

### The Impact of IFRS Adoption on Accounting Conservatism in the European Union

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#### Abstract

**Purpose** –The purpose of this study is to analyze mandatory IFRS adoption's impact on accounting conservatism.

**Design/methodology/approach** – Our empirical study is conducted on a sample of 15 European countries, observed from the year 2000 to 2010. We analyze both conditional and unconditional conservatism, which we measured, respectively, by timely bad news recognition as compared to recognition of good news and discretionary accruals.

**Findings** – The results of the empirical study confirm a significant reduction of accounting conservatism in the IFRS adoption period. This reduction is affected by the accounting model prevailing in a particular country. Moreover, the study shows a reduction of the gap between the two accounting models in the post-IFRS adoption period.

**Practical implications** – The results obtained would be relevant for many decision makers such as investors, standard setters, IASB, European Union countries as well as those wishing to adopt International Standards.

Originality/value - Our study complements and enriches the existent literature about the



impact of the International Standards adoption. It dresses an important issue in a relatively long period to better assess the impact of IFRS.

**Keywords:** IFRS, conditional conservatism, unconditional conservatism, European Union, Accounting model.

#### 1. Introduction

Conservatism has always been recognized as one of the most important principals in accounting. There has been a general consensus between accounting regulators and preparers of accounting reports that conservatism is an attractive characteristic of accounting information particularly relevant to many decision makers. The adoption in the last decade of the International Financial reporting Standard (IFRS) by a large number of countries has brought the issue of accounting conservatism to the limelight of professionals and academics in accounting.

IFRS are characterized by the adoption of a particular decision-making approach along with the prospective orientation of the information presented which allows investors to make a fair evaluation of this information. Indeed, the relevance of the information and its reliability are key in facilitating the decision-making processes of investors. Thus, the prudence principal is not as important as countries operating under the continental accounting model predicted it would be. Although the International Accounting Standards Board (IASB) advocates the use of prudence in cases of uncertainty, it also confirms that it is not a necessary qualitative characteristic. However, conservatism has always played a leading role in accounting practices. Indeed, the fact that it has often been recognized as a basic principle for accounting practice has influenced accounting theory (Basu1997).

Studies conducted in different countries showed that the accounting conservatism level varies from one context to another (Giner and Rees 2001; Lara and Mora 2004; Grambovas, Giner and Christodoulou 2006; Ferreira, Lara and Gonçalves2007, among others). This is not altogether surprising since most of the research studies confirmed the existence of differences between accounting practices around the world. This encouraged some of the researchers to analyze IASB's position as an international accounting harmonization body. D'Arcy (2001) mentions that preparing the financial information with reference to IASB is clearly dominated by the Anglo-American approach. Lewis and Salter (2006) similarly showed that IFRS are also closer to American standards. Hung and Subramanyam (2007) analyzed the characteristics of the International Accounting Standards (IAS) and compared them to German standards. These authors specify that the international approach is oriented towards the capital market and investors' needs and this constitutes an Anglo-American characteristic. Similarly, they add that IFRS will focus on the assessment of balance sheet items at fair value unlike the German position, which they took to represent the continental model in their study and which is based on the principle of prudence and the smoothing of results. This idea has already been spelled out by Dumontier and Raffournier (2005) who find that it can be considered as an Anglo-American characteristic.



In order to analyze the impact of this international bias towards the accounting practices of the countries operating under the continental model, we would like to examine the effect of applying IFRS in countries belonging to the European Union, with reference to the 1606/2002 regulation of the European Parliament. The objective of this research is to verify the hypothesis claiming that the adoption of the International Accounting Standards can affect the conservatism level of the financial statements of companies from the European Union. More specifically, we address the following research question: What is the impact of mandatory IFRS adoption in Europe on the level of accounting conservatism? The results of our study would be relevant for many decision makers such as investors, standard setters, IASB, European Union countries as well as those wishing to adopt International Standards and would explain different consequences that can result from adopting IFRS.

The remainder of the paper is organized as following: the second section is focused on IFRS, their characteristics and their adoption. The third one discusses the concept of accounting conservatism and its theoretical foundations. The fourth section states the research objective and develops the hypotheses. The fifth section presents our methodology. In the sixth section we present the results of our empirical analysis. Finally, the conclusion and suggestions for future research will be the subject of our last section.

#### 2. IFRS, Their Characteristics and Their Adoption

Thanks to IASB's achievements and to its high quality standards, IFRS are either required or authorized in 113 countries (Ball 2006; Heidi 2009). Similarly, international bodies encourage the harmonization process conducted by the IASB and also the adoption of IFRS. On July 19, 2002,the European Council approved the 1606/2002 regulation that imposes on European companies the requirement that they prepare their financial statements according to IFRS. This decision concerns consolidated accounts from January 1,2005.

IFRS are presumed to produce high quality information which leads to the reduction of the information asymmetry between managers and external users of the financial information (Daske 2006; Ball 2006; Gassen, Fülbier and Sellhorn 2006; Soderstrom and Sun 2007). In the same context, Ball (2006) specifies that IFRS produce more precise, better understandable and more appropriate financial information than local accounting standards. In addition to the characteristics of the institutional environment and the company's commitment, Gassen et al. (2006) notice a new factor that influences the financial information quality considering standards quality. The use of a unique body to prepare financial information improves its comparability and, thus, favors better decision making for investors especially (Soderstrom and Sun 2007; Daske 2006; Daske and Gebhardt 2006). In the European context, International Standards are presumed to contribute positively to improving the financial information's quality when compared to local standards in this area. Indeed, International standards are more demanding in terms of mandatory disclosure considering the quantity of the communicated information as well as their informational content (Daske 2006; Daske and Gebhardt, 2006). Thus, as a result of the IFRS application, Daske and Gebhardt's study (2006) has shown that the quality of the information communicated by the sampled firms has significantly improved.

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Although the benefits of adopting international standards are well recognized, many researchers have identified the presence of various difficulties hindering the convergence process of national accounting standards towards international ones (Larson and Street, 2004; Jermakowicz and Tomaszewski 2006; Moris,Gray, Pickering and Aisbitt2014). For example, in countries where capital markets are not sufficiently developed, IFRS application can be hampered. In addition, IAS-IFRS are generally considered as standards for multinational groups. Similarly, some transactions are considered as quite complicated and specific to countries with developed economies (Larson and Street 2004). In Australia, Moris et al. (2014) recently studied the issue of the benefits and difficulties of implementing IFRS in that country using a questionnaire comprising 17 questions which was sent to the financial directors of 1666 listed companies. The results of this study have shown that the responders principally care about the difficulties faced when applying some of these treatments as well asthe high cost of implementing standards while they find that benefits in capital markets are still limited.

#### **3.** The Concept of Accounting Conservatism and Its Foundations

Sterling (1967) considers accounting conservatism to be the oldest principle that has influenced accounting practices. Basu (1997) has proposed a definition that refers to the required verification for taking into account gains and losses. In fact, it appears that accountants require a higher verification level for recognizing good news as opposed to bad. In this context, the author concluded that income reflects bad news more quickly than good. The conservatism definitionas the undervaluation of income and assets aims to protect creditors (Nobes and Parker 2008). Basu's definition (1997) favors shareholders' interests and seeks to ensure their protection since they require timely information, especially when it concerns bad news, in order to make their decisions (Lara and Mora 2004).

Gray (1988) identified conservatism as one of the four accounting values<sup>1</sup>. He considers it as "the value that prefers a conservative measurement approach dealing with the uncertainty associated with future events, in opposition to an optimistic approach of laissez-faire and risk taking". Basu (1997) considered that accounting conservatism plays an effective role in the realization of concluded contracts between the company and different parties.

Watts (2003) considers conservative accounting practices as an effective mechanism to prepare financial information. Indeed, accounting conservatism leads to reliable financial information since it requires a higher control level thus a minimal error risk. Moreover, conservatism has often been used as a quality measure for financial information (Francis,Lafond, Olsson and Schipper 2004; Cheng and Liu 2007). Byungcherl (2012) studied the implications of accounting conservatism on the accuracy of forecasts presented by financial analysts. He conducted his study on listed companies on NYSE, AMEX and

<sup>&</sup>lt;sup>1</sup> According to Gray (1988), there are four accounting values:

<sup>-</sup> Professional judgment versus regulation control.

<sup>-</sup> Uniformity versus flexibility.

<sup>-</sup> Conservatism versus optimism.

<sup>-</sup> Discretion versus transparency



NASDAQ. The data collected are related to the period from 1979 to 2008. Byungcherl (2012) found that financial analysts incorporate accounting conservatism in forecasting companies' results. Moreover, they face more difficulties while estimating the results of less conservative companies.

Furthermore, in order to analyze the determinants of accounting conservatism, some authors have proposed that managers and auditors prefer conservative practices to avoid legal prosecutions and related costs (Kothari,Lys, Smith and Watts 1988; Mensah, Considine and Oakes 1994; Watts 2003).Watts (2003 a), sees that the more a firm realizes positive results, the more it uses accounting conservatism in order to reduce the amount of tax payable.

Regulation was also analyzed as directly or indirectly influencing the accounting conservatism level. Thus, accounting standards require a certain level of caution while preparing financial statements in order to control the exaggerated optimism of managers (Sterling 1967, Grambovas et al. 2006). Lang,Raedy and Yetman (2003) think that listed companies in the USA are subjected to more pressure regarding the quality of information they communicate. They demonstrate a higher conservatism level for listed companies in the USA. In the same context, Lobo and Zhou (2006) have analyzed accounting conservatism before and after the enactment of the SOX<sup>2</sup> law. They have noted an increase in the accounting conservatism level after the application of this law.

#### 4. Research objective and hypothesis development

#### 4.1. Review Of Previous Studies:

Adopting IFRS is an important decision that significantly impacts accounting practices. Indeed, numerous differences exist between these standards and the local ones of many countries especially in Europe. Hung and Subramanyam (2007) conducted a study on a sample of 80 German companies that have voluntarily adopted these standards from 1998 to 2002. Theauthors specify that German standards are dominated and influenced by tax and prudence, while the international standards are independent from tax rules and advocate for a fair value evaluation. Further to that, Prather-Kinsey, Jermakowicz and Vongphanith (2008) have examined the relevance and the informational content of published results by 157 European companies which adopted IFRS for the first time in 2005. In both these studies the authors consider that the IFRS adoption provides several different advantages especially for investors. Indeed, there is a reduction in capital cost, an improvement of the informational content and of the relevance of information prepared in accordance with IFRS. However, the authors notice that these variations are more significant in companies from countries operating under a continental legal system. Thus, they conclude that accounting standards applied by countries operating under the Anglo-American model are closer to International Standards than those of countries operating under the continental model.

Considering the quality of financial statements measured by discretionary accruals, Zeghal, et al. (2011) analyzed the impact of mandatory IFRS adoption on results management in French

<sup>&</sup>lt;sup>2</sup>The Sarbanes-Oxley Act is the law on the accounting reform for listed companies and the protection of promulgated investors on July, 31 2002 in United States of America.



companies. In a sample of 851 French listed companies, the analysis shows a decrease in discretionary accruals after adopting IFRS. Therefore, they have concluded that adopting IFRS reduces results management in French companies. Focusing on accounting conservatism, Piot et al. (2010) conducted their study over the period from 2001 to 2008. They considered early, in time and late IFRS adopters and found a decrease of conditional conservatism and an increase of unconditional conservatism. The authors concluded that mandatory IFRS adoption impeded accounting quality. Staying in the European context, Zeghal et al.(2012) have discussed the issue of mandatory IFRS adoption and its impact on the quality of companies' results. The analysis of 1547 companies from 15 European Union countries from 2002 to 2007, confirms the hypothesis of improving the quality of results after IFRS adoption. However, Zeghal et al. (2012) have shown that there is a reduction in timeliness, in the conditional conservatism level and the relevance of the information after the mandatory IFRS adoption. More recently, Anwer et al. (2013) also addressed the question of mandatory IFRS adoption and its impact on accounting quality. They employed the timeliness of loss recognition as a proxy for reporting aggressiveness. The results of their study show a decrease in the timeliness of loss recognition after the switch to IFRS. This finding contradicts the results of Zhuang et al.(2013) which showed that IFRS have no impact on accounting conservatism. The results of Zhuang et al.(2013) can be explained by their approach which, according to the authors, allows overcoming the inter-temporal limitations. They focused on the period 2005-2008 and compared the degree of conditional conservatism under IFRS versus local GAAP. However André et al. (2015) confirmed a decrease in conditional conservatism in the post mandatory IFRS adoption. The authors state that this reduction is more significant for countries with low audit environment and weak enforcement of compliance.

According to these studies, the issue of the consequences of IFRS adoption on accounting conservatism is still open for debate. Our objective is to palliate to some limitations of previous studies, including short periods of study, measures of accounting conservatism and samples considered, in order to bring a more comprehensive and a more convincing response to the question of IFRS adoption on accounting conservatism. Our study differs from previous ones in several important respects. First, we use a longer period especially after IFRS adoption which is likely to allow a better analysis of the consequences of these standards. Second, previous studies that compared different contexts were not able to distinguish the effects of IFRS adoption from the effects of other specific events. As a remedy for the existing differences in results, we made sure to analyze a relatively homogeneous group. In fact, the European Union, when it was first set up, insisted on the establishment of an economic and monetary union through harmonizing the inflation rate, the monetary unit (Euro), the treatment of the public debt and the budget deficit (Lara and Mora 2004). Third, two different measures of conservatism are considered in order to control for measure biases and to take the two forms of conservatism.

#### 4.2. The Research Objective And Hypotheses To Be Tested:

The objective of this research is to analyze the impact of adopting IFRS on the accounting conservatism level of European Union countries. Recent studies (Ahmed A. et al. 2013;



Zhuang Z. et al. 2013 and André P. et al. 2015) examined accounting conservatism after mandatory IFRS adoption and found different results. We believe that the impact of IFRS on accounting practices needs more investigation in a relatively longer period. Similarly, we think that conservatism, as a fundamental accounting principle, requires further studies especially in accordance with the IFRS application. Thus, the present study is conducted from 2000 to 2010 in 15 European Union countries attempting to test the impact of IFRS after five years of their adoption. Moreover, we consider two conservatism measures in order to reflect the two forms usually used in empirical researches. More specifically, it would be interesting to analyze the growing conservatism level before and after the IFRS application by answering the following questions: Are there any differences between both forms of conservatism? Is the impact of IFRS on conservatism identical for countries operating under a continental model as it is for those operating under the Anglo-American model? Our research discusses these issues and tries to find the appropriate answers through testing hypotheses that are formulated below.

#### 4.3. Accounting Conservative Practices And Differences Between Both Accounting Models:

Previous studies on accounting conservatism have generally confirmed the application of this principle but some differences were noted with regard to the difference in extent from one country or group of countries to another (Gray 1980; Basu 1997; Ball, Kothari and Robin 2000; Giner and Rees 2001; Lara and Mora 2004; Grambovas et al. 2006). Gray (1980) has developed a conservatism index<sup>3</sup>in order to compare the application of this principle in France, Germany, and Great Britain. The collected results of this study show a difference in the conservatism level among the chosen sample. Great Britain presents a lower conservatism level than France and Germany. Nobes and Parker (2008) notice that continental Europe is characterized by the highest conservatism level. For example, both authors report that the equity value of Volkswagen under IFRS is twice its calculated equity under German standards.

The high conservatism level of countries operating under the continental model reflects the priorities of this system. Thus, the legal approach that prevails with respect to accounting practices in these countries encourages accountants to adopt conservative accounting methods in order to primarily protect creditors' interest. Based on this logic and previous research, we expect a higher conservatism level in countries operating under the continental model. Thus, we formulate the two following hypotheses:

# H1a: Unconditional conservatism is higher in countries operating under the continental model than in those operating under the Anglo-American model.

H 1b: Conditional conservatism is higher in countries operating under the continental model than in those operating under the Anglo-American model.

<sup>3</sup> It is calculated as following: 
$$1 - \left[\frac{R_A - R_D}{|R_A|}\right]$$
; with  $R_A = Adjusted \text{ profit and } R_D = disclosed \text{ profit.}$ 



#### 4.4. The Impact Of Adopting International Standards On The Accounting Conservatism Level

Ball et al. (2000), state that the standards of the IASB are closer to the Anglo-American standards than to those adopted by countries operating under the continental model. Indeed, D'Arcy (2001) confirms this idea and considers that the philosophy dominating IFRS is different from the European directives' philosophy. It seems that the impact of applying IFRS would be less significant in countries where standards are already under the Anglo-American influence. In this context, Zeghal et al. (2012) mentioned that conservatism decreased following the mandatory IFRS adoption. They also found that the decrease in the conservatism level after adopting IFRS is more important for countries with local standards different from international ones.

Based on the previous observations, we expect a decrease in the accounting conservatism level after the IFRS adoption. The expected decrease in the conservatism level after the introduction of IFRS could be explained by the destination of the financial information which represents an important characteristic of IFRS. Indeed, as previously explained, countries operating under the continental model seek to principally satisfy the financial information needs of governments and creditors since they both care about the solvency and the sustainability of the company. However, the international financial information's objective is to primarily satisfy the needs of investors who care about the company's performance and the profitability of their investments. Thus, unconditional conservatism better serves the accounting objective of the continental model than the Anglo-American one does. Therefore, we formulate the two following assumptions:

# H2a: IFRS adoption in European Union countries reduces the unconditional conservatism level.

# H2b: IFRS adoption in European Union countries reduces the conditional conservatism level.

From previous observations, on the one hand, we expected a decrease in the conservatism level because of the IFRS application. On the other hand, we have stated that International Standards are similar to the characteristics of the Anglo-American model. Therefore, the impact of the IFRS adoption is expected to be more apparent when these standards are applied in countries operating under the continental model. At this level, the assumption is formulated as follows:

# H 3a: The decrease in the unconditional conservatism level is more important in countries operating under the continental model.

# H 3b: The decrease in the conditional conservatism level is more important in countries operating under the continental model.

Furthermore, the decrease in the conservatism gap due to the IFRS adoption in European Union countries should to be examined. In fact, we have considered that the conservatism level is higher in countries operating under a continental model and it will decrease after this adoption. We expect that this will diminish the conservatism gap between the continental



model and the Anglo-American one. For that, the following hypothesis is formulated:

#### H 3c: IFRS adoption reduces the conservatism gap between the two accounting models.

#### 5. Research Methodology

#### 5.1. Sample And Data Collection Procedure

Our research is based on a sample of 15European countries. In this study we will analyze the impact of the mandatory IFRS adoption on accounting conservatism. The selected companies applied these standards for the first time in 2005 following the described 1606/2002 regulation. Thus, to be part of our chosen sample, these companies must:

- Be listed : since the mandatory IFRS adoption by European Union countries concerns consolidated financial statements of listed companies
- Have the necessary data for at least two years for each period before and after the mandatory adoption in 2005<sup>4</sup>.

As a result, all companies that proceeded to an earlier IFRS adoption, before 2005, were excluded. As with previous studies (Giner and Rees 2001; Lara and Mora 2004), financial firms such as banks, insurance companies, investment and leasing companies (code SIC 60-69), are not included in the sample because of their difference with respect to other companies regarding the applied rules and procedures. Also, to facilitate the identification of the IFRS adoption year, we have excluded companies with a closure date different from the calendar year.

The list of companies from our sampled countries is obtained from the World scope database. Thereafter, data related to these companies have been collected from the "Thomson Reuters Eikon" database.

The final sample of our study is composed of 1216 (1126) companies for the sample measuring conditional (unconditional) conservatism. The selection procedure is described in table 1. The analysis will be conducted over five years before and five years after the mandatory adoption. However, we will not consider 2005 since it is the adoption year and it could distort our results. Similarly, the year 2008 will not be considered in order to eliminate any effects of the financial crisis which may affect data reliability especially stock market data in this year. Considering both facts, our study is conducted in two sub-periods; the first, from 2000 to 2004, representing the period before the adoption while the second, from 2006 to 2007 and from 2009 to 2010, considers the period after the adoption. All data are expressed in Euros and we proceeded to their *winsorization* at 1 percent in order to take into account the outliers.

<sup>&</sup>lt;sup>4</sup>He et al. (2008) estimate that this period is sufficient to make the analysis.



Table 1: The sample	construction process
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Description	Number	
	Conditional conservatism	Unconditional conservatism
Starting Population	6026	6026
Exclusion of companies with a closing date of the accounting period different from December 31 and companies that do not meet the selection criteria	4080	4080
Exclusion of companies from the financial sector	399	399
Subtotal 1	1547	1547
Companies lacking data for at least 2 years after and before IFRS adoption	331	421
FINAL SAMPLE	1216	1126

### 5.2. Characteristics of The Sampled Countries

The sample is composed of two groups: the first represents the continental model and the second the Anglo-American one. Similarly, we will take account of the activity sector of each company from the sample through their classification according to SIC codes. Table 2 summarizes the list of companies from the sample divided according to the accounting model (Panel A) and the activity sector (Panel B). From this table, we note that the sample is composed of 1216 companies for the conditional conservatism (CC) sample and 1126 for the unconditional conservatism (UC) sample. In the CC (UC), 233(226) companies for the subsample of the Anglo-American model, versus 983 (902) companies for the continental model. The number of companies varies from two, in Luxembourg, to 271 (297) in France. France is the most represented country in the sample with 22.29 (26.38) percent followed by United Kingdom with 12.91 (14.74)percent, Sweden is in third place with 11.84 (13.23) percent. Luxembourg is ranked last with two companies. Considering the activity sector distribution, panel B from table 2 shows that the industry sector is the most represented in our sample with a percentage of 47.70 (47.16)percent. Service sectors with 21.22 (22.20) percent and public service with 9.70 (10.57) percent respectively take the second and third places. The public administrative sector occupies the last rank with only one (two)companies.



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Table 2: Sample distribution by countries and activity sectors

Panel A : The distri	bution of the sampled compa	nies by country			
Countries	Number of companies (percentage)				
Continental model					
	Sub-samp	ble $1^5$	Sub-sample 2 <sup>6</sup>		
France	271 (22.2	9)	297 (26.38)		
Sweden	144 (11.8	4)	149 (13.23)		
Greece	137 (11.2	7)	16 (1.42)		
Italy	115 (9.46	)	129 (11.46)		
Germany	85 (6.99)		99 (8.79)		
Finland	65 (5.35)		40 (3.55)		
Spain	60 (4.93)		56 (4.97)		
Belgium	38 (3.31)		41 (3.65)		
Denmark	33 (2.71)		38 (3.37)		
Portugal	28 (2.30)		29 (2.58)		
Austria	5 (0.41)		6 (0.53)		
Luxembourg	2 (0.16)		2 (0.18)		
Sub total	983 (80.8	4)	902 (80.11)		
Anglo-american mo	odel				
	Sub-samp	ole 1	Sub-sample 2		
UK	157 (12.9	1)	166 (14.74)		
Netherlands	60 (4.93)		41 (3.64)		
Ireland	16 (1.32)		17 (1.51)		
Sub total	233 (19.1	6)	224 (19.89)		
GENERAL TOTAI	. 1216		1126		

 <sup>&</sup>lt;sup>5</sup> Sub-sample 1 is the group of countries representing the continental model.
 <sup>6</sup> Sub-sample 2 is the group of countries representing the Anglo-Saxon model.



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Panel B : The distribution of the sampled companies by activity sector				
Sector	SIC Code	Number of companies (Percentage)		
		Sub-sample	Sub-sample 2	
Industry	20-39	580 (47.70)	531 (47.16)	
Services	70-89	258 (21.22)	250 (22.20)	
Public services	40-49	118 (9.70)	119 (10.57)	
Wholesale trade	50-51	107 (8.80)	88 (7.82)	
Construction	15-17	60 (4.93)	50 (4.44)	
Retail trade	52-59	51 (4.20)	48 (4.26)	
Mines	10-14	33 (2.71)	32 (2.84)	
Agriculture, forestry and fishing	01-09	8 (0.66)	6 (0.53)	
Public administration	90-99	1 (0.08)	2 (0.18)	
General TOTAL		1216	1126	

#### 5.3. Conservatism Measure And Studied Variables

The accounting literature distinguishes between unconditional conservatism and the conditional one (Ball and Shivakumar 2005; Beaver and Ryan 2005; Qiang 2007). Obviously, both forms were considered as two different measures since they are not similarly defined. The first is often related to practices aiming to undervalue assets and/ or overstate liabilities. The second is rather related to the recognition of economic losses incurred by the company.

#### 5.3.1. The Unconditional Conservatism Measure

The term « unconditional » is used to emphasize that this conservatism form does not depend on good or bad news. Similarly to previous studies (Lobo and Zhou 2006; Anwer and Duellman 2007; He, El-Masry and Wu 2008), we use discretionary accruals as a measure of this form with reference to Jones model modified by Dechow, Sloan and Sweeny (1995). Total accruals (TAC) are the difference between net results (NR) of the company and its operating cash flows (OCF). The first step of the discretionary accruals level estimation consists of estimating the total accruals level, TAC, similarly to the modified Jones model. We estimate the model (1.1) below each year for each two-digit SIC industry to ensure the observations homogeneity. Discretionary accruals are represented by the residue of the model 1.1 (He et al. 2008). This model is presented as follows:

$$TAC_{i,t} = \Box_1 + \Box_2 (\Delta REV_{i,t} - \Delta REC_{i,t}) + \Box_3 PPE_{i,t} + \varepsilon_{i,t}$$
(1.1)



TAC = Total Accruals;  $\Delta REV$  = Change in revenues;  $\Delta REC$  = Change in receivables; PPE<sub>it</sub> = Gross property plant and equipment. All variables are scaled by lagged total assets.

Once discretionary accruals are estimated, they will be regressed, as shown in table 3 below on the different variables of the study in order to test the formulated assumptions.

#### 5.3.2. The Conditional Conservatism Measure

The literature has shown a strong appeal to the model developed by Basu (1997) as a reference model to measure conditional conservatism in the European or other contexts (Lara and Mora 2004; Lobo and Zhou 2006; Grambovas et al. 2006; Gassen et al. 2006; He et al. 2008). It reflects accountants' tendency to require more verification when considering good news. Despite some critics(Givoly D., C. Hayn et A. Natarajan, 2007), the Basu's modelis still considered one of the most appropriate measures of asymmetric timeliness in bad news incorporation (Piot C. et al. 2010). Basu'smodel (1997) is presented as follows:

#### $\mathbf{NI}_{it} = \beta_0 + \beta_1 \mathbf{RN}_{it} + \beta_2 \mathbf{R}_{it} + \beta_3 \mathbf{RN}_{it} * \mathbf{R}_{it} + \varepsilon_{it}$ (2.1)

Where NI: Net income before extraordinary items per share deflated by share price at the beginning of the period; R: Rate of return of the firm<sup>7</sup>; RN: Dummy variable =1 in case of a negative rate of return and 0 in case of a positive rate of return;  $\varepsilon =$  error term.

According toBasu (1997), when accounting practices are conservative, benefits include bad news being learned more rapidly than good news. The news are measured by the stock return between March of the current year and March from the next year.

Hypothesis	Model to estimate				
	UNCONDITIONAL CONSERVATISM				
H 1.a	$TDA = \beta_0 + \beta_1 ACM + \beta_2 TA + \beta_3 DR + \beta_4 SG + \beta_5 CFO + \varepsilon(1.2)$	$\beta_1 > 0$			
Н 2.а	$TDA = \beta_0 + \beta_1 IFRS + \beta_2 TA + \beta_3 DR + \beta_4 SG + \beta_5 CFO + \varepsilon(1.3)$	$\beta_1 > 0$			
Н 3.а	$TDA = \beta_0 + \beta_1 IFRS + \beta_2 TA + \beta_3 DR + \beta_4 SG + \beta_5 CFO + \varepsilon \qquad (1.3)^8$	$\beta_{1C} > \beta_{1A}^9$			
Н 3.с	$TDA = \beta_0 + \beta_1 ACM + \beta_2 TA + \beta_3 DR + \beta_4 SG + \beta_5 CFO + \varepsilon (1.2)^{10}$	$\beta_1$ non-significant			
CONDITIONAL CONSERVATISM					
H 1.b	$NI = \beta_0 + \beta_1 RN + \beta_2 R + \beta_3 RN * R + \beta_4 ACM + \beta_5 ACM * RN + \beta_6$	$\beta_7 < 0$			

### Table 3: Synthesis of the selected empirical models

<sup>&</sup>lt;sup>7</sup>Similarly to Lara and Mora (2004), Giner and Rees (2001) the return is calculated as follows:  $P_t - P_{t-1} / P_{t-1}$ .

<sup>&</sup>lt;sup>8</sup> The model (1.4) will be estimated for the continental and the Anglo-American models.

 $<sup>{}^{9}\</sup>beta_{IC} et\beta_{IA}$ : Coefficients of the model estimation on respectively the continental and Anglo-American groups. <sup>10</sup> The model (1.3) will be estimated distinctly for 2 periods (pre- and post-adoption of IFRS).



	ACM* R+ $\beta_7$ ACM * RN * R + $\beta_8$ TA + $\beta_9$ DR + $\beta_{10}$ SG+ $\epsilon$ (2.2)	
H 2.b	$NI = \beta_0 + \beta_1 RN + \beta_2 R + \beta_3 RN^* R + \beta_4 IFRS + \beta_5 IFRS * RN + \beta_6$ IFRS* R + \beta_7 RN* R * IFRS + \beta_8 TA + \beta_9 DR + \beta_{10} SG + \varepsilon (2.3)	$\beta_7 < 0$
H 3.b	$NI = \beta_0 + \beta_1 RN + \beta_2 R + \beta_3 RN^* R + \beta_4 IFRS + \beta_5 IFRS * RN + \beta_6$ IFRS* R + \beta_7 RN * R * IFRS + \beta_8 TA + \beta_9 DR + \beta_{10} SG + \varepsilon (2.3)^{11}	$\beta_{7C} > \beta_{7A}^{12}$
Н 3.с	$NI = \beta_0 + \beta_1 RN + \beta_2 R + \beta_3 RN * R + \beta_4 ACM + \beta_5 ACM * RN + \beta_6$ $ACM * R + \beta_7 ACM * RN * R + \beta_8 TA + \beta_9 DR + \beta_{10} SG + \varepsilon (2.2)^{13}$	$\beta_7$ non-significant

**TDA** = Total discretionary accruals as estimated by modified Jones model; **ACM** = Accounting model (= 1 if Anglo-American and 0 otherwise). The continental model comprises Germany, Austria, Belgium, Spain, France, Italy, Luxembourg, Portugal, Finland, Greece, Denmark and Sweden. The Anglo-American model includes Ireland, United Kingdom and Netherlands. **IFRS** = indicator variable (= 1 in the post IFRS adoption period and 0 otherwise) ;**NI** = Net income before extraordinary items per share deflated by share price at the beginning of the period ; **R** = Rate of return of the firm ; **R**N = Dummy variable (= 1 in case of negative rate of return and 0 otherwise) ; **TA** = Natural logarithm of end-of-year total assets ; **DR** = Debt ratio ; **SG** = sales growth ; **CFO** cash flow from operational activities scaled by beginning total assets.

#### 5.3.3. Control Variables

Similarly to previous studies, we have introduced control variables to take into account the factors that could influence the conservatism level in addition to independent variables. First, we have maintained the size TA measured by the natural logarithm of the company's total assets. Then, the variable DR (debt ratio) will be also introduced and it is measured by the total debts standardized by the total assets of the company, and also sales growth SG. Finally, the variable CFO is equal to total operating cash flows standardized by total assets at the beginning of the period and will be introduced for the measurement models of unconditional conservatism.

#### 5.4. Analysis Of Descriptive Statistics

Table 4 summarizes the descriptive statistics of the variables studied. It points out that the net income per share (scaled by share price at the beginning of the period) is on average equal to 0.015 ranging from -0.906 to 0.515 with a standard deviation of 0.168. The median of this variable is 0,020. The stock return varies from -0.844 to 2.446 with amean of 0.109, a standard deviation of 0.560 and a median of 0,028. The share price shows an average of 26.353,with 2.69 as a minimum and 70 as a maximum and with a standard deviation of 26.368and a median of 13,261. The dispersion of this variable could be explained by the

<sup>&</sup>lt;sup>11</sup> The model (2.3) will be estimated for both continental and Anglo-American groups.

 $<sup>{}^{12}\</sup>beta_{7C}$  et $\beta_{7A}$ : Coefficients of the model estimation on the continental and Anglo-American groups.

<sup>&</sup>lt;sup>13</sup>The model (2.2) will be distinctly estimated for 2 periods (pre- and post-adoption of IFRS).



difference in the pricing systems of the sampled countries.

Total accruals (standardized by total assets at the beginning of the period) shows amean of -0.013, a median of -0.012 and a standard deviation of 0.059. This variable ranges between -0.114 and 0.082. Discretionary accruals (relative to total assets) are on average equal to -0.026, with a standard deviation of 0.054. The median is at -0.014, while the minimum and maximum for this variable are -0.122 and 0.038 respectively.

The descriptive statistics of the control variables are presented in table 4 for both models since they do not share the same number of observations. These variables have similar values. Thus, the mean of the variable TA is 5.815 for the conditional conservatism measurement model and 5.878 for the unconditional conservatism measurement model. The debt mean (standardized by total assets) is 0.579 for the first model and 0.582 for the second one. As for the sales growth, it is on average equal to 0.099 for conditional conservatism model and 0.070 for those belonging to the accruals measurement model. The values of other statistics (standard deviation, median, minimum and maximum) are also similar. The operating cash flow average (standardized by total assets in the beginning of the period) is 0.071 and its standard deviation is 0.069. Its minimum is equal to -0.045 whereas its maximum rises to 0.181 with 0.073 for the median.

#### 5.5. Univariate Variable Analysis

In order to analyze the variables' evolution before and after IFRS adoption under the accounting models. comparison tests are used only after verifying the normality of the variables. If the normality condition is verified. Student test will be the appropriate test for the average comparison of groups. otherwise Wilcoxon test is recommended. Normality of the variables was verified by the graphical method. representing their distributions as a histogram and a probability-probability diagram. Similarly. this condition was confirmed by skewness and kurtosis values which are far from zero confirming that the studied variables do not follow the normal distribution. Our analysis shows that the discretionary accruals variable follows a normal distribution; all other variables are not Gaussian. Table 5 shows comparison tests results conducted on variables from both models used in this study<sup>14</sup>.

#### 5.5.1. Comparison Before And After IFRS Adoption

From table 5. we can conclude that the majority of variables present significant differences between the pre- and post- periods of the IFRS adoption. Thus, for the conditional conservatism sample, the variables R. PS and TA significantly increased after adopting IFRS.

<sup>&</sup>lt;sup>14</sup> For better reliability, « Student » and « Wilcoxon » tests are conducted for all variables. The results of both tests give consistent results.



Variable	Mean	STD	Median	Minimum	Maximum	
		VARIA	BLES OF BAS	SU MODEL		
NI	0.015	0.168	0.020	-0.906	0.515	
R	0.109	0.560	0.028	-0.844	2.446	
PS	26.353	26.368	13.261	2.69	70	
TA	5.815	2.115	5.576	1.678	11.198	
DR	0.579	0.212	0.596	0.082	1.259	
SG	0.099	0.379	0.055	-0.833	2.358	
	VARIABLES OF ACCRUALS MODEL					
TAC	-0.013	0.059	-0.012	-0.114	0.082	
ΔREV	0.060	0.155	0.040	-0.183	0.346	
AREC	0.013	0.050	0.006	-0.062	0.109	
PPE	0.498	0.387	0.409	0.042	1.176	
TA	5.878	1.812	5.697	3.326	8.967	
TDA	-0.026	0.054	-0.014	-0.122	0.038	
DR	0.582	0.170	0.602	0.292	0.827	
SG	0.070	0.171	0.054	-0.190	0.387	
CFO	0.071	0.069	0.073	-0.045	0.181	

 Table 4: Descriptive Statistics related to sample firms

NI = Net income before extraordinary items per share deflated by share price at the beginning of the period; R = Rate of return of the firm; PS Share price 3 months after the end of the year. ; TAC = Total accruals scaled by lagged Total assets; TDA = Total discretionary accruals as estimated by modified Jones model;  $\Delta$ REV Change in revenues scaled by beginning total assets;  $\Delta$ REC = Change in receivables scaled by beginning total assets; PPE = Gross property plant and equipment scaled by beginning total assets; TA = Natural logarithm of end-of-year total assets; DR = Debt ratio; SG = sales growth; CFO cash flow from operational activities scaled by beginning total assets.

The NI (DR) decreased (increased) in the post IFRS adoption but the variation is not statistically significant. while SG decreased in a statistically significant way. Total accruals in the post-IFRS adoption period are more significant than those of the pre-adoption period of these standards. The same result is observed for discretionary accruals and the difference is statistically significant. Thus, we can conclude that there is a decrease in the unconditional conservatism level due to the adoption of IFRS. This result is in harmony with our expectations. For control variables, a statistically significant increase is observed for the variables TA and CFO but this is not the case for theDR and SG variables that decreased in a



statistically significant way during the IFRS application period.

#### 5.5.2. Comparison By Accounting Model

Table 6 summarizes the results of the variables analysis under each of the accounting models. It is clear from this table that there are significant differences between both models. For example, when we consider the unconditional conservatism sample, we find that discretionary accruals are less significant in countries operating under the Anglo-American model and the difference is statistically significant. This result is not consistent with our expectations, we need to conduct the multivariate analysis to conclude.

	Before IFRS			After IFR	S	Z Wilcoxon	t Student	
	Mean	STD	Median	Mean	STD	Median		
VARIABLES OF BASU MODEL								
NI	0.017	0.164	0.024	0.013	0.174	0.018	2.655	0.991
R	0.066	0.572	-0.003	0.159	0.542	0.059	10.085***	8.445***
PS	24.638	25.518	17.795	28.423	27.218	15.88	4.987***	7.370***
TA	5.642	2.087	5.413	6.025	2.130	5.814	9.457***	9.307***
DR	0.577	0.215	0.595	0.582	0.208	0.596	1.238	0.273
SG	0.125	0.418	0.056	0.068	0.326	0.053	4.230***	7.636***
	VARIABLES OF ACCRUALS MODEL							
TAC	-0.015	0.060	-0.015	-0.011	0.057	-0.010	3.368***	3.040***
ΔREV	0.065	0.159	0.041	0.054	0.149	0.039	2.402**	3.423***
AREC	0.014	0.052	0.006	0.012	0.047	0.006	0.770	1.964
PPE	0.519	0.386	0.445	0.473	0.387	0.365	6.387***	5.673***
TA	5.726	1.799	5.520	6.062	1.810	5.952	9.255***	9.204***
TDA	-0.029	0.054	-0.018	-0.023	0.054	-0.007	5.639***	5.434***
DR	0.584	0.173	0.607	0.578	0.166	0.596	2.437**	1.850**
SG	0.077	0.176	0.053	0.063	0.165	0.056	2.341**	3.863***
CFO	0.068	0.0708	0.072	0.074	0.0672	0.075	3.639***	3.996***

#### Table 5: Variables Comparison before and after the IFRS adoption

\*\*\* Significant at 1 percent; \*\* Significant at 5 percent. indicating that the means (medians) are significantly different between the two periods (before and after IFRS adoption) using t-test (Wilcoxon rank sum test) The period before IFRS. begins from 2000 and ends in 2004. while the period after IFRS is from 2006 to 2007 and from 2009 to 2010. NI = Net income before extraordinary items per share deflated by share price at the beginning of the period ; R = Rate of return of the firm ; PS Share price 3 months after the end of the year. ; TAC = Total



accruals scaled by lagged Total assets; TDA = Total discretionary accruals as estimated by modified Jones model;  $\Delta REV$  Change in revenues scaled by beginning total assets;  $\Delta REC =$ Change in receivables scaled by beginning total assets; PPE = Gross property plant and equipment scaled by beginning total assets; TA = Natural logarithm of end-of-year totalassets; <math>DR = Debt ratio; SG = sales growth; CFO cash flow from operational activities scaled by beginning total assets.

	Con	tinental n	ntal model		-American	model	Z Wilcoxon	t Student
	Mean	STD	Median	Mean	STD	Median		
	VARIABLES OF BASU MODEL							
NI	0.016	0.181	0.032	0.013	0.103	0.001	0.418	0.491
R	0.091	0.555	0.007	0.181	0.575	0.104	6.536***	7.814***
PS	21.429	23.548	9.70	46.869	27.569	70.00	36.393***	42.429***
ТА	5.772	2.129	5.472	5.991	2.047	6.025	6.138***	4.222***
DR	0.585	0.208	0.601	0.554	0.225	0.567	6.050***	5.836***
SG	0.099	0.385	0.055	0.097	0. 354	0.053	0.091	0.243
			VARIAI	BLES OF A	CCRUALS	MODEL		
TAC	-0.014	0.059	-0.014	-0.009	0.058	-0.004	4.379***	3.698***
AREV	0.059	0.153	0.039	0.065	0.162	0.042	1.012	1.466
AREC	0.013	0.050	0.006	0.012	0.047	0.005	0.508	0.897
PPE	0.487	0.392	0.389	0.541	0.363	0.462	7.672***	5.424***
ТА	5.876	1.833	5.631	5.886	1.726	5.944	0.974	0.221
TDA	-0.025	0.055	-0.011	-0.032	0.051	-0.021	7.248***	5.274***
DR	0.589	0.168	0.610	0.551	0.175	0.558	8.686***	8.953***
SG	0.071	0.171	0.054	0.070	0.173	0.054	0.004	0.116
CFO	0.067	0.068	0.070	0.084	0.069	0.087	9.507***	9.456***

Table 6: Variables comparison by accounting model

\*\*\* Significant at 1 percent; \*\* Significant at 5 percent. The continental model comprises Germany. Austria. Belgium. Spain. France. Italy. Luxembourg. Portugal. Finland. Greece. Denmark and Sweden. The Anglo-American model includes Ireland. United Kingdom and Netherlands. NI = Net income before extraordinary items per share deflated by share price at the beginning of the period; R = Rate of return of the firm ; PS Share price 3 months after the end of the year. ; TAC = Total accruals scaled by lagged Total assets ; TDA = Total discretionary accruals as estimated by modified Jones model ;  $\Delta$ REV Change in revenues scaled by beginning total assets ;  $\Delta$ REC = Change in receivables scaled by beginning total assets ; TPE = Gross property plant and equipment scaled by beginning total assets ; TA =



Natural logarithm of end-of-year total assets; DR = Debt ratio; SG = sales growth; CFO cash flow from operational activities scaled by beginning total assets.

#### 6. Results of the empirical analysis

This analysis is preceded by a preliminary step of choosing the appropriate estimation method and also checking the multicolinearity between explanatory variables. The multicolinearity analysis between explanatory variables is achieved by analyzing the correlation matrix. Furthermore a VIF (Variance Inflation Factor) test was performed for greater accuracy about this issue. This analysis has been conducted on the different models of our study and reveals mostly the absence of any multicolinearity problems. In contrast, at the level of model (2.3), VIF value is significant for the *IFRS x* **RN** variable (VIF = 6.63 > 5). Hence, the multicolinearity problem is present and drives us to delete this variable from our model.

#### 6.1. Hypothesis H 1 Test

We have estimated the modified Jones model each year for each two-digit SIC industry since that number of observations is sufficient for such a procedure<sup>15</sup>. Due to the lack of observations, the Public administration sector (SIC code 90-99) was excluded from the analysis. Then discretionary accruals were regressed following the models presented in table3. We used Basu's (1997) measure for the conditional conservatism. In order to compare the accounting conservatism level of companies from countries operating under the continental model with those operating under the Anglo-American one. the ACM variable (which is equal to 1 for the Anglo-American model and 0 for the continental one) is introduced in Basu's (1997) model. Thus the model (2.2) is obtained as presented in table 3.

Panel A from table 7 summarizes results of the model (1.2) estimation and panel B recapitulates those of model (2.2). Concerning the unconditional conservatism, panel A denotes a strong relation between introduced variables of the model (1.2) and discretionary accruals level. For the verification of the first assumption, H 1.a. we will only need the *ACM* variable. Similarly to our expectations, this variable has a positive sign with a statistically significant coefficient. Thus companies in countries operating under the Anglo-American model use the discretionary accruals more than those belonging to countries operating under continental model. This result is consistent with our expectations and we can conclude that the hypothesis H 1.a is validated.

Concerning conditional conservatism we first notice that the coefficient  $\beta_3$  is positive and significant indicating the existence of conservative accounting practices in companies that belong to countries operating under the continental model. The comparison between  $\beta_3$  and  $\beta_2$  shows that the accounting result is much more affected by bad news than good news. This observation supports the hypothesis of the presence of accounting conservatism in companies from the sampled countries operating under the continental model.

Regarding the conditional conservatism, the difference between the Anglo-American and the

<sup>&</sup>lt;sup>15</sup> Lobo G and J. Zhou (2006) specify that this procedure needs 6 observations at a minimum by sector (two-digit code SIC industry is used for this purpose).



continental models is reflected in the variable ACM \* RN \* R. Results from Table 7 (Panel B) show that companies belonging to countries operating under the Anglo-American model have a lower conditional conservatism level than those belonging to countries operating under the continental model. In fact the coefficient  $\beta_7$  is negative and significant (at the level of 1 percent). This result validates hypothesis H 1.b stating that the conditional conservatism level is higher in countries operating under the continental model.

$Panel A (Model 1.2): TDA_{it} = \beta_0 + \beta_1 ACM + \beta_2 TA_{it} + \beta_3 DR_{it} + \beta_4 SG_{it} + \beta_5 CFO_{it} + \varepsilon_{it}^{(a)}$				
Variable		Coefficient	Z	
ACM	$\beta_1$	0.0077	5.80***	
TA	$\beta_2$	-0.0028	-8.64***	
DR	β <sub>3</sub>	-0.0620	-17.75***	
SG	$\beta_4$	-0.0583	-16.36***	
CFO	β5	-0.4003	-45.47***	
Constant	β <sub>0</sub>	0.0450	17.36***	
Observations	8581	Wald Khi <sup>2</sup>	3308.97***	

#### Table 7: Analysis of the conservatism level in the sampled companies

 $Panel B (Model 2.2): NI_{it} = \beta_0 + \beta_1 RN_{it} + \beta_2 R_{it} + \beta_3 RN_{it} * R_{it} + \beta_4 ACM_{it} + \beta_5 ACM_{it} * R_{it} + \beta_6 ACM_{it} * R_{it} + \beta_7 TA_{it} + \beta_8 DR_{it} + \beta_9 SG_{it} + \varepsilon_{it}^{(b)}$ 

Variable		Coefficient	Z
DR	$\beta_1$	-0.0004	-0.77
R	$\beta_2$	-0.0015	-3.10***
RN * R	β <sub>3</sub>	0.0272	19.65***
ACM	$\beta_4$	-0.0150	-18.69***
ACM * R	β <sub>5</sub>	0.0003	0.26



ACM * RN	$\beta_{6}$	0.0017	1.24
ACM * RN * R	β <sub>7</sub>	-0.0193	-5.05***
TA	$\beta_8$	0.0007	8.60***
DR	β9	-0.0005	-0.67
SG	β 10	0.0031	6.54***
Constant	β <sub>0</sub>	0.0274	37.44***
Observations	9623	Wald Khi <sup>2</sup>	1736.66***

Significant at: \*\*\*1 percent \*\*5 percent \*10 percent.

- (a) Panel A estimates the model (1.2) and measures the impact of the accounting model on unconditional conservatism.
- (b) Panel B estimates the model (2.2) and measures the impact of the accounting model on conditional conservatism.

TDA: Total discretionary accruals as estimated by modified Jones model ACM: Dichotomous Variable equal to 1 for a company operating under the Anglo-American model and 0 for continental model.NI: Net income before extraordinary items per share deflated by share price at the beginning of the period; R: the stock return. RN: Dichotomous variable equal to 1 in case of negative return and 0 otherwise. TA: Natural total assets Logarithm. DR: Total debt normalized by the total assets of the firm. SG: Sales growth of the firm. CFO: Operating Cash flows scaled by total assets in the beginning of the period.

### 6.2. Hypothesis H 2 Test

Analyzing the impact of the International Standards adoption on the unconditional conservatism level will be through the model (1.3) estimation and the model (2.3) concerning conditional conservatism. The results of this analysis are presented in table8. Panel A allows for comparing discretionary accruals before and after the adoption of International Standards. It shows that discretionary accruals increase in the post-period of the IFRS adoption. Indeed. the coefficient of the IFRS variable is positive and significant (1percent). Thus similarly to our expectations and to the results of the univariate analysis, the unconditional conservatism level has decreased because of the IFRS application. Consequently hypothesis H 2.a is validated.

In order to study the impact of IFRS adoption on the conditional conservatism level, we principally observe the coefficient of the variable *IFRS* \* RN \* R from Panel B. Indeed, the interaction *IFRS* \* RN \* R allows for judging the impact of IFRS on the recognition of bad



news over good news. From table 8 (Panel B), we notice that the accounting practices of the firms in the studied sample are conservative. In fact the coefficient  $\beta_3$  is positive and significant (at 1percent). Similarly to what we previously have estimated, the coefficient  $\beta_6$  is negative and significant indicating that the recognition of bad news over good news decreases in the post-period of the IFRS adoption. The variation of the current recognition of bad news versus good through the IFRS adoption is measured as follows ( $\beta_5 + \beta_6$ ) / ( $\beta_2 + \beta_3$ )<sup>16</sup>. Thus IFRS adoption in European Union countries leads to a decrease of 34.48percent in the recognition of bad news over good ones. The hypothesis H 2.b is then validated.

#### 6.3. Hypothesis H 3 Test

#### 6.3.1. Reduction Test Of The Conservatism Level

Table 9 summarizes the estimation results of the models (1.3) and (2.3) for both Anglo-American and continental groups. Thus it allows for comparing IFRS impact on the conservatism level following the accounting model of each country. With regard to unconditional conservatism table 9 (Panel A) shows that companies of the two sub-groups use more discretionary accruals in the post-IFRS adoption period. Besides the coefficient of the IFRS variable is positive and significant (at 1 percent) for both sub-samples. Thus contrary to what we expected. From table 9 we observe no difference between both of the accounting models studied. The decrease of unconditional conservatism after adopting IFRS is similar for the continental model and the Anglo-American one. Thus the hypothesis H3.a is not validated. Hence the reduction of the unconditional conservatism level may be affected by factors other than IFRS adoption and which are not introduced in this study.

Panel B summarizes the results concerning the impact of International Standards on the conditional conservatism level under the accounting model. First. it seems that conservative accounting exists for companies belonging to countries operating under the continental model but not for those countries operating under the Anglo-American one. Indeed, the coefficient  $\beta_3$  related to the variable RN \* R is positive and significant (at 1 percent) for the first group and not for the latter. Table 9 shows that companies of countries operating under the continental model face a decrease in the conditional conservatism level in the post-IFRS adoption period. Thus the coefficient  $\beta_6$  is negative and significant (at 5 percent) indicating that bad news is reflected in earnings more rapidly than good news after the application of IFRS.

<sup>&</sup>lt;sup>16</sup>  $(\beta_2 + \beta_3)$  measures the conditional conservatism degree in the pre-periodof IFRS adoption .  $(\beta_5 + \beta_6)$  measures the conditional conservatism degree in the post-periodof IFRS adoption.



$Panel A: TDA_{it} = \beta_0 + \beta_1 IFRS_{it} + \beta_2 TA_{it} + \beta_3 DR_{it} + \beta_4 SG_{it} + \beta_5 CFO_{it} + \varepsilon_{it} (1.3)^{(a)}$						
Variable		Coefficient	Z			
IFRS	β1	0.0032	6.75***			
ТА	β <sub>2</sub>	-0.0034	-11.18***			
DR	β <sub>3</sub>	-0.0186	-8.46***			
SG	β <sub>4</sub>	-0.0342	-35.44***			
CFO	β4	-0.0357	-11.98***			
Constant	βο	0.0191	9.13***			
Observations	8581	Wald Khi <sup>2</sup>	1835.04***			

Table 8: Analysis of IFRS impact on the conservatism level

 $Panel B: NI_{it} = \beta_0 + \beta_1 RN_{it} + \beta_2 R_{it} + \beta_3 RN_{it} * R_{it} + \beta_4 IFRS_{it} + \beta_5 IFRS_{it} * R_{it} + \beta_6 IFRS_{it} * RN_{it} * R_{it} + \beta_7 TA_{it} + \beta_8 DR_{it} + \beta_9 SG_{it} + \varepsilon_{it} \quad (2.3)^{(b)}$ 

Variable		Coefficient	Z
RN	β <sub>1</sub>	0.0143	2.60***
R	β <sub>2</sub>	0.0088	1.38
RN * R	β <sub>3</sub>	0.1011	6.14***
IFRS	β4	-0.0229	-4.23***
IFRS * R	β <sub>5</sub>	0.0131	1.40
IFRS * RN * R	β <sub>6</sub>	-0.0510	-1.97**
ТА	β <sub>7</sub>	0.0090	10.28***
RN	β <sub>8</sub>	-0.0402	-4.39***



SG	β9	0.0505	8.91***
Constant	βο	-0.0035	-0.43
Observations	9623	Wald Khi <sup>2</sup>	335.53***

Significant at :\*\*\* 1 percent; \*\* 5 percent ; \* 10 percent .

- (a) Panel A estimates the model (1.3) and measures the impact of the IFRS adoption on unconditional conservatism.
- (b) Panel B estimates the model (2.3) and measures the impact of IFRS adoption on conditional conservatism.

TDA: Total discretionary accruals as estimated by modified Jones model. IFRS: Dichotomous Variable equal to 1 in the IFRS post adoption period and 0 elsewhere. NI: Net income before extraordinary items per share deflated by share price at the beginning of the period; R: the stock return. RN: Dichotomous variable equal to 1 in case of negative return and 0 otherwise. TA: Natural total assets Logarithm. DR: Total debt normalized by the total assets of the firm. SG: Sales growth of the firm. CFO: Operating Cash flows scaled by total assets in the beginning of the period.

Table O. Analysia	of the IEDC :	maat on a	an any setion 1	aval fallow	ing the east	ounting model
Table 9. Analysis	of the IFKS I	inpact on co	onservatism i	ever ronow	mg the acc	ounting model

$Panel A: TDA_{it} = \beta_0 + \beta_1 IFRS_{it} + \beta_2 TA_{it} + \beta_3 DR_{it} + \beta_4 SG_{it} + \beta_5 CFO_{it} + \varepsilon_{it} (1.3)^{(a)}$						
		Continental model		Anglo-American model		
Variable		Coefficient	Z	Coefficient	Z	
IFRS	$\beta_1$	0.0018	3.55***	0.0101	7.84***	
ТА	$\beta_2$	-0.003	-9.02***	-0.0045	-6.13***	
DR	β <sub>3</sub>	-0.0182	-7.64***	-0.0150	-2.72***	
SG	$\beta_4$	-0.0314	-30.79***	-0.0459	-17.55***	
CFO	β5	-0.0301	-9.63***	-0.0588	-7.01***	
Constant	β <sub>6</sub>	0.0195	8.47***	0.0140	2.84***	



Observations		6756		1825	
Wald Khi <sup>2</sup>		1323.16***		528.34***	
Panel B: $NI_{it} = \beta_0 + \beta$ $\beta_6 IFRS_{it} * RN_{it} * R_{it} + \varepsilon_{it}$ (2)	$(1 RN_{it} + 2.3)^{(b)}$	$-\beta_2 R_{it} + \beta_3 R$	$\beta_2 R_{it} + \beta_3 RN_{it} * R_{it} + \beta_4 IFRS_{it} + \beta_5 IFRS_{it} *$		
		Continental model		Anglo-American model	
Variable		Coefficient	Z	Coefficient	Z
RN	$\beta_1$	0.0184	2.46**	0.0001	0.08
R	$\beta_2$	0.0138	1.51	-0.0008	-0.43
RN* R	β <sub>3</sub>	0.1269	5.68***	0.0092	1.50
IFRS	β4	-0.0288	-3.85***	-0.0008	-0.52
IFRS * R	β <sub>5</sub>	0.0190	1.44	-0.0008	-0.29
IFRS * RN * R	β <sub>6</sub>	-0.0665	-1.88**	-0.0012	-0.14
ТА	$\beta_7$	0.0105	9.02***	0.0020	5.95***
RN	β <sub>8</sub>	-0.0564	-4.38***	-0.0082	-3.030***
SG	β9	0.0667	8.79***	0.0010	0.57
Constant	β <sub>0</sub>	0.0009	0.08	-0.0021	-0.90
$\Delta$ CC (percentage)		-33.759		-23.80	
Observations		7654		1969	
Wald Khi <sup>2</sup>		307.49***		43.78***	

Significant at: \*\*\* 1 percent; \*\* 5 percent; \* 10 percent. The continental model comprises Germany. Austria. Belgium. Spain. France. Italy. Luxembourg. Portugal. Finland. Greece. Denmark and Sweden. The Anglo-American model includes Ireland. United Kingdom and Netherlands.



- (a) Panel A estimates the model (1.3) and measures the impact of the IFRS adoption on unconditional conservatism following the accounting model.
- (b) Panel B estimates the model (2.3) and measures the impact of IFRS adoption on conditional conservatism following the accounting model.

TDA: Total discretionary accruals as estimated by modified Jones model. IFRS: Dichotomous Variable equal to 1 in the IFRS post adoption period and 0 elsewhere. NI: Net income before extraordinary items per share deflated by share price at the beginning of the period; R: the stock return. RN: Dichotomous variable equal to 1 in case of negative return and 0 otherwise. TA: Natural total assets Logarithm. DR: Total debt normalized by the total assets of the firm. SG: Sales growth of the firm. CFO: Operating Cash flows scaled by total assets in the beginning of the period.  $\Delta$  CC: conditional conservatism level variation.

For the Anglo-American sample, the coefficient  $\beta_6$  is negative but statistically nonsignificant. Consequently, IFRS did not have a notable impact on the recognition of bad news over good. Besides, in order to compare the impact of IFRS on the recognition of bad news over good, the ratio  $(\beta_5 + \beta_6) / (\beta_2 + \beta_3)$  was calculated for both sub-samples. For the continental group, a decrease of 33.759percent resulted in the conditional conservatism level after adopting IFRS. However, a decrease of only 23.80percentwas observed for the Anglo-American group. The hypothesis H3.b. stating that the decrease in the conditional conservatism level is more important in countries operating under the continental model is thus validated.

#### 6.3.2. Test Of The Conservatism Gap Decrease Between Both Models

Table 10 summarizes the results of the conservatism level analysis following the accounting model before and after IFRS adoption. Our objective is to verify that the conservatism difference between both models decreases after the implementation of IFRS. If so, we can conclude that these standards lead to the harmonization of the accounting practices and thus to reaching the objective of the IASB.

Panel A from table 10 presents the results concerning conditional conservatism. The model (2.2) was estimated by distinguishing the two periods. both before and after the IFRS adoption. Through comparing the coefficient of the variable ACM \* RN \* R we will be able to verify the third hypothesis H3.c. From table 10 (Panel A). considering the pre-IFRS adoption period. this coefficient is negative and significant (1percent). This result allows us to conclude that before adopting IFRS. the conservatism level is higher in countries operating under the continental model than in those operating under the Anglo-American one. However in the post-IFRS adoption period, the ACM \* RN \* R variable has a negative coefficient although this is statistically non-significant. This result allows us to conclude that the difference in the conservatism level between countries operating under both models diminished after IFRS adoption. Indeed. the ratio  $(\beta_5 + \beta_7) / (\beta_2 + \beta_3)$  confirms our results. In fact, before IFRS adoption countries operating under the continental model were 84.22 percent more conservative than those operating under an Anglo-American model. This ratio is reduced to 46.69 percent after the adoption of IFRS. Thus IFRS promote the harmonization



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of accounting practices because of accounting conservatism. The hypothesis H 3.c is then validated for conditional conservatism.

In order to verify whether the unconditional conservatism gap decreases in the post-adoption period of IFRS, the model (1.3) is estimated separately for both adoption periods. The coefficient interpretation of the ACM variable allows concluding that there is no difference between the two models after adopting IFRS. Indeed. the coefficient of this variable is significant at the 1 percent level for the two periods (before and after the adoption of IFRS). Thus hypothesis H3.c is not validated for this conservatism measure. This result is not in line with our expectations but is consistent with the result obtained for the hypothesis H3a.

$PANELA: NI_{it} = \beta_0 + \beta_1 RN_{it} + \beta_2 R_{it} + \beta_3 RN_{it} * R_{it} + \beta_4 ACM_{it} + \beta_5 ACM_{it} * R_{it} + \beta_6 ACM_{it} * RN_{it} + \beta_7 ACM_{it} * RN_{it} * R_{it} + \beta_8 TA_{it} + \beta_9 DR_{it} + \beta_{10} SG_{it} + \varepsilon_{it} $ (2.2) <sup>(a)</sup>							
		Before IFRS		After IFRS			
		Coefficient	Z	Coefficient	Z		
RN	β1	0.0002	0.30	-0.0010	-1.26		
R	$\beta_2$	-0.0018	-2.68**	-0.0012	-1.78*		
RN* R	β <sub>3</sub>	0.0297	17.18***	0.0224	9.32***		
ACM	β4	-0.0161	-14.60***	-0.0140	-11.98***		
ACM * R	β <sub>5</sub>	0.0024	1.28	-0.0018	-0.93		
ACM * RN	β <sub>6</sub>	0.0017	0.89	0.0024	1.13		
ACM * RN * R	β <sub>7</sub>	-0.0259	-5.33***	-0.0081	-1.28		
ΤΑ	$eta_8$	0.0004	3.64***	0.0010	8.50***		
RN	β9	0.0013	1.17	-0.0026	-2.13**		
SG	$\beta_{10}$	0.0017	3.01***	0.0055	6.92***		
Constant	$eta_{0}$	0.0286	28.72***	0.0261	24.24***		

Table 10: Analysis of the conservatism gap following accounting model



$\Delta$ CC (percentage)		-84.22		-46.69		
Observations		5049		4574		
Wald Khi <sup>2</sup>		1047.72***		737.61***		
PANEL B: $TDA_{it} = \beta_0 + \beta_1 ACM_{it} + \beta_2 TA_{it} + \beta_3 DR_{it} + \beta_4 SG_{it} + \beta_5 CFO_{it} + \varepsilon_{it} (1.2)^{(a)}$						
		Before IFRS		After IFRS		
		Coefficient Z		Coefficient	Z	
ACM	$\beta_1$	0.0099	8.65***	0.0204	11.76***	
ТА	β <sub>2</sub>	-0.0059	-19.24***	-0.0004	-0.09	
DR	β <sub>3</sub>	-0.0580 -21.73***		-0.0789	-17.71***	
SG	$\beta_4$	-0.1210	-51.70***	-0.0817	-15.73***	
CFO	β <sub>5</sub>	-0.4372	-53.66***	-0.5022	-44.22***	
Constant	β <sub>6</sub>	0.0588 33.68***		-0.0461 13.41***		
Observations		4530		4051		
Wald Khi <sup>2</sup>		9402.34***		2662.21***		

Significant at:\*\*\* 1 percent; \*\* 5 percent ; \* 10 percent. The period before IFRS begins from 2000 and ends in 2004, while the period after IFRS is from 2006 to 2007 and from 2009 to 2010.

- (a) Panel A estimates the model (2.2) and measures the difference between the two accounting models in terms of conditional conservatism before and after IFRS adoption.
- (b) Panel B estimates the model (1.2) and measures the difference between the two accounting models in terms of unconditional conservatism before and after IFRS adoption.

TDA: Total discretionary accruals as estimated by modified Jones model. ACM: Dichotomous Variable equal to 1 for a company operating under the Anglo-American model and 0 for continental model; NI: Net income before extraordinary items per share deflated by

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share price at the beginning of the period; R: the stock return. RN: Dichotomous variable equal to 1 in case of negative return and 0 otherwise. TA: Natural total assets Logarithm. DR: Total debt normalized by the total assets of the firm. SG: Sales growth of the firm. CFO: Operating Cash flows scaled by total assets in the beginning of the period.  $\Delta$  CC: conditional conservatism level variation.

We should also note that the difference between the two models does not definitely disappear. The unconditional conservatism level is always higher in countries operating under the continental model even after IFRS adoption. Consequently, IFRS contribute to the accounting practices harmonization even if differences are not totally eliminated. There are probably factors other than accounting standards that determine accounting practices in the European Union region.

#### 7. Conclusion and Future Research Avenues

The objective of this research is to verify whether mandatory IFRS adoption by countries from the European Union leads to a decrease in the level of accounting conservatism. Then we aim to investigate whether there is narrowing of the conservatism gap between the two accounting models. The verification of this objective is based on a sample of 1216 companies for the model measuring conditional conservatism and 1126 for the one measuring unconditional conservatism. Both sub-samples are observed under two sub-periods. the preperiod of IFRS adoption which is from 2000 to 2004 and the post-adoption period of these standards from 2006 to 2007 and from 2009 to 2010. Conservatism is categorized under two forms: unconditional and then conditional conservatism. The first has been measured by discretionary accruals as has been done in previous studies (Anwer. Billings. Morton andHarris 2002; Lobo and Zhou 2006; Gassen et al. 2006; Anwer and Duellman 2007; He et al. 2008). The second has been measured by Basu's (1997) model.

#### 7.1. Analysis Of The IFRS Impact On Conservatism

Globally. the results show a decrease of the conservatism level in the post adoption period. More specifically. the results of our study show that the analyzed companies use more discretionary accruals when applying IFRS. The recognition of bad news over good ones decreases when financial statements are prepared under IFRS. Similarly to what Paananen and Lin (2009) observed. this result proves that bad news recognition diminished after the mandatory adoption of the IFRS. In the same way.our study has shown an increase of discretionary accruals in the post IFRS adoption.which means a decrease in the unconditional conservatism level.

### 7.2. Accounting And Conservative Models

Further analysis taking into account the accounting model used showed that the decrease in the conditional conservatism level of the continental sample is more significant than the decrease observed in the Anglo-American group. This observation could be explained by IFRS similarities with the Anglo-American model. Thus the IFRS implementation would be more significant in countries operating under the continental model. The previous result is aligned with earlier research on the impact of IFRS adoption. In this context, Zeghal et al.



(2012) showed that the conservatism decreased after the mandatory adoption of IFRS. They also found that the decrease in the conservatism level after IFRS adoption is more important for countries with local standards significantly different from International Standards. However the results of our study show that there is no significant difference in the decrease of the unconditional conservatism level for continental and Anglo-American models. Furthermore, we were able to notice a decrease in the conditional conservatism gap between the countries operating under the continental model and those operating under the Anglo-American one. This important observation allows us to conclude that the IASB is realizing its objective through internationally harmonizing accounting practices. Nevertheless. the gap is not significantly reduced for the unconditional conservatism. This result would be explained by the existence of other factors affecting the accounting practice in the European Union.

The results of our study confirm those of previous researches such as Zeghal et al. (2012). Anwer et al. (2013) and André et al. (2015). However we obtain different results from Piot et al. (2010) and Zhuang et al. (2014). In fact the former found a decrease in conditional conservatism but an increase in unconditional conservatism. The latter stated that there is no change in accounting conservatism (they employed conditional conservatism) for non financial firms and that there is a significant decrease only for firms domiciled in weak legal enforcement countries. The differences in the results obtained can be explained by methodological differences and measures of conservatism.

Future researchers could conduct similar analyses in the context of other countries or groups of countries that have adopted IFRS. This could be especially relevant in the case of emergent countries and other European countries that are not covered by this study.

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