ISCTE Business School

Department of Accounting

Do Firms with a More International Board Comply Better with IFRS Disclosure Requirements?

Sónia Raquel Baptista Fernandes

Thesis specially presented for the fulfillment of the degree of

Doctor in Management - Specialization in Accounting

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ISCTE – Instituto Universitário de Lisboa

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RESUMO

Este estudo analisa o efeito da internacionalização da administração no nível de cumprimento da divulgação obrigatória exigida pela IFRS 3 no Brasil.

A base teórica deste estudo combina duas teorias - *Upper Echelons Theory and Resource Dependence Theory.* Com base nestas teorias criou-se as seguintes hipóteses: uma maior proporção de membros estrangeiros na administração das empresas e/ou uma maior proporção de membros da administração com formação no estrangeiro está associada ao um aumento do nível de cumprimento da divulgação obrigatória da IFRS 3.

Os resultados deste estudo confirmaram as hipóteses, ou seja, empresas brasileiras com mais administradores estrangeiros ou com mais administradores com formação no estrangeiro cumprem mais com a divulgação obrigatória exigida pela IFRS 3.

Estes resultados levantam a discussão de que as características individuais dos membros da administração podem afetar a o cumprimento da divulgação obrigatória. Estes resultados são também importantes para os reguladores que estejam interessados em encontrar a composição da administração ideal.

Palavras-Chave: Cumprimento, Administração – Determinante, Internacionalização, IFRS 3.

ABSTRACT

This study analyses the effect of the internationalisation of the board members on the level of compliance with the disclosure requirements of IFRS 3 in Brazil.

Based on a framework that combines Upper Echelons Theory and Resource Dependence Theory, we hypothesise that a higher proportion of foreign board members and/or a higher proportion of board members with training abroad is associated with a higher level of compliance with IFRS 3 disclosure requirements.

The results of this study confirm our hypothesis, i.e., Brazilian firms with more foreign board members or/and with more board members with training abroad comply better with IFRS 3 requirements.

These findings shed light on the discussion of the effect of board members' characteristics on mandatory disclosure; they are also important to policy makers who are interested in achieving optimal board composition.

Keywords: Compliance, Board Members - Determinant, Internationalisation, IFRS 3.

JEL Classification: M41 – Accounting; M48 - Government Policy and Regulation

SUMMARY

In recent years, the literature on determinants of mandatory disclosure has increased and determinants related to business, culture, enforcement and corporate governance have been tested.

With regard to the determinants of corporate governance, we have found that the individual characteristics of the board members have been little explored and that board members are expected to have strong decision-making power on the information disclosed; this clearly suggests that the characteristics of board members can influence the compliance of mandatory disclosure.

This study analyses the effect of the board members' characteristics, more specifically internationalisation (nationality and training), on the level of compliance with mandatory disclosure. It examines the case of Brazil as this is a growing capital market and, therefore, of relevance and it adopted IAS/IFRS in 2010. However, Brazil is a code law country with low enforcement and weak investor protection; moreover, it has no mandatory rule about the composition of the board, even when recommendations suggest that the board should have as many independent members as possible and that it should be constituted diversely.

Given the wide range of disclosure required by IFRS, our study focuses on a single standard - IFRS 3 - International Financial Reporting Standard 3: Business Combinations. This standard is very important because it reflects business investment and often involves large sums of money.

Based on a framework that combines Upper Echelons Theory and Resource Dependence Theory, we hypothesise that a higher proportion of foreign board members and/or a higher proportion of board members with training abroad is associated with a higher level of compliance with IFRS 3 disclosure requirements.

The study uses the Ordinary Least Squares (OLS) equation where the dependent variable is the compliance/disclosure index and the independent variables include the test variables (hypotheses) and control variables.

The results confirm the hypothesis, i.e., Brazilian firms with more foreign board members or/and with more board members with training abroad comply better with IFRS 3 requirements. This study also demonstrates that the level of compliance with the IFRS 3 disclosure requirements is moderate, as expected.

Our findings not only shed light on the discussion about the effect of board members' characteristics on mandatory disclosure, but are also important to policy makers interested in achieving optimal board composition.

DEDICATION

I dedicate this work to my father, Vítor Ramos Fernandes,

because more than anyone else,

he

has always been on my side in this project,

has always supported me

and has always believed that I could reach the end!

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***"The mind that opens up to a new idea never returns to its original size"* – Albert Einstein**

A PhD process is very hard work. It is as if we are traveling alone down a road thousands of miles long and there are so many times when the frictions we encounter make us want to give up and go back. However, there are people along that road who do not let us do this and they give us that extra push to get to the end! It is these people that I want to highlight and thank from the bottom of my heart.

I would like to start by thanking my supervisor, Prof. Isabel Lourenço. I met Prof. Isabel nine years ago when I decided to do my master's degree, and since then she has been a remarkable person in my life. From the moment we met, she encouraged me from a professional perspective to do my PhD. She played a unique part in this process, an exemplary and excellent supervisor who was always there to help and give great recommendations to make this work possible. And also, when things were most difficult, as a friend she gave me the reassuring words : "You will get there Sonia ..." For all this, a big thank you!

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LIST OF ABREVIATIONS

- ADR – American Depositary Receipt
- BR GAAP – Brazil's Generally Accepted Accounting Principles;
- BM&FBOVESPA - Stock Exchange of São Paulo;
- CEO – Chief Executive Officer;
- CFO – Chief Financial Officer;
- CGI index - Corporate Governance Index of BM&FBOVESPA;
- CPC 15 - *Comité de Pronunciamento Contábil 15;*
- CVM - Securities and Exchange Commission;
- EU – European Union
- FRA – Financial Reporting Act of 1993;
- FRS - Financial Reporting Standards - mandatory disclosure practices of companies listed on the New Zealand Exchange Limited
- IAS – International Accounting Standards;
- IAS 12 - International Accounting Standard – Income taxes;
- IAS 36 - International Accounting Standard – Impairment of assets;
- IBCA - Brazilian Institute of Management Board;
- IBCG - Brazilian Institute of Corporate Governance;
- IFRS - International Financial Reporting Standards;
- IFRS 3 – International Financial Reporting Standard 3: Business Combinations;
- KLSE - Kuala Lumpur Stock Exchange;
- OLS - Ordinary Least Squares Equation
- S&P - Standard & Poor's;
- US – United States;
- US GAAP – United States Generally Accepted Accounting Principles;

1. INTRODUCTION

1.1 Background, Purpose and Hypotheses

This study analyses the effect of the internationalisation of the board members on the level of compliance with the disclosure requirements of IFRS 3 in Brazil, using the theoretical framework of the Upper Echelons and Resource Dependence Theories.

Compliance with mandatory disclosure is a very important issue nowadays because information affects decision making (Bhasin and Shaikh, 2011; Ball, Robin and Wu., 2003; Hodgdon , Tondkar, Harless and Adhikari, 2008), and reduces the cost of capital and information asymmetry (Diamond and Robert, 1991; Botosan, 1997).

Due of the potential impact of the disclosure of information, research on mandatory disclosure has increased in recent years. It should be noted that this increase is also explained by the adoption of IAS (International Accounting Standards) and IFRS (International Financial Reporting Standards). This makes it possible to analyse and compare the level of compliance with mandatory disclosure requirements in different settings.

In addition to the increase in the literature on mandatory disclosure, organisational theories (Agency, Signalling, Political Process and Capital Need) have also been used to explain the link between (Samaha and Khlif, 2016 a, b) business characteristics and the level of compliance with mandatory disclosure. However, the divergent results found in prior literature have led to the further studies on non-business determinants such as cultural determinants (Zarzeski, 1996; Tower, Hancock and Taplin, 1999; Archambault and Archambault, 2003), enforcement determinants (Street and Bryant, 2000; Glaum and Street, 2003; Owusu-Ansah and Yeoh, 2005; Al-Akra, Eddie and Ali, 2010) and corporate governance determinants (Chen and Jaggi, 2000; Alanezi and Albuloushi, 2011; Ebrahim and Fattah, 2015).

With regard to corporate governance determinants, few studies have analysed the individual characteristics of the board members as a determinant of compliance (Abdullah, Evans, Fraser and Tsalavoutas, 2015; Ebrahim and Fattah, 2015). However, given board members' power to decide what information is disclosed, the characteristics of board members can clearly also influence the fulfillment of disclosure.

Moreover, the analysis of compliance with mandatory disclosure also implies examining the location; indeed, according to Samaha and Khlif (2016 a, b), compliance is affected by the economic, social and political environment of the country under analysis. The same conclusion can be reached with regard to the characteristics of board members, that is, certain characteristics of board members may be important in certain environments and not in others. Following this line of thought, we must choose either countries with similar characteristics or a single country when studying compliance.

Brazil is the focus of our study due to its relevance and growing capital market: in 2011, the Stock Exchange of São Paulo - BM&FBOVESPA was the eighth largest in the world.

Brazil adopted IAS/IFRS in 2010 and expects the application of these standards to raise the quality of accounting, and thus be of benefit for companies and users. It should be noted that Brazil is a code law country; as accounting is essentially conducted in accordance with tax rules in code law countries, the introduction of IFRS represents a departure from this norm. Brazil is still an emerging country and according to Ali, Ahmed and Henry (2004) financial reporting is vital to the growth and development of capital markets in this kind of nation. The specific features of this country, such as the risk associated with economic policies and their legal systems, significantly influence disclosure.

In relation to Brazil's corporate governance, although there is no mandatory rule on the composition of the board, the Securities and Exchange Commission (CVM) and the Brazilian Institute of Corporate Governance (IBCG) have recently recommended that the board should be constituted by as many independent and diverse members as possible (Code of Best Corporate Governance Practices, 2015; *Recomendações da CVM sobre Governança Corporativa*, 2002).

In light of the accounting situation in Brazil, it is expected that compliance with mandatory disclosure will be low. In addition, it is clear from the recommendations issued by the CVM and the IBCG that the board's independence and diversity are very important issues that can help companies at various levels, notably to combat low enforcement and even improve compliance with mandatory disclosure. However, the characteristics that make board members really independent as well the nature of diversity that has an impact in Brazil remain unknown.

Internationalisation is one of the observable characteristics of the board which is expected to affect the fulfilment of disclosure because according to Ruigrok, Peck and Tacheva (2007), when board members are foreigners they are really independent. Under Agency Theory, where directors tend to act on their own interests, this is considered important because independent members on the board help avoid agency conflicts. It is noted that internationalisation of the board can also be seen from the perspective of diversity. Other studies have demonstrated the relevance of the internationalisation of the board to different aspects of compliance: the study by Oxelheim and Randøy (2003) shows that foreign board membership increase firm value; the study by Masulis, Wang and Xie (2012)finds that foreign independent directors make better cross-border acquisitions when the targets are from the home regions of these directors; and finally, the study by Dauth, Pronobis and Schmid (2016) demonstrates there is better quality accounting when Chief Financial Officers - CFOs have international education and international work experience. Moreover, internationalisation can be seen not only in terms of nationality, but also education and experience (Dauth *et al.*, 2016).

The fact that internationalisation impacts compliance with mandatory disclosure will be theoretically based on the Upper Echelons (Hambrick and Mason, 1984) and Resource Dependence theories (Pfeffer and Salancik, 1978). In Upper Echelons Theory, the board members' strategic decisions have a psychological base, that is, they are based on their cognitive values and their training and professional career. Internationalisation can affect people's cognitive values, and their professional careers; these, in turn, have an impact on their strategic decisions, more specifically in the compliance of disclosure requirements. Resource Dependence Theory defends that a variety of occupational representation will be a source of knowledge for the board and this knowledge/expertise will affect board members' communication and, consequently, that of the company which, in turn, affects the compliance / disclosure.

Given the wide range of disclosure required by IFRS, our study focuses on a single standard - IFRS 3 - International Financial Reporting Standard 3: Business Combinations. This standard sets out the principles to be used by the acquiring company engaged in a business combination, namely: how to recognise and measure the assets acquired and liabilities assumed in a business combination; how to recognise and measure the non-controlling interests and goodwill, and what kind of information must be disclosed in the new entity's financial statements.

Business combinations reflect business investment aimed at increasing competitiveness, reducing risk and enhancing competition and synergies between business supports and they often involve large sums of money (Hamberg, Paananen and Novak, 2011). Hamberg *et al.* (2011) note the importance of IFRS 3; indeed, there are studies devoted exclusively to compliance with this standard and its determinants (Glaum, Schmidt and Street, 2013; Lucas and Lourenço, 2014, Baboukardos and Rimmel, 2014). We believe it is necessary to analyse the fulfilment of such an important standard as IFRS 3 separately, in order to glean a full the understanding of its determinants. In other words, when analysing this standard in conjunction with other less important ones, compliance results can be “masked”.

In conclusion, the purpose of this study is to analyse the level of compliance in Brazil with IFRS 3 disclosure requirements and whether it is influenced by the internationalisation characteristic of board members. Internationalisation will be examined from the perspective of nationality and training. Our hypotheses are as follows:

- H1: A higher proportion of foreign members on the board is associated with a higher level of compliance with IFRS 3 disclosure requirements.

- H2: A higher proportion of board members with training abroad is associated with a higher level of compliance with IFRS 3 disclosure requirements.

1.2 Summary of the Research Design

The sample of this study is composed of 102 observations from 70 Brazilian companies for the years 2010, 2011, 2012 and 2013 and the methodology used involved collecting data manually, including data from consolidated financial statements and the report "*Formulário de Referência*" of the companies under analysis. Some of the data was also collected from the Worldscope database.

As is usual in disclosure studies, this study uses the Ordinary Least Squares equation (OLS) (Cooke, 1992; Demir and Bahadir, 2014; Owusu-Ansah and Yeoh, 2005; Wallace and Naser, 1995; Ali, Ahmed and Henry, 2004; Owusu-Ansah, 1998; Glaum *et al.*, 2013). Our dependent variable is the compliance/disclosure index and the independent variables include two test variables (proportion of foreign board members in a company and proportion of Brazilian board members who have obtained training abroad) and a set of control variables (size, leverage, profitability, liquidity, ownership of investment funds, independent board, goodwill, foreign revenue, ADR – American Depositary Receipt and Financial or Audit Committee).

The dependent variable represents the average level of compliance with mandatory disclosure of IFRS 3 requirements and was constructed in line with the literature (Nakayama and Salotti, 2014; Tsalavoutas, 2011; Abdullah *et al.*, 2015; Lucas and Lourenço, 2014; Baboukardos and Rimmel, 2014).

The variable of the proportion of foreign board members in a company was obtained from an analysis of the information contained in the "*Formulário de Referência*": more specifically, a board member is classified as a foreigner if he/she has a foreign name and has had an entire career outside Brazil; when the name itself is not foreign, but the person's whole career has been abroad, he/she is also classified as a foreigner.

The information for the variable of the proportion of Brazilian board members who obtained training abroad was also collected from the "*Formulário de Referência*". The classification is given when board members have had some type of training abroad (specialist course, degree, post-graduation, master's, MBA or doctorate).

1.3 Results and Contribution

The findings of this study confirm our hypothesis, that is, foreign board members and Brazilian board members with some kind of training abroad affect the level of compliance with IFRS 3 disclosure requirements. These results are in line with the theoretical expectations based on the Upper Echelons and Resource Dependence theories because

board members with these characteristics will have certain different cognitive values as well as other distinct features / benefits from the rest of the board. This highlights the key role of board members in organisations as decision-makers in particular and, in this case, regarding compliance with disclosure requirements.

One of the contributions of this study is to use theories not previously used to explain the level of compliance with mandatory disclosure, namely Upper Echelons and Resource Dependence theories.

This research also provides policy makers and standard setters with significant guidelines when drawing up future regulations and accounting policies for listed companies in Brazil, or in countries with characteristics similar to Brazil.

1.4 Organisation of the Thesis

This thesis is organised as follows. Section 2 presents the literature review before setting out the hypotheses in Section 3. The methodology is described in Section 4, and the results are given in Section 5. Finally, concluding remarks are made in Section 6.

The literature review is divided into four chapters: Mandatory Disclosure, Board Members, Brazilian Accounting and Governance and finally Main conclusions and brief summary of literature review. The chapter on mandatory disclosure is divided into three sub-chapters: Organisational theories and compliance with mandatory disclosure; Mandatory Disclosure Studies and Mandatory Disclosure in IFRS 3. The chapter on Board Members is divided into two sub-chapters to discuss and analyse studies on board characteristics in general and on the board members' individual characteristics. The chapter entitled The Brazilian Context Accounting and Governance is divided into two sub-chapters: Brazilian Accounting and Brazilian Governance.

In Section 3 describes the two theories on which the hypotheses of the study are based (Upper Echelons Theory and Resource Dependence Theory). This chapter is further divided into 2 subchapters: Foreign Board Members and Training Abroad; each strives to explain one of our hypotheses.

Section 4 on methodology is divided into three chapters: Sample and Data; Variables and Research Model. There are two sub-chapters in the variables chapter: Dependent Variable and Independent Variables. Lastly, the statistical model used in this study is explained in the Research Model chapter.

Section 5, Research Findings, is divided into five chapters: Descriptive Statistics, Analysis of Dependent Variable, Analysis of Test Variables, Correlation Matrix and Regression Results

The Conclusions summarise the study, making reference to the objectives, sample, methodology and main results. The importance and contribution of the study, as well as its limitations and avenues for future research are also outlined.

2. LITERATURE REVIEW

The literature review is divided into four chapters: Mandatory Disclosure, Board Members, Brazilian Accounting and Governance and, finally, Main Conclusions with a brief summary of this review.

The chapter on mandatory disclosure draws attention to the importance and potential impact of disclosure. The chapter is then subdivided into three parts: Organisational theories and compliance with mandatory disclosure; Mandatory Disclosure Studies and Mandatory Disclosure in IFRS 3.

The Organisational theories and compliance with mandatory disclosure sub-chapter describes the organisational theories related to the fulfilment of disclosure and its determinants.

The Mandatory Disclosure Studies sub-chapter is divided into five parts: Business Determinants; Cultural Determinants; Enforcement Determinant; Corporate Governance Determinants and finally a Brief Summary and Main Conclusions. This sub-chapter addresses the evolution of disclosure studies and the determinants that have been tested over time, according to their typology. The sub-chapter closes with a critical analysis of the organisational theories that have been used to support these studies, and identifies determinants that have not yet been adequately explored.

In the sub-chapter entitled Mandatory Disclosure in IFRS 3 – Business Combinations, we note the importance of this standard and analyse the studies on compliance with IFRS 3 disclosure. This includes taking a closer look at the determinants and theories used, as well as the location of the studies and consequent results. Finally, an analysis is also made the number of items that can be included in the index of disclosure of this standard.

In the next chapter, we start by demonstrating the importance of the topic of Board Members. This is followed by a discussion and analysis of several studies on board characteristics in general, and then on the board members' individual characteristics. Finally, we address internationalisation in the context of the board members' individual characteristics.

Brazilian Accounting and Governance begins by explaining the relevance of studying Brazil, namely due to the affect of the location on disclosure and the characteristics of the board. The next two sub-chapters analyse the evolution of accounting and governance evolution in Brazil.

In the final chapter, the main conclusions of each chapter are summarised and the gap in the literature is identified.

2.1 Mandatory Disclosure

When the studies on Accounting Standard disclosure began in the 1960s, disclosure was essentially voluntary and, as a result, they focused primarily on the determinants and consequences of voluntary disclosure. Nowadays, many studies continue to be conducted on the disclosure of accounting information and they continue to be predominantly on voluntary disclosure. Voluntary disclosure is *"any disclosure by companies not mandated by law and/or self-regulatory bodies"* (Owusu-Ansah, 1998: 614). Examples of such studies include: by Banghøj and Plenborg (2008) on how voluntary disclosure affects future earnings; by Hussainey and Walker (2009) on the effect of dividends on voluntary disclosure and the relationship between current earnings and future earnings; and by Patelli and Prencipe (2007) on the relationship between voluntary disclosure and independent directors in the presence of a dominant shareholder.

The focus of studies on mandatory disclosure is predominantly the determinants of the level of compliance with disclosure requirements. *"Mandatory disclosure is the minimum information which promulgated regulation requires from a reporting entity"* (Abdullah *et al.*, 2015: 330). It should also be noted that the increase in mandatory legislation in accounting through IAS and IFRS in recent years has resulted in a considerable growth in the number of studies on mandatory disclosure.

But while some studies address determinants that may influence the fulfilment of disclosure requirements, other equally important studies seek empirical evidence of the impact of the disclosure level. For example, Diamond and Robert (1991) and Botosan (1997) demonstrated that information disclosure reduces information asymmetry and the cost of capital, attracts investors and increases liquidity. Hodgdon *et al.* (2008) found that compliance with the mandatory disclosure of IFRS decreases information asymmetry and improves the ability of financial analysts to provide more precise forecasts. Iatridis (2008) addresses the financial impact and the motives of disclosure in 2004 with 284 UK firms

and concludes that in order to raise money in the capital and debt markets, companies have a tendency to disclose extensive information. Iatridis (2008) also shows in his study that the disclosure of delicate accounting information has not unfavourably affected firms' profitability.

2.1.1 Organisational Theories and Compliance with Mandatory Disclosure

Due to the impact of information disclosure, it is necessary to carefully examine whether companies comply with mandatory disclosure and what determinants affect such compliance; indeed, according to Samaha and Khlif (2016, a, b), compliance with mandatory disclosure of IFRS depends on the socio-economic and cultural characteristics of each country. These authors also state that Positivist Accounting Theory helps explain compliance with IFRS through corporate characteristics and it should take into consideration the following four theories: Agency theory, Signalling Theory, Political Process Theory and finally Capital Need Theory. These organisational theories are of great importance because accounting is an integral part of the structure of an organisation and an understanding of accounting practices is therefore essential (Jensen, 1983). Our study focuses on the accounting practices for disclosure.

Agency Theory states that the owners and managers tend to act in their own interest and it is this separation of interests that causes conflicts (Morris, 1987), hence the need for good governance mechanisms (Gillan and Starks, 2003). In this theory, disclosure is used to reduce the agency costs and information asymmetry found between owners and managers. The following determinants of disclosure are usually related to this theory: size, leverage, ownership diffusion, type of auditor and profitability (Samaha and Khlif, 2016, b; Alanezi and Albulouhi, 2011; Al-Akra *et al.*, 2010; Inchausti, 1997; Demir and Bahadir, 2014; Ferrer and Ferrer, 2011).

Under Signalling Theory, asymmetry is reduced with information sharing and compliance with IFRS (Samaha and Khlif, 2016, a). The determinants usually associated with this theory are liquidity, profitability, leverage, type of auditor, size and industry sector (Samaha and Khlif, 2016, b; Demir and Bahadir, 2014; Owusu-Ansah, 1998).

In the Political Process Theory, it is hypothesised that accounting data is used to fix prices in regulated industries, to fix tax policy or to decide policy on subsidies for companies (Inchausti, 1997). In this theory, correct compliance with mandatory disclosure is vital to ensure that the prices, taxes and policies are fair. This theory is tied to the size and profitability determinants (Samaha and Khlif, 2016, b; Archambault and Archambault, 2003).

Finally, Capital Need Theory hypothesises that companies wish to obtain capital as cheaply as possible (Samaha and Khlif, 2016, a, b). Correct compliance with disclosure requirements is also important in this theory, not only to allow access to financing but also so as not to deceive lenders and investors. This theory is tied to the determinants of internationalisation, for example foreign listing (Samaha and Khlif, 2016, b).

2.1.2 Mandatory Disclosure Studies

As this work will be on mandatory disclosure and their determinants, we refer to a number of studies on this topic in order to determine how these studies have evolved, notably, which determinants have been tested and which supporting theories have been used. It should also be noted that some of the studies presented below, especially older studies, address both mandatory and voluntary disclosure because it is only more recently that mandatory disclosure has been increased through, for example, IAS / IFRSs which were gaining relevance and therefore prior to this it was necessary to analyse voluntary and mandatory disclosure together.

In most of the studies mentioned below, the authors created an index to verify compliance with disclosure, which is generally considered the dependent variable of a regression.

Our analysis of these studies uses the following typology: Business Determinants; Cultural Determinants; the Enforcement Determinant and Corporate Governance Determinants.

2.1.2.1 Mandatory Disclosure Studies – Business Determinants

Cooke (1992) assessed the impact of size, stock market listing and industry type on mandatory and voluntary disclosure the data came from annual reports for 1988, provided by enterprises in response to a request by letter. The author created an index of disclosure with mandatory and voluntary items. The main results of the study showed that the variables of size and industry have a significant relationship with the level of companies' disclosure.

Wallace and Naser (1995) tested the impact of corporate characteristics on the level of compliance of 80 companies listed on the Hong Kong market in 1991. They created an index based on the disclosure rules at that time and on voluntary disclosure, and found that the level of compliance was between 55.3% and 87.2%. This study demonstrated that compliance is positively related with size and negatively related to profit. Other variables such as the return of equity, liquidity, and leverage were not found to be statistically significant.

Inchausti (1997) conducted a study on the influence of company characteristics and accounting regulation on mandatory and voluntary disclosure in 49 Spanish companies and in 3 different years (1989: 49 companies, 1990: 48 companies and 1991: 43 companies). To assess disclosure, the author created an index of 50 items (stock: 14; law: 12; plan: 4; and voluntary: 20). The author found evidence that the determinants size, auditing and stock exchange have an influence on the level of disclosure. However, other determinants such as profitability, leverage and industry were tested and no significant influence was found. The author concluded that it may be impossible to leave disclosure to the market alone, because accounting must be controlled in order to ensure firms satisfy the information needs of different users.

Owusu-Ansah (1998) studied the impact of corporate attributes on compliance of mandatory disclosure requirements in Zimbabwe, where great efforts were being made to improve regulation on disclosure at the time. To analyse the compliance, the authors created an index with 214 items. The sample is comprised of 49 listed companies in Zimbabwe and the independent variables analysed (corporate attributes) were: company size, ownership structure, company age, multinational corporation affiliation, profitability, quality of external audit, industry type and liquidity. Only the variables of

company size, ownership structure, company age, multinational corporation affiliation and profitability had a positive and significant effect on mandatory disclosure.

Street and Gray (2002) examined the financial statements and notes of 279 companies worldwide that had adopted the IAS in order to ascertain the level of compliance and associate key factors. This analysis was performed with companies' 1998 annual reports and was an extension of the work by Street and Bryant (2000). Their major finding was that there is a huge level of non-compliance, primarily with respect to the disclosures requirements. The authors demonstrated that the following factors are positively associated with compliance: being listed in the US; belonging to the trade and transport sector; disclosing that they use international standards; being audited by the five largest audit firms and lastly being based in China or Switzerland. There was a negative relationship with performance if companies were based in France, Germany and other Western Europe countries, and even in Africa.

Ali et al. (2004) examined the compliance with 14 IAS in 566 listed companies from India, Pakistan and Bangladesh. To examine compliance with selected IAS, the authors created a list of disclosures required with 131 items. The results indicated a positive and significant relationship between the level of compliance and the size, profitability and multinational-company status. The authors also tested the variables leverage and size of external auditors but found no significant influence.

Ferrer and Ferrer (2011) analysed whether profitability affects the compliance with IFRS in the Philippines in 2008. The authors used several profitability ratios such as return on assets, return on equity, return on sales, earnings per share and revenues. The average disclosure level is very acceptable (99 per cent). With regard to the main hypothesis of the study, the authors found an insignificant relationship between profitability and the level of IFRS compliance.

Mısırlıoğlu, Tucker and Yükseltürk (2011) studied whether the mandatory adoption of IFRS by Turkish listed companies in 2005 was successful and guaranteed compliance. Instead of creating an index of compliance, the authors made an improvement coefficient to determine whether disclosures practices had improved. They found that although there had been some improvements, the vast majority of the disclosure items required by IFRS were not disclosed. Firm characteristics like auditor type, size, and the degree of foreign ownership of shares exert a positive impact on the disclosures. The authors also conducted interviews in order to study the role played by the firm and country level factors in the

adoption of IFRS. They concluded that the authority of tax laws, the lack of enforcement, corporate governance issues, and inadequate management information systems were all significant constraints to the successful adoption of IFRS.

Maia, Formigoni and Silva (2012) conducted a study in 78 Brazilian companies during the period 2008-2009 (1st IFRS implementation phase). For this study, the authors created an index with 72 items to assess compliance with 13 standards. They concluded that the level of compliance stood at 70%. The determinants of compliance were also analysed and the authors concluded that compliance was positively influenced by the fact that companies are audited by the Big 4, internationalisation measured by the existence of ADR (American depositary receipt), corporate governance and the level of indebtedness. On the other hand, they failed to demonstrate the relationship of firm size and profitability with compliance.

Demir and Bahadir (2014) investigated the compliance of 168 listed companies in Turkey with IFRS for the year 2011. The authors created an index with 215 items (general presentation: 65 items; statement of financial position: 51 items; statement of profit or loss and other comprehensive income: 26 items; special topics: 73 items). They also examine determinants of compliance (profitability, company size and age, firms being audited by the Big 4 and leverage). The results show an average of 79 per cent for the level of compliance, and also indicate that this level is related to firms being audited by the Big 4 but negatively associated with leverage.

We can verify that many business variables have been tested during the period from the paper by Cooke (1992) until the above-mentioned most recent paper by Demir and Bahadir (2014); these include size, industry, profit, foreign sales, debt, listed companies, age, multinationality and liquidity. However, we highlight the fact that the results for these variables sometimes vary in these studies because they are conducted in different contexts with specific country factors; namely legal, political, tax, economic, cultural and historical factors. Also, according to Maia et al. (2012), accounting is shaped under the direct influence of several surrounding environmental factors and the setting of accounting practices cannot be separated from the following: the country's legal system, political, tax and economic factors, culture and history.

We also conclude from our analysis that studies on compliance with IAS/IFRS began to emerge in about 2000 when these standards were gaining great importance at the international level because of accounting harmonisation. Prior to this date, studies on

mandatory disclosure were conducted taking into account the rules imposed by the stock exchange in each country.

2.1.2.2 Mandatory Disclosure Studies – Cultural Determinants

Due to the divergence of results in the literature described above, other studies such as Zarzeski (1996), Tower *et al.* (1999) and Archambault and Archambault (2003), have focused on cultural rather than non-business variables; these are addressed below.

Zarzeski (1996) analysed the effect of culture (uncertainty avoidance, individualism-collectivism, masculinity-femininity and power distance) and market force (foreign sales, debt ratio and total assets) on disclosure practices to determine whether accounting harmonisation was possible / feasible and if the culture had an effect on disclosure. The author states that accounting harmonisation allows comparability and is only achieved if: 1 - the same amount of information is presented, 2 - the same information is presented (recognition and measurement) and 3 - the information is verifiable. He therefore analysed the level of disclosure and created an index with required and voluntary disclosure. The disclosure items analysed in this index include general information, information about management, company's capital, financial information and recent developments. The study sample consisted of 256 annual reports from France, Germany, Hong Kong, Japan, Norway, United Kingdom and United States. The results demonstrated that the level of disclosure is greatest when foreign sales increase. The results also demonstrate that enterprises operating in a global culture appear to be disclosing more, while local enterprises disclose financial information commensurate with the secretiveness of their local culture.

Tower *et al.* (1999) conducted a study on compliance with IAS in six Asia-Pacific countries (Australia, Hong Kong, Malaysia, Philippines, Singapore and Thailand). Their study was motivated by the concern that Australia was moving too rapidly towards harmonisation when compared to other countries. The study took place in 1997 and the authors created an index with IAS rules at this time (IAS 1,2, 5, 7-11, 13, 14, 16-25, 27, 28, 30-33). The findings confirm that, due to the cultural characteristics of each country, the country in which a company reports influences the financial reporting rules.

Archambault and Archambault (2003) developed a model with cultural, national and corporate factors that can influence voluntary and non-voluntary disclosure. This study stands out because it involved a large number of countries (33) and variables. The authors created a disclosure index with voluntary and non-voluntary information that is divided into seven information categories: general information, income statement, balance sheet, fund-flow statement, accounting policies, stockholder information and supplementary information. The sample is composed of information from annual reports of 1993 and 1992. In the model created by the authors, disclosure was a response to cultural factors (such as: education and religion), national factors (such as: political – freedom, legal and press); economic (development, inflation and capital markets) and corporate systems factors (such as: financial – ownership, exchanges, dividends, auditors and leverage; operating: size, industries and foreign sales). This model provided a good explanation of the disclosure decision and also explains differences between the disclosure of companies in the same or different country.

2.1.2.3 Mandatory Disclosure Studies – Enforcement Determinant

In addition to studying business and cultural determinants, some authors focus their research on enforcement. For example, Street and Bryant (2000), Glaum and Street (2003), Owusu-Ansah and Yeoh (2005) and Al-Akra *et al.* (2010) have sought to demonstrate that the level of enforcement affects compliance with disclosure, as we can see below.

The study by Street and Bryant (2000) was different in that it not only analysed compliance with IAS but also whether the results for compliance in companies with U.S. listings or filings were different from the level of disclosure. The sample is composed of 11 U.S. listed companies, 30 U.S. listing companies that claim to comply with IAS, and finally 41 non U.S. filing or listing companies. The authors created an index of compliance with 29 standards (IAS). Results showed that compliance is greater for companies with U.S. listings or filings, because the mean of the index is higher when companies have U.S. listings or filings (84% vs. 77%). This therefore suggests that the enforcement is higher for companies with U.S. listings or filings.

Based on the literature, Glaum and Street (2003) analyse compliance with IAS and US GAAP - United States Generally Accepted Accounting Principles (US GAAP) in the German New Market. The sample is composed of 200 companies (100 apply IAS and 100 apply US GAAP) and the year of study was 2000. The authors wanted to investigate the enforcement of US GAAP outside the US. The compliance level had an average of 84%, but is lower for companies that apply IAS than for those applying US GAAP. It therefore demonstrates that the enforcement of US GAAP outside the US is stronger.

Owusu-Ansah and Yeoh (2005) investigate the effect of FRA - Financial Reporting Act of 1993 (which makes non-compliance illegal) on mandatory disclosure practices of companies listed on the New Zealand Exchange Limited for a four year-period (1-1-92 to 31-12-93). To this end, the authors verified compliance by creating an index with only items required by IFRS before and after implementation of FRA. The results indicated that compliance improved significantly after the implementation of FRA.

Al-Akra *et al.* (2010) examines the influence of accounting disclosure regulation, governance reforms and ownership changes on mandatory disclosure of IFRS. This study was conducted in Jordan in the years 1996 and 2004 in 80 non-financial companies. For the purpose of the study, the authors created two checklists based on IFRS in 2004 and 1996 and found that disclosure compliance was significantly higher in 2004 (79%) than in 1996 (55%). The most significant variable was regulation reforms. Governance reforms and the mandate of audit committees were also significant determinants of compliance.

2.1.2.4 Mandatory Disclosure Studies – Corporate Governance Determinants

In the knowledge that business variables have divergent results and that the culture and level of enforcement can also affect compliance with mandatory disclosure, some authors believed that corporate governance can also affect compliance with mandatory disclosure. Some of these studies are detailed below. It should be noted that although previously mentioned studies on business variables also included governance variables, we now refer to studies that focus only on governance variables.

Chen and Jaggi (2000) examined the association between compliance with mandatory disclosure and independents on corporate boards in a sample of 87 large Hong Kong

firms. The results of their study suggest that there is a positive association between the proportion of independents on corporate boards and mandatory financial disclosures. They also analyse the effect of family control and their findings indicate that this association is weaker for family controlled firms than for non-family controlled firms.

Alanezi and Albuloushi (2011) determined the impact of the presence of a voluntary audit committee on required disclosure practices of IFRS in Kuwait. Using 18 relevant IFRS in this context, an index based on 199 items was developed to investigate the level of disclosure in the annual reports of a sample of 68 listed companies in Kuwait in 2007. The level of compliance in this study is 72% (199-item checklist taken from some IFRS). The results revealed that the presence of an audit committee, several members of the same family on the board and leverage were the most important variables to explain companies' disclosure practices of IFRS. They also showed that compliance is lower in family-dominated companies, but is higher when there is an audit committee and when leverage is higher. Other variables (control variables) like company size, profitability, company age and ownership diffusion are not statistically significant.

Finally, Ebrahim and Fattah (2015) studied corporate governance factors (institutional ownership and foreign representation on the board) and the independent audit quality as determinants of compliance with IFRS recognition and disclosure requirements of income tax accounting in Egypt (IAS 12). Using the initial IFRS adoption in Egypt, the results provide evidence that corporate governance factors improve compliance with IFRS requirements. It is also demonstrated that companies with higher levels of institutional ownership and foreign representation on the board are more likely to engage an audit firm with international affiliation and comply with IFRS recognition and disclosure requirements.

2.1.2.5 Mandatory Disclosure Studies – Brief summary and main conclusions

This literature review on the compliance with mandatory disclosure is summarised in Table 2.1 below which presents the above mentioned studies in chronological order. This makes it easier to visualise the determinants of compliance studied to date, the developments that have been made, any divergent results, and finally the theories used by the authors of these papers.

Table 2.1 - Prior Research on compliance with mandatory disclosure

Author/s	Sample location	Compliance with:	Compliance determinants tested	Theories	Compliance determinants with significant results
Cooke (1992)	Japan	Rules about: financial statements, measurements and valuation methods, ratios, statistics and segmental information, projections and budgetary disclosure, financial story, social responsibility accounting	Size, industry, stock market system	-	Size and industry
Wallace and Naser (1995)	Hong Kong	Disclosure rules at that time	Size, profit, ROE, liquidity, leverage	-	Size and negatively with profit
Zarzeski (1996)	France, Germany, Hong Kong, Japan, Norway, United Kingdom and United States	Required disclosure	Market force: foreign sales, debt ratio, total assets; culture: uncertainly avoidance, individualism-collectivism, masculinity-femininity and power distance	-	Foreign sales, size, lower debt, culture (global culture disclose more)
Inchausti (1997)	Spain	Rules of stock, law and plan	Size, auditing, listing status, profitability, leverage, industry	Agency, Political and Signalling	Size, auditing and listing status

Author/s	Sample location	Compliance with:	Compliance determinants tested	Theories	Compliance determinants with significant results
Owusu-Ansah (1998)	Zimbabwe	Mandatory disclosure	Size, ownership structure, company age, multinational corporation affiliation, profitability, audit, industry type and liquidity	Agency and Signalling	Size, ownership structure, company age, multinational corporation affiliation and profitability
Tower *et al.* (1999)	Australia, Hong Kong, Malaysia, Philippines, Singapore and Thailand	IAS 1, 2, 5, 7-11, 13, 14, 16-25, 27, 28, 30-33	Country	-	Country
Street and Bryant (2000)	Various at global level	IAS	U.S. listings or filings	-	U.S. listings or filings
Chen and Jaggi (2000)	Hong Kong	Disclosure rules	Independent on board and family control	-	Independent on board
Street and Gray (2002)	Various at global level	IAS	Listed in the US, transport sector; disclose the use of international standards, Big 5, China or Switzerland, performance and size	-	Listed in the US, transport sector; disclose the use of international standards, Big 5, China or Switzerland, negative performance
Glaum and Street (2003)	German	IAS and US GAAP	Enforcement of US GAAP outside US	-	lower for companies that apply IAS

Author/s	Sample location	Compliance with:	Compliance determinants tested	Theories	Compliance determinants with significant results
Archambault and Archambault (2003)	33 countries	General information, income statement, balance sheet, funds-flows statement, accounting policies, stockholders information and supplementary information and extract the information from annual reports.	Cultural factors (education and religion), national factors (political – freedom, legal and press; economic – development, inflation and capital markets) and corporate systems factors (financial – ownership, exchanges, dividends, auditors and leverage; operating: size, industries and foreign sales)	Political	Cultural, national and corporate factors depending on the company and / or country
Ali *et al.* (2004)	India, Pakistan and Bangladesh	14 IAS	Size, profitability and multinational-company status, leverage, size of external auditors	-	Size, profitability and multinational-company status
Owusu-Ansah and Yeoh (2005)	New Zealand	FRS	FRA - Financial Reporting Act of 1993 (that makes non-compliance illegal)	-	FRA - Financial Reporting Act of 1993 (that makes non-compliance illegal)
Al-Akra *et al.* (2010)	Jordan	IFRS	Non-executive directors, audit committees, Board size, Ownership structure, size of the firm, leverage, profitability, auditing firm identity, liquidity, industry type, listing and firm age.	Agency	Leverage, Auditor type, audit committee, size of the board, liquidity and gearing ratio

Author/s	Sample location	Compliance with:	Compliance determinants tested	Theories	Compliance determinants with significant results
Alanezi and Albuloushi (2011)	Kuwait	IFRS	Audit committee, leverage, family-dominated companies, size, profitability, company age, ownership diffusion	Agency	Audit committee, leverage, but lower with family-dominated companies
Ferrer and Ferrer (2011)	Philippines	IFRS	Relationship between profitability (various ratios)	Agency	Insignificant relationship between profitability (various ratios)
Mısırlıoğlu *et al.* (2011)	Turkey	IFRS	Auditor type, size, and the degree of foreign ownership of shares, role of firm and country level factors	-	Auditor type, size, and the degree of foreign ownership of shares
Maia *et al.* (2012)	Brazil	IFRS	Big 4, ADR, Corporate governance, leverage, firm size and profitability	-	Big 4, ADR, Corporate governance, leverage
Demir and Bahadir (2014)	Turkey	IFRS	Big 4, leverage, profitability, size and company age	Agency and Signalling	Big 4 auditing firms but negatively associated with leverage.
Ebrahim and Fattah (2015)	Egypt	IAS 12 and EAS 24	Corporate governance factors, institutional ownership, foreign representation on the board, independent audit quality	Agency	Corp. gov. factors, higher levels of inst. ownership and foreign representation on the board

An analysis of the empirical studies included in this table shows that Agency and Signalling theories were the most commonly used theories over time to justify the determinants of compliance. We also find that many authors do not mention theories in their studies but rely on literature to choose their determinants of compliance.

We also conclude that some theories cannot always be used to explain results. Based on Agency Theory, it is expected that compliance is affected by size, indebtedness, profitability, liquidity, industry and auditing; and according to Signalling Theory, size and profitability are expected to affect compliance. However, in the study by Wallace and Naser (1995), for example, it was shown that profitability has a significant - but negative - relation with compliance. In addition, the studies by Wallace and Naser, (1995), Inchausti, (1997) and Ali *et al.* (2004) show that it is not always possible to confirm the significant relationship between the indebtedness determinant and compliance.

The table summarising the literature also allows us to conclude that while many determinants have been tested over the years, they fall mainly into three categories: business, cultural and corporate governance. We also found that, due to the increasing complexity of markets, studies with determinants exclusively related to governance have only emerged more recently. More specifically, the individual characteristics of board members were investigated by Ebrahim and Fattah (2015) using foreign board members as a dummy variable.

The individual characteristics of the board members are also expected to affect the disclosure of information and consequently compliance, because they are the ones who make the business decisions and, consequently, decisions on information disclosure. However, this has little been addressed because it is difficult to access. Nevertheless, its relevance is confirmed, as we have seen, by the fact that the determinants of disclosure underlying organisational theories cannot always be proven and above all due to the potential impact of disclosing information.

2.1.3 Mandatory Disclosure in IFRS 3 – Business Combinations

IFRS 3 is a very important standard because it reflects business, often involves large sums of money and can significantly affect the numbers presented in the financial statements. Due to this importance, Hamberg *et al.* (2011) conducted a study to demonstrate the accounting consequences of the adoption of IFRS 3 in the equity market. The authors used Swedish data and found that, after its adoption, the value of goodwill increased substantially. Similarly, the impairment of goodwill is considerably lower than its amortisation and impairment in accordance with Swedish standards. Hence, they concluded that the adoption of IFRS 3 led to an increase in profit. The authors also reported that, rightly or wrongly, investors see the gains arising from IFRS 3 as a consequence of higher future cash flows.

Despite the importance of IFRS 3, this standard is only relevant in the case of compliance with the disclosure required. Nobes (2006) reported that there were differences in the application of IFRS adopted by different countries. In particular, IFRS 3 was given varying interpretations in different countries because of its vague criteria on the identification of the acquiring company and also because it implied the use of fair value estimates, which could give rise to different readings. It follows that these divergent interpretations of the IFRS 3 mean that differences are to be expected in the compliance with its mandatory disclosure. Hence, and due to the importance of this standard, a number of authors conducted research focusing exclusively on the fulfilment of this standard, namely: Nakayama and Salotti, 2014; Glaum *et al.,* 2013; Lucas and Lourenço, 2014; Baboukardos and Rimmel, 2014. For the above-mentioned reasons, we believe that the fulfilment of this extremely important standard must be analysed separately in order to obtain a full understanding of its determinants. In other words, the compliance results can be "masked" if this standard is analysed in conjunction with other less important standards.

Below we note some studies on compliance with the disclosure of this standard alone, and this standard in conjunction with other standards, in order to understand which determinants have been used and the levels of compliance with it. It should be noted that the studies mentioned addressing compliance with several standards, including IFRS 3,

refer to the level of compliance of each specific standard, and we are therefore able to analyse compliance with the mandatory disclosure of IFRS 3.

Tsalavoutas (2011) studied 153 Greek listed companies' compliance with all IFRS mandatory disclosure requirements in 2005, which was the first year of IFRS implementation in this country. The author's main objective was to show whether changes in shareholders' equity and net income in 2004 as a result of the adoption of IFRS constitute explanatory factors for compliance; the results confirm this hypothesis. His findings reveal a relatively low average level of compliance with IFRS mandatory disclosures in 2005 (about 80%) and also provide strong evidence that companies with the following characteristics comply most with IFRS mandatory disclosures: "Big 4" auditor; exhibited more positive changes in their restated IFRS 2004 net profit; and exhibited more negative changes in their restated IFRS 2004 shareholders' equity figure. This study showed an average of 72% compliance with the mandatory disclosure requirements of IFRS 3, and analysed 20 items of this standard.

Nakayama and Salotti (2014) conducted a study on compliance with mandatory disclosure of *"Comité de Pronunciamento Contábil 15 – CPC 15"* in Brazilian financial statements for the period ending 31/12/2010 (year of adoption of IFRS in Brazil). CPC 15 is the Brazilian standard which addresses business combinations and is derived from IFRS 3. For the purposes of their study, the authors created an index with the disclosures required by CPC 15 and concluded that the level of disclosure was low, about 60%. They noted that the low compliance is related to the fact that international standards were adopted in 2010. Auditing by the Big 4 was the most significant determinant of compliance.

Glaum *et al*. (2013) analysed the level of compliance with IFRS 3 and IAS 36 (IAS 36 - International Accounting Standard – Impairment of assets) by European companies. The authors found a high level of compliance and that this can be influenced by both firm and country characteristics. At the firm level, they demonstrated that compliance is influenced by the importance of goodwill, experience of IFRS, the type of auditor, the presence of an audit committee, the issuance of securities in the study period, and the company's power structure. With respect to the country, compliance is influenced by the level of enforcement and the size of the capital market. Finally, they found that the culture of the countries (conservatism) also has an impact on the level of compliance with disclosure

requirements. This study showed an average of 73% compliance with the mandatory disclosure requirements of IFRS 3

Lucas and Lourenço (2014) examined how firm and country characteristics influence the level of compliance with IFRS 3. This study was conducted based on European listed companies and determined the level of compliance with IFRS 3 disclosure requirements. The results showed that compliance is influenced by both corporate and country features. They also showed that firms located in common-law countries have a strong level of compliance with IFRS 3, while firms located in the "French-civil-law" countries have poor compliance. The return on assets was also found to be a strong determinant of compliance. The study showed an average of 85% compliance with the mandatory disclosure requirements of IFRS 3.

Santos, Ponte and Mapurunga (2014) studied the disclosure requirement of IFRS in the first year of full adoption in Brazil (2010), by comprehensively examining 638 disclosure requirement items from 28 IFRS in the Notes of all Brazilian non-financial corporations (366) listed on the Brazilian stock exchange. They measured disclosure compliance levels by calculating the respective index, both overall and for each standard, and investigated associations between disclosure levels and firm's characteristics as potential explanatory factors of disclosure compliance. They found low levels of compliance; more specifically, compliance with standards requiring disclosure of many items was about 50% lower than for standards that require few items. It was also noted that despite the relatively low level of compliance with the disclosure requirements of IFRS in Brazilian firms, the amount of information required did increase after IFRS adoption, which suggests they are adapting to the new standards. Determinants of the level of disclosure include firm size and audit by a "Big 4" audit firm. The results obtained for compliance with IFRS 3 was quite low, about 3% through a more stringent criterion and 12% in another more tolerant criterion.

Baboukardos and Rimmel (2014) analysed the relevance and disclosures relating to goodwill in an unfavourable environment (Greece). The authors chose Greece because it was a code law and conservative country, which would probably mean an aversion to the implementation of the new rules of IFRS 3 and IAS 36. To test relevance, the authors created formulas with the effect of goodwill on market valuation. For compliance with the information required by IFRS 3, they created an index with 38 items and the average compliance stood at 82%. The results demonstrate that fair value accounting produces

relevant information but only in firms with high compliance with IFRS disclosure requirements.

Abdullah *et al.* (2015) examine the effect of family control on IFRS mandatory disclosures for Malaysian companies in 2008. These authors demonstrate a negative association between family control and compliance with IFRS. Interestingly, a negative relationship was also found between the board's expertise in accounting and compliance. The authors suggest that managers with expertise in accounting can use this knowledge tendentiously and only reveal what interests them. This study also demonstrates an insignificant relation between disclosure level and firm value. We emphasise the fact that although this study analysed compliance with several standards, the level of compliance with IFRS 3 was 77%.

Table 2.2 provides a summary of the disclosure studies examining compliance with IFRS 3.

Table 2.2 - Prior Research on compliance with IFRS 3 mandatory disclosures

Authors	Country	Year	Sample	Number of items	Levels of compliance with IFRS 3	Compliance determinants tested	Compliance determinants with significant results
Tsalavoutas (2011)	Greece	2006	49	20	Compliance of 72%	Size, Gearing, Change in the 2004 shareholders' Equity, Profitability, Change in the 2004 net profit, Liquidity, Audit firm size and Industry	Change in the 2004 shareholders' Equity, Change in the 2004 net profit, Audit firm size and Industry
Nakayama and Salotti (2014)	Brazil	2010	40	10 items and 65 sub-items	Compliance of 60%	Big 4, year of adoption of the standard, goodwill and dispersion of capital.	Big 4 and year of adoption of the standard
Glaum *et al.* (2013)	Europe	2005	357	?	Compliance of 73%	Combinations, Goodwill, companies that prepared IFRS statements prior to 2005, Big 4, Size, US listing, audit committees, companies with bond issues, equity shares closely held (families, foundations, institutional investors), Country, Industry, distance between national GAAP and IFRS, Enforcement, Size of stock market and Conservatism	Goodwill, Big 4, audit committees, the issuance of equity shares or bonds, ownership structure, industry, enforcement, size of the national stock and conservatism

Authors	Country	Year	Sample	Number of items	Levels of compliance with IFRS 3	Compliance determinants tested	Compliance determinants with significant results
Lucas and Lourenço (2014)	Europe	2009	302	13	Compliance of 85%	Leverage, Profitability, Ownership Structure, Size, International listing Status, Early IAS/IFRS adoption and country characteristics	Country characteristics and Profitability
Santos *et al.* (2014)	Brazil	2010	343/72	?	Compliance of 3% and 12%	Leverage, Size, Profitability, International listing, "Big 4", Governance and Industry	Size and Big 4
Baboukardos and Rimmel (2014)	Greece	2008	76	38	Compliance of 82%	-	-
Abdullah *et al.* (2015)	Malaysia	2008	221	20	Compliance of 77%	Family control, board expertise and firm value	Negative association for family control, negative relationship for board expertise in accounting and compliance

It can be seen from the analysis of the table with compliance studies which include IFRS 3 that these are relatively recent studies as the oldest one analyses data from 2005. This is explained by the fact that IAS / IFRS gained more significant international relevance after 2000.

An analysis can also be made here of the number of items in the disclosure indexes created for this standard by each author because, although the same standard is being analysed, compliance will be measured differently if the number of items is very different. The index must therefore be constructed in strict accordance with what is required by the standard.

The table also reveals different levels of compliance; this can be explained by both the construction of different indexes of compliance, and by the fact that the studies are conducted in different contexts and realities.

In addition, these studies have several types of determinants of compliance - business, governance and cultural - and the results are not always in line with organisational theories. For example, the studies by Nakayama and Salotti (2014), Glaum *et al.* (2013), Lucas and Lourenço (2014) and Santos *et al.* (2014) were unable to demonstrate a significant relationship between some variables, such as size or leverage, and compliance.

Moreover, it should be noted that the study by Nakayama and Salotti (2014) was the only one conducted on this standard alone in Brazil; it analyses just 40 companies for the year 2010, and it has no determinant / variable on the characteristics of the board members.

Finally, the board members' individual characteristics (expertise) have only been analysed by Abdullah *et al.* (2015) in a very recent work. This demonstrates that researchers have recently begun to believe that board members' characteristics may affect compliance, as has already been studied by Ebrahim and Fattah (2015) through the internationalisation of the board.

2.2 Board Members

Board members are very important in companies: for example, according to Brennan (2006) the board of directors is the official first line of defence against managers because it is expected to act in the interests of shareholders. Also, Judge Jr. and Zeithaml (1992) stated that the pressure for greater accountability in corporate decision making has focused on board involvement in the strategic decision making process and that the response to this pressure is achieved through greater involvement and less passivity by the board. For these reasons, not only is a vigorous board needed to represent shareholders' interests and to control the management's actions, but also a set of mechanisms to help monitor them.

With respect to compliance with disclosure specifically, board members are also important because, as referred by Glaum *et al.* (2013), there may be three reasons for noncompliance: unintentional neglect (when the management overlooks particular requirements), misinterpretation of disclosure rules (when managers do not understand the information that is supposed to be discloses), and finally managers may knowingly and intentionally fail to comply with the rules.

The composition of the board is one of the corporate governance mechanisms; it is considered a key factor for the level of disclosure of companies and is a way of protecting shareholders from expropriation by managers (Madhani, 2015).

Finally, according to Agency Theory, board members are expected to be independent in order to effectively assume their functions and comply with mandatory disclosure; and according to the Theory of Signalling, there should be diversity in the composition of the board because diverse backgrounds have a positive effect on compliance with mandatory disclosure. Various papers, reports and codes of governance have therefore been written recommending that the majority of board members should be independent and they should be as diverse as possible (Fields and Keys, 2003; NACD, 1998; Code of Best Corporate Governance Practices, 2015).

Due to the importance of board members and consequently their characteristics, the studies in this area have increased in recent years in various contexts. We will now

analyse this literature taking into account the following division: general characteristics of the board (size, independent, family, institutional, etc.) and individual characteristics of the board members (age, gender, race, nationality, etc.).

2.2.1 Board – General characteristics

The studies quoted below demonstrate the potential importance of the general characteristics of the board in other contexts than the compliance of mandatory disclosure.

Anderson, Mansi and Reeb (2004) believed that the characteristics of the directors influenced the integrity of financial reports. In a sample of S&P (Standard & Poor's) 500 firms, they find that the cost of debt is inversely related to board independence and board size. They also find that fully independent audit committees are associated with a significantly lower cost of debt financing. Similarly, yield spreads are negatively related to audit committee size and frequency of meetings.

Haniffa and Hudaib (2006) conducted a study about the structure of corporate governance and performance in Malaysian listed firms. They analysed 347 companies listed on the Kuala Lumpur Stock Exchange (KLSE) between 1996 and 2000 and concluded that board size and top five substantial shareholdings are significantly associated with market and accounting performance measures. They also found a significant relationship between multiple directorships and market performance, although role duality and managerial shareholdings are significantly associated with accounting performance.

Ajina, Sougne and Laouiti (2013) investigate the empirical relationship between corporate governance and information asymmetry across a range of French firms. Based on a cross-sectional analysis, their study of the empirical relationship between corporate governance and information asymmetry involved 160 companies over the years 2008-2010. Their results seem to indicate a significant relationship between certain mechanisms of corporate governance (the presence of insiders: family, majority shareholders and institutional investors) and the information asymmetry of the French market. These mechanisms can reduce adverse selection costs and make exchanges more transparent. Their results also suggest that firms with efficient corporate governance

mechanisms may reduce informative asymmetry and improve transparency among investors.

Madhani (2015), investigated the impact of board characteristics (board size: number of directors, and board composition: independent directors) on corporate governance and disclosure practices of firms, namely voluntary disclosure. The author's research was based on 54 firms listed in the Indian Stock Exchange and he developed an instrument to measure corporate governance and voluntary disclosure. The results showed a significant relationship between disclosure and size, but not between disclosure and board composition.

We can conclude from the above mentioned papers that the general composition of the board can affect company performance, the cost of capital and information asymmetry. We also found that the characteristics studied in these papers at board composition level are: independence, board size, family, institutional investors.

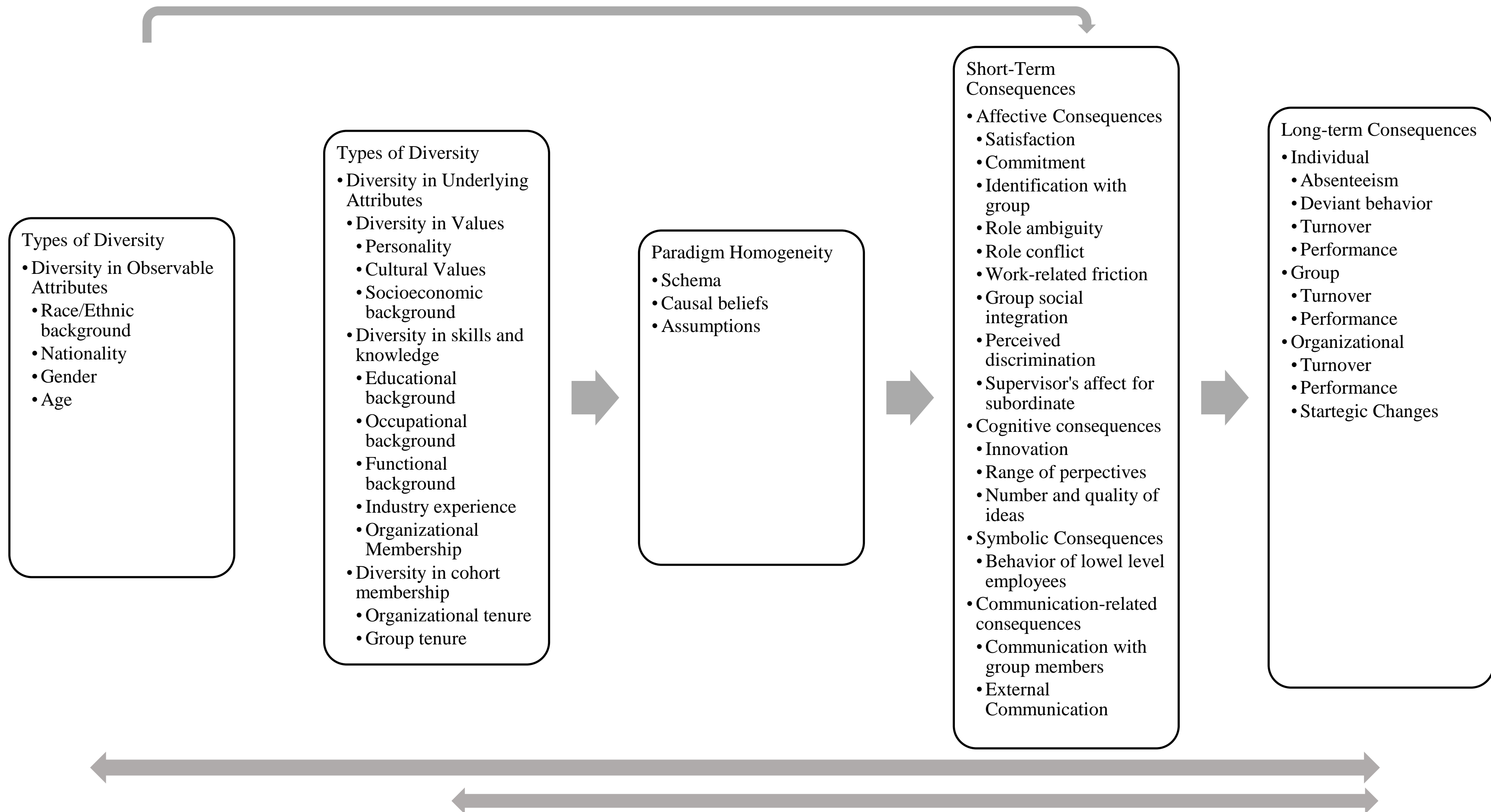
2.2.2 Board Members – Individual Characteristics

The general composition of the board is extremely important, as we have seen from the above mentioned studies; however, we believe the board members should also be analysed individually because each one plays a crucial role in monitoring, recommending and connecting the enterprise to the providers of external resources (Sitthipongpanich and Polsiri, 2015).

The individual characteristics of the board have been the subject of previous studies addressing the diversity of the board. For example, according Carter, D'Souza, Simkins and Simpson (2010), diversity is very important and can be the key to solving business problems as a diverse board can bring a range of perspectives and non-traditional approaches. Also, Robinson and Dechant (1997) presented various intuitive propositions about the diversity of the board, namely: it increases the understanding of the stock market; enhances creativity and innovation; promotes a more efficient resolution of problems and, lastly, increases leadership. Moreover, Milliken and Martins (1996) state that diversity is very important because it affects outcomes such as turnover and performance through the affective, cognitive, communication and symbolic processes of

the organisational groups. Figure 2.1 demonstrate a model of effects of diversity in organisational groups developed by Milliken and Martins (1996).

Figure 2.1 - Model of effects of diversity in Organisational Groups (Milliken and Martins, 1996)



Based on the above model (FIGURE 2.1) by Milliken and Martins (1996), we can see two types of diversity - diversity of observable attributes (race, nationality, gender and age) and diversity of underlying attributes (personality, cultural values, educational background, socio-economic background, functional background, experience, organisational membership, organisational tenure and group tenure).

We can also see that the external communication of companies is affected by the kind of diversity. Milliken and Martins suggest that while members of diverse groups communicate very formally and therefore communicate less with each other, they communicate with outside organisations very frequently.

Hence it can be concluded from Milliken and Martins (1996)'s model of diversity effects that board diversity and consequently board members' individual characteristics probably affect companies' disclosure because this impacts communication and therefore affects compliance. However, according to García-Meca, García-Sánchez and Martínez-Ferrero (2015) and Ruigrok *et al.* (2007) care should be taken in obtaining the right level of diversity. Over-diversity can be disadvantageous because it may delay the decision making process according to social and psychological theories (García-Meca *et al.*, 2015). Also, Ruigrok *et al.* (2007) state that diversity can lead to negative communication and affective consequences such as slower decision-making, misunderstandings and conflicts.

The studies quoted below demonstrate the potential importance of the individual characteristics of board members in contexts other than the compliance of mandatory disclosure.

Ramaswamy and Li (2001) studied foreign investors and foreign directors and concluded that the presence of foreign members influences the organisation's strategies due to their knowledge and understanding of various strategic overseas markets in which the company may be interested. Specifically, the authors said that the presence of foreign directors on the board affects the control of the organisation and this is particularly striking in developing and emerging countries.

Haniffa and Cooke (2002) examined the relationship between corporate governance, cultural and firm characteristics with voluntary disclosure of information in the annual reports of Malaysian companies. The results showed that there is as relation between the following factors and the extent of voluntary disclosure: when the president is a non-

executive member; when companies are dominated by families (corporate governance factors) and a high proportion of Malaysian directors (cultural factor) on the board. These results suggest that the Malaysian people have a tendency towards secrecy and feel threatened by the presence of foreigners on boards.

Carter, Simkins and Simpson (2003) studied board diversity (percentage of women, African Americans, Asians and Hispanics on the board of directors) and firm value measured by Tobins`s Q, for *Fortune* 1000 firms, using control variables such as size, industry and other corporate governance measures. The authors found a significant positive relationship between the existence of woman or minorities and financial performance. They also found that the proportion of women and minorities increases with the size of the companies. In light of this, they suggest that companies should increase the number of women on the board.

Oxelheim and Randøy (2003) studied the impact of foreign board membership on firm value in a sample of firms with headquarters in Norway or Sweden. The authors conclude that firms with outsider Anglo-American board members have a significantly higher value. They also suggest that the presence of Anglo-American board members strengthens investor confidence and consequently increases firm value because they come from a very demanding system of corporate governance and are therefore both more active and more independent of management.

Ruigrok *et al.* (2007) studied the effect of nationality and gender diversity on the directors' level of independence, the number of other directorships and other demographic characteristics. This study used a sample of 1678 directors of Swiss Corporate Boards for the year 2003. Switzerland is characterised by an open international orientation and relatively closed ownership networks; the purpose of the paper was to understand gender and national diversity in this context. The results showed that foreign directors tend to be more independent, and they hold few director positions.

Alli, Chan, Subrahmanyam and Thapa (2010) investigated the multinational board diversity and firm value in multinational corporations (US and non-US multinational firms) and concluded that there is no significant relationship between the presence of foreign nationals on the board and firm value. The aim of the study was to contrast results in the literature for American and other firms.

Carter *et al.* (2010) studied the effect of gender (women) and ethnic diversity (ethnic minority directors) in US boards and board committees on financial performance. The authors measure financial performance through the return on assets and Tobin's Q. This study was conducted in major US based corporations listed in the S&P 500 index. The results indicate a positive and significant relationship between both the number of women on the board and the number of ethnic minorities on the board and the return on assets; however, the authors do not find a significant relationship for Tobin's Q. Nevertheless, they point out that there is also no negative relationship between diversity and Tobin's Q and their findings so do not contradict the theories that link diversity as a determinant of company performance.

Masulis *et al.* (2012), studied the effects of foreign directors on corporate governance and the firm's performance and found that foreign independent directors make better cross-border acquisitions, but only if the targets are from the home regions of these foreign directors. The authors also conclude that foreign directors attend few meetings, which leads to low-quality reporting. They justify this conclusion by the fact that the study was conducted in American companies and foreign directors often come from countries with weaker accounting rules than US GAAP. Note that the Anglo-American system is a more demanding corporate governance system than the German, Latin or Japanese systems (Oxelheim and Randøy, 2003).

Mahadeo, Soobaroyen and Hanuman (2012) examine the key elements of board diversity amongst listed companies operating in an emerging economy (Mauritius) and the extent to which these influence financial performance. Specifically, they ask whether there is evidence of tangible benefits from pursuing a strategy of board diversity in terms of gender, age, educational background and independence in a corporate context. They find that women remain poorly represented on boards, but there is a relatively satisfactory level of heterogeneity in terms of educational background, age and independence when compared with developed countries. The authors also demonstrated significant positive and negative relationships between all variables analysed and company performance, which calls into question the validity of having a homogeneous or diverse board.

Ujunwa, Okoyeuzu and Nwakoby (2012) conducted a study on board diversity, namely nationality, gender and ethnicity of board members, and firm performance in 122 quoted Nigerian firms for the period 1991-2008. The results showed that while gender

diversity was negatively related with firm performance, nationality and ethnicity of board members were positive related with firm performance.

Arnegger, Hofmann, Pull and Vetter (2014) studied the relation between firm size and the supervisory board; more specifically, the authors examine if and how firm size influences the diversity of occupational and international background (German citizens) in supervisory boards. They studied 1720 board members in151 German firms for the year 2005. Their results demonstrate that the diversity of occupational and international background grows with increasing firm size. However, this is only true of the international background until a certain firm size because this kind of diversity brings differences in opinions, beliefs, values or attitudes which can be costly for companies, making it undesirable to shareholders and companies.

Harris (2014), studied the impact of board diversity and expertise on non-profit performance and concluded that diversity (racial heterogeneity and gender) and expertise (financial experts: people who have an understanding of generally accepted accounting principles and financial statements) of the board members are associated with better performance organisations. Information for the study was gathered from non-profit boards in the higher education industry using a survey; however, the sample is small, so the results should be read with caution.

García-Meca *et al.* (2015) studied the effect of board diversity (gender and nationality) on bank performance. The authors test whether board diversity matters when the institutional characteristics of each country is taken into account. This study was conducted using a sample of 159 banks in nine countries (Canada, France, Germany, Italy, the Netherlands, Spain, Sweden, the United Kingdom and the United States) during the period 2004-2010. The results show that while gender diversity increases bank performance, national diversity inhibits it. In relation to nationality, this is explained by the fact these directors are unable to exercise their influence because the countries in question have very strong laws and high investor protection. As for the results on gender, the authors explain that women have unique characteristics that positively influence the results of banks.

Isidro and Sobral (2015) conducted a study in Europe about the effect of women on corporate boards, firm value, financial performance and ethical and social compliance. European policy argues that companies should increase female representation at the top; therefore, the authors wanted to determine whether the presence of women on the board

brings benefits to companies. They found no evidence of higher female representation on the board directly affecting firm value. However, indirect effects were identified because the presence of women on the board is positively related with financial performance and with ethical and social compliance. The authors also suggest that women's influence on ethical and social compliance indirectly leads to an increase in the value of companies.

Sitthipongpanich and Polsiri (2015) studied whether the characteristics of the Chief Executive Officer (CEO) and board matter in non-financial family firms listed on the Stock Exchange of Thailand, where investor protection is weak. The authors analyse which characteristics of family CEOs could reduce the possibilities of expropriation and managerial incompetence. The authors also examine whether board characteristics, namely age diversity and political connections, could have an impact on the capabilities and behaviours of family CEOs. The results show that family CEOs reduce firm value (higher potential expropriation of minority shareholders), but the firm value increases if the ages of board members are diverse and if they have political ties.

Dauth *et al.* (2016) studied whether and how the internationalisation of top managers (foreigner, international education and international experience) is associated with accounting quality; they conclude that higher levels of accounting quality are associated with the internationalisation of the CFO. They also find that international education and international work experience of the CFO are important factors in higher accounting quality. This study was performed with a sample of firms listed in the German DAX-30 index from 2005 to 2010 and using demographic data on more than 1800 individuals belonging to boards. In this study, the authors based their results on Agency Theory, Human Capital Theory and Upper Echelons Theory.

An analysis of these studies on the individual characteristics of the board reveals that most focus on internationalisation, nationality or race. We also noted that many of the studies focus on gender and that the fewest studies are about training/education/expertise. This is an expected finding as it is easier to study observable than unobservable attributes.

Most of these studies confirmed a relationship between the characteristics of the board members and the organisation's strategy, voluntary disclosure, the value of the companies and the size of the companies. However, the majority focus on the relationship of the characteristics of the board members with the performance and value of the companies.

We also stress the fact that it is impossible to extend the results of these studies to all parts of the world because each country has a specific economic situation, culture, capital market, and enforcement. For example, Oxelheim and Randøy (2003) found a significant relationship between the presence of foreign (Anglo-American) board members and the value of companies in Sweden and Norway; on the other hand, this relationship was not found to be significant in the study Alli *et al.* (2010) conducted with US and non-US companies. Hence, studies on the about characteristics of board members must taking the situation of the country under analysis into account.

Finally, with regard to the characteristic of the internationalisation / nationality of the board members, authors explain the divergent results by the differences between the countries under analysis and the origins of the board members. That is, the impact on firms increases or vice versa if studies are conducted in places where law and enforcement are weak and if the characteristics of the place of origin of board members are different (Oxelheim and Randøy, 2003; Masulis *et al.*, 2012). Also with regards internationalisation, we highlight the study by Ruigrok *et al.* (2007) which finds foreign directors to be more independent, which in turn favors Agency Theory.

In fact, internationalisation must be analysed carefully and at several levels. For example, according to Dauth *et al.* (2016) the international profile of an individual must not only take their nationality into account, but also education, experience and board appointments. The two studies below do not address internationalisation from the perspective of nationality.

Carpenter, Sanders and Gregersen (2001) conducted a study on the impact of international experience on company performance in 245 multinational firms, drawn from S&P in 1994. They conclude that a CEO with international assignment experience improves the financial performance of firms. The authors even state that international experience gives the CEO unique knowledge, worldviews and professional ties that improve his management capacities.

O'Hagan and Green (2011) studied the educational affiliations of directors in Atlantic Canada and conclude that people who leave their country to pursue an international education are exposed to different institutional structures, both formal and informal, and gain more valuable knowledge than at local universities. Their reasoning is that local universities preserve and teach similar approaches, while the outside universities can offer new corporate strategies, i.e., local universities only provide knowledge and visions for

their domestic market, forgetting that the market is global. The authors also argue that learning abroad is also very important to establish personal relationships, and the experiences gained would certainly affect the decision-making process of the directors.

Based on studies by Carpenter *et al.* (2001) and Dauth *et al.* (2016) addressing internationalisation from the perspective of international experience and training, we can conclude that international experience improves company performance and also that international experience and training improves accounting quality. O'Hagan and Green (2011) also state that when the directors emigrate, they acquire much more valuable knowledge that can affect their decision making and consequently have an impact on the organisations and on disclosure.

2.3 The Brazilian Context Accounting and Governance

The importance of board members in organisations has already been demonstrated in the literature (Brennan, 2006; Judge Jr., 1992) and in organisational theories; moreover, according to the model of effects of diversity in organisational groups developed by Milliken and Martins (1996) the characteristics od board members probably affect companies' disclosure. It is therefore necessary to understand which of the board members' characteristics should be analysed, taking the location under analysis into account, of course.

For this reason, we will next characterise the Brazilian system, and examine both the context and the evolution of accounting and governance. This is necessary for the coherent and logical selection of the variables in light of the country context; It also sheds light on the results of this study.

2.3.1 Brazilian Accounting

Nobes (1998) states that although there are various explanations for the differences in international accounting disclosure, it is the system, not the country, that would be the

major cause. The Brazilian system has a Latin and Euro continental tradition and is therefore considered a code law system (Santos *et al.* 2014). Investor protection in countries with this system is low (Gillan and Starks, 2003), leading to lower levels of disclosure because accounting in such systems is performed mainly for tax and creditors. Brazil is also an emerging country and one of the fastest growing economies in the world that is expected to reach a prominent place in the ranking of world economies (Rodrigues, Schmidt and Santos, 2012). However, and despite its strong growth, average transparency and disclosure is low in Brazil just as in other South Americas countries, and when compared to other Asian and European countries (Patel, Balic and Bwakira, 2002).

With regard to the evolution of accounting in Brazil, strong economic development in the late 19th century caused by the expansion of the coffee industry created the need for the bookkeeping business. New schools were opened to study the science of accounting and Francis D'Áuria (1884-1958) introduced the concept of Italian accounting, whereby accounting is a science with its own laws and principles. After the Brazilian revolution in 1930, Gertúlio Vargas became the first constitutionally elected President, and the following year legislation was passed recognising the accounting profession and the process to standardise financial reporting began (Rodrigues *et al.,* 2012). However, Brazil began to move away from the Italian accounting model towards the American model from the 1970s due to the development of capital markets, the reform of the financial system, as well as the fact that the large Brazilian business partners were American (Rodrigues *et al.,* 2012).

More recently, in an attempt to capture foreign investment and increase its international business, Brazil decided to adopt the IFRS so as to reduce the costs of information. This has already been documented in the literature; for example, Ramos (2011) and Amiran (2012) state that the adoption of IFRS decreases information costs and, consequently, leads to an increase in business and foreign investment. Also, Lourenço and Branco (2015) show in a study conducted in Brazil that the adoption of IFRS has a positive effect on the relevant value of net income; however, this only occurs if the companies have good corporate governance practices. Different results are also reported in the literature. For example, Nnadi and Soobaroyen (2015) studied the IFRS and foreign investment in Africa and concluded that the adoption of IFRS has a negative impact on foreign investment because investors have shown they attach greater importance to the institutional structures of African countries than to the adoption of

IFRS. Nevertheless, regardless of any potential negative repercussions, Brazil decided to adopt IFRS and separated itself from the Italian accounting model based on tax. This adoption took place in 2 phases: Phase 1 (2008): partial adoption of some standards, 2nd phase (2010): full adoption of all IFRS.

Prior to the adoption of IFRS, accounting in Brazil followed the Generally Accepted Accounting Principles (BR GAAP), which were designed primarily in line with tax laws and regulations from government agencies (Central Bank of Brazil and Brazilian Securities Commission). The government was the main user of financial information rather than participants of stock market, and the production of quality financial reporting was low (Santos and Cavalcante, 2014). As a result of this change, Brazil went from one extreme i.e. providing investors with little information (BR GAAP), to the other extreme i.e. providing investors with a lot of information (IFRS). We also add that, according to Young and Guenther (2003), countries with a higher disclosure of information have greater mobility of capital; if Brazil adopted the IFRS to attract more investment, this probably happened because IFRS provide more information than the local Brazilian standards. Note that some local adaptations have been made to the IFRS (e.g. prohibition of revaluation of assets, adjustments in the definition of cash equivalents, etc.).

Although an increase in disclosure is expected when IFRS come into force, Glaum *et al.* (2013) state that conservative countries have a lower level of disclosure and especially in the phase following the adoption of IFRS; as Brazil also falls into this category, disclosure is expected to be low. Similarly, Armstrong, Barth and Riedl (2010) found that the market reacts negatively to the adoption of IFRS by code law countries, due to their enforcement levels. Peng, Tondkar, Smith and Harless (2008) also state that the application of IFRS in developing countries may be questionable due to the lack of enforcement mechanisms.

Following Brazil's introduction of IFRS in 2010, together with major changes in accounting disclosure, the accounting professionals became more influential due to their increased freedom to make judgments (Antunes, Grecco, Formigoni and Neto, 2012), i.e. as accounting was no longer seen simply in conjunction with taxation, accountants became less dependent on tax laws when practising their profession.

In conclusion, the application of IFRS in Brazil is expected to raise the quality of accounting; this will help companies by reducing the cost of capital, increasing liquidity, reducing errors in analysts' forecasts, etc. (Botosan, 1997; Barth, 2008; Bhasin and

Shaikh, 2011; Ball *et al.*, 2003). However, we underline that these benefits can only be achieved if the IFRS are effectively fulfilled (Ball, 2006; Daske and Gebhardt, 2006; Hodgdon *et al.* 2008; Daske, Hail, Leuz and Verdi, 2008); but given Brazil's above mentioned characteristics, the degree of compliance is expected to be low. Studies by Maia *et al.* (2012) and Nakayama and Salotti (2014) have already confirmed this and found levels of compliance of around 60% and 70%.

2.3.1.1 Brazilian Accounting – IFRS 3

Given that IFRS 3 is our object of study and we have already verified that IFRS were introduced in 2010, it is pertinent to analyse the main changes brought by this standard in relation to the BR GAAP previously in force.

IFRS 3 came into force in Brazil in 2010, through *"Comité de Pronunciamento Contábil 15 – CPC 15"*, which is the Brazilian standard that regulates the business combinations but that derived from IFRS 3. The objective of CPC 15 is to improve the relevance, reliability and comparability of the information of business combinations.

Thus, according to the report by Deloitte Touche Tohmatsu (2009), the main differences between IFRS 3/CPC 15 in 2010 and the previous national accounting are:

- greater importance of the concept of fair value: assets and liabilities in a business combination measured at fair value - recognition of goodwill or badwill (intangible);
- no amortisation of goodwill - impairment tests
- disclosure of the amount paid and the net equity;
- disclosure of the fair value of assets acquired (and/or net equity) by the tax and accounting basis;
- disclosure of liabilities assumed;
- disclosure of goodwill or badwill.

As can be seen above, the introduction of IFRS 3 /CPC 15 in Brazil in 2010 brought an increase in the importance of fair value. However, Brazil is a code law country where the use of fair value is limited in relation to the use of historical cost (Baboukardos and Rimmel, 2014). It can therefore be concluded that it is an unfavourable environment for the perfect implementation of this standard and the disclosures required.

Before IFRS 3/CPC 15 came into effect, the disclosure of information on business combinations was regulated in *CVM – Instrução nº 319* of 1999, which required a minimum of 20 items to be disclosed. This annulled various aspects of the operation, such as reasons and justification for the realisation of the business combination, as well as the calculation of the exchange ratio of shares between the companies involved. This standard was very broad and required the disclosure of corporate and tax aspects. Also, *Lei n. 6404*/76 *(Lei das Sociedades por ações)* defines the conditions of the business combinations that must be submitted to the shareholders' meeting; however, it does not establish any mandatory disclosure.

On the other hand, IFRS 3/CPC 15 establishes 39 mandatory disclosure items and, in fact, CPC 15 is more demanding than CVM 319. It is worth noting that this standard refers to all business combinations and CVM 319 referred only to incorporation, merger and spin-off operations. According to *Lei 6404*/76, an incorporation is when one or more companies are incorporated into another entity, while a merger is the merging of two or more companies into a new entity and, finally, a spin-off is when a company sets aside part of its patrimony to form an entity.

In conclusion, although IFRS 3 / CPC 15 is more demanding than the previous standard in force because there are more mandatory items, compliance is expected to be low due to the specific Brazilian characteristics already mentioned, such as low investor protection and low enforcement.

2.3.2 Brazilian Governance

With regard to the evolution in Brazilian corporate legislation, the first law on public limited companies was published in 1976 (*Lei nº 6404/76*); the CVM (*Lei nº 6385/76*), which is the regulator of securities markets in Brazil, was also formalised in that year.

The law of public limited companies (*Lei nº 6404/76*) states that the Board of Directors should be composed of at least three members and that they should be elected at the company's General Assembly but no mention is made of the profile of the Board members. Note that although this law was changed in 2001, nothing was changed / added in matters related to profiles or competence of Board members.

The CVM issued recommendations in 2002 to stimulate and develop the Brazilian capital market. Among these, it was recommended that the Board of Directors should be composed of five to nine technically qualified members and at least two of these must have experience in finance and be responsible for monitoring the accounting practices more closely. It should be noted that before this date the CMV made no mention about the composition of board of directors. The document of recommendations emitted in 2002 also states that the Board should have as many independent members as possible. And finally, in 2010 the CMV brought about a major change in companies when it published *Instrução CVM nº 480* and *nº 481,* which required listed companies to complete the *"Formulário de Referência",* This requires companies to disclose the following information: 1. Responsible for the *"Formulário de Referência"*; 2. Independent Auditors; 3. Selected financial information; 4. Risk factors; 5. Market Risk; 6. Issuer history; 7. Issuer's activities; 8. Economic Group; 9. Relevant assets; 10. Directors' comments; 11. Projections; 12. Assembly and administration; 13. Remuneration of directors; 14. Human resources; 15. Control; 16. Transactions related parties; 17. Share capital; 18. Securities; 19. Plans buyback / treasury; 20. Trading Policy; 21. Disclosure Policy; 22. Extraordinary Business.

BM&FBOVESPA, formed in 2000, is another important organism for regulating entities; it concentrates all stock trading in Brazil. This is a self-regulating entity and operates under the supervision of the CVM; however, it has a procedures manual for the admission of participants (Annex IV of the *Ofício Circular 078/2008-DP*). This manual

includes operational requirements for the admission of market participants, and the following conduct requirements are specified:

"The partners, managers, operators and proposed Participant shall meet at least the following requirements:

a) *be absolutely able to act in civil and commercial life;*

b) *not been convicted in the last five years, for a crime against property, public faith, public administration, or misdemeanour by the practice of legally prohibited games or vagrancy;*

c) *Not been declared insolvent or convicted in creditors contest in the last five years,, or in the same period, been the subject of an executive law suit or have been convicted in a collective suit;*

d) *not been convicted of any of the offences set forth in Chapter VII-B of Law No. 6,385, of 12/15/76, of Law No. 7,492, of 06/16/86 and Law No. 9613 of 03-03-98, unless the sentence has already been served;*

e) *been restored to solvency in the event of being declared insolvent;*

f) *have no record in his/her of uncovered cheques or the credit bureau - SPC;*

g) *not been punished in the last two years, or have been disabled temporarily or permanently by the Exchange, the CVM, the Central Bank of Brazil or the Board of Appeals of the National Financial System;*

h) *not been convicted by the Federal Government, state or local tax in disciplinary or administrative proceedings in the last 2 years;*

i) *enjoys unblemished reputation and conduct compatible with the function; and*

j) *undertakes to observe ethical trading standards and behaviour."* (Translated by the authors - *Ofício Circular 078/2008-DP* - Annex IV: 8-9)

As we can see, in the requirements for the board members of participating companies in the BM&FBOVESPA market, nothing is said about the composition and characteristics of the Board Members. However, since 2000 BM&FBOVESPA has been organised in segments that require better governance practices. These segments are as follows, in

ascending order of the requirement: Traditional Market, Level 1, Level 2 and New Market (Lourenço and Branco, 2015). In addition to the creation of these segments, this market created the CGI index (Corporate Governance Index) in 2001; this measures the performance of a portfolio of shares of companies with good levels of governance, because investors increasingly value these companies.

In addition to the CVM and BM&FBOVESPA, the Brazilian Institute of Management Board (IBCA) is a reference organisation which addresses the governance issues of companies. It was formed in 1995 and is a non-profit organisation. This organizations refers that the Brazilian Corporate Governance is closer to the Insider System model of organisation, where the ownership of companies is highly concentrated, the debt market has an important role and there is a strong presence of family and state-controlled companies. However, in recent times the governance of Brazilian companies has come closer to the Anglo-Saxon model, which increases the importance of the equity market as a source of business financing. Thus, it has also been found that investors are willing to pay a higher value for companies that adopt good corporate governance practices, especially favouring the interests of business owners and longevity of companies. In 1999, IBCA became known as IBCG - Brazilian Institute of Corporate Governance and it launched the first Brazilian code on corporate governance - Code of Best Corporate Governance Practices. This code has been improved over the years and several editions were published after 1999. The 2008 edition of the code did not mention how the Board should be composed. Note that the 2008 edition is important because it was in force at the time of this study (which cover the years 2010 to 2013). The 5th edition of the Code, published in 2015, has been greatly improved; regarding the board of directors, it states:

"Composition of the board of directors

"Principle

The board of directors is a collective body, and its performance depends on the respect and understanding of the characteristics of each of its members, which should not imply the absence of debates. This diversity of personalities is crucial, because it allows the organisation to take advantage of a plurality of arguments and of a richer and more reliable decision-making process.

Practice

a) The composition of the board of directors must consider diversity of knowledge, experiences, behaviours, cultural aspects, age and gender. The directors must ensure that the executive management defines and promotes policies that provide equal opportunities for women to access high leadership positions within the organisation" (Code of Best Corporate Governance Practices, 2015: 42)"

In light of the developments in the Code of Best Corporate Governance Practices between 2008 and 2015, we concluded that the diversity of members of the board has gained importance in the Brazilian context.

We also note that the independence of members of the Board has gained importance since the 2008 edition, when the subject was not addressed; the 2015 edition now states:

"Independence of board members

Principle: Once elected, all board members have a responsibility to the organisation, regardless of the shareholders, shareholder group, administrator or stakeholder who appointed them to the position.

Board members must perform their duties based on technical knowledge, with emotional and financial detachment and without the influence of any personal or professional relationships. They must create and preserve value for the organisation as a whole, within the appropriate legal and ethical guidelines." (Code of Best Corporate Governance Practices, 2015: 44)

This code also recommends having between five and eleven members in the board of directors, depending on various factors such as the business sector, size, complexity of activities, the organisation's life cycle stage and the need to form committees.

We can therefore conclude from the historical research about CVM, BM&FBOVESPA and IBCG, that progress has been made in corporate governance in recent years due to CVM recommendations, the creation of segments, and a BM&FBOVESPA index that distinguishes companies with better governmental practices, and finally the significant improvement in the Code of Best Practice of Corporate Governance issued by IBCG. This analysis shows us that Brazil has strived to combat enforcement problems and that the

independence and diversity of members of the Board of Directors may help resolve this and increase investor confidence.

2.4 Main Conclusions and Summary of Literature Review

After reviewing the literature, it can be concluded that despite 50 years of studies on the determinants of compliance, there are still divergent results, and consequently organisational theories cannot always be proven. Judge, Li and Pinsker, (2010) and Samaha and Khlif (2016, b) also reached a similar conclusion, especially in the case of developing countries where the social, cultural, political and economic context must be taken into account. With respect to IFRS 3, this is such an important standard that some studies are devoted specifically to compliance with it; however, results about determinants also vary.

An analysis of the studies with determinants of compliance tested over time reveals that there is a recent body of research on the individual characteristics of board members, notably the studies by Abdullah *et al.* (2015) and Ebrahim and Fattah (2015). It is thought that this area of study is only recent due to the difficulty in obtaining this type of information in the past. However, it is no longer so complicated in Brazil, for example, because listed companies have been required to complete the *"Formulário de Referência"* since 2010, in which the curriculum of companies' board members is mandatory data. There is therefore a clear gap in the literature because, to our knowledge, the individual characteristics of board members have never been studied as determinants, except in the papers by Abdullah *et al.* (2015) and Ebrahim and Fattah (2015). This determinant is also expected to be of great relevance because it is the board members that make company decisions they will affect the disclosure of the information.

In light of this, and in order to ascertain which board characteristics should be analysed, we have examined the literature on governance, more specifically on board characteristics generally and on the individual characteristics of board members. It was concluded that most studies on individual characteristics focus on the internationalisation variable, which can be analysed in terms of nationality, training and experience. It should

be noted that location must also be taken into account when addressing the characteristics of the board, because the specificities of each country may or may not dictate the importance of certain board characteristics.

The significance of location to compliance with disclosure requirements and to the characteristics of the board members makes Brazil's accounting and governance situation an interesting topic of research. In relation to accounting in particular, it was concluded that Brazil is a code law country, with low enforcement and low investor protection where compliance is therefore expected to be low and it has recently adopted the IFRS (2010). In fact, the papers by Maia *et al.* (2012) and Nakayama and Salotti (2014) confirmed low compliance in Brazil. On the other hand, there are no obligations with regard to the composition of the board; however, in recent years the competent local authorities and organisations (CVM and IBCG) have recommended having more independent and more diverse members. Hence, as the composition of the board is expected to be relevant in the Brazilian context, it is important to know which characteristics of board members would foster compliance with disclosure in this country.

In relation to the CVM and IBCG recommendation on independent board members, it is necessary to define true independence in the Brazilian context. In line with the paper by Ruigrok *et al.* (2007) that claims foreign members are more independent, internationalisation is expected to be a key variable. Board needs really independent people with strong characteristics of compliance and enforcement, and these are not common Brazilian characteristics. It should be noted that Oxelheim and Randøy (2003), Ujunwa *et al.* (2012) and García-Meca *et al.* (2015) also stress that foreign directors have different characteristics from those of local directors, and this affects company strategy.

The CVM and IBCG also recommends having diversity on the board; this can be analysed in terms of age, gender or internationalisation (Attributes/Characteristics observable). The relevance of internationalisation is explained in the previous paragraph. On the other hand, gender is not expected to influence disclosure, because Brazil is still a very macho country where women are unlikely to have the power to change a company's disclosure strategy even when they have a seat on the board; in addition, many of them are related to men in the organisation. Age is also not expected to affect companies' disclosure strategies because, in Brazil, board members are mainly from older age groups; when there are younger board members, they usually have family ties with older members

and are influenced by them and, therefore, their youth does not affect compliance with accounting disclosure.

Meanwhile, internationalisation of the board may have an impact on compliance because, according to Fields and Keys (2003), a board with a diverse background can bring unique experience and perspectives to a company and this diversity is obtained through geographical origin and professional experience. Board members who are foreign nationals or have had training abroad may have more knowledge about the capital market and about the importance of compliance than Brazilian board members. They are therefore likely to foster innovation and greater compliance with mandatory disclosure. Finally, experience of different cultures often develops better problem-solving and leadership skills which can impact disclosure. These members of the board lead to greater supervision of management, which is in the interest of shareholders, increases the disclosure of information and reduces agency problems found in Brazil.

Finally, and because Brazil has strong foreign investment, it is expected to have many business combinations; as this impacts financial statements/disclosures and consequently the users of information, it is very important to ascertain whether the disclosure requirements for the combinations and business standard (IFRS 3) are met and which determinants affect its compliance. Although Nakayama and Salotti (2014) studied compliance with this standard, they only examined compliance for the year 2010 (year of IFRS implementation), in a sample of 40 companies, and without any determinants on the Board Members' Characteristics.

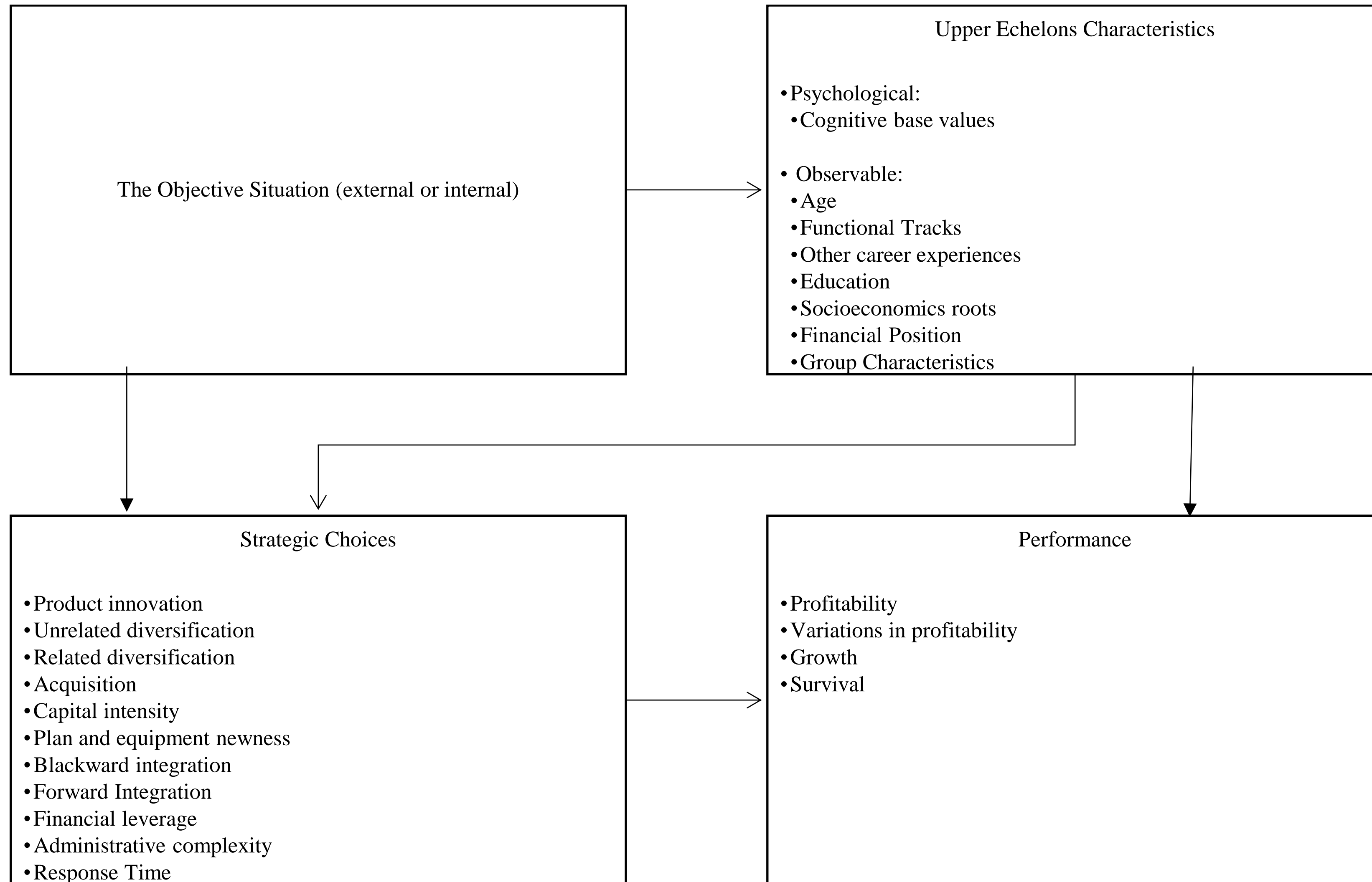
For the aforementioned reasons, the characteristics of board members, and internationalisation in particular, are expected to affect the level of compliance with the disclosure requirements, namely compliance with IFRS 3.

3. HYPOTHESES

This study analyses the influence of the level of board members' internationalisation on compliance with IFRS 3 mandatory disclosure requirements in Brazil. This analysis using a theoretical framework that combines the Upper Echelons Theory developed by Hambrick and Mason (1984) and the Resource Dependence Theory developed by Pfeffer and Salancik (1978).

The Upper Echelons Theory reveals that organisations are a reflection of their board members. The strategy of an organisation reflects the values and cognitive bases of its actors, in this case, its board members. The original Upper Echelons model is recreated in Figure 3.1.

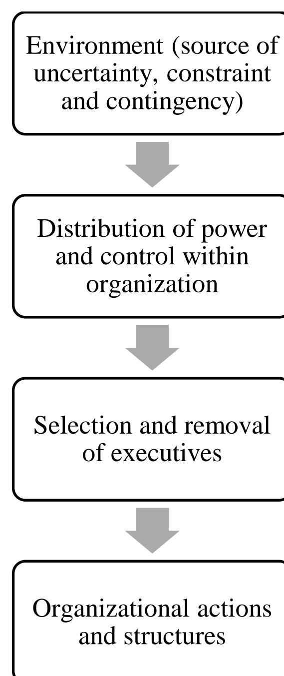
Figure 3.1: Upper Echelons Model (Hambrick and Mason, 1984)



Summarising the above model of the Upper Echelon Theory, companies have objectives that are affected by the board members' psychological (cognitive and base values) and observable characteristics (age, functional tracks, other career experiences, education, socioeconomics roots, financial position and group characteristics). As board members base their strategic decisions on these characteristics, they in turn affect company performance. Board members' characteristics are therefore expected to influence strategic business decisions, including those on disclosure and, in particular, on the level of compliance with accounting disclosure requirements although this is not one of the topics mentioned in the strategic decisions of this model.

On other hand, Resource Dependence Theory is concerned with how organisational behaviour is affected by external resources used by the organisation. This theory is supported by the idea that resources are key to organisational success and that access and control over resources is a basis of power. The Resource Dependence model is recreated in Figure 3.2.

Figure 3.2: Resource Dependence Model (Pfeffer, 2003):



To summarise this theory, the resources received by board members from the environment are uncertain and, as their decisions are made in line with resources received and owned, they affect organisations. According to Pfeffer (1972), board members also have their own resources; these can include experience, expertise, reputation and relational capital. Hillman and Dalziel (2003) state that there are four other benefits/resources that can be provided by the board: advice and guidance, legitimacy, channels of communication with the outside, and preferential access to commitments outside the company. Hence, this theory can also be applied in our study insofar as disclosure may be affected by the following feature /benefits of board members: experience, expertise and finally channels of communication.

Based on Upper Echelons and Resource Dependence theories, it is concluded that board members affect the strategic decisions and means of communication in companies. More specifically, we propose studying the level of internationalisation as a characteristic of board members.

Internationalisation can come under the umbrella of Upper Echelons Theory because, according to this theory, board members' strategic decisions have a psychological base which includes board members' cognitive values and, at an observable level includes training and professional career. We believe that the board's internationalisation will not only affect people's cognitive values but also their professional careers, which in turn will have an impact on strategic decisions, in this case, the level of compliance with disclosure requirements. Also, Ramaswamy and Li (2001) advocate that foreign board members affect the control of organisations and this is felt more keenly in developing and emerging countries, which is the case of Brazil. Following Ramaswamy and Li (2001), we conclude that if board members can affect control through their strategic decisions, they soon control companies' disclosure, especially in countries like Brazil.

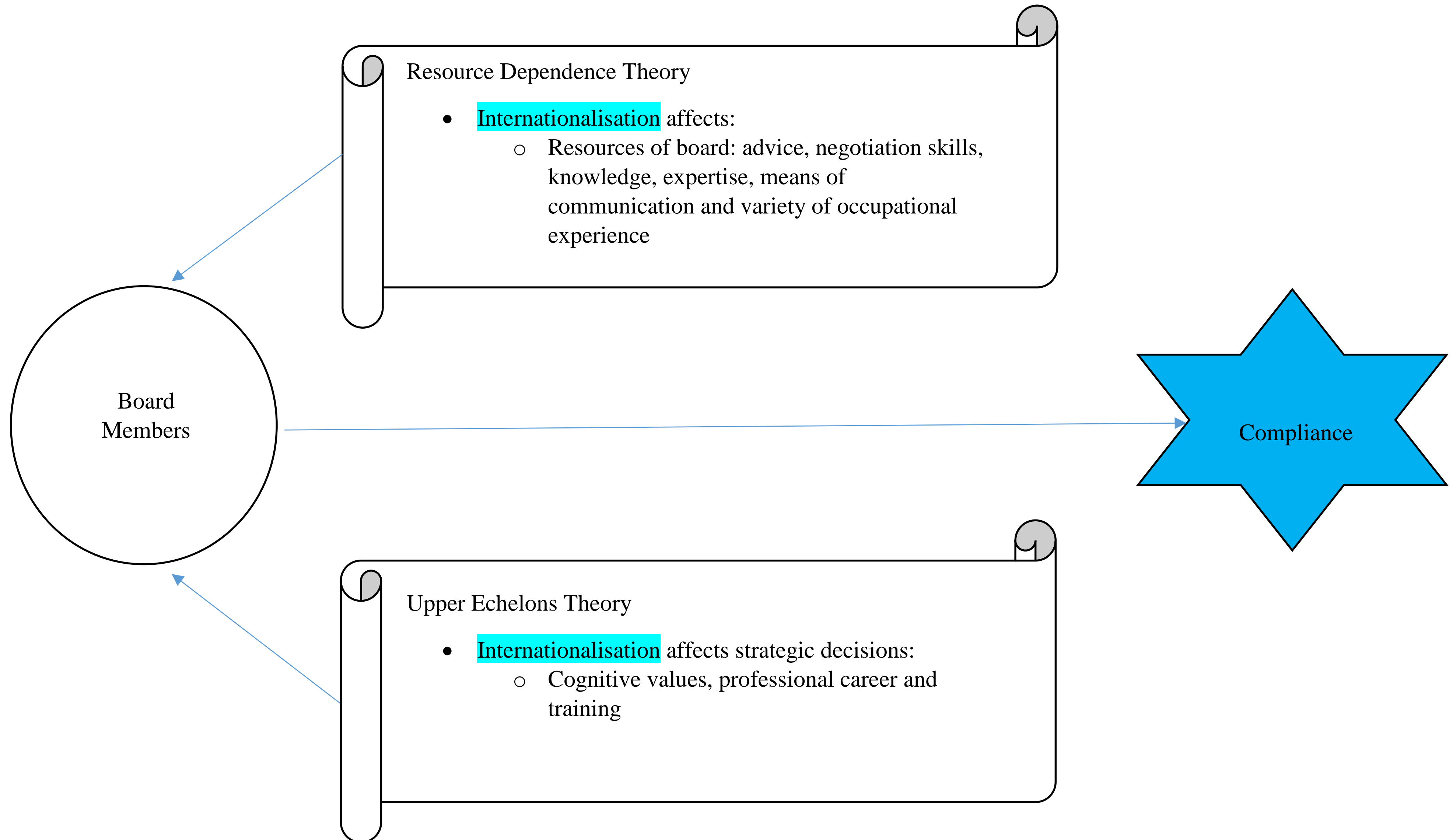
The internationalisation feature can also come under Resource Dependence Theory because this defends that the variety of occupational representation will be a source of knowledge for the board and this knowledge/expertise is a resource/benefit of board members. According to Hillman, Cannella Jr. and Harris (2002), the greater the diversity among the members of the board, the more resources they will give the company. Occupational variety will be taken here to mean the internationalisation of board

members. This theory also highlights the potential benefits of board diversity in an uncertain and complex environment, which is the case of Brazil.

Several studies demonstrate the importance specifically of the variable of internationalisation. For example, Gillan and Starks (2003) highlighted the special role played by institutional investors, especially if they are foreigners, in fostering the exchange of corporate governance practices. Other studies analyse the relationship between foreign ownership of firms and the degree of compliance, notably the study by Mısırlıoğlu *et al.* (2013). Moreover, the study by Oxelheim and Randøy (2003) shows that foreign board membership increases firm value. For Ruigrok *at al.* (2007), foreign directors tend to be more independent; and the study by Masulis *et al.* (2012) showed that foreign independent directors make better cross-border acquisitions when the targets are from the home regions of these directors. On the other hand, mandatory IFRS adoption increased foreign mutual fund ownership (DeFond, Hu, Hung and Li, 2011). And finally, the study by Dauth *et al.* (2016) demonstrated that CFOs with international education and international work experience are associated with better quality accounting.

The relationship between the theories above with board members and with compliance can be seen in figure 3.3.

Figure 3.3: Model of compliance



Based on theoretical considerations, this study explores hypotheses about board members' characteristics that could affect the level of compliance with disclosure requirements of IFRS 3, namely the internationalisation of board members. Internationalisation is understood herein as the presence of foreign board members or board members with training abroad. Next, we explain these forms of internationalisation in more detail.

3.1 Foreign board members

Foreign board members have undertaken various management tasks during their career and have different strategic visions about financial reporting and stakeholders' information needs (Ebrahim and Fattah, 2015); this means they can provide companies with better advice, which is a benefit of Resource Dependence Theory. On the other hand, the presence of foreign members on the board also may signal the company's ability to deal with international markets and better financial disclosure and transparency; this is also consistent with Resource Dependence Theory which shows communication with the outside is one of the benefits / resources provided by the board. Finally, according to Ujunwa *et al.* (2012) foreign board members have better qualifications and more experience than local board members; this can also be seen as a resource / benefit of board members and is in line with Resource Dependence Theory.

On the other hand, foreign board members are expected to have great intercultural competence, defined as: *"Intercultural competence is the personal ability needed to communicate and work efficiently in intercultural every-day and business situations with members of different cultural groups or in a foreign cultural environment"* (Behrnd and Porzelt, 2012: 214). Bearing in mind that intercultural competence is the ability to communicate effectively, and because foreign members are expected to possess a high level of intercultural competence, they are expected to comply with the required disclosure. This is also in line with Upper Echelons Theory, in that foreign members possess a high level intercultural competence, which will have a psychological effect on

their cognitive values and certainly impact their professional career and socioeconomic roots; these are two observable characteristics of board members that affect strategic decisions and consequently compliance.

In addition, companies with foreign directors may disclose more information to demonstrate their management skills. But it must be borne in mind that this is only applicable if we are analysing countries with weak accounting laws and weak enforcement and foreign members come from countries where this is not the case (Masulis *et al.,* 2012). The study by Masulis *et al.* (2012) concludes that foreign directors in low enforcement countries, like Brazil, will probably bring stricter rules and therefore will make more disclosures. It is also recalled that accounting rules have changed recently in Brazil (adoption of IFRS in 2010) and Brazilians may therefore not yet be very familiar with them; if foreign directors come from countries where these standards are already applied, they will comply more with the disclosure requirements. Finally, it is also assumed that the presence of foreign board members in Brazil will lead to more disclosure because, according to Oxelheim and Randøy (2003), board members from foreign environments with more rigid systems are more active and more independent of management.

Based on the arguments presented above, a higher representation of foreign members on the board of Brazilian companies is expected to have a positive effect on the level of compliance with financial reporting requirements, which results in the following hypothesis:

H1: A higher proportion of foreign members on the board is associated with a higher level of compliance with IFRS 3 disclosure requirements.

3.2. Training Abroad

Saxenian (2002, 2006) propose the Theory of Brain Circulation to explain the phenomenon of prominent people leaving a country only to return once they have

furthered their knowledge. She argues that there is a circular movement of individuals and this movement brings intangible knowledge that improves the competitiveness of companies.

Resource Dependence Theory reinforces this hypothesis because the presence of board members with knowledge acquired abroad may affect companies' disclosure because they may have different sources of knowledge, especially if they do training in countries with stricter accounting rules, according to Masulis *et al.* (2012).

In line with Upper Echelons Theory, career and education are observable characteristics of board members. The training board members receive will therefore certainly affect their strategic decisions and consequently compliance.

According to the Theory of Brain Circulation in which career / experience / knowledge is affected by foreign experience, it can be concluded that this specific type of training will affect board members and consequently compliance with mandatory disclosure; this is in line with both Resource Dependence Theory and Upper Echelons Theory.

Finally, Behrnd and Porzelt (2012) investigated the intercultural competence and training outcomes of students with experience abroad; they concluded that such experience increases the intercultural skills of students. Intercultural competence is defined as: *"the personal ability needed to communicate and work efficiently in intercultural every-day and business situations with members of different cultural groups or in a foreign cultural environment"* (Behrnd and Porzelt, 2012: 214); therefore, in line with the conclusions of Behrnd and Porzelt (2012), we expect board members with training abroad to have an influence on the level of compliance with disclosure requirements.

Considering the above-mentioned theories and literature about training outcomes of students with experiences abroad, board members are expected to bring new knowledge to companies from their international training; this affects the decision making process and communication and consequently the disclosure of enterprises. Board members with training abroad are therefore expected to have a positive effect on compliance with financial reporting regulations, namely with IFRS 3, which results in the following hypothesis:

H2: A higher proportion of board members with training abroad is associated with a higher level of compliance with IFRS 3 disclosure requirements.

4. METHODOLOGY

4.1. Sample and data

This work began by analysing all the companies listed in BM&FBOVESPA and all their consolidated financial statements were collected electronically for the years 2010, 2011, 2012 and 2013 (total of 607 reports per year). Each financial statement was then analysed to identify which companies report information about business combinations. Following this selection, we obtained a sample of 136 observations (94 companies with business combinations in 2010, 2011, 2012 and/or 2013).

The "*Formulário de Referência*" of these companies were then collected to assemble information related to the characteristics of the board members (nationality and training) and other corporate governance characteristics (the existence of a finance or audit committee and the revenue obtained from abroad). In this process, 11 observations were removed from the sample because they did not provide the "*Formulário de Referência*" for the year under analysis. An additional constraint at this stage was that not all "*Formulário de Referência*" disclose information about board members, which meant it was necessary to eliminate a further 17 observations.

Finally, we eliminated observations with a studentized residual higher than "2.0" (6 observations). The final sample is thus composed of 102 observations (70 companies) which can be seen in Appendix A.

Table 4.1 shows the number of observations per year and by sector in order to provide a better understanding of the sample.

Table 4.1 - Decomposition of the sample per year per and sector

Sectors	2010	2011	2012	2013	%
Production	4	5	6	3	18%
Logistics		4	2	2	8%
Construction/ Real Estate		6	2		8%
Trade	1	5	3	5	14%
Education		3	3	3	9%
Energy	2	4	2		8%
Food	1	2	4	1	8%
Technology	2	3	3	4	12%
Other Services	1	8	5	1	15%
Various Sectors	1	1			2%
Total	12	41	30	19	

An analysis of Table 4.1 reveals that the sample is distributed across all sectors of activity. It also shows that 2011 is the year with the most observations, followed by 2012, 2013 and finally 2010. The low number of observations in the 1st year (only 12) may be explained either by companies with business combinations not making the respective disclosures, or by the fact that there were fewer business combinations in this year.

4.2. Variables

An index of disclosure was constructed to compute the level of compliance with IFRS 3 disclosure requirements, and is used as the dependent variable of our study.

The independent variables can be divided into two types: test variables and control variables. The test variables are: the proportion of foreign board members and the

proportion of board members with training abroad. The selected control variables are: size; leverage; return on assets; operational cash flow, proportion of the company owned by investment funds, proportion of independent board members, goodwill weight, percentage of foreign revenue; listing in the United States and existence of financial or audit committee. The data used to compute most of the control variables were taken from the consolidated financial statements and "*formulário de referência*".

4.2.1. Dependent Variable

The dependent variable is based on the IFRS 3 disclosure requirement about business combinations at the time of the study (2010, 2011, 2012 and 2013).

As this study focuses on disclosure requirements, special attention was given to paragraphs 59-63 of IFRS 3, which require companies to disclose information about the business combinations that took place in the reporting period[1].

Paragraph 59 of this IFRS refers to paragraphs B64-B66; these paragraphs specify in more detail what information companies are required to disclose about business combinations. Based on to these paragraphs, our compliance index was constructed to verify whether companies complied with all mandatory disclosure requirements of IFRS 3. However, in the following situations it is difficult or even impossible to validate compliance with mandatory disclosure: how the acquirer company obtained control of the acquiree company; the acquisition-date fair value of each major class of consideration; the contingent consideration arrangements and the indemnification assets; the acquired receivables; the contingent liability recognised; the transactions that are recognised separately from the business combination.

With regards the mandatory disclosure of how the acquirer company obtained control of the acquiree company, this information is disclosed in only a few cases.

It was not possible to confirm whether companies disclose the fair value of the consideration transferred by each accounting class (for example: cash, other tangible or

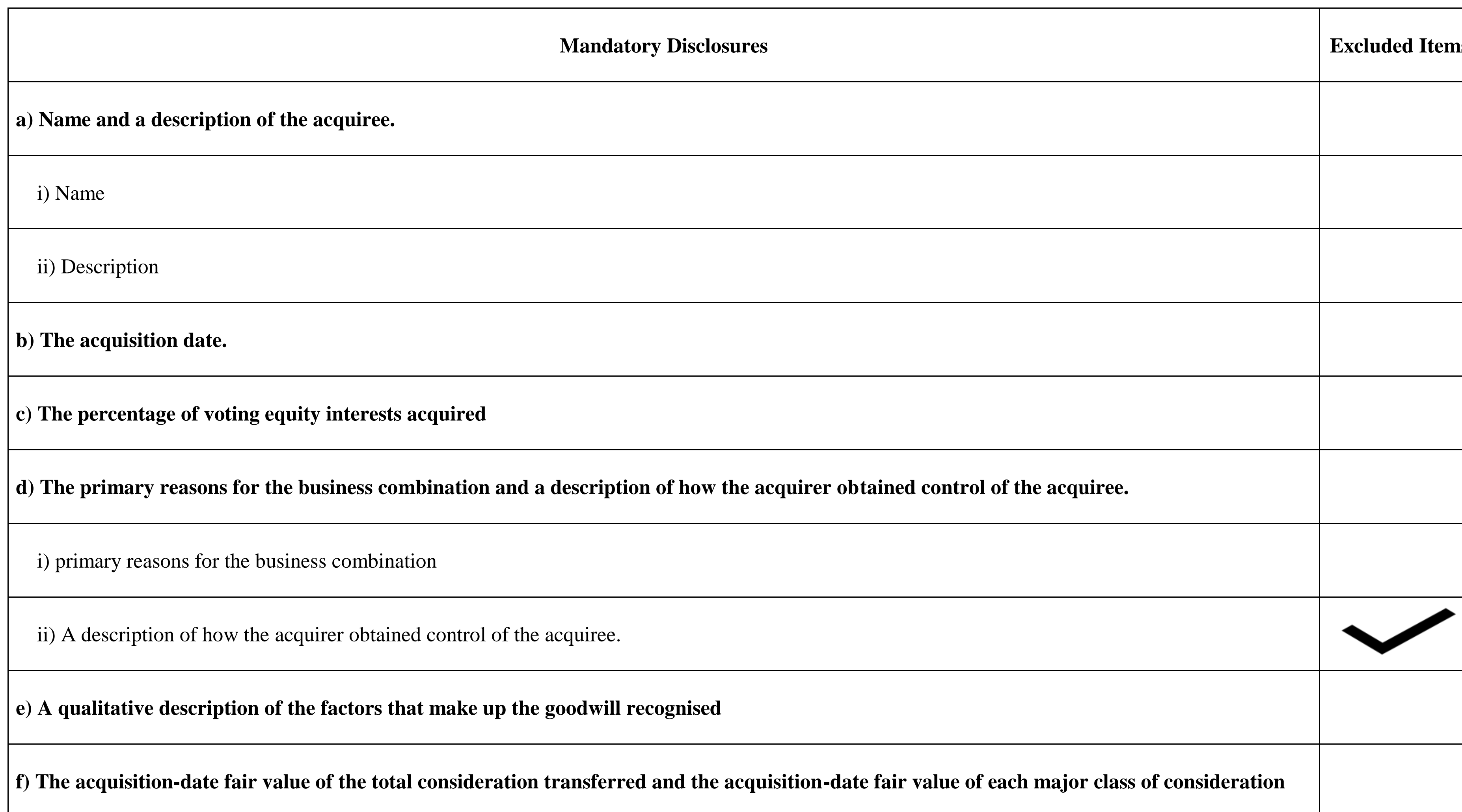
[1] IFRS 3 also requires companies to disclose information about the business combinations that occur after the reporting period but before the approval of the accounts; however, these disclosures are not considered to be infrequent.

intangible assets, liabilities incurred and shares of the acquirer) because the information disclosed was not conclusive. That is, although many companies report that they "paid" a certain amount for the business combinations, we cannot conclude that this payment was made in cash, for example, unless specified.

Finally, the mandatory disclosures regarding contingent consideration, indemnification assets, purchased receivables, contingent liabilities and on transactions that are recognised separately from the business combination were withdrawn from validation. In these cases non-disclosure may not mean noncompliance because the companies might not have any such items to disclose, i.e., may be situations of inapplicability.

In light of the above, Table 4.2 was constructed showing all mandatory disclosure items in IFRS 3 and also the excluded items.

Table 4.2 - Disclosure items required by IFRS 3



Mandatory Disclosures	Excluded Items
a) Name and a description of the acquiree.	
i) Name	
ii) Description	
b) The acquisition date.	
c) The percentage of voting equity interests acquired	
d) The primary reasons for the business combination and a description of how the acquirer obtained control of the acquiree.	
i) primary reasons for the business combination	
ii) A description of how the acquirer obtained control of the acquiree.	✓
e) A qualitative description of the factors that make up the goodwill recognised	
f) The acquisition-date fair value of the total consideration transferred and the acquisition-date fair value of each major class of consideration	

Mandatory Disclosures	Excluded Items
i) The acquisition-date fair value of the total consideration transferred and the acquisition-date fair value of each major class of consideration	
ii) The acquisition-date fair value of the total consideration transferred and the acquisition-date fair value of each major class of consideration	✓
g) Disclosure about contingent consideration arrangements and indemnification assets	✓
h) Disclosure about acquired receivables	✓
i) The amounts recognised as of the acquisition date for each major class of assets acquired and liabilities assumed.	
j) Disclosure about contingent liabilities	✓
k) The total amount of goodwill that is expected to be deductible for tax purposes.	
l) For transactions that are recognised separately: a description of each transaction; how the acquirer accounted for each transaction; the amounts recognised for each transaction and the line item in the financial statements in which each amount is recognised; if the transaction is the effective settlement of a pre-existing relationship, the method used to determine the settlement amount. (	✓
m) The disclosure of separately recognised transactions required by (l) shall include the amount of acquisition-related costs and, separately, the amount of those costs recognised as an expense and the line item or items in the statement of comprehensive income in which those expenses are recognised.	✓
n) In bargain purchase	
i1) The amount of any gain recognised	

Mandatory Disclosures	Excluded Items
i2) The line item in the statement of comprehensive income in which the gain is recognised	
ii) A description of the reasons why the transaction resulted in a gain.	
o) For each business combination in which the acquirer holds less than 100 per cent	
i) The amount of the non-controlling interest in the acquiree recognised at the acquisition date	
p) In a business combination achieved in stages	
i) the acquisition-date fair value of the equity interest in the acquiree held by the acquirer immediately before the acquisition date	
ii) The amount of any gain or loss recognised as a result of remeasuring to fair value the equity interest in the acquiree held by the acquirer before the business combination and the line item in the statement of comprehensive income in which that gain or loss is recognised.	
q) Other information	
i) The amounts of revenue and profit or loss of the acquiree since the acquisition date included in the consolidated statement of comprehensive income for the reporting period	
ii) The revenue and profit or loss of the combined entity for the current reporting period as though the acquisition date for all business combinations that occurred during the year had been as of the beginning of the annual reporting period	
iii) If disclosure of any of the information required by this subparagraph is impracticable, the acquirer shall disclose that fact and explain why the disclosure is impracticable.	

As we can see in Table 4.2, the previous analysis resulted in a total of 12 main items (main items are in bold in the table), and 13 sub-items. The sub-items are used to determine the level of compliance in each item (using weights as a function of the number of sub-items). It should be noted that there is no consensus on the number of items in previous studies addressing the level of compliance with IFRS 3 even though the same standard is under analysis. For example, 20 items were analysed in the study by Tsalavoutas (2011) and Abdullah *et al.* (2015), 13 in the study by Lucas and Lourenço (2014), and 38 in the study by Baboukardos and Rimmel (2014). The study by Nakayama and Salotti (2014) is closest to the index of this work because it is organised in a similar way, with 10 items and 65 sub-items. Due to this controversy, the index for this work was constructed precisely in accordance with IFRS 3 disclosure requirements on the distribution of weight by item and sub-item.

After constructing Table 4.2 with the items for analysis, we verified the compliance of each item. For this purpose, we made the following classification: 0 - not disclose; 0.5 - partially disclosed (e.g., disclose only some of the business combinations); and finally, 1 - disclose. Then we used the following index (1):

$$\textbf{Index} = [\textstyle\sum_{i=l}^{n} \boldsymbol{di}]/\textbf{n} \quad \textbf{(1)}$$

where Di = item index (0; 0,5 or 1) and n = number of main items.

This index shows the average level of compliance of each company and as it is organised in main items and sub-items, it is very important to explain how the calculation was made using the following example: the first mandatory disclosure required by IFRS 3 is the name and description of the acquiree and this disclosure has been broken down into 2 sub-items – i) name and ii) description. A company is attributed " 1 " if it discloses the name of the acquiree and " 0 “, if it does not disclose the description; the main item (name and description) will therefore have a rating of "0.5" because it will be = (1 + 0)/2, where the number "2" is the number of sub-items applicable.

The denominator of the formula should also be clearly understood when calculating the compliance index. The maximum number of this denominator is “12”, which is the number of main items. That is, any items that are not applicable to companies do not enter the calculation, because companies cannot be forced to disclose information that is not required. For example, if a business combination gave rise to goodwill, companies cannot be required to disclose information relating to a badwill (item n - bargain purchase); the main item referring to this information is therefore excluded from the calculation, which means the denominator for this company will be "11".

In conclusion, with this index, companies with an average close to “1” generally meet the disclosure requirements and those with an average close to “0” do not.

4.2.2. Independent Variables

The test variables used in this study are: FOREIGN BOARD (proportion of foreign board members in a company) and TRAINING ABROAD (proportion of Brazilian board members who have obtained training abroad). For a clear understanding of the test variables, it is first important to clarify that board members are understood in this study to be the independent, effective and advisory members of the Administrative Council and including the vice president and the president. It should be noted that the directors and members of the Fiscal Council do not belong to the group of board members.

To calculate the FOREIGN BOARD variable, it was necessary first to identify the members of the board who are foreigners using the information in the "*Formulário de Referência*". This information was extracted manually from item 12 - Assembly and Administration, more precisely from point 12.6 - Composition and professional experience of the Administration and the Fiscal Council where information can be extracted about the profession and professional experience of the members of the board. Although the nationality of the members is not mentioned here, it is possible to assess whether the member is foreign or not by the name and / or professional experience. More specifically, a member with a foreign name and an entire career outside Brazil is classified as a foreigner. A member who does not have a foreign name is also classified as a foreigner if his/her entire career was spent abroad. Finally, after extracting the number of

foreign board members, this variable was calculated by dividing the total number of foreign board members by the total number of board members. In accordance with Upper Echelons and Resource Dependence theories, this is expected to positively affect compliance with mandatory disclosure.

The information for the TRAINING ABROAD variable was also collected from section 12.6 Composition and professional experience of the Administration and the Fiscal Council in the "*Formulário de Referência*". Board members were included in this variable if they had any type of training abroad; this includes specialist course, degree, post-graduation, master's, MBA and doctorate degree. After extracting the number of board members with training abroad, this variable was calculated by dividing the total number of these members by the total number of board members. In accordance with Upper Echelons and Resource Dependence theories, this is expected to positively affect compliance with mandatory disclosure.

The control variables of this study are: SIZE (natural logarithm of total assets); LEV (total liabilities / total assets); ROA (net income / total assets); CASH-FLOW (funds from operations / total assets); INVEST FUND (percentage of a company owned by an investment fund); INDEP BOARD (proportion of independent board members); GOODWIIL (goodwill / total value of the transaction); FOREIGN REVENUE (percentage of company revenues from abroad); ADR (assigning the value "1" if the firm is cross-listed in the US) and FIN/AUD COMMIT (assigning the value "1" if the company has an audit/financial committee).

The size of firms is often positively associated with mandatory disclosure (Cooke, 1992; Wallace and Naser, 1995; Zarzeski, 1996; Inchausti, 1997; Owusu-Ansah, 1998; Archambault and Archambault, 2003; Ali *et al*., 2004; Mısırlıoğlu *et al.,* 2013; Tsalavoutas, 2011; Santos *et al.*, 2014). However, some authors find no evidence of an association between size and level of compliance with IAS required disclosures (Street and Bryant, 2000; Street and Gray, 2002; Alanezi and Albuloushi, 2011; Lucas and Lourenço, 2014; Glaum *et al.,* 2013; Demir and Bahadir, 2014; Maia *et al.*, 2012; Al-Akra, *et al.*, 2010). Nevertheless, a positive relationship is expected to be found between compliance and size.

Leverage was selected because some authors demonstrate that firms with greater leverage are likely to disclose more information (Alanezi and Albuloushi, 2011).Ali *et al*. (2004) found no significant results for this variable but a later study by Al-Akra *et al.*

(2010) obtained mixed results . Finally, Demir and Bahadir (2014) found a negative relationship. Thus, it can be seen from the above-mentioned literature that the results for this variable are not consistent. We therefore have no expectations for this variable although it is likely to be strongly influenced by the situation of the country under study.

The link between profitability and mandatory disclosure was tested by Al-Akra *et al.* (2010), Owusu-Ansah (1998), Ali *et al.* (2004) and Lucas and Lourenço (2014) and these authors showed a positive and significant relationship between compliance with mandatory disclosure and profitability. However, the following authors also demonstrated that this relationship was negative: Wallace and Naser (1995); Street and Gray (2002). Moreover, some authors were unable to demonstrate a significant relationship between compliance and profitability, namely, Street and Bryant (2000), Ferrer and Ferrer (2011), Inchausti (1997), Demir and Bahadir (2014), Maia *et al*. (2012), Alanezi and Albuloushi (2011), Tsalavoutas (2011) and Santos *et al.* (2014). We also draw attention to the paper by Ferrer and Ferrer (2011); due to the divergent results for the profitability variable, these authors decided to test profitability with several ratios of measurement, namely, return on assets, return on equity, return on sales, earnings per share and revenues and they found no significant relationship between compliance and profitability. In light of these divergent results, we have no expectations for this variable and it is probable that the result achieved will depend on the reality of Brazil.

Al-Akra *et al.* (2010) found mixed results for liquidity, while Owusu-Ansah and Yeoh (2005), Owusu-Ansah (1998), Tsalavoutas (2011) and Wallace and Naser (1995) found no significant relationship. Therefore, in this case, we also have no expectations for this variable and believe the result achieved will probably depend on the reality of Brazil.

Aggarwal, Erel, Ferreira and Matos (2011) stated that institutional properties have been growing internationally, but as little is known about their effect on companies. Al-Akra *et al.* (2010) studied the relation between the ownership of companies by institutional investors and the companies' disclosure practices, but they found no significant relationship between these variables. However, Ebrahim and Fattah (2015), for example, found a significant relationship between these variables. We was therefore decided to investigate whether the ownership of investment fund companies affects disclosure. Institutional investors are expected to influence firms internationally to adopt better governance practices, including disclosure practices because these owners are more

rigorous (Aggarwal *et al.*, 2011). It is further added that Brazil is a low-enforcement country and therefore this variable probably affects disclosure.

The relationship between the independent board members and disclosure has already been tested (Abdullah *et al.*, 2015; Chen and Jaggi, 2000). Also in Agency Theory where the owners and managers tend to act in their own interests (Morris, 1987), it is important to have independent board members in order to avoid agency conflicts and this indirectly favours compliance with disclosure requirements. In line with the literature and with Agency Theory, a meaningful and positive relationship is expected to be found between the presence of independent board members and compliance with mandatory disclosure.

The magnitude of goodwill was tested by Nakayama and Salotti (2014) and Glaum *et al.* (2013). However, these papers obtained divergent results for this variable; whereas Glaum *et al.* (2013), for example, showed a significant relationship with compliance with mandatory disclosure, Nakayama and Salotti (2014) showed no relationship. Analysing the magnitude of Goodwill is considered particularly relevant to compliance with the mandatory disclosure of IFRS 3 as it is an important characteristic of this standard; however, it is not possible to predict the results for this variable due to inconsistent findings in the literature.

According to the literature, an increase in foreign sales is associated with more disclosure (Archambault and Archambault, 2003; Zarzeski, 1996). A meaningful and positive relationship is therefore expected between the revenue obtained abroad and compliance with disclosure.

It has been suggested that listed companies in the United States is a determinant of compliance with disclosure (Street and Bryant, 2000; Glaum and Street, 2003; Street and Gray, 2002; Maia *et al.,* 2012). However, Glaum *et al.* (2013) were unable to demonstrate a relationship between the fact that companies are listed in the United States and better compliance with mandatory disclosure. In light of the literature presented and also the fact that Brazil is a low-enforcement country, we expect to find a significant and positive relationship for this variable. In other words, if companies are listed in the United States market, it will probably affect compliance because the US market is more rigorous.

Finally, the audit committee is an important characteristic of internal control due to its responsibilities for monitoring the compliance with rules like IFRS. Empirical research provides evidence on the potential contribution of the audit committee in the financial

reporting process. For example, Al-Akra *et al.* (2010), Glaum *et al.* (2013) and Alanezi and Albuloushi, (2011) show a positive relationship between the presence of an audit committee and the compliance of disclosure. In line with the literature, it is therefore expected to find a significant and positive relationship between the presence of an audit or financial committee and compliance with mandatory disclosure.

All independent variables and expected results for each are summarised below in Table 4.3.

Table 4.3 – The Expected impact of independent variables on compliance with the mandatory disclosure

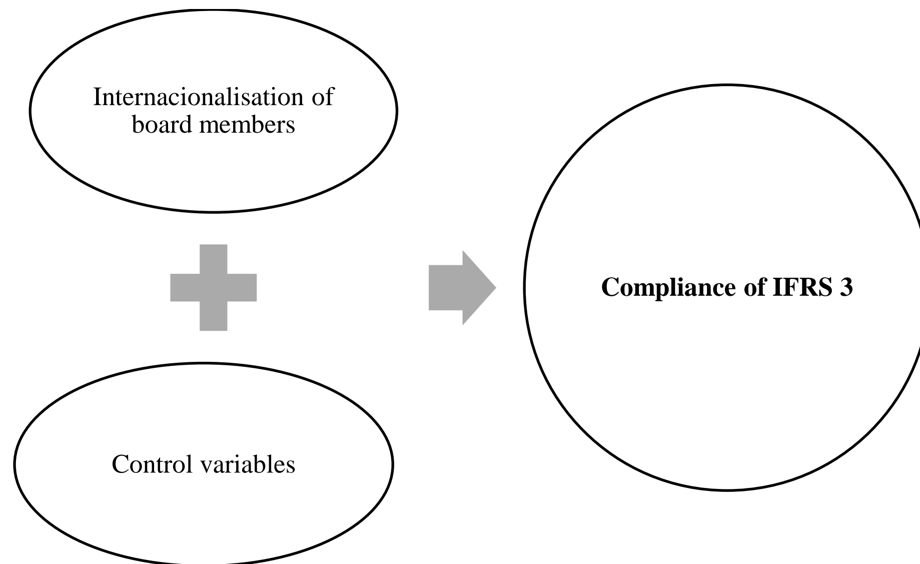
Independent Variables Label	Variable Measurement	Expected Impact on Compliance with the Mandatory Disclosure
FOREIGN BOARD	Proportion of board members who are foreign	+
TRAINING ABROAD	Proportion of the Brazilian board members who have received some kind of training abroad	+
SIZE	Natural logarithm of total Assets	+
LEV	Liabilities/Total of Assets	?
ROA	Net Income/Assets	?
CASH-FLOW	Funds/Operations by Assets	?
INVEST FUND	Percentage of the company that is owned by investment funds	+
INDEP BOARD	Proportion of independent board members	+
GOODWILL	Goodwill/total value of the transaction	?
FOREIGN REVENUE	Percentage of revenue achieved abroad	+
ADR	ADR – 1; Non ADR - 0	+
FIN AUD COMMIT	Financial or Audit Committee – 1; Non-Financial or Audit Committee - 0	+

4.3. Research Model

This study examines the level of compliance with the IFRS 3 disclosure requirements in Brazil and, more specifically, whether a higher proportion of foreign board members and a higher proportion of board members with training are associated with a higher level of compliance with IFRS 3 disclosure requirements, as shown in Figure 4.1.

Figure 4.1

Model of Compliance with IFRS 3



In order to achieve this goal, we use the following equation model:

$$\begin{aligned} INDEX = \alpha_0 &+ \alpha_1\, FOREIGN\ BOARDj + \alpha_2\, TRAINING\ ABROADj + \alpha_3\, SIZEj \\ &+ \alpha_4\, LEVj + \alpha_5\, ROAj + \alpha_6\, CASH - FLOWj + \alpha_7 INVEST\ FUNDj \\ &+\ \alpha_8\, INDEP\ BOARDj + \alpha_9\, GOODWILLj \\ &+ \alpha_{10}\, FOREIGN\ REVENUEj + \alpha_{11}\, ADRj \\ &+\ \alpha_{12} FIN\ AUD\ COMMITj + +\alpha_{13}\, INDj\ \varepsilon_j \quad (2) \end{aligned}$$

This is an Ordinary Least Squares (OLS) equation, which is the most commonly used technique in disclosure studies (Cooke, 1992; Demir and Bahadir, 2014; Owusu-Ansah and Yeoh, 2005; Wallace and Naser, 1995; Ali *et al.* 2004; Owusu-Ansah, 1998, Glaum *et al*., 2013) where the dependent variable is the compliance/disclosure index and the independent variables include the variables discussed in the previous chapter.

It should be noted that the regression was fair with industry fixed effect.

<u>5. RESEARCH FINDINGS</u>

5.1. Descriptive Statistics

Table 5.1 presents descriptive statistics of the variables included in the model.

Table 5.1 – Descriptive Statistics

Variables	Mean	SD	Median	Min	Max
INDEX	0.652	0.156	0.649	0.333	1.000
FOREIGN BOARD	0.116	0.221	0.000	0.000	0.909
TRAINING ABROAD	0.237	0.184	0.200	0.000	0.714
SIZE	15.235	1.827	15.060	8.107	20.989
LEV	0.582	0.191	0.554	0.181	1.116
ROA	0.037	0.063	0.033	-0.344	0.241
CASH-FLOW	0.076	0.069	0.073	-0.100	0.307
INVEST FUND	0.045	0.120	0.000	0.000	0.631
INDEP BOARD	0.287	0.190	0.250	0.000	0.857
GOODWILL	0.628	0.708	0.585	0.000	0.996
FOREIGN REVENUE	0.168	0.265	0.000	0.000	0.991
ADR[A]	0.157	-	-	0.000	1.000
FIN AUD COMMIT[A]	0.422	-	-	0.000	1.000

INDEX demonstrates the level of compliance of companies with IFRS 3; FOREIGN BOARD represents the proportion of board members who are foreign; TRAINING ABROAD represents the proportion of the Brazilian board members in a company who have received some kind of training abroad; SIZE is the natural logarithm of total assets; LEV is total liabilities divided by total assets of each company; ROA is the return on assets and is calculated by dividing net income by assets; CASH-FLOW is the operational cash flow and is calculated by dividing funds from operations by assets; INVEST FUND represents the percentage of the company that is owned by investment funds; INDEP BOARD represents the proportion of independent board members; GOODWILL is the weight of the goodwill over the total value of the transaction; FOREIGN REVENUE is the percentage of revenue from abroad; ADR is a dummy variable that classifies whether the company is listed in the US or not with the value 0 and 1; FIN AUD COMMIT is a dummy variable that shows whether the company has or not a financial/audit committee with the values 0 or 1;

[A] This average represents the percentage of firms listed in the United States and that have a financial/audit committee

The level of compliance with the IFRS 3 disclosure requirements is moderate because the average of this variable (INDEX) is 0.65. A minimum of 0.33 means that disclosure

by some companies is quite low. There is a maximum of 1.00 because an observation reflects the company disclosing all the required information. In other studies on compliance with mandatory disclosure of IFRS 3 requirements, the average of this variable is usually higher; for example, in the study by Lucas and Lourenço (2014), Baboukardos and Rimmel (2014) and Abdullah *et al.* (2015), compliance was around 80%. However, we recall here that the compliance index may be different because it was evaluated differently, i.e. with a different number of items for this particular standard, and also due to the different contexts and realities in which the studies were conducted. Also, in the papers by Tsalavoutas (2011) and Glaum *et al.* (2013), compliance was around 70% (lower than previous studies); this is probably explained by the fact these studies used the year of IFRS implementation or the following year as their years of reference. Finally, Nakayama and Salotti (2014) reached approximately the same index; this research addressed the same standard in Brazil in 2010 and the index was constructed very similarly to that of this study. Not only are the results of our study in line with those presented by Nakayama and Salotti (2014), but this was expected given that Brazil has low enforcement and weak investor protection. It is also worth noting that, according to Glaum *et al.* (2013), a low level of disclosure is expected in Brazil because the most conservative countries, which is the case of Brazil, have lower disclosure levels, especially when IFRS have been recently adopted.

In this study, on average, 12% of the company's board members are foreigners and an average of 24% of Brazilian board members received some kind of training abroad. Some companies have a majority of foreign board members (maximum - 91%); however, some others have no foreign board members. Similarly, while some companies have no board members who trained abroad, in others the majority of board members received at least one type of training abroad.

The SIZE variable has an average 15.24, which is in agreement with previous literature (Archambault and Archambault, 2003; Nakayama and Salotti, 2014; Glaum *et al.*, 2013; Lucas and Lourenço, 2014).

The LEV variable has an average of 0.58, which shows that the sample companies are more indebted when compared to other studies in which leverage had lower average. (for example, in the studies by Al-Akra *et al.*, 2010 and Alanezi and Albuloushi, 2011). However, the average leverage in the study by Demir and Bahadir (2014) and Zarkeski (1996) is close to our results (0.61 and 0.60). These results seem reasonable given that

banks in Brazil are an attractive source of financing with formal restrictive clauses, when compared with short-term lenders (Cavalier-Rosa and Tiras, 2013); companies therefore look to these entities for loans, which causes an increase in leverage.

We found that the average of the ROA variable is quite low (mean – 0.037), which means the companies in question have low profitability. In other similar studies, profitability is higher (Chen and Jaggi, 2000; Al-Akra *et al.* 2010; Alanezi and Albuloushi, 2011; Ferrer and Ferrer, 2011).

The CASH-FLOW variable has an average 0.076, which shows that the companies analysed have little liquidity.

On average, companies in the sample are held by investment funds at 4.5%; however, some companies have no participation by investment funds, while in others have a maximum for this variable of 63%. A similar variable in studies by Al-Akra *et al.* (2010) and Ebrahim and Fattah (2015) had a higher average (27% and 36%). These results demonstrate that the companies under analysis have little ownership by investment funds.

Companies have on average 28.7% of independent board members. Note that Chen and Jaggi (2000) reached a similar average in their study. For this variable, we find that whereas there are no independent directors in some companies, others have a majority of independent directors with a maximum of 86%. It should be noted that although CMV and IBCG recommend having independent members on the board in Brazil, it is not mandatory.

For GOODWILL, the average weight is 63% compared to total value transacted, showing that, on average, goodwill represents more than half of the amount paid in business combinations. In some observations, goodwill is 0 because there is badwill.

On average, 17% of company revenues comes from abroad. For this variable, we found that some companies obtain all their revenue in Brazil but others obtain most of the revenues abroad (maximum - 76.5%). In the paper by Archambault and Archambault (2003), this variable had a higher average (33%); however, our results are similar to those of Glaum and Street (2003).

Of the total sample, 16% are listed in the US market.

For the FIN AUD COMMIT variable, the average is a little lower than in other studies (mean: 0.422). For example, the study by Al-Akra *et al.* (2010) showed an average of

around 0.70. Nevertheless, our results are similar to those of Alanezi and Albuloushi (2011) for this variable. This may be explained by the low enforcement mechanisms in the companies analysed by Alanezi and Albuloushi (2011) that studied companies in Kuwait.

5.2. Analysis of the Dependent Variable

Table 5.2 presents the frequency distribution of the INDEX variable.

Table 5.2 – Distribution of the INDEX

INDEX distribution	Number of observations	%
1	1	1
0.90 – 0.99	8	8
0.80 – 0.89	9	9
0.70 – 0.79	23	23
0.60 – 0.69	24	24
0.50 – 0.59	21	21
0.40 – 0.49	13	13
0.30 – 0.39	3	3
Total	102	100

INDEX demonstrates the level of compliance of companies with IFRS 3

Table 5.2 shows that one observation (1 per cent) scored 1 of the applicable required disclosures, 8 (8 per cent) scored between 0.90 and 0.99, 9 (9 per cent) scored between 0.80 and 0.89, 23 (23 per cent) scored between 0.70 and 0.79, 24 (24 per cent) scored between 0.60 and 0.69, 21 (21 per cent) scored between 0.50 and 0.59, 13 (13 per cent)

scored between 0.40 and 0.49 and only 3 (3 per cent) scored between 0.30 and 0.39. These results suggest that disclosure was widely distributed.

As IFRS were implemented in Brazil in 2010, we also considered it relevant to analyse the average disclosure index over the years of the study.

Table 5.3 – Average disclosure index per year

	2010	2011	2012	2013	Total
INDEX mean	0.565	0.644	0.657	0.716	0.652
N	12	41	30	19	102

INDEX demonstrates the level of compliance of companies with IFRS

As can be seen from Table 5.3, the average of the index increases over the years; this leads us to conclude that compliance in the early years was perhaps low due to the substantial difference between BR GAAP and IFRS. Also, Nakayama and Salotti (2014) defended that the low compliance is related to the year of adoption of international standards. Finally, Santos *et al.* (2014) also found low levels of compliance with the disclosure requirement of IFRS in the first year of full adoption in Brazil.

Still with regard to the annual variation of the index of disclosure, the Krustal - Wallis test was used to verify if this variation was significant. In this test, the distribution of a variable is compared in three or more populations, namely the years in the case of this study. This test is also used when the samples are small, which is again the case of our study and the variable (disclosure index) does not have a normal distribution. The results of this test are shown in Table 5.4.

Table 5.4 – Krustal-Wallis Test (variable INDEX)

Null Hypothesis	Test	Sig.	Decision
The distribution of INDEX mean is the same across categories of Year	Independent Samples Krustal-Wallis Test	0.083	Retain the null hypothesis

INDEX demonstrates the level of compliance of companies with IFRS

The significance level is 0.05.

After performing the Krustal-Wallis test, it was confirmed that the null hypothesis should be retained; in other words, the distribution of the INDEX variable is the same throughout the categories of years, which means that this variation is not significant even though the index of disclosure increases over the years. This result was expected due to the specific characteristics of Brazil, namely, it is a code law country with low enforcement and low investor protection; that is, low compliance is not affected by the fact that IFRS have been applied recently because the variation is not significant over the years following their implementation.

Finally, Table 5.5 was constructed for the disclosure index; it shows which items of mandatory disclosure in IFRS 3 are most commonly disclosed.

Table 5.5 – Detailed information per item of the disclosure index

	N	Mean	SD	Median	Min	Max
a) Name and a description of the acquiree.	102	0.826	0.235	1.000	0.500	1.000
b) The acquisition date.	102	1.000	0.000	1.000	1.000	1.000
c) The percentage of voting equity interests acquired	102	0.961	0.168	1.000	0.000	1.000
d) The primary reasons for the business combination	101	0.441	0.486	0.000	0.000	1.000
e) A qualitative description of the factors that make up the goodwill recognised	89	0.393	0.485	0.000	0.000	1.000
f) The acquisition-date fair value of the total consideration transferred	100	0.980	0.121	1.000	0.000	1.000
g) The amounts recognised as of the acquisition date for each major class of assets acquired and liabilities assumed.	100	0.830	0.371	1.000	0.000	1.000
h) The total amount of goodwill that is expected to be deductible for tax purposes.	87	0.184	0.382	0.000	0.000	1.000
i) bargain purchase	11	0.508	0.280	0.667	0.000	1.000
j) Information related to each business combination in which the acquirer holds less than 100 per cent	46	0.410	0.498	0.000	0.000	1.000
k) Information related to a business combination achieved in stages	19	0.276	0.403	0.000	0.000	1.000
l) Other information	102	0.305	0.000	0.412	0.000	1.000

This panel shows that the acquisition date of a business combination is the most disclosed data; the mean is 1, that is, all companies have disclosed this information. The percentage gained (mean – 0.96), and the fair value of the consideration transferred (mean – 0.98) are also widely disclosed. Lucas and Lourenço (2014) found similar results for these three items.

Companies usually disclose the assets acquired and liabilities assumed in business acquisitions (mean – 0.83), and the name and description of the company acquired (mean – 0.83). However, although the name of the company acquired in a business combination is generally disclosed, not all companies give a description of the acquired company.

In the work of Nakayama and Salotti (2014) conducted in Brazil in 2010, the general information is also the most disclosed with an average of 0.85. The general information of these study included acquisition date, percentage gained, fair value of the consideration transferred, assets acquired and liabilities assumed, name of the company acquired, description of the acquired company.

Companies generally do not disclose the reasons for business combinations (mean – 0.44). And little is known about the other information item (mean – 0.31); that is, companies do not generally disclose the impact of the business combination results on the company either from the date of acquisition, or as if business combinations had occurred at the beginning of the year.

The description of goodwill (mean – 0.51), as well as information related to badwill is generally little known (mean – 0.39). These results were also obtained by Nakayama and Salotti (2014) and Lucas and Lourenço (2014).

Companies did not usually disclose the required information when the business combination is less than 100% (mean – 0.41) or when it takes place in stages (mean – 0.28). In relation to the information about combination that take place in stages, Nakayama and Salotti (2014) had similar results with a mean of 0.28.

And finally, the least data is disclosed about the effect of goodwill on taxes (mean – 0.18).

We emphasise the fact that these results are not always comparable with previous literature because although some authors have studied compliance with IFRS 3, they do not always disclose the average of the mandatory information for each requirement item of the standard (Tsalavoutas, 2011; Glaum *et al.,* 2013; Santos *et al.*, 2014; Baboukardos and Rimmel, 2014; Abdullah *et al.*, 2015). In addition, tables of IFRS 3 requirements are sometimes constructed differently (Lucas and Lourenço, 2014).

In conclusion, the explanation for the number of observations (N) not always being 102, which is the total number of observations of the sample because companies do not disclose mandatory information in certain situations because they are not obliged to do so; in other words, it is a case of non-applicability rather than noncompliance. The statistical data presented for each required item of mandatory information represent only the number of applicable situations and not the total number of observations.

5.3. Analysis of the Test Variables

Table 5.6 and Table 5.7 presents the frequency distribution of the tested variables (FOREIGN BOARD and TRAINING ABROAD).

Table 5.6 – Distribution of the FOREIGN BOARD

FOREIGN BOARD	Number of observations	%
0.90 – 0.99	2	2
0.80 – 0.89	2	2
0.70 – 0.79	1	1
0.60 – 0.69	1	1
0.50 – 0.59	1	1
0.40 – 0.49	4	4
0.30 – 0.39	5	5
0.20 – 0.29	7	7
0.10 – 0.19	8	8
0.01 – 0.09	4	4
0	67	66
Total	102	100

FOREIGN BOARD represents the proportion of foreign board members.

Table 5.6 shows that 2 observations (2 per cent) scored between 0.90 and 0.99 of the foreign board members, 2 (2 per cent) scored between 0.80 and 0.89, 1 (1 per cent) scored between 0.70 and 0.79, 1 (1 per cent) scored between 0.60 and 0.69, 1 (1 per cent) scored between 0.50 and 0.59, 4 (4 per cent) scored between 0.40 and 0.49, 5 (5 per cent) scored between 0.30 and 0.39, 7 (7 per cent) scored between 0.20 and 0.29, 8 (8 per cent) scored between 0.10 and 0.19, 4 (4 per cent) scored between 0.01 and 0.09 and 67 (66 per cent) scored 0. These results demonstrate that there are no foreign board members in more than half of the sample (66 percent); however, 34% of the sample has foreign board members in different proportions.

Table 5.7 – Distribution of the TRAINING ABROAD

TRAINING ABROAD	Number of observations	%
0.70 – 0.79	4	4
0.60 – 0.69	2	2
0.50 – 0.59	5	5
0.40 – 0.49	5	5
0.30 – 0.39	17	17
0.20 – 0.29	22	22
0.10 – 0.19	29	28
0.01 – 0.09	3	3
0	15	15
Total	102	100

TRAINING ABROAD represents the proportion of the Brazilian board members in a company who have received some kind of training abroad

Table 5.7 shows that 4 observations (4 per cent) scored between 0.70 and 0.79 of training abroad, 2 (2 per cent) scored between 0.60 and 0.69, 5 (5 per cent) scored between 0.50 and 0.59, 5 (5 per cent) scored between 0.40 and 0.49, 17 (17 per cent) scored between 0.30 and 0.39, 22 (22 per cent) scored between 0.20 and 0.29, 29 (28 per cent) scored between 0.10 and 0.19, 3 (3 per cent) scored between 0.01 and 0.09 and finally 15 (15 per cent) scored 0. These results suggest that the disclosure was widely distributed.

5.4. Correlation Matrix

Table 5.8 presents the correlation matrix only between continuous variables because, as the Pearson coefficient is used, we should not use dummy variables. That is, all variables are in the correlation matrix except: ADR and FIN AUD COMMIT.

Table 5.8 - Correlation Matrix (Pearson)

	INDEX	FOREIGN BOARD	TRAINING ABROAD	SIZE	LEV	ROA	CASH-FLOW	INVEST FUND	INDEP BOARD	GOODWILL	FOREIGN REVENUE
INDEX	1.000										
FOREIGN BOARD	0.337***	1.000									
TRAINING ABROAD	0.049	-0.270***	1.000								
SIZE	0.069	-0.353***	0.153	1.000							
LEV	-0.089	-0.044	-0.051	0.224**	1.000						
ROA	-0.300***	-0.046	-0.008	-0.051	-0.474***	1.000					
CASH-FLOW	-0.041	-0.003	0.10	-0.001	-0.270***	0.645***	1.000				
INVEST FUND	0.482***	0.100	-0.118	-0.037	-0.177*	-0.083	-0.127	1.000			
INDEP BOARD	-0.179*	-0.166*	0.139	-0.027	0.098	-0.083	-0.068	0.019	1.000		
GOODWILL	-0.041	-0.071	0.088	0.125	-0.025	0.176*	0.172*	-0.114	-0.078	1.000	
FOREIGN REVENUE	0.007	0.028	0.175*	0.028	0.175*	-0.126	-0.048	-0.126	-0.008	-0.003	1.000

INDEX demonstrates the level of compliance of companies with IFRS 3; FOREIGN BOARD represents the proportion of foreign board members ; TRAINING ABROAD represents the proportion of the Brazilian board members in a company who have received some kind of training abroad; SIZE is the natural logarithm of total assets; LEV is total liabilities divided by total assets of each company; ROA is the return on assets and is calculated by dividing net income by assets; CASH-FLOW is the operational cash flow and is calculated by dividing funds from operations by assets; INVEST FUND represents the percentage of the company that is owned by investment funds; INDEP BOARD represents the proportion of independent board members; GOODWILL is the weight of the goodwill over the total value of the transaction; FOREIGN REVENUE is the percentage of revenue from abroad.

***, ** and * indicate significance at the 0.01, 0.05 and 0.10 levels respectively. (n=102)

An analysis of the correlation matrix reveals that the FOREIGN BOARD variable is strongly correlated with the INDEX variable, which shows that the index of compliance with the disclosure is strongly affected by the presence of foreign board members. We note also that the INDEX variable is negatively correlated with ROA, suggesting that companies with low profitability also increase their efforts to comply with the mandatory disclosure in order to inform the users of information. Another significant correlation is the correlation between the INDEX variable and the INVEST FUND variable; however this correlation is positive. This was already expected because when investment funds are in a shareholding position, they are more demanding about compliance with disclosure and have stricter rules.

It can be also verified that the FOREIGN BOARD members variable is strongly correlated with the TRAINING ABROAD variable, but the correlation has a negative sign. It can therefore be concluded that the companies with foreign board members are less likely to have Brazilian members with training abroad. The FOREIGN BOARD variable is also strongly correlated with the FOREIGN REVENUE variable and the SIZE variable; however, the correlation for the latter is negative. These results suggest that companies with more foreign members on the board also obtain more revenues abroad. This also indicates that it is the smaller companies that have more foreign board members, and consequently the largest Brazilian companies under analysis are those with the fewest foreign board members.

Finally, the TRAINING ABROAD variable does not present any significant correlation with the other variables.

5.5. Regression Results

Table 5.9 shows the regression results of the model of compliance with IFRS 3.

Table 5.9 - Regression results

	Index
FOREIGN BOARD	0.253***
TRAINING ABROAD	0.152**
SIZE	0.013*
LEV	-0.165**
ROA	-1.215***
CASH-FLOW	0.487**
INVEST FUND	0.522***
INDEP BOARD	-0.098
GOODWILL	0.002
FOREIGN REVENUE	-0.006
ADR[A]	0.055
FIN AUD COMMIT[A]	0.030

INDEX demonstrates the level of compliance of companies with IFRS 3; FOREIGN BOARD represents the proportion of foreign board members ; TRAINING ABROAD represents the proportion of the Brazilian board members in a company who have received some kind of training abroad; SIZE is the natural logarithm of total assets; LEV is total liabilities divided by total assets of each company; ROA is the return on assets and is calculated by dividing net income by assets; CASH-FLOW is the operational cash flow and is calculated by dividing funds from operations by assets; INVEST FUND represents the percentage of the company that is owned by investment funds; INDEP BOARD represents the proportion of independent board members; GOODWILL is the weight of the goodwill over the total value of the transaction; FOREIGN REVENUE is the percentage of revenue from abroad; ADR is a dummy variable that classifies whether the company is listed in the US or not with the value 0 and 1; FIN AUD COMMIT is a dummy variable that shows whether the company has or not a financial/audit committee with the values 0 or 1;

***, ** and * indicate significance at the 0.01, 0.05 and 0.10 levels respectively. (n=102)

Adjusted R^2: 0.504

Table 5.9 shows that the coefficients of the FOREIGN BOARD, TRAINING ABROAD, SIZE, CASH-FLOW and INVEST FUND variables are positive and statistically significant and the coefficients of the LEV and ROA variables are negative and statistically significant.

These findings suggest that the following companies comply better with mandatory disclosure: companies with more foreigners board members, with more Brazilian board members with some kind of training abroad, larger companies, which are less indebted

and less profitable, that have higher operating cash flows and which have investment funds in their ownership positions.

Firstly, we can confirm the hypothesis of the study, that is, the internationalisation of board members affects the level of compliance with IFRS 3 disclosure requirements. These results are in line with theoretical expectations that board members are extremely important in organisations and company decisions depend on them, in particular and in this case regarding compliance with disclosure requirements.

Regarding the FOREIGN BOARD variable, as expected and in accordance with Resource Dependence Theory, it was confirmed that the presence of foreign board members contributes to greater disclosure and transparency, and communication is a benefit / resource for these companies (Pfeffer, 1972; Hillman and Dalziel, 2003). These board members possess the intercultural skill of efficient communication according to Behrnd and Porzelt (2012), and this is in line with Upper Echelons Theory. This result is also supported by the diversity model of Milliken and Martins (1996), which argues that board members' nationality affects the disclosure of companies. Finally, this finding is also in line with the position of Masulis *et al.* (2003) and Oxelheim and Randøy (2003), because Brazil has low enforcement and consequently low compliance with the rules; this study confirms that board members originating from countries with higher enforcement improved compliance with disclosure requirements.

Regarding the TRAINING ABROAD variable, the theoretical expectation of this study is also confirmed, i.e. board members who have had training abroad contribute to better compliance with disclosure requirements. These results are in line with Resource Dependence Theory, according to which Masulis *et al.* (2012) advocated that members with knowledge obtained abroad improve companies' disclosure. They are also in accordance with Upper Echelons Theory (Hambrick and Mason, 1984) and the Diversity Model of Milliken and Martins (1996), where it is argued that career and training affect organisational decisions and disclosure, taking into account also that knowledge obtained abroad brings intangible knowledge (Saxenian, 2002, 2006) that improves disclosure.

It can therefore be said that our results support our hypotheses as they confirm that the internationalisation of the board members definitely affects compliance with mandatory disclosure requirements in accordance with Resource Dependence and Upper Echelons theories.

Moving on to the control variables, SIZE is found to have a significant and positive relationship with compliance with IFRS 3 disclosure requirements, as expected in light of the literature (Archambault and Archambault, 2003; Wallace and Naser, 1995; Ali *et al.*, 2004. This variable is very important and there are many explanations for this relationship; for example, Ali *et al*. (2004) argued that disclosure is costly and larger companies have greater financial capacity to disclose information. In addition, according to Samaha and Khlif, (2016 b) this variable is especially associated with compliance with disclosure in emerging countries, which is the case of Brazil.

With regard to the LEV variable, the regression results are the same as in previous studies in the literature (Al-Akra *et al.,* 2010; Demir and Bahadir, 2014; Zarkeski, 1996). However, other authors like Alanezi and Albuloushi (2011) reached significant results for this variable but with the opposite sign (positive). Given that it is not always possible to verify the significance with the same sign, this variable must be analysed with other cultural / economic factors of the country under review. Considering the Brazilian context, in which banks are an attractive source of financing with formal restrictive clauses when compared with short-term lenders (Cavalier-Rosa and Tiras, 2013), it is probable that banks require companies to disclose information privately and they therefore do not worry about disclosing more information to other agents.

In the ROA variable, the regression results demonstrate a negative and significant relation. Owusu-Ansah, (1998) also found a significant negative relation and this author suggested enterprises that lose cash are more likely to divulge more information in order to preserve or justify their weak or insufficient performance. In our sample, on average companies have low profitability and this may also explain the negative and significant sign. Note also that Alanezi and Albuloushi (2011) and Wallace and Naser (1995) reached similar results in their study for this variable.

Regarding the results of the CASH-FLOW variable, the regression results demonstrate a positive and significant relation, which is consistent with previous literature (Al-Akra *et al.,* 2010).

Whereas the INVEST FUND variable did not prove to be significant in the study by Al-Akra *et al.* (2010), it is one of the most important variables in this study and in that of Ebrahim and Fattah (2015). According to El-Gazzar (1998), these results are to be expected, given that the presence of institutional investors in companies encourages the disclosure of information because of their fiduciary responsibilities and to increase

portfolio performance. Aggarwal *et al.* (2011) offer a further viewpoint, namely that firms located in countries with weaker investor protection, like Brazil, are likely to benefit more from international institutional investment.

Table 5.10 was constructed to visualise the results of the regression better and compare them with previous expectations.

Table 5.10 – Results Summary

Independent variables	Expected impact on compliance with the mandatory disclosure	Results Achieved	Confirmation / Non-confirmation of expectation
FOREIGN BOARD	+	+	Confirmed
TRAINING ABROAD	+	+	Confirmed
SIZE	+	+	Confirmed
LEV	?	-	No defined expectation
ROA	?	-	No defined expectation
CASHFLOW	?	+	No defined expectation
INVEST FUND	+	+	Confirmed
INDEP BOARD	+	Not Significant	Not Confirmed
GOODWILL	?	Not Significant	No defined expectation
FOREIGN REVENUE	+	Not Significant	Not Confirmed
ADR	+	Not Significant	Not Confirmed
FIN AUD COMMIT	+	Not Significant	Not Confirmed

INDEX demonstrates the level of compliance of companies with IFRS 3; FOREIGN BOARD represents the proportion of foreign board members; TRAINING ABROAD represents the proportion of the Brazilian board members in a company who have received some kind of training abroad; SIZE is the natural logarithm of total assets; LEV is total liabilities divided by total assets of each company; ROA is the return on assets and is calculated by dividing net income by assets; CASH-FLOW is the operational cash flow and is calculated by dividing funds from operations by assets; INVEST FUND represents the percentage of the company that is owned by investment funds; INDEP BOARD represents the proportion of independent board members; GOODWILL is the weight of the goodwill over the total value of the transaction; FOREIGN REVENUE is the percentage of revenue from abroad; ADR is a dummy variable that classifies whether the company is listed in the US or not with the value 0 and 1; FIN AUD COMMIT is a dummy variable that shows whether the company has or not a financial/audit committee with the values 0 or 1;

In conclusion, the expectations for the control variables were confirmed for SIZE and INVEST FUND. Regarding the LEVERAGE, ROA, CASH-FLOW and GOODWILL variables, there was no initially defined expectation; however, only LEVERAGE, ROA

and CASHFLOW variables were found to be significant, as justified above. In relation to GOODWILL, Nakayama and Salotti (2014) were also unable to demonstrate any relationship between this variable and compliance with disclosure requirements. Finally, we were unable to confirm our expectation for the following control variables: ADR, INDEP BOARD, FIN AUD COMMIT and FOREIGN REVENUE

6. CONCLUSIONS

This study aimed to demonstrate that the internationalisation of the board members can affect compliance with mandatory disclosure, more specifically compliance with the disclosure of IFRS 3 requirements, using the theoretical framework of Upper Echelons and Resource Dependence Theories.

Given the wide range of disclosure required by IFRS, this study focused on a single standard - IFRS 3 - International Financial Reporting Standard 3: Business Combinations. This is a very important standard because business combinations reflect business investment aimed at increasing competitiveness, reducing risk and enhancing competition and synergies between business supports and they often involve large sums of money (Hamberg *et al.*, 2011). This is why some studies focus exclusively on the compliance and determinants of this standard (Glaum *et al.*, 2013; Lucas and Lourenço, 2014, Baboukardos and Rimmel, 2014).

Upper Echelons and Resource Dependence theories provide the theoretical base for our argument that internationalisation affects compliance with mandatory disclosure; these theories defended that board members' strategic decisions and means of communication rely on their cognitive values and their knowledge/expertise. Not only can internationalisation affect the cognitive values of these people, but it will certainly affect knowledge/expertise, which in turn, affects compliance with mandatory disclosure.

In order to assess the level of compliance with the mandatory disclosure of IFRS 3 requirements, the mandatory disclosure items of this standard were analysed in detail; this resulted in the construction of a table of mandatory disclosures with 12 main items and 13 additional sub-items. It is also noted that some items are not disclosed by companies because they are not obliged to do so; as certain situations are not applicable, these situations do not affect the companies' level of compliance. Finally, this information was used to construct an index of compliance with the mandatory disclosure of IFRS 3 requirements, which is in line with the previous literature (Nakayama and Salotti, 2014; Tsalavoutas, 2011; Abdullah *et al.*, 2015; Lucas and Lourenço, 2014; Baboukardos and Rimmel, 2014).

The Ordinary Least Squares (OLS) equation was used for the purpose of this study; that is the most commonly used technique in disclosure studies (Cooke, 1992; Demir and Bahadir, 2014; Owusu-Ansah and Yeoh, 2005; Wallace and Naser, 1995; Ali *et al.* , 2004;

Owusu-Ansah, 1998, Glaum *et al.*, 2013) where the dependent variable is the compliance/disclosure index and the independent variables include two test variables (proportion of foreign board members in a company - FOREIGN BOARD and proportion of Brazilian board members who have obtained training abroad in a company – TRAINING ABROAD) and a set of control variables (size, leverage, profitability, liquidity, ownership of investment funds, independent board, goodwill, foreign revenue, industry, ADR and Financial or Audit Committee).

Our sample is composed of 102 observations from 70 Brazilian companies and data was collected manually from consolidated financial statements and the "*Formulário de Referência*" for the years 2010, 2011, 2012 and 2013. Additional data was gathered from the Worldscope database. It should be noted that the "*Formulário de Referência*" has been mandatory in Brazil since 2010 and this report enabled us to extract the information on the characteristics of the board members.

The results of this study demonstrated that the level of internationalisation of the board members definitely affects compliance with mandatory disclosure requirements because the variables FOREIGN BOARD and TRAINING ABROAD are positive and statistically significant.

Regarding the FOREIGN BOARD variable, our hypothesis was confirmed because, in accordance with Resource Dependence Theory, the presence of foreign members in the board of the companies contributes to greater disclosure and transparency and also gives companies a benefit / resource, namely communication with the stakeholders (Pfeffer, 1972; Hillman and Dalziel, 2003). According to Behrnd and Porzelt (2012) and in line with Upper Echelons Theory, these members also possess an intercultural competence of efficient communication.

Regarding the TRAINING ABROAD variable, the theoretical expectation of this study is also confirmed, i.e. board members who have had training abroad contribute to greater compliance with disclosure requirements. These results are in accordance with Resource Dependence Theory, whereby Masulis *et al.* (2012) advocates that members with knowledge obtained abroad improve the disclosure of companies. Our findings are also in line with Upper Echelons Theory (Hambrick and Mason, 1984) which argues that career and training affect organisational decisions and disclosure, given that knowledge obtained abroad also brings intangible knowledge (Saxenian, 2002, 2006) that improves disclosure.

In addition, this study demonstrated a moderate level of compliance with the IFRS 3 disclosure requirements; this was expected due to Brazil's low enforcement and weak investor protection.

While it was also possible to verify that the level of compliance with IFRS 3 requirements increases over the years, this variation is not significant, and thus demonstrates that non-compliance is due to the specific characteristics of Brazil and not to IFRS being implemented in 2010.

The most disclosed data of the IFRS 3 requirements was found to be the acquisition date of the business combination, as well as the percentage acquired. Companies also generally disclosed the total consideration transferred. The least disclosed data was on goodwill, the qualitative description of the goodwill and the effect of this tax level in particular. The impact of the business combination on the company results is another undisclosed item, both from the date of acquisition and if business combinations had occurred since the beginning of the year.

The results showed that different variables may influence the compliance of the disclosure in code law countries, such as Brazil, where enforcement is low. Our study therefore contributes to the literature by confirming that the boards members' individual characteristics may also affect the compliance with mandatory disclosure.

Another contribution of this study is our use of theories, namely Upper Echelons and Resource Dependence theories, that have not yet been used in this way to explain the level of compliance with mandatory disclosure.

The results of this study are of interest to regulators because they create numerous rules and codes of corporate governance to ensure timely and accurate disclosure that is important to investment analysts, and market participants especially where the enforcement mechanisms are low as in the case of Brazil. These findings are very important, especially to policy makers who are interested in achieving optimal board composition.

Although the low number of observations is a limitation of this study, compliance was only analysed for IFRS 3; this greatly reduced the number of observations because only companies with business combinations were analysed. Therefore, this limitation could be overcome by examining compliance with other standards.

The study of other variables that may characterise corporate governance would be a fruitful avenue for future research in order to prove that board members' characteristics affect compliance with disclosure requirements. However, care must be taken when selecting the characteristics of the board to be analysed because their pertinence also depends on the context / location.

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APPENDICES

Appendix A – Company List

Company	Year	Business	Country of Origin
Abril Educação, S.A.	2011	Education	Brazil
	2012		
	2013		
Abyara Planejamento Imobiliário, S.A.	2011	Real Estate	Brazil
Anhanguera Educacional Participações, S.A.	2013	Education	Brazil
Autometal, S.A.	2010	Automobile	Brazil
	2012		
	2013		
B2W Companhia Digital	2013	E-commerce	Brazil
Banco Indusval, S.A.	2011	Financial	Brazil
Banco Panamericano, S.A.	2012	Financial	Brazil
Bandeirante - Energia, S.A.	2011	Energy	Portugal
BHG S.A. - Brazil Hospitality Group	2011	Tourism	Brazil
Banrisul - Banco do Estado do Rio Grande do Sul S.A.	2012	Financial	Brazil
BR Properties, S.A.	2012	Real Estate	Brazil
Brazil Brokers Participações, S.A.	2011	Real Estate	Brazil
Brazil Pharma S.A.	2011	Pharmaceutical	Brazil
BRF - Brazil Foods, S.A.	2012	Food	Brazil
Cielo, S.A.	2012	Financial	Brazil
Cia Siderurgica Nacional	2011	Steel	Brazil
	2012		
Contax Participações, S.A.	2010	Trade Marketing - Call Center	Brazil

Company	Year	Business	Country of Origin
	2011		
Cosan, S.A. Industria e Comércio	2011	Logistics, Energy, Food, Fuels e Infrastructures	Brazil
CPFL - Energias Renováveis, S.A.	2011	Energy	Brazil
Dufry AG	2011	Trade - Duty Free	Switzerland
	2012		
	2013		
DURATEX SA	2012	Production Wood and Crockery	Brazil
EDP - Energias do Brasil, S.A.	2011	Energy	Portugal
MPX - Energia, S.A.	2010	Energy	Brazil
Estácio Participações, S.A.	2011	Education	Brazil
	2012		
	2013		
Fertilizantes Heringer, S.A.	2012	Fertilizer Production	Brazil
General Shopping Brasil, S.A.	2012	Shopings	Brazil
Gerdau, S.A.	2012	Steel	Brazil
Gol Linhas Aéreas Inteligentes, S.A.	2011	Aviation	Brazil
Helbor Empreendimentos, S.A.	2011	Real Estate	Brazil
Hypermarcas, S.A.	2011	Pharmaceutical	Brazil
Ideias Net, S.A.	2010	Internet Projects	Brazil
Iguatemi - Empresa de Shopping Centers, S.A.	2011	Shopings	Brazil
IMC - International Meal Company Holdings, S.A.	2011	Food	Brazil
	2012		
	2013		
JSL, S.A.	2011	Logistics	Brazil
	2012		

Company	Year	Business	Country of Origin
	2013		
Klabin, S.A.	2011	Paper Production and Export	Brazil
Kroton Educacional, S.A.	2011	Education	Brazil
	2012		
Light, S.A.	2011	Energy	Brazil
	2012		
Linx, S.A.	2011	Softwares	Brazil
	2012		
	2013		
LPS Brasil Consultoria de Imóveis, S.A.	2011	Real Estate	Brazil
Lupatech, S.A.	2010	Energy	Brazil
	2012		
M Dias Branco, S.A. Ind. e Com. de Alimentos	2011	Manufacture and Sale of Biscuits and Pasta	Brazil
Magazine Luiza, S.A.	2013	Trade	Brazil
Magnesita Refratários, S.A.	2013	Refractories and Mining	Brazil
Marcopolo, S.A.	2011	Transportation	Brazil
	2012		
Metalurgica Gerdau, S.A.	2012	Steel	Brazil
Minerva, S.A.	2010	Meat	Brazil
	2011		
	2012		
Mills Estruturas e Serviços de Engenharia, S.A.	2011	Engineering Products and Services	Brazil
Natura Cosméticos, S.A.	2013	Cosmetic Products	Brazil
Plascar, S.A.	2010	Automobile	Brazil
Petróleo Brasileiro, S.A. Petrobras	2011	Exploration and Production of Petroleum	Brazil

Company	Year	Business	Country of Origin
Qualicorp, S.A.	2011	Health Insurance	Brazil
	2012		
Randon, S.A. Implementos e Participações	2011	Trailers and Semi-Trailers Manufacturer	Brazil
Rodobens Negócios Imobiliários, S.A.	2011	Construction	Brazil
	2012		
Saraiva, S.A. Livreiros Editores	2013	Publishing	Brazil
Sul América, S.A.	2010	Insurance	Brazil
	2011		
Suzano Holding, S.A.	2010	Paper and Cellulose / Insurance / Real Estate / Softwares	Brazil
	2011		
Technos, S.A.	2012	Watchmaking	Brazil
	2013		
Telefónica Brasil, S.A.	2011	Telecommunications	Spain
Tereos Internancional, S.A.	2010	Production of Sugar, Starch, Ethanol and Alcohol	Brazil
	2011		
Tim Participações, S.A.	2011	Telecommunications	Brazil
	2012		
Totvs, S.A.	2010	Softwares	Brazil
	2011		
	2013		
Unipar Carbocloro, S.A.	2013	Soda, Chlorine and Derivatives	Brazil
Valid Soluções e Serv. Seg. Meios Pag. Ident. S.A.	2010	Technology	United States
Valid Soluções e Serv. Seg. Meios Pag. Ident. S.A.	2012		
Valid Soluções e Serv. Seg. Meios Pag. Ident. S.A.	2013		
Via Varejo, S.A.	2013	Retail	Brazil

Company	Year	Business	Country of Origin
Vigor Alimentos, S.A.	2012	Milk	Brazil
Viver Incorporadora e Construtora, S.A.	2011	Construction	Brazil
WEG, S.A.	2011	Electrical Equipment Manufacturer	Brazil
	2012		
Wilson Sons Limited	2013	Port, Maritime and Logistics Services	Brazil