
Acm	-0.001	-0.85	0.394
Ac	-0.023	1.98**	0.025
Cfo	-0.019	(-2.94)***	0.003
Lnassets	-0.002	-0.5	0.614
Gearing	0.001	1.65*	0.099
Ifrsind	-0.004	2.25**	0.015
Ifrsac	-0.013	-2.46**	0.643
Ifrscfo	0.015	1.99**	0.047
Ifrscfoind	0.003	1.47	0.143
Ifrscfoac	-0.084	(-2.05)**	0.04
CEO Duality	0.004	0.44	0.654
LEVERAGE	0.015	1.97**	0.045
TOBINQ	-0.028	0.38	0.708
AG	-0.035	1.98**	0.047
ROA	-0.019	-0.12	0.901
_cons	0.037	1.29	0.198
Adj R-squared	0.117		
Number of obs	5247		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed)
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members
$INDP_t$:The percentage of independent directors on the firm's board
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise
$ACSZ_t$:The size of audit committee
ACM_t: The meeting of audit committee
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets
$LNASSETS_t$: Natural logarithm of total assets in year t
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP
Ifrs*ac: The interaction variable for IFRS dummy and AC
Ifrs*cfo: The interaction variable for IFRS dummy and CFO
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP
CEO_Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise
LEVERAGE: calculated as total debt divided by total assets
TOBINQ: Market value of assets over book value of assets
AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year

ROA: Return on assets: earnings before interests and tax divided by total assets

Furthermore, Table 2-13 and Table 2-14 also confirm our empirical results and the earnings management decrease after the mandatory IFRS adoption as the interacted variables (Ifrs*indp, Ifrs*ac) are significant. As well as, companies with large size (LNASSETS) or with lower leverage ratio (LEVERAGE), and higher Tobin's Q (TOBINQ) are more likely to reduce earnings management.

Table 2-13. Fixed effect Regression models with AWCA

Awca	Coef.	T	P>t
Ifrs	1.515	1.97**	0.048
Bdsz	-0.575	-1.81	0.07
Indp	-0.088	(-2.63)***	0.008
Acsz	-0.48	(-1.98)**	0.047
Acm	0.179	1.03	0.305
Ac	2.15	0.37	0.709
Cfo	9.199	7.1***	0
Lnassets	-1.175	1.75*	0.08
Gearing	0.018	-0.4	0.686
Ifrsind	-0.013	-2.02	0.043
Ifrsac	-1.526	(-1.97)**	0.041
Ifrscfo	-3.708	(-3.19)***	0
Ifrscfoind	0.897	2.31**	0.021
Ifrscfoac	2.674	2.94***	0
CEO Duality	-0.006	0.29	0.771
LEVERAGE	0.993	(-1.66)*	0.091
TOBINQ	-0.026	1.63*	0.076
AG	0.001	0.15	0.882
ROA	-0.005	(-2.07)**	0.039
_cons	-1.014	0.13	0.894
Adj R-squared	0.265		
Number of obs	5247		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed)
$AWCA_t$: Abnormal working capital accrual in year t; scaled by lagged total assets end-of-the-year
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members
$INDP_t$:The percentage of independent directors on the firm's board
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise
$ACSZ_t$:The size of audit committee
ACM_t: The meeting of audit committee
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets
$LNASSETS_t$: Natural logarithm of total assets in year t

$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP
Ifrs*ac: The interaction variable for IFRS dummy and AC
Ifrs*cfo: The interaction variable for IFRS dummy and CFO
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP
CEO_Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise
LEVERAGE: calculated as total debt divided by total assets

TOBINQ: Market value of assets over book value of assets
AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year
ROA: Return on assets: earnings before interests and tax divided by total assets

Table 2-14. Fixed Regression models with SPOS

Spos	Coef.	T	P>t
Ifrs	-0.033	(-3.63)***	0
Bdsz	0.004	1.4	0.163
Indp	-0.037	(-2.63)***	0.002
Acsz	-0.001	-0.38	0.702
Acm	-0.001	-0.13	0.899
Ac	-0.002	(-2.02)**	0.032
Cfo	0.01	0.83	0.406
Lnassets	-0.039	6.71***	0
Gearing	0.001	1.37	0.17
Ifrsind	0.005	1.98**	0.047
Ifrsac	0.027	2.34**	0.031
Ifrscfo	-0.024	-1.84	0.066
Ifrscfoind	0.007	1.98**	0.048
Ifrscfoac	-0.21	-3.03	0.002
CEO Duality	-0.001	-1.57	0.116
LEVERAGE	0.005	(-1.97)**	0.047
TOBINQ	-0.001	-0.2	0.844
AG	-0.001	(-1.69)*	0.058
ROA	-0.001	-1.22	0.223
_cons	-0.271	-5.51	0
Adj R-squared	0.167		
Number of obs	5247		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed)
$SPOS_t$: A dummy my variable that assumes a value of 1 if net income scaled by lagged total assets is between 0 and 0.01
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members
$INDP_t$:The percentage of independent directors on the firm's board
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise
$ACSZ_t$:The size of audit committee
ACM_t: The meeting of audit committee
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets
$LNASSETS_t$: Natural logarithm of total assets in year t
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP

Ifrs*ac: The interaction variable for IFRS dummy and AC
Ifrs*cfo: The interaction variable for IFRS dummy and CFO
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP
LEVERAGE: calculated as total debt divided by total assets
CEO_Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise
TOBINQ: Market value of assets over book value of assets
AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year
ROA: Return on assets: earnings before interests and tax divided by total assets

2.5.5. Accounting flexibility:

Earlier studies suggest that tend to manipulate earnings upwards due to internal accounting system flexibility and the nature of accrual accounting. Earnings management is controlled by firms' accounting choices and it is reflected by the net asset value on the balance sheet (Barton and Simko, 2002).Companies with a higher level of overstated net assets relative to sales will have less ability to engage in further accrual earnings management. Following Barton and Simko we use the net operating assets scaled by sales at the beginning of the year to proxy for accounting flexibility. When accounting flexibility is low, firms are more likely to engage in earning management (Wang and D'Souza, 2006).

We run the following fixed effect regressions:

$$\begin{aligned} \mathrm{DACC_t} = {} & \mathrm{a_0} + \mathrm{a_1IFRS_t} + \mathrm{a_2BDSZ_t} + \mathrm{a_3INDP_t} + \mathrm{a_4AC_t} \\ & + \mathrm{a_5ACSZ_t} + \mathrm{a_6ACM_t} + \mathrm{a_7CFO_t} + \mathrm{a_8LNASSETS_t} \\ & + \mathrm{a_9GEARING_t} + \mathrm{a_{10}IFRS_t} * \mathrm{IND_t} + \mathrm{a_{11}IFRS_t} * \mathrm{AC_t} \\ & + \mathrm{a_{12}DUALITY_t} + \mathrm{a_{13}LEVERAGE_t} + \mathrm{a_{14}TOBINQ_t} + \mathrm{a_{15}AG_t} \\ & + \mathrm{a_{16}ROA_t} + \mathrm{a_{17}AF_t} + \mathrm{a_{18}IFRS_t} * \mathrm{AF_t} + \varepsilon_t \end{aligned} \tag{2-11}$$

$$\begin{aligned} ACC_t = {} & a_0 + a_1 IFRS_t + a_2 BDSZ_t + a_3 INDP_t + a_4 AC_t \\ & + a_5 ACSZ_t + a_6 ACM_t + a_7 CFO_t + a_8 LNASSETS_t \\ & + a_9 GEARING_t + a_{10} IFRS_t * IND_t + a_{11} IFRS_t * AC_t \\ & + a_{12} IFRS_t * CFO_t + a_{13} DUALITY_t + a_{14} LEVERAGE_t \\ & + a_{15} TOBINQ_t + a_{16} AG_t + a_{17} ROA_t + + a_{18} AF_t \\ & + a_{19} IFRS_t * AF_t + \varepsilon_t \end{aligned} \tag{2-12}$$

AF: Accounting flexibility calculated as the net operating assets over sales at beginning of the year.

Ifrs*AF: The interaction variable for IFRS dummy and AF

Table 2-15. Fixed effect Regression models with Discretionary Accruals (Dacc)

Dacc	Coef.	T	P>t
Ifrs	-0.016	(-3.23)***	0.001
Bdsz	0.003	1.6	0.11
Indp	0.027	1.86*	0.063
Acsz	-0.001	-0.14	0.892
Acm	-0.002	-1.26	0.207
Ac	-0.05	(-1.97)**	0.05
Cfo	0.016	2.91***	0.004
Lnassets	-0.002	-0.35	0.727
Gearing	0.001	1.44	0.149
Ifrsind	-0.001	(-2.08)**	0.039
Ifrsac	0.036	1.98**	0.047
Ifrscfo	-0.018	-1.46	0.146
Ifrscfoind	0.003	0.39	0.7
Ifrscfoac	-0.061	-1.22	0.221
CEO Duality	0.002	0.46	0.649
LEVERAGE	0.001	2.21**	0.033
TOBINQ	0.001	0.94	0.349
AG	0.001	1.86*	0.063
ROA	-0.001	-1.04	0.298
AF	-0.001	(-2.48)**	0.013
IfrsAF	-0.002	3.31***	0.009
_cons	0.024	0.88	0.378
Adj R-squared	0.265		
Number of obs	4479		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed)
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members
$INDP_t$:The percentage of independent directors on the firm's board
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise
$ACSZ_t$:The size of audit committee
ACM_t: The meeting of audit committee
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets
$LNASSETS_t$: Natural logarithm of total assets in year t
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP
Ifrs*ac: The interaction variable for IFRS dummy and AC
Ifrs*cfo: The interaction variable for IFRS dummy and CFO
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP
CEO_Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise
LEVERAGE: calculated as total debt divided by total assets
TOBINQ: Market value of assets over book value of assets

AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year
ROA: Return on assets: earnings before interests and tax divided by total assets
AF: Accounting flexibility calculated as the net operating assets over sales
Ifrs*AF: The interaction variable for IFRS dummy and AF

Table 2-16. Fixed effect Regression models with Total Accruals (Acc)

Acc	Coef.	T	P>t
Ifrs	-0.011	(-1.8)*	0.072
Bdsz	0.003	1.52	0.128
Indp	-0.007	(-2.39)**	0.016
Acsz	0.001	0.17	0.863
Acm	-0.002	-1.15	0.251
Ac	0.027	0.84	0.4
Cfo	-0.02	(-3.07)***	0.002
Lnassets	-0.01	(-2.53)**	0.011
Gearing	0.001	1.21	0.225
Ifrsind	0.008	(2.04)**	0.041
Ifrsac	-0.022	(-1.68)*	0.097
Ifrscfo	0.011	0.72	0.472
Ifrscfoind	0.006	0.76	0.448
Ifrscfoac	-0.102	(-1.67)*	0.095
CEO Duality	0.005	1.93*	0.052
LEVERAGE	-0.001	-0.45	0.656
TOBINQ	0.002	1.97**	0.049
AG	0.001	1.32	0.185
ROA	-0.001	-1.12	0.263
AF	-0.002	(-2.08)**	0.038
IfrsAF	-0.004	2.22**	0.024
_cons	0.112	3.43***	0.001
Adj R-squared	0.149		
Number of obs	4479		

Notes:
***, **, *=Significantly different from zero at the1%, 0.5% and 10% level, respectively (two tailed)
$DACC_t$: Discretionary accruals in year t, scaled by lagged total assets
ACC_t: Accruals in year t, scaled by lagged total assets.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0)
$BDSZ_t$:The total number of board members
$INDP_t$:The percentage of independent directors on the firm's board
AC_t: A dummy variable taking the value of one if an audit committee exists and zero otherwise
$ACSZ_t$:The size of audit committee
ACM_t: The meeting of audit committee
CFO_t: Operating cash flow in year t, taken from cash flow statement, scaled by lagged total assets
$LNASSETS_t$: Natural logarithm of total assets in year t
$GEARING_t$: Ratio of long-term debt over common equity in year t
Ifrs*indp: The interaction variable for IFRS dummy and INDP
Ifrs*ac: The interaction variable for IFRS dummy and AC
Ifrs*cfo: The interaction variable for IFRS dummy and CFO
Ifrs*cfo*indp: The interaction variable for IFRS dummy, CFO and INDP
CEO_Duality: A dummy variable equal to 1 if the CEO is also chairman of the board and 0 otherwise
LEVERAGE: calculated as total debt divided by total assets
TOBINQ: Market value of assets over book value of assets

AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year
ROA: Return on assets: earnings before interests and tax divided by total assets
AF: Accounting flexibility calculated as the net operating assets over sales
Ifrs*AF: The interaction variable for IFRS dummy and AF

Table 2-15 and Table 2-16 indicate that accounting flexibility has a significant and negative relationship with earnings management proxies. The empirical results show the coefficients are significant at 5% level (AF=-0.01, AF=-0.02) Table 2-15 and Table 2-16, respectively. Similar to the finding of Kou at al, (2014) results present that firms with lower accounting flexibility are more likely to use earnings management. Nevertheless, the coefficients on the interacted variables (Ifrs*AF) are significant and negatively correlated with earnings management proxies. These results indicate that companies with lower accounting flexibility are more likely to manage their earnings after the mandatory adoption of IFRS in 2005.

2.6. Conclusion

This paper examines whether adoption of IFRS leads to lower earnings management and addresses the question of whether the board of directors is more effective in constraining earnings management with the mandatory IFRS adoption, focusing on the impact of two board characteristics: board independence and the presence of an audit committee.

The study provides empirical evidence on the impact of the mandatory IFRS adoption in consideration board independence and audit committees in decreasing earnings management. Results imply that earnings management can be more constrained by board independence and audit committees after the compliance of IFRS. Therefore, corporate governance characteristics are still an important factor of the extent of earnings management. Furthermore, study detects a stronger effectiveness of board independence and audit committees in reducing earnings management after IFRS. In other words, study finds that the negative relationship between earnings management and boards' characteristics is becoming stronger with the IFRS adoption which acts as a moderator of

this relationship. It could be believed that the progress of board and audit committee effectiveness is due to the higher level of disclosure and transparency that characterises IFRS and that makes it easier for independent directors and audit committees to monitor the accounting policies applied by the companies.

Study also test the impact of the existence of independent directors and audit committees in reducing earnings management after the introduction of IFRS country by country after running the regression through 11 European countries (Germany, France, Italy, Spain, Sweden, Switzerland, Belgium, Portugal, The Netherlands, Norway and the UK). By using four different proxies of earnings management, Results revealed that both corporate governance characteristics (independent directors and audit committees) are significantly reduce earnings management in the majority of sample countries after the mandatory IFRS adoption.

Chapter 3

The Impact of the Mandatory Adoption of IFRS on the Accounting Conservatism

3.1. Introduction

Accounting conservatism is one of the most important subjects in accounting literature that are discussed in last decades since accruals play the main role in this concept. The conservatism principle has been interpreted as capturing accountants' tendency to require a higher degree of verification for recognising good news than bad news in financial statements (Basu, 1997). According to Basu's study, bad news is reflected by earnings more quickly than good news in term of interpretation conservatism. For example, unrealised losses are usually recognised earlier than unrealised gains. This asymmetry in recognition leads to systematic differences between bad news and good news periods in the timeliness and persistence of earnings.

Generally, accounting conservatism is defined as asymmetric timeliness of earnings. As well as, it can be said that the earnings conservatism is that future bad news is anticipated, whereas future good news is not. Besides, earnings management could be mitigated by accounting conservatism.

It can be considered that accrual accounting is a technology for improving financial reporting and disclosure in term of asymmetrically timely gains and losses recognition (accounting conservatism). One explicit way accrual accounting functions is by improving transitory changes in operating cash flow (Dechow, 1994; Dechow at al., 1998). The effects of transitory cash flow could be noticed in the relation between the firm's operating activities and working capital, leading to the timely variation in working

capital items (such as inventory, accounts receivable and accounts payable, etc.) that caused by firms' operating activities or managerial manipulation .Furthermore, Operating cash flow was adjusted by working capital accruals that allow an earnings variable to be produced. In addition, it can be seen that this adjustment is with less noisy in measuring periodic performance and more efficient for contracting with managers, lenders and others (Ball and Shivakumar, 2006). However, one way that related to accrual accounting functions is through depreciation and amortisation accruals. These items are moving the average of past –period investment in non-current assets. It can be noticed that transitory variation in free cash flow (the sum of operating and investing cash flows), which is improved by depreciation and amortisation accruals, occurs because managers manipulate investment timing or because of firms' investment opportunities vary in time. Thus, prove the important of accrual accounting in increasing the usefulness of accounting earnings for performance measurement and for contracting purposes (Ball and Shivakumar, 2006).

The relation between accruals and cash flows cannot be linear to recognise unrealised gains and losses to integrate them in reported earnings (Ball and Shivakumar, 2006). Timely gain and loss recognition must occur around the time of revisions in expectations of future cash flows, that are likely occur prior to the actual realisation of the cash flows and thus to require accounting accruals (Ball and Shivakumar, 2006). The nonlinearity relationship between cash flows and accruals exists because of that gains and losses recognition is asymmetric and losses generally are recognised in a more timely fashion than gains which is challenged by a linear requirement which is common to the standards accruals models. As well as, it indicates that standard linear models, including the Jones model, have misspecifications for the purpose of estimating discretionary accruals.

There are several studies for asymmetrically timely gain and loss recognition could be discussed. First, conditional conservatism defined as an asymmetric gain and loss recognition timeliness. According to contemporaneous relation between earnings and stock return that is almost completely due to negative-return years, asymmetric gain and loss recognition timeliness is considered as an empirically significant property of accounting earnings (Basu, 1997), but the asymmetry as a role of accruals has been addressed in the literature only indirectly.

Second, a new highlight into the function of accounting accruals that related to distinguish accounting from the mere counting of cash (Ball and Shivakumar, 2006). Accounting earnings can play their main role in performance measurement, evaluation and contracting which is given by accruals. Therefore, it could be useful in determining the impact of accrual accounting functions in the understanding of the economic role of earnings relative to cash flows, leads to evidence that the important role of timely loss recognition in accrual accounting.

Third, several researchers who study earnings management and earnings quality (e.g., Jones, 1991; Dechow and Dichev, 2002; Burgstahler, et al., 2006), they have been attracted substantially by accounting accruals and how the role of accruals and nonlinearity by incorporating the gain and loss recognition could work to estimate earnings management and earnings quality.

Fourth, there are some incorrect implications related to earnings management and earnings quality can result from incomplete accruals models. In 1994 Dechow published his study about the asymmetric view of accruals and he proves that variance of earnings and conditional on the variance of cash flows can be reduced by high-quality of accrual accounting. Meantime, timely loss recognition does not support this evidence. Timely loss recognition could be mistaken for poor earnings quality because of raising the volatility of accruals and earnings with given cash flows (e.g., Dichev and Tang, 2005). Viewed alternatively, timely loss recognition is considered as essential property of accounting standards and practice and is designed to improve reporting quality (Ball and Shivakumar, 2005).

Finally, studies demonstrate that the ability of current earnings to forecast future cash flows, as far as three years ahead, is significantly increasing by nonlinearity relation between earnings and future cash flows. Despite Basue's (1997) paper that shows a considerable growth over three decades in the sensitivity of earnings to economic losses, there are much has been made of the assumed declining "value relevance" of earnings (Ball and Shivakumar, 2006). Moreover, the accruals asymmetry has increased in recent

decades as well as the role of piecewise linear specification in predicting future cash flows by increasing the ability of current earnings. Generally, in the accruals models which incorporate the loss recognition asymmetry, the results are consistent with the improvement in explanatory power. Conversely, the accounting accruals process can be misspecified by conventional linear accruals models, which do not incorporate the loss recognition asymmetry, resulting in misestimating the nondiscretionary and discretionary components of accruals (Ball and Shivakumar, 2006).

The main question this chapter address is whether application of international financial reporting standards (IFRS) is related with higher earrings quality than application of domestic GAAP in term of accounting conservatism. In particular, we examine whether the timeliness of the asymmetrical loss recognition will increase with the mandatory IFRS adoption by applying the Piecewise linear accrual model and considering cash flow from operations as a proxy for asymmetrically timely gain and loss recognition across 11 European countries**.** The effects of mandatory IFRS adoption on earnings quality critically depend on whether IFRS are of higher or lower quality than domestic GAAP and how they affect the efficacy of enforcement mechanisms. The study assumes a higher quality of mandatory adoption of IFRS will improve earnings quality. The study investigates the impact of the mandatory of IFRS adoption on accounting conservatism across 11 European countries (Germany, France, Italy, Spain, Sweden, Switzerland, Belgium, Portugal, the Netherlands, Norway, and the UK). The study tests the regression as the pooled sample then across country by country. The results illustrate that the accounting conservatism increases with the mandatory IFRS adoption in pooled sample. Also, for individual countries, the results indicate the increase of accounting conservatism in majority of countries.

3.2. Literature Review

3.2.1. Asymmetrically Timely Loss Recognition

Basu (1997) found the nonlinear relation between accruals and cash flows in his study and he proved that asymmetrically timely recognition is an empirically significant

property of accounting earnings. As well as, He reported that when cash flows and earnings regressed on positive and negative stock returns, which represented as a proxy for gains and losses, slopes of cash flows and earnings are shown incremental. His study is supported by Ball, Kothari, and Robin (2000).

Afterwards, the issue of linearity and nonlinearity relationship between accruals and cash flows has been addressed in the recent literature. Since an implication of the result directly shows that accruals are a piecewise linear function of stock returns, there is no evidence that this implication illustrated the extent to which of a linear accruals models are affected by omitting loss recognition asymmetries such as the Jones and Dechow and Dechiv (DD) models (Ball and Shivakumar, 2006). Later, Butler, Leone, and Willenborg (2004) illustrated that large negative abnormal accruals have been found in financially distressed firms, and DeAngelo, DeAngelo and Skinner (1994) attributed this to earnings management. Nevertheless, timely loss recognition is more likely in distressed firms (Ball and Shivakumar, 2006). Kothari, Leone and Wasley (2005) and Dechow, Sloan and Sweeney (1995) found that firms with financial distress could have a timely loss recognition. An asymmetric relation between accruals and cash flows in UK firms has been reported by Ball and Shivakumar (2005), but without addressing accruals models. Same as Kothari, Leone and Wasley (2005) who do not estimate nonlinear accruals models when they reported the role of timely loss recognition in accruals. Ball and Shivakumar (2006) study directly examined the results of loss recognition asymmetry on the standard accruals models considering the importance of discretionary accruals models. They also found that more variation in accruals could be explained by nonlinear accruals models than equivalent linear specifications. In addition, they proved that the coefficients on the independent variables in linear accrual models are weakened comparing with their equivalents in nonlinear models which integrate timely loss recognition. This is in line with Givoly and Hayn (2000), who show that the nonlinear accrual is robust with respect to different proxies for gains and losses.

3.2.2. The Conservatism Principle

The accounting conservatism is defined as the asymmetric timeliness of gains and losses. The main principle of the accounting conservatism is that future bad news is anticipated, whereas future good news is not.

3.2.2.1. Alternative definitions of conservatism and the differences between them

According to Basu (1997) accounting conservatism is defined as the earnings reflecting bad news more quickly than good news. Meantime, conservatism conventionally is expressed by accountants as predict no profits but predict all losses, or to recognise good news as gains need a higher degree of a confirmation than to recognise bad news as losses (Basu, 1997).

In contrast, conservatism is interpreted more generally by accountants' preference for accounting methods referring to shareholders' equity with lower reported values. For example, Belkaoui (1985) argues that conservatism indicates that assets and revenues with lowest values, while liabilities and expenses with highest values are preferable to be reported which basically disagrees with FASB (SFAC2, 1980, para. 95) states: "Conservatism no longer requires deferring recognition of income beyond the time that adequate evidence of its existence becomes available or justifies recognizing losses before there is adequate evidence that they have been incurred". In meantime this is inconsistent with accounting practice. For instance, using the straight –line method rather than accelerated depreciation in most US companies.

3.2.2.2. The developments of the theories of the role of conservatism

Accounting practice mostly has been influenced by conservatism during accounting development. Historical records show that the conservatism of accounting existed in medieval Europe (Basu, 1997). For instance, the principle that the lower of cost or market has discussed for an ancient time leads to numerous costly contracting clarifications which have been innovative for the existence and inescapable influence of conservatism (Basu, 1995). It can be noticed with uncertainty future profits that valuable private information about companies operations and assets values are mostly possessed by

managers. In terms of the future profits, assuming reported earnings are linked to managerial compensations, managers have incentives to keep any information from reported earnings that would unfavourably impact their compensation. Correspondingly, managerial compensation would be reduced by the expected effect of such malfeasance by rational claimholders that leads to the conflict between managers and claimholders. As well as, managers tries to bond against exploiting their asymmetrically informed situation relative to other claimholders. On the other hand, timely information about bad news is requested by other creditors and debtholders because of sensitive decrease of option values in their claims. Therefore, conservatism is disputed to play the main role in contracting between the parties establishing the company. As well, the accounting numbers used to partition cash flows among them would be determined conservatively and that would agree by contracting parties voluntarily. It could be also seen in last decade that the recognition of previously off-balance sheet liabilities such as pensions, environmental liabilities and post-retirement health benefit obligations has been demanded by the Financial Accounting Standards Board (FASB) along with expenses relation (Basu, 1997).

3.2.3. Timely Gain and Loss Recognition

This section highlights the relation between accruals models and timely gain and loss recognition by considering the predictions of two roles of accruals: improving transitory working capital effects on cash flows and asymmetrically timely loss recognition.

3.2.3.1. The Dechow (1994) Noise –Reduction Role of Accruals

Dechow (1994) argued that accounting accruals may mitigate the transitory variation in cash flow what is known as cash flow "noise". The noise of cash flow arises from either normal operating or manipulative variation in working capital of firms and other decisions that made for investment. For example, if a firm decided not to pay its accounts payable for the current year because the managers have made their decision to increase operating cash flow for this year. The effect of the cash flow of this transaction is transitory because it reverses the in following year when the accounts are paid. In the meantime, by comparing between contracts based on cash flow and contracts based on

accounting income, it could be noticed that accounting income is protected from this transitory noise by accruals accounting that making it more efficient performance measure. Although Dechow (1994) showed the cash flow noise and how accounting accruals mitigate this noise, his work is limited to two implications. First implication is that the association between accruals and operating cash flows is negative since accruals offset transitory cash flow effects (Dechow, 1994; Dechow, et al., 1998). The second one is that the function of accruals in symmetrically, because accruals respond to increases and declines in inventory levels. Overall, it could be said that these implications are in contract with the implications of an asymmetrically timely loss recognition role for accruals (Ball and Shivakumar, 2006).

3.2.3.2. Asymmetrically Timely Loss Recognition Role of Accruals

Watts (2003), Leftwich (1983) and Watts and Zimmerman (1986) examined the relationship between accounting conservatism and contracting, particularly debts and compensation contracting. Nevertheless, the role of accruals and differentiates between conditional and unconditional conservatism is not discussed in these studies, while Kothari, Leone, and Wasley (2005) and Ball and Shivakumar (2006) clearly addressed this role.

Economic gain and loss can be assumed to be in the present –period cash flow and any revision in the current value of expected future cash flows. Therefore, gains and losses timely recognition must be achieved at least in part through accruals, because the timely recognition of gains and losses made prior their real realisation which is based in part on revisions of future cash flow expectations. Examples of timely recognition: inventory write-downs due to factors such as spoilage, obsolescence or declines in market value. Goodwill impairment charges are arising from negative net present value (NPV) acquisitions and asset impairment charges arising from negative-NPV investments in long-term assets (Ball and Shivakumar, 2006).

Interestingly, a positive correlation between accruals and current –period operating cash flow can be sourced by the gain and loss recognition role of accruals which is in contrast with noise reducing the role of operating accruals. That happens because of the positive

relationship between revisions in the current period cash flow from fixed asset and revisions in its expected future cash flows. Therefore, expected future cash flows are potential to increase or decrease when current period cash flow increases or decreases (Ball and Shivakumar, 2006). The conflict between the two roles of accruals could be an issue for researchers, while one role causing a positive correlation between accruals and cash flows, the other introducing a negative correlation. This study assumes that asymmetrically timely gain and loss recognition presents asymmetry in the relation between accruals and cash flows. According to asymmetrically timely gain and loss recognition principle, it can be seen that losses are more likely to be recognised on a timely basis, as accrued noncash charges against income, while gains are more likely to await their recognition till cash realisation (Ball and Shivakumar, 2006). However, the positive correlation between cash flows and accruals is greater in periods with losses than with gains which are implied by the asymmetry timely recognition role of accruals. In turn, this suggests that the linear accruals models in cash flows are misspecified leads to the correct specification most likely is piecewise linear model.

3.3. The Methodology and Piecewise Linear Accruals Models

To test the impact of IFRS on asymmetrically timely loss and gain recognition, study estimates the general piecewise linear regression:

$$ACC_t = a_0 + a_1 X_t + a_2 VAR_t + a_3 DVAR_t + a_4 DVAR_t * VAR_t + V_t \quad (3\text{-}1)$$

where ACC_t is accruals in year t, X_t is the set of independent variables estimated from model 3-2, 3-3 and 3-4, VAR_t is a proxy for gain or loss, and $DVAR_t$ is a (0, 1) dummy variable that takes the value one if VAR_t indicates a loss in year t. This framework incorporates asymmetric recognition of accrued (unrealised) gains and losses into the standard accruals models.

According to Piecewise linear regression, the study tests the following specific accruals models: Firstly, cash flow (CF) model where operating cash flow is the sole explanatory

variable. Secondly, DD model that used by (Dechow, 1994; Dechow, Kothari, and Watts, 1998) with operating cash flow in (t+1) and (t-1). Finally, Jones model (1991) who differentiate between discretionary accruals and non-discretionary.

Cash flow (CF) model: $ACC_t = a_0 + a_1 CF_t + \varepsilon_t$ (3-2)

DD model: $ACC_t = a_0 + a_1 CF_t + a_2 CF_{t+1} + a_3 CF_{t-1} + \varepsilon_t$ (3-3)

Jones model: $ACC_t = a_0 + a_1 \Delta REV_t + a_2 GPPE_t + \varepsilon_t$ (3-4)

where CF_t is current operating cash flow, $GPPE_t$ gross cost of property, plant, and equipment (undepreciated cost), and ΔREV_t is change in total revenue. We test these models in two ways : Firstly, we estimate the models in their linear form .Secondly, study re-estimated the models in a piecewise linear form by using three different dummy proxies for the existence of losses or gains on the current year.

3.3.1. Hypotheses and Definition of Variables

How the introduction of a more neutral accounting regime will play out overall and across different countries in Europe remains an open empirical question. If IFRS are more neutral than most national regimes in place, we would expect an increase in conservatism. It is also difficult to conjecture on the interaction of the mandatory adoption of IFRS introducing a more neutral accounting system and of particular institutional factors present in each country which vary on many dimensions. We look at cross-country variation in conservatism with respect to these factors prior IFRS and examine whether differences, if any, persist (Watt, 2003).

Study investigates the impact of the mandatory adoption of IFRS on the asymmetrically timely gain and loss recognition in term of earning quality by using the piecewise linear regression with specific accruals models.

The study examines the following hypothesis:

Firms which have adopted IFRS in 2005 engage more in accounting conservatism compared to national Generally Accepted Accounting Principles GAAP

Our variables are:

ACC_t = accruals in year t, the dependent variable in all regressions, scaled by average total assets. Accruals are defined as earnings taken from profit and loss statement minus operating cash flow that taken from cash flow statement.

CF_t = cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.

ΔREV_t= change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.

$GPPE_t$= Gross property, plant, and equipment scaled by average total assets.

Three proxies VAR are employed for fiscal year gains and losses considering the dummy variable DVAR of loss-year. Our proxies are shown as following.

Table 3-1. Gain and Loss Proxies

Gain/Loss Proxy VAR_t	Loss Proxy $DVAR_t * VAR_t$	Variables definitions
Level of cash flow	$DCF_t * CF_t$	CF_t=cash flow from operations in year t. DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise
Changes in cash flows	$D\Delta CF_t * \Delta CF_t$	ΔCF_t=CF_t-CF_{t-1} $D\Delta CF_t$=dummy variable =1 if ΔCF_t<0,and =0 otherwise
Abnormal returns	$DABNRET_t * ABNRET_t$	$ABNRET_t$=RET_t-$MKTRET_t$ RET_t=Stock return in fiscal year t $MKTRET_t$= market return in fiscal year t $DABNRET_t$=dummy variable =1 if $ABNRET_t$<0,and =0 otherwise

Notes:
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets
ΔCF_t : is Changes in cash flows from year t to year t-1.
Ar: is an abnormal return.
DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise.

The DCF_t* CF_t and $D\Delta CF_t$* ΔCF_t proxies are measured based on book value, whereas the $DABNRET_t$*$ABNRET_t$ proxy is measured based on stock market returns.

Comparing between the bookable proxies DCF_t* CF_t and $D\Delta CF_t$* ΔCF_t it can be seen that the changes in cash flows proxy $D\Delta CF_t$* ΔCF_t is more likely to be correlated with and revisions in the levels of future cash flows than cash flow level DCF_t* CF_t with bookable gains and losses (Ball and Shivakumar, 2006). Each proxy has potential strengths and weaknesses. For example, cash flows cannot adapt to a random walk process (Dechow [1994], Dechow, Kothari, and Watts [1998]), so cash flow changes do not capture the new information in that variable. Market value does not include booked items, growth options and synergies which are less related for accounting purposes. Meantime, there is more information in the changes in market value than the financial statement that based on book values (Roychowdhury and Watts 2007). However, the non-booked items exist in changes in market value that generate losses which trigger accounting accruals with errors while this problem seems to be less likely to have it with current-period cash flows and changes in cash flows. The main conclusion that can be drawn from above discussion is that each proxy has strengths and weaknesses, so the study explores them all.

3.3.2. Sample and Data

All data are obtained from Bloomberg data stream for 1994-2012 periods for different 11 European stock market countries (Germany, France, Italy, Spain, Sweden, Switzerland, Belgium, Portugal, the Netherlands, Norway, and the UK).

All data are extracted from annual financial statement (profit and loss statement, financial position statement and cash flow statement). The study excludes financial companies because of their specific accounting requirements differ significantly from those of industrial and commercial companies, which prevent them from applying the accounting standards freely (Tendeloo and Vanstraelen, 2005). Therefore, the sample comprises to 5247 firm-year observations, relating to the period 1994-2012.

The study targets to test the impact of the mandatory IFRS adoption on the asymmetrically timely loss and gain recognition. The regression has been estimated in

two stages. Firstly, the study pools the whole sample. Secondly, the study conducts analysis on a country separately.

The quality and consistency of the collections process can be guaranteed by using official hard copies of financial statements.

3.4. Empirical Results

3.4.1. Statistic Results:

Table 3-2. Descriptive statistics

Variable	Mean	Midean	Max	Min	Sd
Acc	0.0128	0.0009	1.8871	-1.5327	0.1788
Cf	0.1608	0.0952	1.978	-0.9515	1.5465
cft+1	0.1608	0.0952	1.978	-0.9515	1.5465
cft-1	0.1607	0.0951	1.978	-0.9515	1.5465
ΔREV_t	0.1089	0.0484	1.6949	-1.9583	1.3594
Ppe	0.4212	0.2608	1.405	0.0001	3.1182
Ifrs	0.6397	1	1	0	0.4801
Δcf	-0.0001	-0.0008	1.801	-1.885	2.1608
Dcf	0.0289	0	1	0	0.1677
DΔcf	0.5086	1	1	0	0.4999
Dcf*cf	-0.0015	0	0	-0.9515	0.0209
DΔcf*Δcf	-0.0579	-0.0008	0	-1.885	1.5255
Ar	0.0234	0.0004	1.2022	-1.4718	0.7477
Dar	0.3905	0	1	0	0.4879
Dar*ar	-0.0144	0	0	-1.4718	0.2110
Ifrs*dcf*cf	-0.0008	0	0	-0.9515	0.0152
ifrs*DΔcf*Δcf	-0.0422	0	0	-1.885	1.5204
Ifrs*dar*ar	-0.0094	0	0	-1.4718	0.1565

Notes:
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.
ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets.
Ar: is an abnormal return.
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise.

Table 3-2 present the descriptive statistic of study's sample. Table 3-2 shows the mean of the dependent variables accruals (ACC_t) is 0.0128 and the median is 0.0009 with a value

ranging between -1.5327 and 1.8871. Table 3-2 also shows the descriptive statistic results of the independents variables. It can be shown from Table 3-2 that the mean of operating cash flow CF_t is 0.1608 with median 0.0952 that has a value ranging from -0.9515 to 1.978. However, the mean of (CFO_{t+1}) and (CFO_{t-1}) are close 0.1608, 0.1607 with median 0.0952, 0.0951 respectively. The results present that change in revenue (ΔREV_t) is ranging from (-1.9583) to (1.6949) with Mean 0.1089 and median 0.0484 .As well as, the mean of Gross property, plant and equipment ($GPPE_t$) is 0.4212 with median 0.2608 and the values ranging between 0.0001 and 1.405. Finally, Table 3-2 also shows the descriptive statistic of the dummy variable IFRS, DCFO, DΔCF, and DAR with values that ranging from (0) to (1).

3.4.2. Correlation Matrix

Table 3-3. Pearson Correlation Matrix.

Vriables	Acc	Cf	cft+1	cft-1	ΔREV_t	ppe	ifrs	Δcf	dcf
acc	1								
cf	(-0.0218)***	1							
	0.001								
cft+1	(-0.0372)***	0.0239*	1						
	0.007	0.083							
cft-1	(-0.0267)*	0.0239*	0.0183	1					
	0.0534	0.083	0.1854						
ΔREV_t	(-0.34)***	0.0185	0.0003	-0.0024	1				
	0	0.1798	0.9802	0.8602					
ppe	(-0.0268)*	-0.002	-0.003	0.01	0.037***	1			
	0.0524	0.8836	0.8294	0.4686	0.0074				
ifrs	(-0.0457)***	-0.0165	-0.0068	-0.011	(-0.0352)**	(-0.0451)***	1		
	0.0009	0.2332	0.6249	0.4251	0.0108	0.0011			
Δcf	0.0035	0.6986***	0.004	(-0.6986)***	0.015	-0.0086	-0.0039	1	
	0.7987	0	0.7696	0	0.2774	0.533	0.7776		
dcf	0.1094***	(-0.0236)*	-0.014	-0.0143	-0.0008	-0.0105	0.0065	-0.0067	1
	0	0.0871	0.31	0.2995	0.9558	0.4464	0.6372	0.6301	
DΔcf	0.0082	(-0.0342)**	-0.0145	0.0408***	-0.0199	0.0076	0.0218	(-0.0537)***	0.1357***
	0.5529	0.0133	0.2926	0.0031	0.1504	0.583	0.1152	0.0001	0
Dcf*cf	(-0.0575)***	0.0209	0.0043	0.0085	-0.0085	0.0057	0.014	0.0089	(-0.4063)***
	0	0.1304	0.7539	0.5385	0.5381	0.6815	0.311	0.5207	0
DΔcf*Δcf	0.0275**	-0.0027	-0.0026	(-0.9906)***	-0.0009	-0.0103	-0.007	0.707***	-0.0042
	0.0464	0.8437	0.8508	0	0.9496	0.4571	0.6127	0	0.759
ar	0.0058	-0.0019	-0.0017	-0.0022	0.0018	-0.0017	0.0049	0.0002	0.0013
	0.677	0.8903	0.9018	0.8751	0.8944	0.904	0.7202	0.989	0.9256
dar	-0.0006	-0.0181	-0.0139	-0.0112	-0.0133	-0.0106	0.0196	-0.005	0.0248*
	0.9629	0.1887	0.3128	0.4165	0.337	0.4448	0.1562	0.7195	0.0726
Dar*ar	-0.0039	0.0025	0.0034	0.0017	0.0043	0.0023	-0.0014	0.0006	0.0057
	0.7752	0.8544	0.804	0.8992	0.7563	0.866	0.9167	0.9675	0.6793
ifrs*dcf*cf	-0.0069	0.0153	0.0069	0.0062	0.0021	0.0046	(-0.0393)***	0.0066	(-0.303)***
	0.6151	0.2667	0.6156	0.6553	0.8795	0.7396	0.0044	0.6346	0
ifrs*DΔcf*Δcf	0.0284**	0.0013	-0.0006	(-0.9826)***	-0.0002	0.0017	-0.0208	0.7042***	-0.0016
	0.0399	0.9227	0.9663	0	0.989	0.901	0.1315	0	0.905
ifrs*dar*ar	-0.0065	0.0025	0.0028	0.0013	0.0029	0.0007	(-0.0449)***	0.0009	0.0082

	0.6381	0.8579	0.8403	0.9265	0.8329	0.9572	0.0011	0.9504	0.5525

Table 3-3. Continue

Variables	DΔcf	dcfcf	DΔcf*Δcf	ar	dar	darar	ifrsdcfcf	ifrs*DΔcf*Δcf	ifrsdarar
DΔcf	1								
Dcf*cf	(-0.0452)***	1							
	0.0011								
DΔcf*Δcf	(-0.0373)***	0.0117	1						
	0.0068	0.3965							
ar	0.002	0.0012	0.0008	1					
	0.8864	0.9287	0.9534						
dar	0.0018***	-0.0122	0.0089	(-0.0646)***	1				
	0.0079	0.3752	0.5193	0					
Dar*ar	-0.0154	-0.0037	-0.0011	0.2857***	(-0.0854)***	1			
	0.2656	0.7868	0.9384	0	0				
ifrs*dcf*cf	(-0.039)***	0.7281***	0.0087	0.0006	0.0023	-0.0032	1		
	0.0046	0	0.5306	0.9631	0.8695	0.8176			
ifrs*DΔcf*Δcf	(-0.0273)**	0.0058	0.9964***	0.0009	0.0075	-0.0007	0.0092	1	
	0.0482	0.6719	0	0.9469	0.5885	0.9622	0.5038		
ifrs*dar*ar	-0.0044	-0.0038	-0.0006	0.212***	(-0.0748)***	0.7405***	-0.0026	0	1
	0.7523	0.7823	0.965	0	0	0	0.8504	0.9993	

Notes:
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.
ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets.
Ar: is an abnormal return.
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise

Table 3-4. Correlation matrix between dummy proxies

Variables	dcf	DΔcf	Dar
Dcf	1		
DΔcf	0.1357***	1	
	0		
Dar	0.0248*	0.0018***	1
	0.0726	0.0079	

DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise.

Table 3-3 reports the Pearson correlation matrix coefficients with p-values for all variables and provides evidence on the degree of overlay between our proxies. It can be observed from the table that ACC_t and CFO_t are negatively related -0.0218*** and the correlations are statistically significant at the 1%. As well as, we notice from Table 3-3 that the dependent variable ACC is negatively correlated with most independent variables (CFO_{t+1} CFO_{t-1}, CFO_{t-1} and $GPPE_t$) with different significant levels. Table 3-3 shows that CFO_t ,CFO_{t+1} and $CFO_{t-1}$is positively associated at 10% significant level. Furthermore, a significant relationship is showing between ΔREV_t and GPPEt with a positive sign 0.037***. Regarding IFRS variable, it can be seen that there is a negative significant correlation between IRFSt and Acct,ΔREV_t and GPPEt, while a negative insignificant relation between IFRS and CFOt, CFOt+1, and CFOt-1 is observed by Table 3-3.

Table 3-4 also presents the correlation between the (0, 1) study dummy proxies. The proxies generally are positively related. The association between DCF and DΔCF at 1% significance level 0.1357*** is positively stronger than the relation between DCF and DAR with 10% significance level 0.0248*, while the relationship between DΔCF and DAR is positive and significant 0.0018***. The significant positive correlation between the dummy proxies suggests that gains and losses proxies are capable of detecting asymmetrically timely gain and loss recognition.

3.4.3. Linear Accruals Models

Table 3-5. Linear Accruals Regressions

	Pooled Regressions				Fixed Regressions		
	CF Model	DD Model	Jones Model		CF Model	DD Model	Jones Model
Cons	0.0132	0.0143	0.0181	cons	0.0127	0.0131	0.0177
	5.32***	5.72***	7.66***		8.37***	8.49***	13.73***
Cf	-0.0025	-0.0023		cf	0.0004	0.0002	
	-1.58	-1.47			0.47	0.2	
cft+1		0.0041		cft+1		0.0019	
		(2.63)***				(1.79)*	
cft-1		0.0029		cft-1		0.0004	
		(1.85)*				0.42	
Δsales			-0.0446	Δsales			-0.0437
			(-26.12)***				(-43.52)***
Ppe			-0.0008	ppe			-0.0005
			-1.09				-1.32
Adj R-squared	0.0003	0.0019	0.1154	R-squared	0.0005	0.0016	0.1158
Number of obs	5247	5247	5247	Number of obs	5247	5247	5247

Notes:
The table shows regression results for the following accruals models:
Cash flow (CF) model: $ACC_t = a_0 + a_1 CF_t + \varepsilon_t$
Dechow and Dichev [2002] (DD) model: $ACC_t = a_0 + a_1 CF_t + a_2 CF_{t+1} + a_3 CF_{t-1} + \varepsilon_t$
Jones [1991] model: $ACC_t = a_0 + a_1 \Delta REV_t + a_2 GPPE_t + \varepsilon_t$

***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.
ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets

The study shows the results of using three linear accruals models: a simple cash flow model, the DD model and the standard Jones model. We being by running the regression of these linear models, then study reports the improvement when we run the regression of piecewise linear models which incorporated by the asymmetric gain and loss recognition role of accruals by using a diversity of proxies for the existence of current-year losses.

Table 3-5 presents the results of replicating models (3.2), (3.3), and (3.4) in linear form. The study considers current-year accruals as a dependent variable in all specifications. We run the regression in two parts: firstly, study regress pooled data then we run fixed regressions. Table 3-5 shows that current-year cash flow (CFO) has a negative slope regression while positive slopes are notable on following year (CFOt+1) and prior year (CFOt-1) cash flow with significance level 1% and 10% respectively, in line with the noise reduction role of accruals (Ball and Shivakumar, 2006).

It can be seen from Table 3-5 that Jones model variables (ΔREV and GPPE) are negatively related with ACC in pooled and fixed regressions. As well as, the correlation between ΔREV and ACC is statistically significant at the1% level. Table 3-5 also observes that adjusted R-squared is nearly close in both regressions with lower values in pooled regressions than fixed regressions

3.4.4. Proxies for Gains and Losses

As mentioned earlier, all gains and losses proxies, which probably can be recognised via accounting accruals, have weakness and strengths. The study does not prefer a proxy on others and which proxies work best. However, by using individually and different mixtures between the proxies, we report the evidence on all proxies.

Table 3-6 through Panels A to C presents the three individual proxies for gains and losses which show that piecewise linear allowance for the gain and loss recognition role of accruals. Table 3-6 shows that IFRS has a negative relationship with accruals and the correlations are statistically significant at 1% level in both pooled and fixed regressions. In the meantime, the loss proxy dummy DCF is positively related to accruals with a significance level for pooled regressions in three accruals models, same as our second

loss proxy DΔCF is positively correlated with accruals from panel B, as well as the third and last loss proxy DAR from panel C of Table 3-6, consistent with Ball and Shivakumar' restlts (2006) which present the positive relationship between the proxies and the dependent variables (Acc).

From Panel A of Table 3-6, it can be noticed that the negative relationship between accruals and operating cash flow variables in both regressions which is in line with Ball and Shivakumar (2006) paper. Furthermore, it can be seen from Table 3-6 that the asymmetry indicates positive coefficients on the cash flow variables interacted with the loss dummies (accounting conservatism coefficients) : which are, DCF*CF, DΔCF*ΔCF and DAR*AR for panel A, B and C respectively. In addition, it has been clear that all coefficient are positive and significant suggests the existence of accounting conservatism and consistent with Ball and Shivakuma (2006).

Panel A from Table 3-6 suggests a positive coefficient on loss dummies that interacted with the cash flow variables and IFRS (international financial accounting standard) adoption which can be implied by the asymmetry: that is, on IFRS*DCF*CF in panel A, IFRS*DΔCF*ΔCF in panel B, and IFRS*DAR*AR in panel C. This forecast is corroborated in all panels and columns (i.e., in the 18 mixtures of three proxies, three accruals models, and pooled as well as fixed regressions). The results show that the coefficients are statistically significant at 1% and 5% level respectively. As well as, Table 3-6 implies that the coefficient on the incremental loss is steady quietly across specifications which ranging from 0.8371 to 1.5451 in panel A for (IFRS*DCF*CF), while the ranging is from 0.0012 to 0.0096 in panel B for (IFRS*DΔCF*ΔCF), and from 0.0043 to 0.0159 for (IFRS*DAR*AR) in panel C.

Table 3-6 implies that the accounting conservatism is increased by the mandatory IFRS adoption. Panel A shows the coefficient on IFRS*DCF*CF is positive and bigger than the coefficient on DCF*CF across all three accruals models. For CF model the coefficient is 0.8371>05671, while for DD model is 0.8396>0.5684 and it is 0.8923>0.6255 for Jones model. The same results can be concluded from panel B and panel C suggest that with IFRS compliance the accounting conservatism increases.

The study uses three different loss proxies to present the impact of the mandatory IFRS adoption on asymmetrically timely loss and gain recognition. Table 3-6 suggests the loss proxy is based on the market (DAR) are smaller than the loss proxies are based on book value. This shows that the proxy is based on the stock market is inferior to book-based proxies for the purpose of recognising "bookable" accrued losses and gains. This is not surprising, since the market assets such as growth options and synergies are more likely to generate market returns than current-period cash flows, let alone changes in cash flows (Ball and Shivakumar, 2006).

Table 3-6. Picewise Linear Accruals Regressions

Panel A: Proxy for loss CF_t<0							
	Pooled Regressions				Fixed Regressions		
	CF Model	DD Model	Jones Model		CF Model	DD Model	Jones Model
Cons	0.0201	0.0212	0.0281	Cons	0.0211	0.0217	0.0304
	4.86***	5.14***	7.21***		7.82***	7.97***	13.13***
Cf	-0.0022	-0.0021	-0.0015	Cf	-0.000	-0.0002	0.0011
	-1.44	-1.34	-1.06		-0.53	-0.23	1.16
cft+1		-0.0041		cft+1		-0.0020	
		(-2.58)***				(-1.95)*	
cft-1		-0.0028		cft-1		-0.0005	
		(-1.79)*				-0.49	
Δsales			-0.0449	Δsales			-0.0427
			(-26.55)***				(-42.68)***
Ppe			-0.0008	Ppe			-0.0007
			-1.2				(-1.68)*
Dcf	0.1107	0.1098	0.1091	Dcf	0.0049	0.0043	0.0136
	6.93***	6.88***	7.27***		0.46	0.41	1.5
dcf*cf	0.5671	0.5684	0.6255	dcf*cf	1.4789	1.4798	0.8253
	(3.18)***	0.19	(3.73)***		(12.29)***	1.3	(7.96)***
Ifrs	-0.0159	-0.0161	-0.0205	Ifrs	-0.0148	-0.0151	-0.0215
	(-3.13)***	(-3.16)***	(-4.28)***		(-4.25)***	(-4.3)***	(-7.23)***
ifrs*dcf*cf	0.8371	0.8396	0.8923	ifrs*dcf*cf	1.5401	1.5451	0.9223
	3.57***	3.58***	4.05***		9.89***	9.92***	6.91***
Adj R-squared	0.0161	0.0176	0.1331	Adj R-squared	0.0076	0.0086	0.1269

Number of obs	5247	5247	5247	Number of obs	5247	5247	5247

Panel B: Proxy for loss ΔCF_t<0

	Pooled Regressions				Fixed Regressions		
	CF Model	DD Model	Jones Model		CF Model	DD Model	Jones Model
Cons	0.0225	0.0228	0.0314	Cons	0.0205	0.0208	0.0323
	4.48***	4.55	6.91		6.17***	6.26***	12.22***
Cf	-0.0026	-0.0025		Cf	-0.0165	-0.0003	
	-0.21	-1.58			-1.74*	-0.33	
cft+1		-0.0043		cft+1		-0.0023	
		(-2.69)***				(-2.2)**	
cft-1		0.0037		cft-1		0.0188	
		0.29				1.96**	
Δsales			-0.0448	Δsales			-0.0441
			(-26.27)***				(-44.5)***
Ppe			-0.0011	Ppe			-0.0007
			0.182				(-1.72)*
Δcf	0.0001		-0.0017	Δcf	-0.0164		0.0007
	0.01		-1.14		(-1.72)*		0.79
DΔcf	0.0032	0.0029	0.0008	DΔcf	0.0029	0.0029	0.0005
	1.64*	1.96**	0.18		(1.96)**	0.94	(2.21)**
DΔcf*Δcf	0.0025	0.0024	0.0046	DΔcf*Δcf	0.0184	0.0216	0.0066
	0.09	1.99*	0.25		0.96	1.12	0.62
Ifrs	-0.0169	-0.0168	-0.0212	Ifrs	-0.0171	-0.0171	-0.0232
	(-3.24)***	(-3.22)***	(-4.34)***		(-4.73)***	(-4.75)***	(-7.67)***
ifrs*DΔcf*Δcf	0.0056	0.0046	0.0096	ifrs*DΔcf*Δcf	0.0012	0.0017	0.0067

	2.27**	2.22**	2.52**		2.1**	2.13**	2.63***
Adj R-squared	0.0023	0.0035	0.119	R-squared	0.002	0.0033	0.1193
Number of obs	5247	5247	5247	Number of obs	5247	5247	5247

Panel C: Proxy for loss $ABNRET_t<0$

	Pooled Regressions				Fixed Regressions		
	CF Model	DD Model	Jones Model		CF Model	DD Model	Jones Model
Cons	0.0242	0.0259	0.0326	Cons	0.0229	0.0235	0.0321
	5.32***	5.6***	7.58***		7.67***	7.82***	12.66***
Cf	-0.0026	-0.0024		Cf	-0.0003	-0.0002	
	-1.63	-1.52			-0.33	-0.02	
cft+1		-0.0042		cft+1		-0.0021	
		(-2.65)***				(-1.94)*	
cft-1		-0.0031		cft-1		-0.0006	
		(-1.89)*				-0.58	
Δsales			-0.0449	Δsales			-0.0441
			(-26.3)***				(-44.05)***
Ppe			-0.0009	Ppe			-0.0006
			-1.3				(-1.65)*
Ar	0.0018	0.0017	0.0018	Ar	0.0001	0.0001	0.0002
	0.53	0.52	0.58		0.07	0.06	0.15
Dar	0.0001	0.0003	0.0015	Dar	0.0033	0.0032	0.0022
	(2.02)**	0.08	(2.33)**		(1.92)*	(1.97)**	0.81
dar*ar	0.0025	0.0027	0.0044	dar*ar	0.0024	0.002	0.0006
	0.14	(2.15)**	0.27		0.2	0.2	(2.07)**
Ifrs	-0.0173	-0.0175	-0.0219	Ifrs	-0.0181	-0.0182	-0.0236
	(-3.37)***	(-3.41)***	(-4.53)***		(-5.09)***	(-5.15)***	(-7.9)***

ifrs*dar*ar	0.0141	0.0142	0.0159	ifrs*dar*ar	0.0043	0.0045	0.0065
	2.6***	2.61***	2.72***		2.28**	2.28**	2.5**
Adj R-squared	0.0016	0.0033	0.1182	Adj R-squared	0.0019	0.0033	0.1191
Number of obs	5247	5247	5247	Number of obs	5247	5247	5247

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.
ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets.
Ar: is an abnormal return.
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if $CF_t < 0$, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if $\Delta CF_t<0$, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t<0$, and =0 otherwise.

Table 3-7. Picewise Linear Accruals Regressions by country

Panel A: Proxy for Loss CF_t<0

CF Model

	UK	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway
Cons	0.0131	0.0357	0.0384	0.0157	0.0501	0.0856	0.0536	-0.0318	0.0683	0.1286	0.17505
	1.4	1.64*	4.05***	1.03	1.05	7.2***	3.31***	-0.88	2.2**	1.73*	2.55**
Cf	-0.1885	-0.1167	0.0428	0.0005	0.0321	-0.0451	-0.1973	0.2441	-0.3857	0.1342	0.0978
	(-3.88)***	-1.48	1.45	0.01	0.32	-0.62	(-1.87)*	1.5	(-1.77)*	0.29	2.39**
Dcf	0.0179	0.0442	-0.0254	-0.0056	-0.0549	-0.0723	-0.0633	0.0281	-0.0821	0.0015	0.2351
	0.43	0.41	-0.21	-0.13	-0.38	(-2.84)***	(-2.06)***	0.33	-1.25	0	1.72*
dcf*cf	0.2563	2.5636	3.0592	5.6425	-0.1678	-0.1406	0.4377	0.4007	1.0837	3.4469	1.6651
	0.29	1.17	0.46	1.11	(-20.04)***	-0.46	0.61	0.09	0.76	0.49	3.27***
Ifrs	-0.0154	0.0081	-0.0524	0.0084	-0.0859	-0.0081	0.0535	0.0419	-0.0151	-0.1450	-0.1904
	(-1.66)*	0.39	(-4.54)***	0.54	-1.53	-0.71	3.61***	1.15	-0.53	(-2.06)**	(-2.13)**
ifrs*dcf*cf	0.8662	2.9277	-4.641	5.7281	0.3605	0.3771	0.6306	0.8279	0.9169	0.9021	-3.5791
	2.5***	1.92*	-1.53	1.79*	2.18**	2.29**	1.89*	2.2**	2.5**	0.04	(-6.46)***
N	1197	390	528	480	463	464	286	282	283	369	680
Adj-R	0.121	0.252	0.422	0.688	0.868	0121	0.351	0.581	0.112	0.141	0.388

Panel B: Proxy for Loss CF_t<0

DD Model

	UK	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway
Cons	0.0145	0.0271	0.0374	0.0188	0.0487	0.0827	0.0655	-0.0224	0.0751	0.1344	0.1492
	1.39	1.18	3.87***	1.14	1.02	6.77***	4.23***	-0.57	2.18**	1.54	2.12**
Cf	-0.1784	-0.1975	0.0071	0.0329	0.0148	-0.1177	0.0062	0.3215	-0.3422	0.1606	0.0661
	(-3.07)***	(-1.92)*	0.09	0.35	0.14	-1.13	0.05	1.63	-1.42	0.32	1.54
cft+1	0.0519	0.0699	0.0327	-0.1245	0.0108	0.0806	0.0989	-0.1832	-0.1139	-0.0147	0.1027
	0.95	0.77	0.6	-1.46	0.3	0.99	1.4	-1.09	-0.55	-0.03	2.53**
cft-1	-0.0729	0.0771	0.0102	0.0533	0.01784	0.0248	-0.3932	0.0101	-0.0008	-0.06918	0.0196
	-1.33	0.85	0.19	0.63	0.47	0.31	(-5.59)***	0.06	0	-0.15	0.48
Dcf	0.01876	0.0449	-0.0244	-0.01219	-0.0402	-0.0709	-0.0881	0.0205	-0.0872	0.0005	0.2256
	0.45	0.42	-0.2	-0.27	-0.27	(-2.78)***	(-2.99)***	0.24	-1.3	0	1.65*
dcf*cf	0.2886	2.4678	3.0978	5.8372	0.1497	0.0583	0.4978	0.3049	-1.1046	1.5471	1.5173
	0.33	1.16	0.46	1.15	19.03***	0.18	0.72	0.07	-0.77	0.5	2.97***

Ifrs	-0.0155	0.0103	-0.0519	0.0093	-0.0856	-0.0089	0.0513	0.0427	-0.01634	-0.1451	-0.1821
	(-1.68)*	0.49	(-4.48)***	0.6	-1.52	-0.78	3.63***	1.16	-0.57	(-2.05)***	(-2.03)***
dcf*cf*ifrs	0.7274	1.4522	-3.4679	5.7469	0.4659	0.3735	0.5007	-0.7902	0.8344	3.1737	3.7881
	2.41**	1.77*	-1.61	1.89*	2.23**	2.29**	1.74*	-0.19	2.45**	0.05	6.79***
N	1197	390	528	480	463	464	286	282	283	369	680
Adj-R	0.123	0.122	0.392	0.641	0.867	0.108	0.418	0.871	0.717	0.414	0.393

Panel C: Proxy for Loss CF_t<0

Jones Model

	UK	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway
Cons	0.0368	0.0864	0.0282	0.0173	0.0883	0.0801	0.0551	-0.0167	0.0757	0.2071	0.1751
	3.68***	3.36***	2.32**	1.12	1.49	6.49***	3.32***	-0.38	2.42**	2.59***	2.52**
Cf	-0.1814	-0.141	0.0319	0.0565	0.0306	-0.1105	-0.2079	0.2771	-0.2781	-0.3178	0.0977
	(-3.74)***	(-1.79)**	1.05	0.69	0.3	-1.36	(-1.98)**	1.66*	-1.25	-0.61	2.39**
Δsales	0.0177	0.0964	0.0422	-0.0783	0.1181	0.0411	0.1473	-0.0581	-0.2242	0.2858	0.0005
	1.36	1.64*	1.52	(-3.19)***	0.49	1.13	3.47***	-0.89	(-2.14)**	2.04**	0.01
Ppe	-0.0566	-0.1623	0.0254	-0.0102	-0.1273	0.0354	-0.0562	-0.0333	0.0001	-0.1485	-0.0003
	(-6.19)***	(-3.83)***	0.81	-0.97	-1.31	1.3	(-2.25)**	-0.64	0.06	(-2.38)**	-0.11
Dcf	0.0102	0.0111	-0.0322	-0.0061	-0.0536	-0.0697	-0.0706	0.0216	-0.0751	-0.1184	0.2345
	0.25	0.11	-0.27	-0.14	-0.37	(-2.74)***	(-2.35)**	0.25	-1.15	-0.33	1.71*
dcf*cf	0.2635	5.2434	2.1551	5.5011	2.1653	0.04681	0.5739	0.4519	-1.2465	-0.9983	1.6652
	0.31	0.88	0.32	1.1	19.76***	0.15	0.82	0.1	-0.88	-0.57	3.27***
Ifrs	-0.0211	-0.0002	-0.0495	0.0102	-0.0891	-0.0051	0.0625	0.0394	-0.0236	-0.1437	-0.1901
	(-2.3)**	-0.01	(-4.26)***	0.66	-1.57	-0.43	4.25***	1.06	-0.82	(-2.04)**	(-2.12)**
dcf*cf*ifrs	0.8789	5.4511	-6.5285	5.5921	2.4464	0.34548	0.5404	-0.8309	1.3577	-0.4801	-3.5789
	2.51*8	1.93*	-1.58	1.67*	2.22**	2.27**	1.98**	-0.2	2.58***	-0.02	(-6.45)***
N	1197	390	528	480	463	464	286	282	283	369	680
Adj-R	0.416	0.347	0.471	0.128	0.868	0.156	0.385	0.871	0.841	0.144	0.386

Notes

***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).

CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.

CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.

CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.

ΔCF_t : is Changes in cash flows from year t to year t-1.

ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets.
Ar: is an abnormal return.
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise.

In second empirical part in our study, we run the pooled regressions across 11 European countries separately (The UK, Germany, France, Italy, Spain, Sweden, Switzerland, Belgium, Portugal, The Netherlands, and Norway).

The results that are presented in Table 3-7 to Table 3-9 indicate accruals as a dependent variable and the earnings components as independent variables.

Table 3-7 presents the results of pooled regressions as CFO<0 loss proxy through three accruals models (CF, DD, and Jones Models). The results show that IFRS is negatively related with ACC in most sample counties and the correlation is also significant at 1% and 5% level. Regarding asymmetrically timely loss and gain recognition, it can be seen from panel A of Table 3-7 that a positive coefficient on interaction variable IFRS*DCF*CF in most countries except France, Belgium and The Netherlands in CFO accruals model. Besides, the correlations are significant in different levels that support the accounting conservatism is increased by the mandatory IFRS adoption. Panel B presents the results of DD accruals models. Same as before, the interaction variable IFRS*DCF*CF is significant and positive correlated with the dependent variable ACC (1%, 5%, and10% levels) excluding France, Belgium and the Netherlands. As well as, the results imply in panel C with Jones accruals models with excluding France, Belgium and the Netherlands which have a negative relationship with ACC and insignificance level. The results demonstrate that France, Belgium and the Netherlands are not affected by the mandatory IFRS adoption and the accounting conservatism does not increase in these countries leads that there is no impact of IFRS on these countries, considering the existence of accounting conservatism before the IFRS adoption. One explanation could be that firms with larger size are more mature and have richer information environment leads to a lower information asymmetry then a lower claim for timely loss and gain recognition that consistent with (Easley et al., 2002; Khan and Watts, 2009). From above discussion, we conclude that the important of IFRS in accounting conservatism as measurement of earnings quality.

Table 3-8. Picewise Linear Accruals Regressions by country

Panel A:Proxy for loss ΔCF_t<0											
				CF Model							
	UK	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway
Cons	0.0203	0.0182	0.0423	0.0027	0.0879	0.0718	0.0132	-0.0122	0.0285	0.2125	0.3396
	1.81**	0.73	3.76***	0.15	1.46	4.99***	0.81	-0.31	0.86	2.4**	3.31***
Cf	-0.3081	-0.0901	0.0628	-0.0982	-0.4913	0.0515	0.1093	-0.0424	-0.4075	-0.0521	-0.5299
	(-4.8)***	-0.68	1.3	-0.93	(-5.49)***	0.74	1.72*	-0.19	(-1.88)*	-0.08	(-4.58)***
Δcf	0.2688	-0.0605	-0.0361	0.2431	0.0393	0.0081	-0.0876	0.3985	0.8475	-0.1487	0.5634
	2.73***	-0.37	-0.35	1.64*	0.94	0.06	-0.76	1.27	2.41**	-0.19	4.56***
DΔcf	-0.0004	0.0102	-0.0119	0.0254	-0.0965	-0.0106	0.0265	-0.0478	0.0241	-0.11422	0.0783
	-0.04	1.56*	1.92*	1.71*	-1.53	-0.72	1.83*	-1.21	0.7	-1.37	0.72
DΔcf*Δcf	0.2919	0.1482	0.0944	0.3869	1.6023	-0.0541	0.3146	0.9155	0.9187	-0.04211	0.6893
	2.31**	0.37	0.5	1.93*	15.92***	-0.26	1.05	2.01**	1.88*	-0.04	4.34***
Ifrs	-0.0152	-0.0211	-0.0571	0.0126	-0.041	-0.0101	-0.05791	-0.0604	-0.0382	-0.1737	-0.2566
	-1.54	1.97**	(-4.72)***	0.75	(-1.65)*	-0.78	3.79***	1.68*	-1.27	(-2.24)**	(-2.27)**
ifrs*DΔcf*Δcf	0.0761	0.2654	-0.5377	0.2001	0.7993	-0.2272	0.9357	0.2352	-0.9783	-1.1881	-0.2471
	2.5**	1.56	(-2.1)**	1.65*	1.91*	-0.92	3.26***	2.46**	(-1.88)*	-0.71	-1.27
N	1197	390	528	480	463	464	286	282	283	369	680
Adj-R	0.177	0.225	0.398	0.116	0.845	0.751	0.436	0.191	0.327	0.227	0.337
Panel B: Proxy for loss ΔCF_t<0											
				DD Model							
Cons	0.015	0.0161	0.0417	0.0071	0.0871	0.0694	0.0141	-0.0036	0.0286	0.2172	0.3202
	1.33	0.63	3.7***	0.38	1.44	4.76***	0.87	-0.09	0.8	2.28**	3.11***
Cf	-0.0507	-0.1833	-0.0058	0.1656	-0.4635	0.0163	0.0544	0.4288	0.44006	-0.1912	0.0145
	-0.67	-1.62	-0.06	1.48	(-4.74)***	0.11	0.38	1.82*	1.39	-0.31	0.26
cft+1	0.0834	0.0679	0.0344	-0.0954	0.0253	0.0801	-0.0591	-0.1597	-0.0008	-0.0631	0.0871
	1.49	0.75	0.63	-1.1	0.64	0.99	-0.85	-0.96	0	-0.13	1.71*
cft-1	-0.3162	0.0492	0.0391	-0.1981	-0.0393	-0.0196	0.0884	-0.3944	-0.8471	0.16691	-0.5806
	(-3.06)***	0.3	0.38	-1.29	-0.94	-0.14	0.76	-1.26	(-2.29)**	0.21	(-4.69)***
DΔcf	0.0011	0.0095	-0.0121	0.0245	-0.0982	-0.0103	0.0267	-0.0471	0.0241	-0.1151	0.0846
	2.1**	1.88*	-0.97	1.96**	-1.56	-0.7	1.84*	(-1.89)*	1.69*	-1.37	1.77*

DΔcf*Δcf	0.3361	0.1551	0.0848	0.3385	1.5917	-0.0472	0.2891	0.8866	-0.9183	-0.0287	-0.7030
	2.6***	0.39	0.45	1.65*	15.59***	-0.23	0.96	1.95*	(-1.83)*	-0.03	(-4.43)***
Ifrs	-0.0151	-0.0208	-0.0565	0.0118	-0.0393	-0.0161	-0.0602	0.0601	-0.0384	-0.1745	0.2555
	(-1.57)*	1.96**	(-4.65)***	0.7	(-1.69)*	-0.82	3.88***	1.57	(-1.66)*	(-2.24)**	2.27**
ifrs*DΔcf*Δcf	0.3613	0.2598	-0.5274	0.1539	0.7971	-0.2357	0.9784	0.2242	-0.9785	-1.1917	-0.2615
	2.4**	1.55	(-2.05)**	2.5**	1.91*	-0.95	3.35***	2.44**	(-1.87)*	-0.71	-1.35
N	1197	390	528	480	463	464	286	282	283	369	680
Adj-R	0.188	0.336	0.387	0.117	0.855	0.651	0.435	0.881	0.292	0.112	0.365
Panel C: Proxy for loss ΔCF_t<0											
			Jones Model								
Cons	0.0162	0.0614	0.0339	0.0024	0.0095	0.0678	0.0318	0.0018	0.0131	0.2673	0.2321
	1.6	2.4**	2.53**	0.14	0.13	4.94***	2.01**	0.04	0.44	3.51***	2.27**
Δsales	0.0104	0.0867	0.0401	-0.0798	-0.2604	0.0364	0.0747	-0.0637	-0.2849	0.2967	-0.0542
	0.8	1.46	1.43	(-3.27)***	-0.99	1.01	1.86*	-0.98	(-2.79)***	2.18**	-0.82
Ppe	-0.0571	-0.1641	0.0317	-0.0096	-0.1291	0.0368	-0.0533	-0.0403	0.0006	-0.1569	0.0008
	(-6.21)***	(-3.88)***	1.03	-0.92	-1.19	1.43	(-2.34)**	-0.8	0.24	(-2.54)**	0.18
Δcf	-0.0291	-0.1669	0.0418	0.1941	0.0237	-0.0211	-0.1586	0.4009	0.7046	-0.7481	0.0551
	-0.39	-1.63	0.6	1.77*	0.55	-0.15	-1.37	1.77*	2.24**	-1.15	1
DΔcf	-0.0016	0.0107	-0.0108	0.0219	-0.0909	-0.0126	0.0232	-0.0455	0.0352	-0.1374	0.0771
	-2.15**	2.52	-0.89	1.23	-1.39	-0.85	1.64*	-1.16	1.72*	(-1.65)*	1.69*
DΔcf*Δcf	0.0102	0.1495	0.0318	0.3559	2.0525	0.0086	0.4151	-0.9585	-0.8691	0.6209	0.0908
	0.09	1.55*	0.25	2.1**	3.98***	0.04	1.38	(-2.57)**	(-1.82)*	1.65*	1.01
Ifrs	-0.0238	0.0136	-0.0533	-0.0149	0.0391	-0.0079	-0.0655	0.0594	-0.0483	-0.1784	-0.1409
	(-2.42)**	0.64	(-4.4)***	1.89*	0.6	(-1.69)*	4.35**	1.64*	-1.59	(-2.32)**	(-1.66)*
ifrs*DΔcf*Δcf	0.0526	0.1146	-0.4369	1.1885	2.1704	-0.2374	1.0203	0.3157	-0.9327	-1.4082	-0.3879
	2.35**	1.38	-1.58	2.62***	1.93*	-0.97	3.63**	1.634*	(-1.8)*	-0.85	(-1.99)**
N	1197	390	528	480	463	464	286	282	283	369	680
Adj-R	0.304	0.333	0.439	0.207	0.836	0.235	0.446	0.113	0.439	0.208	0.332

Notes
***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.

ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets.
Ar: is an abnormal return.
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise.

Table 3-8 presents the results of pooled regressions as ΔCF<0 loss proxy through three accruals models (CF, DD, and Jones Models). From Table 3-8 through panel A to C it can be seen that the negative relationship between IFRS and the dependent variable (ACC) with significance levels 1%, 5%, and 10% respectively. A positive correlation between the loss proxy ΔCF and the ACC could be noticed from Table 3-8 .

Regarding accounting conservatism, Panel A from Table 3-8 presents the interacted variable IFRS*DΔCF*ΔCF is positively related with ACC in most sample countries except Germany ,Sweden, the Netherlands and Norway, that have negative and insignificant coefficients , and the correlations are significant at 1%, 5%, and 10% in term of CF accruals model. From panel B of Table 3-8 that present the results of DD accruals model, the positive relationship between the interacted variable IFRS*DΔCF*ΔCF and ACC can be noticed for all countries excluding again Germany, Sweden, the Netherlands and Norway at three different significance levels. The results from Jones accruals model that is presented in panel C from Table 3-8 indicate the same positive and significant relationships between the IFRS*DΔCF*ΔCF and ACC for the whole sample excluding Germany, France, Sweden and the Netherlands. Results imply that in the majority of countries the significant impact of the mandatory IFRS adoption on the increasing of accounting conservatism leads to higher quality of earnings. Furthermore, results show that there is no effect of IFRS adoption in Sweden, Netherlands, and Norway that could be because their accounting system structure, less developed stock markets, concentrated ownership, weak investor rights which consistent with Andre et al. (2012) who present that the mandatory IFRS adoption have no effect on accounting conservatism.

Table 3-9. Picewise Linear Accruals Regressions by country

Panel A: Proxy for loss $ABNRET_t<0$					CF Model						
	UK	Germany	France	Italy	Spain	Sweden	Switzerland	Belgium	Portugal	The Netherlands	Norway
Cons	0.0153	0.0271	0.0498	0.0106	0.4825	0.0732	-0.015	-0.0272	0.0531	0.2059	0.2494
	1.57	1.11	4.74***	0.65	7.41***	6.67***	-0.95	-0.7	1.83*	2.57***	2.58***
Cf	-0.1905	-0.1047	0.0404	0.0022	-1.8234	0.0705	0.5022	0.2153	-0.251	-0.0029	-0.0638
	(-4.03)***	-1.35	1.39	0.03	(-37.2)***	1.11	8.31***	1.42	-1.37	-0.01	-1.24
Ar	0.017	1.6113	-3.5621	-0.1114	-0.2232	-0.066	-0.174	0.6409	-0.0024	-0.5169	-0.0171
	0.81	1.06	(-4.53)***	-0.68	-0.51	-1.03	-0.38	0.56	-0.01	-0.54	-0.08
Dar	0.0002	0.0034	-0.0078	0.0241	0.042	-0.009	0.0046	-0.0204	0.0105	-0.1044	0.1906
	2.02**	2.18**	-0.64	1.72*	0.53	-0.83	0.3	-0.55	2.35**	-1.44	1.73*
dar*ar	0.9355	0.4189	10.3322	0.8441	5.5713	6.4248	0.4176	-3.3282	1.9681	0.2736	1.7123
	1.22	0.05	2.46**	0.68	0.65	1.55	0.44	-0.6	0.42	0.08	0.82
Ifrs	-0.0194	-0.0099	-0.0518	0.0011	-0.3702	-0.009	0.0323	-0.0485	-0.0165	-0.1545	-0.1705
	(-2.05)**	0.46	(-4.46)***	0.06	(-4.76)***	-0.77	2	1.31	-0.55	(-2.18)**	-1.51
ifrs*dar*ar	1.2144	5.7656	5.0867	2.0875	4.9598	6.7943	0.0425	1.9561	1.1783	-0.1352	-1.6686
	1.71*	1.54	1.91*	1.99**	2.54**	1.92*	1.74*	234**	2.25**	-0.04	-0.8
N	1197	390	528	480	463	464	286	282	283	369	680
R-Adj	0.135	0.288	0.233	0.117	0.651	0.113	0.197	0.181	0.313	0.311	0.211
Panel B: Proxy for loss $ABNRET_t<0$					DD Model						
Cons	0.0172	0.0164	0.0485	0.0111	0.4347	0.0689	0.0014	-0.0155	0.0561	0.2106	0.2498
	1.59	0.64	4.51***	0.63	6.71***	5.93***	0.09	-0.37	1.76*	2.27**	2.53**
Cf	-0.1779	-0.1882	0.0008	0.0239	-1.8519	-0.0018	0.7683	0.3015	-0.2301	0.0127	-0.0704
	(-3.14)***	(-1.86)*	0.01	0.27	(-38.3)***	-0.01	8.19***	1.59	-1.07	0.03	-1.31
cft+1	0.0503	0.0737	0.0328	-0.1222	0.1229	0.0965	0.0409	-0.1958	-0.0878	-0.0691	0.0641
	0.92	0.82	0.61	-1.45	2.54**	1.19	0.53	-1.15	-0.43	-0.15	1.24
cft-1	-0.0771	0.0805	0.0147	0.0756	0.1796	0.0202	-0.4431	0.0097	0.0371	0.0147	-0.0417
	-1.42	0.88	0.28	0.88	3.73***	0.25	(-5.77)***	0.06	0.18	0.03	-0.79
Ar	0.0168	1.6745	-3.5554	-0.0999	-0.2131	-0.0718	-0.2941	0.5387	0.0039	-0.5132	-0.0161
	0.8	1.1	(-4.52)***	-0.61	-0.5	-1.1	-0.68	0.46	0.01	-0.53	-0.08
Dar	0.00051	0.00494	-0.0072	0.0261	0.0457	-0.0091	-0.0035	-0.0256	0.0101	-0.1052	0.1901

	0.05	0.26	-0.59	1.63	0.58	-0.76	-0.25	-0.68	0.33	-1.44	1.72**
dar*ar	0.9862	-0.5124	10.3587	0.8286	5.0028	7.135	0.6049	-3.4443	1.9544	0.2848	1.7093
	1.29	-0.06	2.46**	0.67	0.59	1.7*	1.68*	-0.62	1.72*	0.09	1.82*
Ifrs	-0.0195	0.0127	-0.0514	0.0026	-0.3424	-0.0099	-0.0328	-0.0491	-0.0174	-0.1552	-0.1784
	(-2.06)**	0.59	(-4.41)***	0.16	(-4.48)***	-0.85	-2.13**	-1.32	-0.58	(-2.18)**	-1.56
ifrs*dar*ar	1.2599	4.7942	5.1212	1.9657	4.2329	7.2814	0.1503	2.0962	1.178	-0.1531	-1.6641
	1.67*	1.02	1.91*	1.73*	2.47**	1.98*	(2.14)**	0.36	2.25**	-0.04	-0.8
N	1197	390	528	480	463	464	286	282	283	369	680
R-Adj	0.138	0.371	0.104	0.117	0.261	0.221	0.285	0.104	0.578	0.225	0.112
Panel C: Proxy for loss $ABNRET_t<0$											
					Jones Model						
Cons	0.0177	0.0603	0.0407	0.0184	0.3594	0.0668	0.0266	0.0158	0.0516	0.2281	0.2261
	2.02**	2.39**	3.18***	1.3	2.16**	6.07***	1.41	0.39	1.94*	3.43***	2.41**
Δsales	0.0102	0.0678	0.0437	-0.0748	-0.1055	0.0446	0.0733	-0.0391	-0.2507	0.2356	-0.0521
	0.79	1.15	1.6	(-3.11)***	-0.16	1.26	1.38	-0.61	(-2.43)***	1.89*	-0.79
Ppe	-0.0573	-0.1624	0.0349	-0.0088	-0.262	0.0437	-0.0365	-0.0272	0.0002	-0.1383	0.0001
	(-6.23)***	(-3.82)***	1.16	-0.84	-0.98	1.69*	-1.2	-0.54	0.07	(-2.25)**	0.04
Ar	0.0182	1.2567	-3.5457	-0.0917	-0.1404	-0.0663	-0.0376	0.4272	0.0447	-0.5239	-0.0145
	0.87	0.83	(-4.53)***	-0.57	-0.16	-1.03	-0.07	0.37	0.15	-0.55	-0.07
Dar	0.0004	0.0057	-0.0076	0.0231	0.0714	0.0118	0.0079	-0.0203	0.0147	-0.0903	0.1941
	2.04**	0.31	-0.63	1.77*	0.44	1.99*	0.47	-0.54	2.48**	-1.25	1.75*
dar*ar	0.9051	3.3867	10.3366	0.8414	1.3381	7.1762	0.2441	-2.9374	2.9655	0.8589	1.5865
	1.19	0.44	2.47**	0.68	0.08	1.73*	0.23	-0.53	0.64	0.26	0.76
Ifrs	-0.0262	0.0088	-0.0494	-0.0008	-0.2748	-0.0054	-0.0453	0.0359	-0.0281	-0.1495	-0.1445
	(-2.78)***	0.43	(-4.23)***	0.05	(-1.73)*	-0.47	2.49**	0.96	-0.93	(-2.11)**	-1.31
ifrs*dar*ar	1.1322	7.5903	4.3849	2.1652	1.4458	7.123	0.2231	1.774	2.2361	-0.6768	-1.5443
	1.72*	1.45	2.08**	1.84*	1.95*	1.97**	2.17**	0.31	2.49**	-0.2	-0.74
N	1197	390	528	480	463	464	286	282	283	369	680
R-Adj	0.323	0.275	0.194	0.187	0.161	0.163	0.275	0.166	0.179	0.168	0.129

Notes
***, **, *=significant at the 1%,0.5% and 10% level respectively (two tailed).
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.

ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, REV_t - REV_{t-1}, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets.
Ar: is an abnormal return.
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if CF_t < 0, and =0 otherwise.
$D\Delta CF_t$=dummy variable =1 if ΔCF_t<0, and =0 otherwise.
$DABNRET_t$=dummy variable =1 if $ABNRET_t$<0, and =0 otherwise.

Table 3-9 presents the results of pooled regressions and integrates loss recognition using the market adjusted return DAR<0 as a proxy for gains and losses, which is presented by Basu (1997), through three accruals models (CF, DD, and Jones Models). Same as above, the negative relationship between IFRS and ACC can be argued in Table 3-9 through panel A to C and the correlation is significant.

For the firm-years with negative abnormal market returns DAR a positive relationship it clears through all panels in the majority of countries. The coefficient on proxy loss FRS*DAR*AR is positive and significant, as forecasted. Panel A of Table 3-9 shows that (excluding Germany, the Netherlands and Norway) the coefficients are positive and significant for the rest of countries. Suggesting that the negative abnormal market returns AR contains significant information about accruals consistent with conditional conservatism in term of CF accruals model which is in line with Ball and Shivakuma (2006). The results of panel B and C from Table 3-9 supports our argument and indicates the same positive and significant correlation between accruals and the interacted variable regarding the DD accruals model Jones accrual model respectably. As well as, Germany, The Netherlands and Norway have negative coefficients in both panel B and C, while Belgium has a positive coefficient with insignificant correlations among these countries suggesting that there is no impact of the mandatory IFRS adoption which is line with Andre et al. (2012) findings. Finally, Table 3-9 promotes the conditional accounting conservatism under IFRS with the market adjusted return DAR <0 as a proxy for gains and losses.

3.4.5. Robustness Test

Table 3-10. Linear Accruals Regressions

	Pooled Regressions				Fixed Regressions		
	CF Model	DD Model	Jones Model		CF Model	DD Model	Jones Model
Cons	0.004	0.006	0.009	cons	0.012	0.012	0.015
	0.89	1.14	2.08**		3.38***	3.49***	5.27***
Cf	-0.003	-0.003		cf	-0.001	-0.001	
	-1.55	-1.45			1.97**	2.02**	
cft+1		-0.005		cft+1		-0.002	
		(-2.63)***				(-1.79)*	
cft-1		-0.003		cft-1		-0.001	
		(-1.83)*				-0.43	
Δsales			-0.045	Δsales			-0.044
			(-26.13)***				(-43.55)***
Ppe			-0.001	ppe			-0.001
			-1.05				(-2.32)**
Dcf	0.107	0.108	0.109	dcf	0.046	0.048	0.016
	3.63***	5.38***	3.27***		0.86	0.31	1.53
dcf*cf	0.421	0.682	0.255	dcf*cf	1.281	1.398	0.253
	(3.12)***	0.15	(3.93)***		(4.29)***	1.45	(7.66)***
Ifrs	-0.019	-0.011	-0.025	ifrs	-0.018	-0.011	-0.025
	(-3.25)***	(-3.46)***	(-3.28)***		(-4.15)***	(-4.32)***	(-6.24)***
ifrs*dcf*cf	0.371	0.396	0.223	ifrs*dcf*cf	1.211	1.51	0.323
	2.57***	4.08***	3.05***		2.89***	5.82***	4.51***
Leverage	0.001	0.001	0.001	leverage	0.001	0.001	0.001
	1.82*	1.81*	1.96**		0.57	0.57	1.25
TOBINQ	-0.001	-0.001	0.001	TOBINQ	0.001	0.001	0.001
	1.95**	-0.01	0.13		1.74*	0.54	1.87*
AG	0.001	0.001	0.001	AG	0.001	0.001	0.001
	0.26	0.27	0.45		1.14	1.84*	1.53
ROA	0.001	0.001	0.001	ROA	-0.001	-0.001	-0.001
	2.29**	2.27**	2.27**		(-2.38)**	-0.36	-0.33

Adj R-squared	0.211	0.226	0.116	R-squared	0.212	0.121	0.283
Number of obs	5247	5247	5247	Number of obs	5247	5247	5247

Notes:
The table shows regression results for the following accruals models:
Cash flow (CF) model: $ACC_t = a_0 + a_1 CF_t + \varepsilon_t$
Dechow and Dichev [2002] (DD) model: $ACC_t = a_0 + a_1 CF_t + a_2 CF_{t+1} + a_3 CF_{t-1} + \varepsilon_t$
Jones [1991] model: $ACC_t = a_0 + a_1 \Delta REV_t + a_2 GPPE_t + \varepsilon_t$

***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
CF_t : is cash flow from operations in year t, taken from the cash flow statement and scaled by average total assets.
CF_{t+1}: is cash flow from operations in year t+1, taken from the cash flow statement and scaled by average total assets.
CF_{t-1} : is cash flow from operations in year t-1, taken from the cash flow statement and scaled by average total assets.
ΔCF_t : is Changes in cash flows from year t to year t-1.
ACC_t : is accruals in year t, defined as earnings taken from profit and lost statement minus operating cash flow that taken from cash flow statement scaled by average total assets.
ΔREV_t: is change in revenue in year t, $REV_t - REV_{t-1}$, scaled by average total assets.
$GPPE_t$= Gross property, plant, and equipment, scaled by average total assets
$IFRS_t$:Dummy variable (compliance to IFRS=1, else=0).
DCF_t= dummy variable = 1 if $CF_t < 0$, and =0 otherwise
Leverage: calculated as total debt divided by total assets
TOBINQ: Market value of assets over book value of assets
AG: Assets Growth: A percentage of total assets by comparing current period with same period prior year
ROA: Return on assets: earnings before interests and tax divided by total assets

In order to further validate our results, we employ two additional regression models run on the whole sample using some control variables. In particular study controls firm characteristics and performance that might affect accounting conservatism. LEVERAGE has been found to affect the earnings management and is defined as the total debt divided by total assets. TOBINQ is the proxy for investment opportunities and is the Market value of assets over book value of assets. Assets Growth (AG) is a percentage increase or decrease of total assets by comparing current period with same period prior year. Return on Assets (ROA,) is an indicator of how profitable a company is relative to its total assets and it gives an idea as to how efficient management is at using its assets to generate earnings.

From Table 3-10, it can be noticed that the negative relationship between accruals and operating cash flow variables in both regressions which is in line with our empirical results. Furthermore, it can be seen from the table that the asymmetry indicate the positive coefficients on the cash flow variables interacted with the loss dummies (accounting conservatism coefficients) DCF*CF. In addition, it has been clear that coefficient is positive and significant suggests the existence of accounting conservatism.

3.5. Conclusion

Several types of research have studied the role of accruals accounting as the mitigation of noise in operating cash flows due to variation in working capital levels (Dechow, 1994). As well as, the similar mitigation of noise in investment cash flows considering the variation of net investment level.

Accounting accruals also have an additional role that is the timely recognition of gains and losses which arising from both working capital assets and liabilities and long-term assets and liabilities. According to these roles of accrual accounting, the correlation

between stock return and earning is stronger than the correlation between stock returns and cash flows (Basu, 1997; Nichols and Wahlen, 2004).

The impact of the mandatory adoption of IFRS on the accounting conservatism has documented by this study as the timely recognition of gains and losses. The results are consistent with previous studies show that the accrual of loss recognition is more dominant than the accrual of gain recognition consistent with Basu (1997). We also show that the important increasing the explanatory power of accruals models (Dechow and Dichev, 2002; Jones 1991) by using piecewise linear regressions which including proxies for losses. The final results present that asymmetrically timely gain and loss recognition (i.e. accounting conservatism) has increased after the mandatory adoption of IFRS.

Regarding the accounting conservatism cross the countries in term of IFRS adoption, the results indicate that the important of IFRS compliance in increasing accounting conservatism in some countries like, the UK, Italy and Spain which show the accounting conservatism is an essential property of accounting accruals after the mandatory international accounting standards adoption . Furthermore, it can be noticed from the tables that the IFRS compliance has no impact on Germany, The Netherlands and Sweden in term of accounting conservatism and sometimes in Norway.

Chapter 4 Do the Investors Over Value the Deferred Tax Expense, as a Determinant Factor of Accruals, in the Company Valuation, IFRS Evidence

4.1. Introduction

Sloan (1996) proves that in the U.S. capital markets, a significant abnormal security returns can be generated in the following year by a trading strategy based on a short (long) position in stocks of firms in the highest (lowest) decile of accruals. By using Mishkin (1983) test, results reveal that investors overweight accruals in pricing stocks.

A number of studies prove that the accrual anomaly is robust across numerous samples of U.S. firms (e.g., Collins and Hribar 2000; Xie 2001). However, several studies claim that temporary distortions arising from accrual accounting cause the accrual anomaly. Furthermore, accrual anomaly is described as the negative relation between future stock returns and accruals (Papanastasopoulos and Tsiritakis, 2015). This negative relationship between accounting accruals and future earnings is recognised and studied by Sloan (1996). Similar studies have found out that when investors forecast the earnings, they overestimate accruals. However, the question of the ability of investors to forecast the future performance of companies arises when the low persistence of accruals is revealed in the future (Fama & French 2008).

Earnings expectations are negatively related to accounting accruals due to higher subjective accounting distortions. Managers tend to mislead users of financial statements when they use accruals distortions which could arise from estimation errors.

Furthermore, investors misunderstand the implications of accounting distortions, resulting in significant accruals overweighting in stocks pricing. Therefore, companies with high accruals could possibly have less earnings performance than those with low accruals. Thus, accounting distortions play an essential role in firms' underperformance (Papanastasopoulos and Tsiritakis, 2015).

Accounting accruals have several components including depreciation, amortization, and deferred tax expense. Deferred tax expense reflects the tax effects of temporary differences between book income (i.e., income reported to shareholders and other external users) and taxable income (i.e., income reported to the tax authorities) (Warfield, et al., 2008). Deferred tax expense plays an important role in company valuation and it has generally being incrementally useful beyond total accruals and abnormal accruals to avoid an earnings decline, to avoid a loss and meeting analysts' forecast (Phillips, et al. 2003).

The purpose of this research is to investigate whether investors are able to forecast a company's future performance efficiently with deferred tax expense as one of the accruals components and whether this forecasting can be generalised to companies in the other European countries. Mishkin (1983) test would be applied in our study across 10 European countries (both Code Law and Continent Law Countries) to see whether investors over value the deferred tax expense as a determinant factor of accruals in the company valuation in consideration of the impact of country-level accounting and institutional structures on the existence of an accruals anomaly and whether this overweighting will be generalised. The impact of mandatory adoption of international financial reporting standards IFRS will also be examined in this chapter. Results reveal that investors overweight the deferred tax expense in pooled samples before and after the mandatory adoption of IFRS leads to no significant difference between the results before and after the IFRS adoption. Furthermore, the study concludes that deferred tax expense is overweighting the stock prices in the majority of code law countries and in common law countries in the EU as well as in the UK. Also, results prove the existence of accruals anomaly in majority of sample's study with before and after mandatory adoption of IFRS.

4.2. Literature Review

Numerous studies regarding accounting accruals anomaly have been focused on U.S. firms (Sloan, 1996; Xei, 2001). Pincus et al. (2007) found the accrual anomaly across different countries with respect to stock returns and future profitability. Their results suggest that the accrual anomaly occurs in Canada, Australia, U.K and the U.S. leads to significant accruals overweighting in stocks pricing and investors misunderstand the implications of accounting distortions. Furthermore, considering abnormal (discretionary) accruals, their outcomes support an important role of explaining the accrual anomaly occurrence in earnings management. As well as, several studies link earnings management to abnormal (discretionary) accruals (e.g., Dechow, Ge, & Schrand, 2010).

More recent studies such as Papanastasopoulos (2014) investigated the impact of accrual anomaly on stock returns in 16 European capital markets from 1988 to 2009. His results revealed that the accrual anomaly, based on traditional accruals, exist in 11 of 16 European countries: Germany, France, Italy, the Netherlands, Norway, Denmark, Spain, Sweden, Switzerland, Belgium and the UK. He finds that the country-level factors could possibly have a significant role behind the effect of accruals on stock returns in Europe. These factors include the shareholder protection, financial analysts' research output, ownership structure, culture, and equity-market setting. He also identifies similar influences of other factors including the quality of reported accounting and accounting regime. Nevertheless, the implication of Papanastasopoulos (2014) study does not consider the measures of abnormal (discretionary) accruals in his tests which are misleading when assessing whether accounting distortion could be caused by accruals on stock returns in Europe.

Concurrently, Doukakis and Papanastasopoulos (2014) found that in countries with largest European capital market like U.K., accounting distortions establish a significant contributing factor on the accrual anomaly. Correspondingly, a study published by

Mouselli, Jaafar and Goddard (2013) find that in the U.K. stocks market, the cross-section of stock returns could be explained by the quality of accruals. Nonetheless, their study does not represent an asset pricing risk factor.

Moreover, Dechow et al. (2011) found that countries with common law have stronger accruals anomaly as compared to those countries which have civil code law and the countries with the legal and accounting systems similar to the US. Nonetheless, the findings of Dechow et al. are not consistent with results by Leippold and Lohre (2012) and LaFond (2005) who found that anomaly accruals exist in both common and civil law countries. As well it should be considered, when to study the accruals anomaly, that US and UK both have a higher number of observations than other countries resulting in low test power for small markets (Dechow et al. 2011). In additions, countries which react strongly to earnings news with less persistent accruals towards cash flows could reflect a stronger accruals anomaly according to Dechow et al (2011).

Richardson et al. (2010) proved that there is a decline of accruals anomaly and they show that investors have begun to draw more attentions to the different persistence of accruals and cash flows, besides look for more information about accruals. Furthermore, Leippold and Lohre (2012) demonstrate that accruals anomaly exist in only a few markets in 10 out of 26 countries. It is observed that when earnings are not related to stock prices, the accruals anomaly have small opportunities to occur in their sample countries. Moreover, accounting accruals seem to be used intensively in US capital markets. However, the authors do not realise the important role of speculating differences between earnings components which occur in a uniform investors` earnings fixation across countries. In addition, LaFond (2005) and Xu and Lacina (2009) argue that the accruals anomaly may occur wherever the accruals accounting system exists.

4.2.1. Evidence of Accruals Anomaly in the US

Sloan (1996) focused on the nature of the information contained in accruals and cash flow as two components of current earnings, and whether this information is reflected in stock prices. Sloan argues that both the accruals and cash flow have different implications to

evaluate future earnings. This implies that, if the cash flow is attributed as a component of earnings, the current earnings performance is more likely to persist. Conversely, earnings performance is less likely to persist when it is attributable to the accrual component of earnings. The study contributes to three key areas: First, the paper uses a model that relies on characteristics of the underlying accounting processes which are documented in texts on financial statement analysis. Second, the study assumes that investors might not fully distinguish between accruals and cash flow. Finally, Sloan employs a naive earnings expectation model to test the efficiency of the market. The study shows that investors will tend to overprice stocks when the accruals are higher than cash flows as earnings components, and vice versa.

The stocks overpricing occurs because the accrual component is not totally estimated by the market. To exploit this mispricing, Sloan used a trading strategy taking a short position in stocks of companies with high levels of accruals and a long position in stocks of companies with low levels of accruals to produce abnormal stock returns. By using pricing equation and forecasting equation that components of Mishkin test, Sloan examines the efficiency of the market. Results show that earnings performance attributable to the cash flow component of earnings reveals higher persistence than earnings performance attributable to the accrual component of earnings, and investors fail to distinguish between the two components of earnings. Correspondingly, the results indicate that companies with comparatively high levels of accruals generate negative future abnormal returns that are concentrated around future earnings announcement. On the other hand, the positive future abnormal stock can be generated by companies with the low level of accruals. Finally, results are inconsistent with the traditional efficient market view which indicates that stock prices completely reflect all publicly available information.

Xie (2001) divided total accruals into normal accrual and abnormal accrual components with Jones model. He examines the mispricing of abnormal accruals in general conditions with Mishkin test regardless whether the abnormality results from earnings management

or not. Xie used two different methods to test market by rationally pricing of abnormal accruals with considering their one-year-ahead earnings implications.

In the first method, by using the Mishkin test, the study compares statistically between a measure of the market pricing of abnormal accruals (market valuation coefficient on abnormal accruals) and a measure of abnormal accruals ability to predict one-year-ahead earnings (the forecasting coefficient of the abnormal accruals). The study tests whether the valuation coefficient is significantly larger or smaller than the forecasting coefficient of abnormal accruals for one -year- ahead earnings. Then Mishkin test would show that the market under-prices or overprices abnormal accruals.

In the second method, the study uses the hedge-portfolio test to form a portfolio short in companies in the most positive decile and long in companies the most negative decile of current abnormal accruals. The author depends on more than 7000 USA companies from 1971-1992 as a study sample. The results show with Mishkin test adoption that the market overprices both abnormal and normal accruals. The results prove that in the forecast model the persistence of abnormal accrual is less than the persistence of normal accrual, which in turn is less persistent than cash flow. While the hedge –portfolio test supports the overpricing of abnormal accruals, but does not support the overpricing of normal accruals. Overall, the paper suggests that the market overprices abnormal accruals, while the evidence on the overpricing of normal accruals is mixed and weak.

Pincus et al (2007) examined the accruals anomaly across 20 countries. Their study purpose is to investigate the generalization of accruals anomaly outside the USA to other countries. Moreover, the existence of accruals anomaly is associated with the county–level accounting and institutional structures. The study conducted the Mishkin test to document the occurrence of accruals overweighing outside of the U. S. The paper focuses on country legal tradition and divided the countries into common law and code law which provides the analysis of each country separately. The study also uses country-level data to test a set of conjectures related to the mispricing of accruals to cross-country differences

in accounting and institutional structures. Countries are classified to three characteristics: legal tradition and extent of constraints on insider trading, the extent of accrual accounting permitted and strength of shareholder protections to mitigate earnings management, and characteristics of equity markets. Results show that common law legal tradition countries are more likely to have the accruals anomaly than countries with code law because of the authorisation of more extensive accruals accounting. Furthermore, the existence of accrual anomaly can be observed in countries with the lower concentration of share ownership and weaker outside shareholders rights. Moreover, their results illustrate that the occurrence of accrual anomaly is due to the use of accruals to manage earnings.

Sloan's study in 1996 was the first one that documented the existence of accruals anomaly in US capital market. Furthermore, there are several studies which seek to confirm Sloan's findings and the researchers extend the occurrence of accruals anomaly to the same US market (Xie, 2001; Collins and Hribar, 2000; Bradshaw et al. 2001). Previous studies give evidence which accruals anomaly exists only in US capital market. This is because the US has the biggest capital market with large firms and it is considered as common law countries. This is contrary to the present evidence which has verified that the existence of accruals anomaly can extend to other countries either more or less developed than the US.

Nevertheless, Sloan's (1996) results have been confirmed by many studies. The results by Xie (2001) are consistent with Sloan and he introduces a measure of earnings management by considering abnormal accruals. Chen and Cheng (2002) indicate that there is a negative relationship between abnormal accruals and future abnormal returns. Currently, this negative association could extend to other capital markets. Moreover, they refuse the idea that accrual anomaly exists only in the US capital market.

4.2.2. Evidence of the Existence of Accruals Anomaly in Single Country Studies

It can be noticed that there are numerous studies which investigate accruals anomaly in various countries other than the US. Furthermore, the results of these papers prove that the occurrence of accruals anomaly exists in one or two countries. Consequently, Clinch

et al. (2012) published a study which examines the existence of accruals anomaly in one country is more attractive for border markets. However, the aggregate studies refer to large firms only. Clinch et al. (2012) study Australia as a well-developed capital market like the US to examine whether accrual anomaly occurs. The results illustrate the existence of accruals anomaly in Australia, but their results are weaker than the results shown by Sloan (1996). This might be due to the fact that Australia has many more small businesses as compared to the US. The results are stronger and more supportive when small companies are removed from the sample.

Another study of the Australian market is by Goncharov et al. (2013) which investigated two big capital markets: Australia and Spain by examining conditioned comparability of accruals and insider trading returns in both countries. The results show that the abnormal returns in Australia are higher than in Spain. The common law-based accounting system in Australia and code law-based accounting system in Spain, besides the cultural differences between two countries, lead to different results in both countries. Australian accounting accruals include more opaqueness to the general public as compared to accounting accruals in Spain. Furthermore, accruals in Spain are not related with greater insider returns or income predictability which is contrary to Australian results.

There are also various studies which examine the existence of accruals anomaly in Asian stock markets. For example; while Kho and Kim (2007) examined the Korean firms, Li et al. (2011) studied the accruals anomaly in Chinese companies. As discussed by Kho and Kim (2007), the results have been robust to numerous measures of accrual in Korean firms. However, in China the results suggest that the accrual anomaly can only be identified after removing the distortions of earnings caused by delisting regulation (Li et al. 2011).

According to Li et al. (2011), Chinese companies avoid China's delisting regulation by applying a big-bath (earnings management). The firms distinguish large income-decreasing abnormal accruals in the loss years. Therefore, earnings management cause the accruals anomaly under the market pressure induced by delisting regulation.

Consistent with the work of Li et al. (2011), Mehdi et al. (2011), provided evidence of accrual anomaly in Tunisian companies with low institutional ownership. It can be noticed that both countries (China and Tunis) are considered as emerging countries. Besides, empirical evidence illustrate that not only the accruals anomaly occurs outside the US, but it also exists in the emerging countries and beyond the developed markets. Contrary with the work of Pincus et al. (2007), who assume that accrual anomaly is a characteristic of US capital markets. On the contrary, Koerniadi and Tourani-Rad (2007) could not find evidence of accruals anomaly in New Zealand. Rather, they find the cash flows anomaly in New Zealand firms. These results are confusing because New Zealand is one of the countries whose accounting structure is based on a common law legal system.

The main conclusion that can be drawn from above discussion is that accrual anomaly not only exists in the US markets but also it occurs in other developed countries. Although there is evidence of the existence of accruals in two emerging markets (China and Tunisia), this phenomenon cannot be generalized to other emerging markets too. Moreover, accrual anomaly not only exists in large companies but it is also associated with small companies (Clinch et al., 2012).

4.2.3. Evidence of Accruals Anomaly in Comparative Countries Studies

Accruals anomaly have been investigated in several studies across aggregate countries (Leippold and Lohre, 2012; Pincus et al., 2007; LaFond, 2005). The existence of accruals anomaly has been investigated internationally by Pincus et al. (2007). Their sample includes 20 developed countries from 1994-2003 which are classified by their legal systems (code law and common law countries). Four countries of the sample are confirmed by the existence of accruals anomaly: Australia, Canada, UK, and the US. They argued that common law countries are most likely to have accruals anomaly which is determined by earnings management. This is because information from earnings component can be understood better by insider stakeholders in countries with the code law than those with the common law.

In fact, it can be seen that Leippold and Lohre (2012) and Pincus et al. (2007) have tested accruals anomaly by dividing the countries according to their legal systems and then conducting the analysis of developed countries. Leippold and Lohre (2012) investigated the accruals anomaly in 26 developed countries from 1994 to 2008. After dividing countries by their legal system, tests are employed one country at a time and they examined simultaneously numerous hypotheses. Results imply that ten countries in the sample, after adjusting for common risk factors, have been identified by abnormal returns. Furthermore, results reveal that because of the biases in data, which are raised when testing several hypotheses at the same time, these results could be spurious.

LaFond (2005) tested the accruals anomaly in 17 developed countries and he found evidence of the occurrence of accruals anomaly in 15 of 17. He proves that wherever the accruals accounting is applied, the accruals anomaly exists as a phenomenon. Contrary to Pincus et al. (2007), LaFond (2005) demonstrates that the existence of accruals anomaly does not depend on investor protection, accruals intensity or the legal system of the country. Moreover, he argued that there is no dominant factor which might clarify the occurrence of accrual anomaly around the globe.

A different approach was considered by Fan and Yu (2013) across multiple countries including developed and emerging countries. With the sample of 43 equity markets between 1989 and 2009, they found the positive relationship between abnormal returns and idiosyncratic risk. They posited that in developed countries the impact of idiosyncratic risk on abnormal returns is less than those in emerging countries. The results confirm that accruals anomaly could produce abnormal returns across countries.

Another study is done by Goncharov and Jacob (2014) with different measures of accounting accruals, namely corporate taxation. The sample comprises OECD countries (the organization for Economic Co-operation and Development) from 1997 to 2009. Accruals are defined as a significant element of corporate taxable income. The study documents the use of accruals in tax purposes on the “trade-off between the lower volatility of accrual-based corporate tax revenues and the higher procyclicality of tax

collection in accrual regimes". They found the impacts of accrual are against cash elements for the distribution of corporate tax revenues. Their results indicated that there are variations in the perception of accruals between countries. Countries with high accruals have less volatile tax revenue and easier to predict.

Generally, the previous studies which search for the evidence of accruals anomaly occurrence outside the US could indicates accruals anomaly do exist around the world apart from the legal system or having US capital market features. Overall, accruals anomaly most likely exist in developed countries with large firms and where the accruals accounting system is applied. Furthermore, empirical research has confirmed that accruals anomaly not only occurs in developed countries with large firms and where an accruals accounting system exists but also could exist in emerging countries with small companies (Clinch et al. 2012).

As this chapter examines whether the investors overweighting a deferred tax expense as determinant factor of accruals, the following section imply the important of the deferred tax expense. Deferred tax expense is defined as the tax effects of temporary differences between book income (i.e., income reported to shareholders and other external users) and taxable income (i.e., income reported to the tax authorities)

4.2.4. Deferred Tax Expense as Determinant Factor of Accruals

Ayers (1998) investigated that whether the net deferred tax liabilities (the differences between deferred tax assets and deferred tax liabilities) disclosed under SFAS No.109 (Statement of Financial Accounting Standards) provides any relevant information. The relevant information is required to disclose in financial statements byAccounting Principle Board Opinion (APB No.11). The investigation was to see whether SAFS No.109 amounts should be more value-relevant than APB No.11 amounts because firms under SAFS No.109 measures deferred tax liabilities and assets using expected tax rate and current tax laws. Ayers (1998) differentiate two important tax types: (1) the tax payable for the current year. (2) Deferred tax liabilities and assets for the future tax implications of transactions from firms' financial statements. He divided the study into

different samples: sample 1 consists of (771) firms -year observations and sample 2 consists of (1444) firms-year observations with estimating cross–sectional regressions. The results show that the net deferred tax liabilities under SFAS No.109 provide value – relevant information more and beyond APB No.11.

Bauman, et al (2001) examines earnings management via changes in the deferred tax asset valuation allowance. The study has been developed in three ways. Firstly, the study improves the financial statements disclosure policy. Secondly, it uses the amount reported in the effective tax rate reconciliation as a proxy for the earnings effect of valuation allowance change instead of the net change in the valuation allowance account. Finally, in contrast to prior studies which have used cross-sectional regression models to make generalisations about earnings management behaviour, the study used a contextual approach to assessing whether observed valuation allowance changes are consistent with different motivations for earnings manipulation. The sample study contains the firms that report changes in the deferred tax asset valuation allowance which are listed in the 1997 Fortune 500. The results show that the usefulness of the variations in the deferred tax asset allowances to investigate earnings managements. They find that current disclosure requirements are insufficient and under these current disclosure requirements a large sample study cannot be performed.

Phillips, et al. (2003) proves the usefulness of deferred tax expense in detecting earning management. They assume that there is a greater discretion under GAAP than under tax rules. They posit that managers vary the income at their own discretion, thereby; generating differences in tax book and increasing deferred tax expense. They use different methods to manipulate earnings. For instance, they use deferred tax as a device to detect earning management in order to avoid earning decline and a loss as well as to avoid failure to beat or meet analysts' earnings forecasts. Their study regress earnings on deferred tax expense, cash flow and accruals as earning management model. The study includes USA companies between 1994-2000 periods. The results illustrate that deferred tax (DTE) is incrementally useful in detecting earnings management to avoid earnings decline and earnings loss. Nonetheless, the findings are not useful to avoid failing to meet

or beat analysts' forecasts. In addition, one of the limitations of their study is that it does not provide guidance to detect earnings management.

Furthermore, in 2004 Phillips, et al. presents evidence of earnings management to avoid an earnings decline. Consistent with Phillips et al. (2003) findings, the study decomposes changes in deferred tax into deferred tax liabilities and deferred tax assets. Then they examine the relationship between these components and changes in annual earnings. The study's sample consists of (396) the USA firms from 1994-2000 firm-years. The difference between two papers is that they replaced deferred tax expense DTE to the annual change in firm's net deferred tax liability (ΔNDTL). The study is employed to prove whether the change in the net deferred tax liability is incrementally useful to accrual measures in detecting earnings management to avoid an earnings decline. Testing the change in the deferred tax asset valuation allowance is useful in detecting earnings management in order to avoid an earnings decline. The results illustrate that the total change in a firm's net deferred tax liability is not useful in detecting earnings manipulations to avoid earnings decrease. Furthermore, the outcomes present that the deferred tax component reflecting revenue and expense accruals is significantly useful in explaining the probability of managing the earnings to avoid an earnings decrease.

4.3. The Methodology and Research Design:

4.3.1. Basic Research Hypothesis:

Pincus et al. (2007) and Papanastasopoulos (2014) show that the occurrence of the accrual anomaly is not specific to the U.S. stock market. Both studies examine the effectiveness of fundamental formal and informal institutions on the existence the of the accruals anomaly at the country level. Nevertheless, investigation on what underlying factors drive the negative relation of accruals with future earnings and returns at the firm-level within the above-mentioned countries is limited.

Considering the variations across countries in business practices, legal, institutional, and capital market structures, accounting regimes, etc., The research focuses on whether

deferred tax expense is a determinant factor in the valuation of the securities pricing. Besides, whether investors overweight the price in relation to deferred tax expense and whether this overweighting is generalised to other countries (Pincus, 2007).

The study investigates the following hypothesis:

HI: if deferred tax expense is a determinant factor of accruals in the valuation of the securities pricing, the investors will be able to forecast the company future performance efficiently**.**

H2: whether the overweighting of deferred tax expense in securities pricing generalized for many countries.

The study assesses the usefulness of deferred tax expense, which is represented by the empirical proxy for book-tax differences which in turn reflects managerial discretion, as a main factor of accruals in overweighting (underweighting) securities' prices. This study defines that the deferred tax expense based on accounting cash basis, whereas accruals based on accounting accrual basis (Burgstahler and Dichev, 1997).

The study is divided into two sections. In the first section, we test the sample in two ways. First, by conducting Mishkin (1983) tests, study pools firm-level data on a sample that spans 10 countries. The sample has been classified by legal tradition systems (code law countries and common law countries). Second, the study examines each country separately by using firm-level data. In the second section, the study conducts the Mishkin (1983) tests by pooled firm-level data after the mandatory adoption of IFRS (international financial reporting standards) in 2005.

4.3.2. Empirical Design

The Mishkin Test:

The study employs the Mishkin test to examine whether the market rationally prices deferred tax expense and infer overweighting of deferred tax expense if market participants attribute higher valuation coefficient to accruals than the weight implied in the relationship between accruals and future earnings. The importance of deferred tax expense is noticed when forecasting a company's future performance and when the overweighting of deferred tax expense is generalised. In 1983 Mishkin developed a framework to test capital market efficiency, and since Sloan presented the Mishkin structure to the accounting literature, it could be noticed that capital market has been tested in a number of studies by suing Mishkin framework (Sloan, 1996).

As in previews studies, we jointly estimate a forecasting specification for future earnings and the rational expectations pricing specification and Mishkin test is represented by following equations (forecasting equation and pricing equation):

$$\text{Earning}_{t+1} = y_0 + y_1 \text{Earning}_t + \varepsilon_{t+1} \quad (4\text{-}1)$$

Forecasting equation:

$$NI_{t+1} = y_0 + y_1 DTE_t + y_2 ACC_t + y_3 CFO_t + \varepsilon_{t+1} \quad (4\text{-}2)$$

Pricing or valuation equation:

$$AR_{t+1} = B_0 + B_1(NI_{t+1} - y_0^* - y_1^* DTE_t - y_2^* ACC_t - y_3^* CFO_t) + v_{t+1} \quad (4\text{-}3)$$

Where is:

NI_{t+1} : Net income before extraordinary items

DTE_t: deferred tax expense

ACC_t: accounting accruals are defined as earnings taken from profit and loss statement minus operating cash flow that taken from cash flow statement

CFO_t: Cash flow from operations in year t, taken from the cash flow statement

AR_{t+1}: Abnormal return

Equations (4-2) and (4-3) represent a test of the study hypothesis for all variables. Each firm's accrual (ACC) is separately calculated for each year from 1994 to 2011 and followed the same procedure to determine for operating cash flows (CFO) and for earnings (NI t+1).

Market efficiency with respect to accruals imposes the constraint that (Y1*) from the Pricing Equation (4-3) is not different than (Y1) from the forecasting Equation (4-2). This nonlinear constraint requires that the stock market rationally anticipates the implications of current period accruals for future earnings. If the anomaly generalises to other countries, then Y1<Y1*, implying the market evaluates a higher contribution of current period accruals to future earnings than is warranted by the underlying cross-sectional association of current period accruals and future earnings (Pincus, 2007).

Equation (4-2) is a forecasting equation that estimates the forecasting coefficients (Ys) of deferred tax expense and other earnings components (accruals and cash flows). Equation (4-3) represents pricing or valuation equation that estimates the valuation coefficients (Y*s) that the market allocates to deferred tax expense and other earnings components (accruals and cash flows). Mishkin (1983) estimated equations (4-2) and (4-3) using iterative weighted nonlinear least squares by proceeding in two stages.

In the first stage, the study jointly estimates equations (4-2) and (4-3) without imposing any constraints on Y*s and Ys. This is to test whether the valuation coefficients (Y*s) are

significantly different from their counterpart forecasting coefficients (Ys). In the second stage, research also jointly estimates equation (4-2) and (4-3) Y but after imposing the rational pricing constraints.

Mishkin shows that the following likelihood ratio statistic is asymptotically, x2(q), distributed under the null hypothesis that the market rationally prices one or more earnings components with respect to their associations with one-year-ahead earnings:

2N Ln (SSRc/SSRu)

Where:

q = the number of rational pricing constraints imposed.

N = the number of sample observations.

Ln = natural logarithm operator.

SSRc = the sum of squared residuals from the constrained regressions in the second stage.

SSRu = the sum of squared residuals from the unconstrained regressions in the first stage.

The empirical sections for this study will be divided into following:
Firstly, the study applies Mishkin test of the sample combining all countries. Secondly, the research extends Mishkin tests for study's sample for each country individually. Finally, study conducts the Mishkin tests after the mandatory adoption of IFRS (international financial reporting standards) in 2005.

4.3.3. Variables Measurement

Deferred tax expense (DTE) is calculated as the difference between the balance of the deferred tax liabilities at the beginning of accounting period and the balance of the deferred tax liabilities at end the previous accounting period (Warfield et al 2008).

Following Ball et al. (2000), the study defines accounting income as net income before extraordinary items. Operating cash flows defined as net income before extraordinary items plus depreciation minus the change in noncash current assets plus the change in current liabilities other than the current portion of long-term debt. Accruals are defined as income minus operating cash flows.

All variables, deferred tax expense income, operating cash flows, and accruals, are scaled by average total assets measured as the average of the beginning and end-of-fiscal-year book value of total assets. Stock return is the annual holding period return, including dividends. Abnormal return (AR) is stock return minus expected stock return that is calculated according to CAPM capital assets pricing model.

4.4. Sample and Data

There are three major sectors in the Stock Markets; the financial sector which includes banks and insurance companies, the service sector and the industrial sector. Since the focus on this study is on accrual anomaly, companies from the financial and service sectors, such as banks and insurance companies are excluded from the sample because of their different accounting practices, and the regulated firms may have different incentives regarding earnings management than other businesses. Therefore, firms from the industrial sector that are listed in the first market will only be included in the sample.

This study conducts the empirical analysis using firms with available data over 1994–2011 for companies in the 10 European stock markets. These countries are Germany, France, Italy, The Netherland, Spain, Sweden, Switzerland, Portugal, Belgium and the United Kingdom.

We focus on these countries because the greatest number of usable observations for our practical tests is available for these countries, and they cover a significant proportion of Euro’s total stock market capitalization and reflect different reporting, regulatory and corporate governance values.

All observations for the 10 European countries and time periods were observed. Moreover, all the accounting data are extracted from the financial statements in Bloomberg data stream at the end of fiscal year, resulting in a sample of 4568 firm-years observations. Samples were taken from 10 European countries ranging from the country with the smallest number of observations (Portugal, 170) to the country with the highest number of observations (1420, United Kingdom).

4.5. Empirical Results

4.5.1. Descriptive Statistics

Table 4-1 presents the results of description statistics. The sampled countries are combined in terms of several key financial variables which are firm net income before extraordinary items scaled by average total assets (NI), operating cash flows scaled by average total assets (CFO), accruals scaled by average total assets (ACC), Deferred tax expense (DTE), and abnormal returns including dividends (Return). Table 4-1 shows the descriptive statistics values for each variable over a whole sample.

Table 4-1. Descriptive statistics

variable	Mean	sd	p50	min	Max	p25	p75
inc	0.081	0.1291	0.0561	-0.5685	0.9952	0.0229	0.0999
cfo	0.1139	0.1231	0.0919	-0.9732	0.9921	0.0477	0.1449
acc	-0.0487	0.1040	-0.0375	-0.9750	0.7647	-0.0725	-0.0060
dte	0.0234	0.0857	0.0088	-0.8828	0.9646	-0.0009	0.0335
ar	0.0892	0.3078	0.0785	-0.9847	0.9871	-0.1125	0.275

Notes:
INC: is net income before extraordinary items scaled by average total assets measured as the average of the beginning and end of the fiscal year total assets.
CFO: is operating cash flows scaled by average total assets. Operating cash flows is determined as net income before extraordinary items plus Depreciation minus the change in Current assets and plus the change in Current liabilities.
ACC: is accruals scaled by average total assets determined by INC minus CFO.
DTE_t : is deferred tax expense scaled by average total assets.
AR: is Abnormal Return. Abnormal Return is determined as stock return mines expected stock return that is calculated according to CAPM capital assets pricing model.

The results suggest that the mean (median) of cash flows from operating has the highest value as compared to others 0.1139 0.0919 respectively with values ranging from -97.32% to 99.21%. For deferred tax expense, the mean is 0.0234 and the median is

0.0088 with values ranging between -88.28% and 96.46%. The tablet also shows that the mean (median) of accruals variables are negative -0.0487 -0.0375 because it includes depreciations and amortizations accruals. Ranging between (-97.5% and 76.47%). Finally, it can be seen from the table that the abnormal return mean is (0.0892) whereas median is 0.0785 and ranging from -98.47% to 98.71%.

4.5.2. Pearson Correlation Matrix

Table 4-2 presents the Pearson correlations between net income, operating cash flows, accruals, deferred tax expense, and abnormal return.

Table 4-2. Correlation Statistics between Earnings and its Components

	Inc	cfo	Acc	dt	ar
Inc	1				
Cfo	0.9852**	1			
Acc	0.663***	-0.6856**	1		
Dt	0.7889**	-0.7644**	0.5508**	1	
AR	0.7096*	0.7748**	0.7132**	0.642**	1

Notes:
INC is net income before extraordinary items scaled by average total assets measured as the average of the beginning and end of the fiscal year total assets.
CFO is operating cash flows scaled by average total assets. Operating cash flows is determined as net income before extraordinary items plus Depreciation minus the change in Current assets and plus the change in Current liabilities.
ACC is accruals scaled by average total assets determined by INC minus CFO.
DTE_t : is deferred tax expense scaled by average total assets.
AR: is Abnormal Return. Abnormal Return is determined as stock return mines expected stock return that is calculated according to CAPM capital assets pricing model.

Table 4-2 shows correlations between earnings and its components. Table 4-2 implies that the correlations between the CFO and ACC are significantly negative (-0.6856) at 5% level, as well as CFO is negatively related with DTE (-0.7644) at same significance level. However, earnings is reliably positive associations with its components and the correlation between net income and cash flow from operating has the highest value (0.9852). The smallest value is the associations between accruals and deferred tax expense (0.5508).

4.5.3. Mishkin Tests

The results of the Miskin test are presented in Table 4-3 as follows.

Table 4-3. Regression Results of the Mishkin (1983) Framework on Accrual and Cash Flow Components

Panel A: Mishkin Tests of the Components of Earnings—Pooled Samples:

$$NI_{t+1} = y_0 + y_1 DTE_t + y_2 ACC_t + y_3 CFO_t + \varepsilon_{t+1} \quad (4.2)$$

$$AR_{t+1} = B_0 + B_1(NI_{t+1} - y_0^* - y_1^* DTE_t - y_2^* ACC_t - y_3^* CFO_t) + v_{t+1} \quad (4.3)$$

Forecasting coefficients

Variables	Estimate	Std.Error	F-test
constant	-0.036	0.0006	-5.609***
Y1 (DTE)	0.1323	0.0055	23.9262***
Y2(ACC)	0.0346	0.004	8.5659***
Y3 (CFO)	0.9824	0.0044	22.4324***

Valuation coefficients

Variables	Estimate	Std.Error	F-test
constant	-0.0367	0.0009	-3.3347***
Y*1 (DTE)	0.2044	0.0081	25.185***
Y*2 (ACC)	0.1711	0.0073	23.5309***
Y*3 (CFO)	0.2224	0.0081	5.0944***

Panel B:

Null Hypothesis	Chi2	P
DTE: Y1=Y*1	53.8393	< 0.0001
ACC: Y2=Y*2	61.5375	< 0.0001
CFO: Y3=Y*3	67.0081	< 0.0001
All slopes	198.725	< 0.0001
Slopes and const	138.634	< 0.0001

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
INC is net income before extraordinary items scaled by average total assets measured as the average of the beginning and end of the fiscal year total assets.
CFO is operating cash flows scaled by average total assets. Operating cash flows is determined as net income before extraordinary items plus Depreciation minus the change in Current assets and plus the change in Current liabilities.
ACC is accruals scaled by average total assets determined by INC minus CFO.
DTE_t : is deferred tax expense scaled by average total assets.
AR: is Abnormal Return. Abnormal Return is determined as stock return mines expected stock return that is calculated according to CAPM capital assets pricing model.

Panel A of Table 4-3 presents the coefficients estimates for equations (4-2) and (4-3) obtained in the first stage, while Panel B reports the significance of the Mishkin test by jointly estimating equations (4-2) and (4-3) again in the second stage. It can be seen from the table that for cash from operations, the forecasting coefficient Y3=0.9824 is higher than the valuation coefficient Y*3= 0.2224, implying that the market under-prices operating cash flow relative to its ability to evaluate earnings. From Panel B it can be noticed that the likelihood ratio statistic of 67.0081 is significant at the 0.0001 level, indicating that the under-pricing of cash flow from operations (Y3>Y*3) is statistically significant and hence, consistent with Pincus (2007) who conclude that the operating cash flows are underweighted in pricing.

Panel A of Table 4-3 also shows that for accruals variable, the forecasting coefficient (Y2=0.0346) is smaller than valuation coefficient (Y*2= 0.1711), suggesting that the market overprices Accruals. Panel B of Table 4-3 shows that the likelihood ratio statistics rejects the null hypothesis of rational pricing of accruals ($p< 0.0001$), indicating that the market significantly overprices accruals variables (Y2<Y*2) which is in line with Pincus (2007) who found that stock prices overweight accruals persistence.

For deferred tax expense viable as the determinant factor of accruals, the table illustrates that the market significantly overprices the deferred tax expense Y1=0.1323<Y*1=0.2044 at the 0.0001 level since the likelihood ratio statistic is 53.83 reported in Panel B of Table 4-3.

Finally, for all variables, the likelihood ratio statistic of 198.72 rejects the null hypothesis that the market, rationally prices all earnings components $p< 0.0001$. Therefore, the results present the existence of accruals anomaly which is characterised by stock markets overweighting accrual persistence in line with Pincus. Moreover, deferred tax expense plays the main role in the abnormality of accruals as the determinant factor.

While equation (4-3) is estimated alone using the ordinary least squares methods, the forecasting coefficient (Y1,Y2, andY3) measures the persistence of earnings components (CFO , ACC and DTE) (freeman et al , 1982) (Sloan, 1996). As shown in Panel A of

Table 4-3, the forecasting coefficient for CFO, ACC and DTE are 0.9824, 0.0346 and 0.1323, respectively. Conducting t-tests on equation (4-3) alone indicate that the operating cash flow coefficient is significantly larger than the coefficients on accruals Y*3=0.2224 > Y*2=0.1711 and deferred tax expense Y*3=0.2224 > Y*1=0.204 with (F=5.094). However, the coefficient on deferred tax expense Y*1=0.2044> Y*2=0.1711 is significantly larger than that on accruals (F= 25.185). Therefore, it can be concluded from these results that the cash flow as an earnings component is more persistent than deferred tax expense component; while conversely, the deferred tax expense is more persistent than accruals component which is consistent with Sloan (1996) and Xie (2001).

Table 4-4. Mishkin Tests of the Components of Earnings—By Country

Country			DTE		ACC		CFO		F -Statistic Test		
Code Law	N	B1	Y1	Y*1	Y2	Y*2	Y3	Y*3	Y1=Y*1	Y2=Y*2	Y3=Y*3
Germany	352	0.333	0.256	2.158	1.552	2.053	1.265	0.186	2.457**	4.565 ***	0.715
France	483	2.727	0.0122	0.155	1.112	1.3511	1.653	0.523	1.703*	3.653***	1.965 *
Spain	402	0.162	0.0256	0.063	1.125	1.353	1.632	-0.442	0.046	3.71 ***	0.4877
Italy	540	1.213	0.0652	0.144	1.862	2.506	1.052	0.091	2. 238**	5.32 ***	2.728 ***
Sweden	453	0.256	-0.043	1.149	0.424	1.343	1.303	1.283	1.743*	2.272**	2.272***
Switzerland	198	0.897	0.063	0.096	1.532	0.052	1.523	-0.196	0.061	2.047 **	1.0492
Belgium	254	0.544	0.032	0.346	1.234	1.266	1.412	-0.486	1.253	1.476	0.8488
Portugal	170	0.632	0.063	1.539	0.661	-0.546	0.740	-3.542	2.045**	1.3473	1.3473
The Netherlands	296	0.005	-0.471	1.230	0.818	4.473	0.962	14.47	2.571***	1.2029	1.2029
Common Law											
UK	1420	0.021	0.9508	3.6947	0.406	-3.662	0.751	-0.556	2.602***	1.963*	0.635

Notes

***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).

INC: is net income before extraordinary items scaled by average total assets measured as the average of the beginning and end of the fiscal year total assets.

CFO: is operating cash flows scaled by average total assets. Operating cash flows is determined as net income before extraordinary items plus Depreciation minus the change in Current assets and plus the change in Current liabilities.

ACC: is accruals scaled by average total assets determined by INC minus CFO.

DTE_t : is deferred tax expense scaled by average total assets.

AR: is Abnormal Return. Abnormal Return is determined as stock return mines expected stock return that is calculated according to CAPM capital assets pricing model

Table 4-4 presents the results of estimating Equations (4-2) and (4-3) by using firm-level data pooled across the 10 countries individually. It can be seen from table 4 that, study re-runs Mishkin test after dividing the sample's study into two groups according to country's legal tradition: Code law countries and Common law countries. Code law system is characterised by ''stakeholder model'' of corporate governance, while Common system is characterised by ''shareholder model'' of corporate governance (Ball et al, 2000). Distinguishing between these two groups depends on how the information asymmetry between corporate insiders and other stakeholders gets determined. In common law countries, the governing boards of companies are elected by shareholders, and most stakeholders interact with firms through markets greater than under code law countries. On the contrary, in Code law countries it can be seen that companies' governing boards, which includes agents, representing various sets of stakeholder interests (e.g., suppliers, debtholders, employees, shareholders, and customers). Correspondingly, in countries with the code law, a wider range of stakeholders has access to companies' inside information than countries with common law countries, which makes the accruals components of reported earnings more understandable to a wider range of stakeholders. Therefore, the code law countries of corporate governance are more appropriate to the persistence characteristics of accruals and accruals anomaly is more likely to occur in common law countries (Pincus, 2007).

Table 4-4 shows results of earnings components using firm-level data for individual countries. It can be noticed from Table 4-4 that deferred tax expense is significantly overpriced in most sample countries excluding Spain, Switzerland and Belgium which show that deferred tax expense (DTE) is insignificantly overpriced. Consequently, deferred tax expense as the determinant factor of accruals is significantly overpriced by the stock prices and this overweighting is generalized for many countries. Table 4-4 shows that accruals are significantly overweighting in most code countries and the law country (UK). Hence, Table 4-4 presents evidence of accruals anomaly (overweighting) in most sample countries and it shows that the study did not detect the accruals anomaly in Switzerland and Portugal Y2=1.532 >Y*2=0.052 and Y2=0.661>Y*2=-0546 respectively.

That could be because of the lack of power due to fairly small sample sizes of those countries making the results consistent with the findings of LaFond (2005). Moreover, it can be seen from Table 4-4 that there is no evidence of operating cash flows underweighting in the majority of sample countries excluding France (F=1.965), Italy (F=2.728), and Sweden (F=2.272) hence showing that the operating cash flows is significantly underweighted which is also in line with the findings of Pincus (2007).

Table 4-5.Code law countries and common law countries:

			DTE		ACC		CFO		F -Statistic Test		
Country	N	B1	Y1	Y*1	Y2	Y*2	Y3	Y*3	Y1=Y*1	Y2=Y*2	Y3=Y*3
Code Law	3148	0.152	0.064	1.671	0.897	2.887	0.9842	4.77	1.978*	1.960*	0.960
Common Law	1420	0.121	0.950	3.694	0.406	-3.662	0.751	-0.556	2.602***	1.963*	0.635

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
INC: is net income before extraordinary items scaled by average total assets measured as the average of the beginning and end of the fiscal year total assets.
CFO: is operating cash flows scaled by average total assets. Operating cash flows is determined as net income before extraordinary items plus Depreciation minus the change in Current assets and plus the change in Current liabilities.
ACC: is accruals scaled by average total assets determined by INC minus CFO.
DTE_t : is deferred tax expense scaled by average total assets.
AR: is Abnormal Return. Abnormal Return is determined as stock return mines expected stock return that is calculated according to CAPM capital assets pricing model.

Table 4-5 reports the results of estimating Equations (4-2) and (4-3) using firm-level data pooled across the common law and code law countries. The study reruns the Mishkin tests after decomposing the pooled sample into two groups: common law and code law. Table 5 shows the results of common law and code law country firms. It can be noticed from table 5 that both deferred tax expenses (DTE) and accruals (ACC) are significantly over-weighted by stock prices in code law countries (Y1=0.064<Y*1=1.671, F=1.978) (Y2=0.897<Y*2=2.887, F=1.96) and common law countries (Y1=0.950<Y*1=3.694, F= 2.602) (Y2=0.406<Y*2=-3.662, F=1.963) respectively. Therefore, the deferred tax expense is considered as an important factor of accruals that is overpriced while accruals anomaly has occurred in both groups. There is no evidence that stock prices underweight operating cash flow persistence in code law (Y3= 0.984<Y*3=4.77, F= .0960) (insignificant) and in common law countries (Y3=0.751>Y*3= -0.556 ,F= 0.635) too.

Second Part of the study is examining the mandatory adoption of IFRS (international financial reporting standards) in detecting accrual anomaly with using the following equations:

$$NI_{t+1} = y_0 + y_1 DTE_t + y_2 ACC_t + y_3 CFO_t + y_4 IFRS_t + y_5 IFRS_t * DTE_t + y_6 IFRS_t * ACC_t + y_7 IFRS_t * CFO_t + \varepsilon_{t+1} \quad (4\text{-}4)$$

$$AR_{t+1} = B_0 + B_1(NI_{t+1} - y_0^* - y_1^* DTE_t - y_2^* ACC_t - y_3^* CFO_t - y_4 IFRS_t - y_5^* IFRS_t * DTE_t - y_6^* IFRS_t * ACC_t - y_7^* IFRS_t * CFO_t) + v_{t+1} \quad (4\text{-}5)$$

Table 4-6. Regression Results of the Mishkin (1983) Framework on Accruals and Cash Flows Components with IFRS adoption

Panel A: Mishkin Tests of the Components of Earnings—Pooled Samples:

$$NI_{t+1} = y_0 + y_1 DTE_t + y_2 ACC_t + y_3 CFO_t + y_4 IFRS_t + y_5 IFRS_t * DTE_t + y_6 IFRS_t * ACC_t + y_7 IFRS_t * CFO_t + \varepsilon_{t+1} \quad (4.4)$$

$$AR_{t+1} = B_0 + B_1(NI_{t+1} - y_0^* - y_1^* DTE_t - y_2^* ACC_t - y_3^* CFO_t - y_4 IFRS_t - y_5^* IFRS_t * DTE_t - y_6^* IFRS_t * ACC_t - y_7^* IFRS_t * CFO_t) + v_{t+1} \quad (4.5)$$

Forecasting coefficients

Variables	Estimate	St Error	F-test
Constant	-0.014	0.0131	-1.0751
Y1 (DTE)	0.7948	0.0476	1.6692*
Y2 (ACC)	0.1805	0.0867	2.0816**
Y3 (CFO)	0.9853	0.0203	2.8715***
Y4 (IFRS)	0.0448	0.0136	3.2931***
Y5(IFRS*DTE)	0.7314	0.0471	1.535
Y6(IFRS*ACC)	0.0934	0.0919	1.0158
Y7(IFRS*CFO)	0.5822	0.0204	2.8432***

Valuation coefficients

Variables	Estimate	Std.Error	F-test
constant	-0.0355	0.0108	-3.2781***
Y*1 (DTE)	0.8576	0.0921	1.6777*
Y*2 (ACC)	0.2412	0.0018	0.5732
Y*3 (CFO)	0.5825	0.0693	5.8031***
Y*4 (IFRS)	-0.013	0.0113	-1.1505
Y*5(IFRS*DTE)	0.8254	0.0923	-1.5944
Y*6(IFRS*ACC)	0.1197	0.0761	0.2594
Y*7(IFRS*CFO)	0.2458	0.0696	1.449

Panel B		
Null Hypothesis	Chi2	P>
IFRS	3.2125	0.0731
DTE: Y1=Y*1	4.1495	0.0824
ACC: Y2=Y*2	4.5316	0.0159
CFO: Y3=Y*3	3.2472	0.0339
IFRS: Y4=Y*4	3.1916	0.0022
Y5=Y*5:IFRS*DTE	5.1295	0.0863
Y6=Y*6:IFRS*ACC	3.8994	0.0429
Y7=Y*7:IFRS*CFO	7.6004	0.0059
All slopes	183.4726	0
Slopes and const	183.8519	0

Notes
***, **, *=significant at the 1%, 0.5% and 10% level respectively (two tailed).
INC: is net income before extraordinary items scaled by average total assets measured as the average of the beginning and end of the fiscal year total assets.
CFO: is operating cash flows scaled by average total assets. Operating cash flows is determined as net income before extraordinary items plus Depreciation minus the change in Current assets and plus the change in Current liabilities.
ACC: is accruals scaled by average total assets determined by INC minus CFO.
DTE_t : is deferred tax expense scaled by average total assets.
AR: is Abnormal Return. Abnormal Return is determined as stock return mines expected stock return that is calculated according to CAPM capital assets pricing model.
$IFRS_t$: Dummy variable (compliance to IFRS=1, else=0).

Panel A of Table 4-6 presents the coefficients estimates for equations (4-2) and (4-3) that obtained in the first stage after IFRS adoption, whereas Panel B reports the significance of the mishkin test by jointly estimating equations (4-2) and (4-3) again in the second stage.

It can be noticed from Table 4-6 panel A that the deferred tax expense significantly overweighing the prices Y1=0.7948<Y*1=0.8576 at 10% level (p>0.0824). Furthermore, the results present that significant overweighting of deferred tax expense still exists in our sample after IFRS adoption (Y5: IFRS*DTE=0.7314< Y*5: IFRS*DTE1=0.8254) at 10%. The results are significant before and after the mandatory adoption of IFRS in 2005, concluding that the deferred tax expense is incrementally overpriced by stock price. Table 4-6 also present results of accruals (Y2=0.1805<Y*2=0.2412) (Y6: IFRS*ACC=0.0934< Y*6: IFRS*ACC=0.1197). However, it can be understood that the market overweighting the accruals over study sample leads to the accrual anomaly is existing before and after the mandatory IFRS adoption in 2005.

Furthermore, Table 4-6 shows that the market underweighting operating cash flow before IFRS compliance Y3=0.9853>Y*3=0.5825, as well as after the mandatory IFRS adoption in 2005 the results. Present that the market underweighted operating cash flows (Y7: IFRS*CFO=0.5822> Y*7: IFRS*CFO=0.2458).

In summary, this study indicates that is no significant difference between the results before and after the mandatory IFRS adoption. The deferred tax expense and accruals are overweighed by the market with or without the mandatory IFRS adoption. Moreover, the results show that market under-prices operating cash flows.

4.6. Conclusion

Several studies investigated the existence of accrual anomaly in international equity markets and whether it is becoming a global phenomenon. Pincus (2007) examined whether the evidence correlated to the accrual anomaly is specific to the U.S. market. By analysing samples from 20 countries, they found that the accrual anomaly, characterised by stock markets overweighting accrual persistence, exists in only four countries: Canada, Australia, the U.S. and the U.K.

This study investigates whether the deferred tax expense is an important factor of accruals in overweighting (underweighting) securities prices. Then, the overweighting of accrual anomaly in securities pricing is generalised for 10 countries. Our findings are consistent with Xie (2001), Pincus (2007) and LaFond (2005). We present deferred tax expense as a determinant factor of accruals and the accruals anomaly exists in pooled sample before and after the mandatory IFRS adoption. Then we split the sample into two groups: common law countries and code law countries. The study concludes that deferred tax expense is overweighting the stock prices in the majority of code law countries and in common law countries in the EU as well as in the UK. Furthermore, the results show that the existence of the accruals in the majority of code law countries and in common law countries in the EU as well as in the UK in line with LaFond (2005).

In additions, the study illustrates that is no significant difference between the results before and after the mandatory IFRS adoption. The market is overweighing both the deferred tax expense and accruals with or without the mandatory IFRS adoption. Moreover, the results show that market under-prices operating cash flows before and after mandatory IFRS adoption.

Chapter 5

Conclusion, Limitations and Future Research

5.1. Conclusion

This thesis contributes to the literature on earnings quality in terms of earnings management and accounting conservatism and the role of deferred tax expense as a determinant factor of accruals in price valuation. The relevant literature is quite extensive and has taken various directions.

5.1.1. Earnings Management and Corporate Governance

Chapter two discusses the adoption of previous earnings management models (Jones, 1991; Dechow et al., 1995; McNichols, 2002) to develop a new model that detects and measures earnings manipulation. The cross-sectional Jones model was modified to include an additional variable that represents corporate governance (board independence and the presence of audit committee) with the mandatory adoption of IFRS. The new models controlled for nondiscretionary accruals and measured the discretionary accrual, which was estimated as the residuals of the Jones model. Using the cross-sectional Jones model, the discretionary accruals were estimated, and the new models were developed to detect earnings management. Then, abnormal working capital accruals (AWCA) and small positive earnings (SPOS) were used as proxies for earnings management, which is in line with Tendeloo and Vanstraelen (2005). Real data taken from listed firms in 11 European stock markets (Germany, France, Italy, The Netherlands, Spain, Sweden, Switzerland, Portugal, Belgium, Norway and United Kingdom) were used for this study.

Chapter Two investigates whether the adoption of IFRS is associated with lower earnings management and addresses the question of whether the board of directors is more effective in constraining earnings management after the mandatory adoption of IFRS. Due to corporate governance structures, two board characteristics were included: board independence and the presence of an audit committee. The study contributes to previous literature that provides empirical evidence on the effectiveness of board independence and audit committees in reducing earnings management after the mandatory adoption of IFRS.

The empirical results imply that board independence and audit committees still play an important role in constraining earnings management after IFRS adoption. The results, which are consistent with the expectations, suggest that there is a stronger effectiveness of board independence and audit committees in constraining earnings management after IFRS adoption. In other words, it was found that the negative relationship between boards' characteristics and earnings management could be moderated by IFRS implementation. Furthermore, the development of board and audit committee effectiveness is caused by the higher level of disclosure and transparency that characterises IFRS and that makes it easier for independent directors and audit committees to monitor the accounting policies applied by the firm.

5.1.2. Asymmetrically Timely Gain and Loss Recognition:

Chapter Three examines the impact of the mandatory IFRS adoption on the asymmetrically timely gain and loss recognition. Several studies have investigated the role of accruals accounting as the mitigation of noise in operating cash flows due to variations in working capital levels (Dechow, 1994). In addition, a similar mitigation of noise in cash flows from investing activities due to the variations in net investment level. Accounting accruals also play a role in the timely recognition of gains and losses that arise from both working capital assets and liabilities and long-term assets and liabilities. Based on the roles of accrual accounting, the correlation between stock returns and

earnings is stronger than the correlation between stock returns and cash flows (Basu, 1997; Nichols and Wahlen, 2004).

Chapter Three examines the whether the mandatory IFRS adoption will produce a higher earnings quality in term of the accounting conservatism. Furthermore, the study discusses the evaluation of the relationship between accruals and current period cash flows by estimating the general piecewise linear regression. Specific accruals models were used. First, the cash flow (CF) model was used in which the operating cash flow was the sole explanatory variable. Second, the DD model (Dechow, 1994; Dechow, Kothari, and Watts, 1998) was used with the operating cash flow in (t+1) and (t-1).Finally, the Jones model (1991) was used, which differentiates between discretionary accruals and non-discretionary accruals. Then, the models were modified to include an additional variable that represented the impact of the mandatory IFRS adoption on accounting conservatism.

The results support the findings of Basu (1997), who indicated that the accrual of loss recognition is dominant over the accrual of gain recognition. Also, the empirical results imply that asymmetrically timely gain and loss recognition (i.e. conditional conservatism) is a significant property of accrual accounting, which is consistent with Ball and Shivakuma's (2005) findings. The importance of IFRS compliance in accounting conditional conservatism across 11 European countries is demonstrated in this study. Interestingly, the results show that the timely loss and gain recognition increased in the majority of the sample except The Netherlands and Sweden and sometimes in Norway due to their legal systems and accounting structure systems. Therefore, there are still difficulties in adopting accounting conservatism for some countries.

5.1.3. Accrual Anomaly and Stock Returns

Chapter Four examines the relationship between accounting accruals and stock returns. In particular, the chapter discusses whether investors are able to efficiently forecast a company's future performance based on a deferred tax expense, which represents the differences between book income and taxable income as accruals components and determines whether this forecasting could be generalised to other countries.

Sloan (1996) defined an accruals anomaly as a negative relationship between accounting accruals and future stock returns. Managers aim to mislead investors using accruals distortions, which leads to accruals overweighting stock pricing. Therefore, investors are not able to efficiently forecast the company's future performance. It could be stated that accounting distortions play a significant role in the underperformance of firms (Papanastasopoulos and Tsiritakis, 2015). Mishkin (1983) tests were applied across 10 European countries (both code law and continent law countries) using the real data taken from firms listed in the stock markets. Also, the impact of mandatory adoption of IFRS on an accruals anomaly was examined.

The findings imply that an accruals anomaly existed in the pooled sample before and after the mandatory IFRS adoption and that the deferred tax expense was a determinant factor of accounting accruals in overweighting stock prices before and after IFRS adoptions.

The sample was divided into two groups, common law countries and code law countries, to identify and accruals anomaly across 10 countries individually. The empirical results suggest that the deferred tax expense caused overweighting in the majority of code law countries as well as in common law countries in the EU and in the UK. In addition, the existence of the accruals anomaly in the UK supports the findings of Pincus et al. (2007).

5.2. Limitations of the Research

One of the main limitations of this study was the assumption that the same tools of manipulation were used in all firms of the sample. For example, in the UK sample, changes in stock and changes in debtors were used as tools for earnings management. Furthermore, for this study, it was assumed that all companies in the same sample used the same accruals accounts to manage earnings; however, each firm may use different accruals accounts and methods to manipulate earnings. For example, firms might decrease expenditures to raise earnings (i.e. real earnings management). Applying additional methods for the same sample could overcome this limitation.

Earnings management influenced by two main factors: ability and incentive. The earning management literature has confirmed that the ability is based on the availability of accounting technology (i.e. accruals). Therefore, most accounting research that has investigated earnings management, including this study, has only considered manufacturing firms in their sample; however, the samples could include additional types of firms and could investigate their accounting systems while noting that earnings management is not necessarily only correlated with accruals, which may enhance understanding of the different methods of earnings management.

5.3. Future Research

Future research in the earnings management field should focus more on the limitations of earnings manipulations accrued by managers. Restrictions are a result of the surrounding environment rather than the available accounting technology. Also, future research should focus on the role of IFRS and more effective corporate governance in earnings quality.

Future research should examine the different accounting tools used to manipulate earnings. Moreover, it should be noted that companies use methods and tools other than accounting accruals to manipulate earnings. A useful method for future studies in terms of constraining earnings management would be conducting interviews with managers. The interviews would help describe the thought process of managers, the reasons that managers consider manipulation an option and the way the manipulation of earnings is performed. Retired CEOs and managers could be more helpful by providing an insider's perspective.

As the results presented in the chapter are new contributions to the relevant literature, further analyses are required. Future research could use data from both developed countries as well as from developing and emerging countries.

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