



The Corporate Governance and the probability of fines

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Master Dissertation

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Biographical Note

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Abstract

The Master Dissertation is focused on the study of the Corporate Governance characteristics in the Portuguese companies and its relation with the probability of fines imposed by CMVM.

The purpose of this research is to study the historical data of the penalties imposed by CMVM to the faulty companies, to analyze their Corporate Governance reality, especially in terms of the “comply or explain” approach and other relevant elements, in order to suggest what factors can explain the probability of fines, through a Logit model.

One of the major concerns while studying Corporate Governance is whether the companies evolve their Corporate Governance structure in sync with the national regulation, in terms of recommendations and amendments. Considering the relative high cost of compliance for the companies, understanding their Corporate Governance reality and also the fundamentals and implications of the “comply or explain” principle assume a critical role.

The study concludes that the percentage of stock owned by the major shareholder and the existence of an internal control mechanism might influence the likelihood of fines, as the regression tests have shown statistical significance for some of the equations tested. The CEO duality might also influence the probability of fines according to the regressions analysis.

Keywords: Corporate Governance, Compliance analysis, Regression analysis, Regulatory Recommendations

JEL-Codes: G30, G38

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Introduction

The increasing extension and complexity of the markets all over the World in the last decades has been followed by a wide range of remarkable economic events in very short periods of time, which have made the economic agents focus their attention not only on the external environment towards the companies, but also on the internal reality of the organizations, over which the companies' management and policy have a special concern.

Apart from the macroeconomic and industry environment and the impact of events such as the financial crisis and other catastrophic ones that happened in the past, the Corporate Governance of firms plays one of the most important roles in the company's long term performance, regarding the capacity of fulfilling its goals and promoting good management practices.

The theme of Corporate Governance has been increasing its importance over time. Apart from many studies having been developed over the topic, also Governments have been playing an important role in the evolution of Corporate Governance of the companies in terms of regulation, based on recommendations and actions on the companies' activity when needed.

The "comply or explain" principle has been the central element of the most notorious codes of Corporate Governance in the World, and will be one of the bases for the literature review of the Master Dissertation. It assumes a critical importance to observe the non-compliance situations and their implications.

The proposed dissertation topic intends to explore a theme that has not been targeted in the literature. We analyze whether Corporate Governance characteristics can be related to the probability of a firm being fined by the Securities and Exchange Commission.

The first inference we may issue from this subject is the fact that there isn't a "perfect" Corporate Governance model that will naturally drive the companies to an optimal performance state.

The Corporate Governance discipline has been evolving throughout time, as many studies have been published in the last decades, the role of the regulation has been increased and the complexity around this theme has been evolving, too.

On the regulatory side, there's been an improvement in the last years in relation to the number of recommendations issued. Due to the heterogeneous characteristics of firms, the recommendations on the Corporate Governance have been under the challenge of providing sufficient flexibility to companies, in line with the impossibility of developing a model that would serve all the cases, according to the principle that "one size does not fit all" (Coles et al, 2008).

1. Literature Review

1.1. Corporate Governance concept and relevance

The main goal of a corporation is to create value. In line with it, all the companies' departments are supposed to be geared to provide its maximum contribution in the pursuit of that goal.

According to Jensen and Meckling (1976), an Organization can be defined as a nexus of contracts. There are several agents – stakeholders - with distinct interests involved in the organizational activity. The main internal and external stakeholders are shareholders, managers, clients, suppliers, debt holders, the Government and the society.

Corporate Governance allows the companies to assure that their resources are fully directed to the company's goals, as Larcker and Tayan (2011) define it as “the collection of control mechanisms that an organization adopts to prevent or dissuade potentially self-interested managers from engaging in activities detrimental to the welfare of shareholders and stakeholders”.

Considering the complex environment around the organizations, bad Corporate Governance practices could impact not only the owners and managers, but also the creditors, customers, suppliers, investment analysts, labor unions, auditors, the media and the regulators.

Moreover, several authors understand that good Corporate Governance practices can create value for the company.

Chen (2009) in his study on the legal protection of investors, Corporate Governance, and the cost of equity capital concluded that the firm-level of Corporate Governance is negatively correlated to the cost of equity of companies, especially in emerging markets and for countries where investors have weak legal protection. According to the study, investors are willing to pay a premium price of more than 20% for companies with better Corporate Governance.

Gompers et al (2001) defined a “Governance Index” composed by 1500 firms per year and studied the relationship between this index and specific performance measures. The authors have found a positive relationship between Corporate Governance and stock

returns. The Index demonstrated high correlation with firm value. On the other hand, weaker shareholders rights appeared to be related with lower profits, lower sales growth, higher capital expenditures and a higher amount of corporate acquisitions.

McKinsey (2002) placed a survey of institutional investors and concluded that good governance is an important factor affecting stock selection.

Analyzing the Portuguese market, Alves and Mendes (2004) studied the effects of the recommendations and amendments published by CMVM since 1999. However, the authors didn't find any evidence of a relationship between the compliance level of some Corporate Governance recommendations and abnormal returns. They state that, in general, the CMVM's code of best practices doesn't have a systematic effect on returns; the different groups of recommendations show opposite effects and therefore the total effect of those recommendations is negligible.

1.2. The role of Regulation

Becht et al (2002) argue that shareholders do not have the capacity to create efficient rules that are able to protect the interest of all stakeholders. Therefore regulatory rules would be necessary to preserve those interests. Moreover, without a regulatory role in the market, and even if the firms would be able to design efficient corporate rules, the managers could be tempted to change these afterwards in their advantage.

Recommendations are seen as a set of principles intended to guide the Companies towards good Corporate Governance practices, mainly centered on the "comply or explain" approach, rather than statutory rules.

In the Portuguese market the recommendations are issued by the *Comissão de Mercado de Valores Mobiliários* (CMVM). In 1999 CMVM released the first set of 13 recommendations. New recommendations and supplementary documents were released afterwards (2001, 2003, 2005, 2007 and 2010). In 2015 CMVM registered 40 recommendations in its Corporate Governance annual report.

However, the regulatory action over the companies' activity may be put into question, under the idea of the firms being capable to provide adequate protection to the

shareholders, plus the fact that the regulatory entities do not potentially possess enough information to design efficient rules that would serve all the companies in the market.

1.3. The “Comply or Explain” approach

According to Faure-Grimaud et al (2005), “the comply or explain approach provides the companies the flexibility to adjust their reality to the recommendations of the Combined Code”.

This section is centred on specific studies developed over the “Comply or Explain” approach of the Corporate Governance, firstly starting with a recent study posted by CMVM in 2012 displaying the reality of the Portuguese companies on this matter.

CMVM (2012) noticed that the average level of compliance with the Corporate Governance Recommendations substantially increased from 74% in 2010 to 89% in 2011. In light of the spirit of the "comply or explain" principle, the CMVM considered the recommendations that were not adopted in cases where the issuer had an acceptable and complete explanation for the non-compliance as equivalent to the compliance thereof. From the 2011 analysis of the listed Portuguese companies, CMVM concludes the following average level of compliance per category: 97% for the General Meeting recommendations; 88% for the Board of Directors recommendations; 90% for the General and Supervisory Board, the Financial Matters Committee, the Audit Committee and the Supervisory Board recommendations; 77% for the recommendations on Remunerations; 84% for the Auditors recommendations.

A similar study was developed in the UK by Faure-Grimaud et al (2009), based on an analysis of the “comply or explain” approach towards the Combined Code of Corporate Governance. It analyzes the effectiveness of this approach in the Corporate Governance of several listed companies in the London Stock Exchange (LSE). This study analyzed whether the Combined Code of Corporate Governance introduced in the UK in 1998 produced the desired effects in the evolution of the CG in the market, in terms of the level of compliance and the quality of the explanations.

Arcot and Bruno (2005) analyzed 245 UK non-financial companies belonging to the FTSE 350 index, from the time horizon between 31st of December 1998 and 30th of June

2004. The methodology followed a statistical approach. The results displayed a level of Compliance of 87,4% (8712 cases of compliance in the sample of 10288), increasing year by year over the time period as described in a increasing percentage rate from 1998-99 to 2003-04. This statistical observation induces that the Code had been effective over time in a progressive way, however, also suggesting a significant time needed by the companies to adapt themselves to the recommendations, since the increasing rate is more or less constant for the entire period. Regarding the Shareholders' attitude, the authors demand having statistical evidence that suggests that little attention is paid to explanations, as opposed to compliance itself. The quality of explanations at a company level does not improve over time. Most of the companies from the sample started with some type of explanation and kept with that explanation until at some point they jumped to full compliance. The authors do not observe companies providing general explanations moving towards specific ones before ultimately complying. The "comply or explain" approach provides the companies the flexibility to adjust their reality to the recommendations of the Combined Code. However, flexibility also introduces the possibility that some companies do not comply without having any good reason for doing so. The authors raise the question whether a more statutory system would prevent a bad use of the Code, concerning the companies that neither comply nor explain. The results from the research for these no comply-no explain cases suggest that the companies do not effectively use the flexibility provided by the Code.

From a different perspective, Oliver Hart (1995) argued that a Corporate Governance problem arises whenever contracts are incomplete and agency problems exist. From his analysis based on public companies, the author defends the Cadbury recommendations approach as the best option on educating and persuading the companies to make changes in their Corporate Governance structure, rather than through statutory rules.

Seidl et al (2009) compared the conformance levels in the codes of Corporate Governance in UK and Germany from that year, according to the "comply or explain" approach also. They gave a special attention to the role of some corporate scandals in UK, USA and Germany in increasing the countries' efforts for a more effective regulation of the corporate behaviour in general and the actions of the companies' directors in particular. They found several similarities, but also some discrepancies, between the Codes from UK and Germany, in which 50% of the analyzed UK

companies were fully compliant and the respective number in Germany was less than 15%. In both countries, the compliance level dropped as the company size decreased.

1.4. The importance of internal controls

In an increasingly challenging economy, the internal control mechanisms assume a high importance in preventing bad Corporate Governance practices, in which the auditing activity plays a key role.

Mitra (2012) emphasizes the importance of the existence of an auditing unit to ensure a fair overview of the company's reality in the financial reports, and provides an example of a bankrupted firm route-caused by Corporate Governance problems in which the internal auditing failed to prevent it.

Coram et al (2008) examined whether organizations with an internal audit function are more likely to detect and self-report fraud than those without such mechanism. The authors concluded that organizations with an internal audit function are more likely to detect fraud than those without. Furthermore, organizations that rely solely on outsourcing for their internal audit function are less likely to detect and self-report fraud than those that undertake at least part of their internal audit function themselves.

The internal control mechanisms are important to promote good Corporate Governance practices and to reduce agency risk. The importance of these mechanisms are highlighted in other studies developed by Yermack (1996), Brown & Caylor (2009) Kaserer & Moldenhauer (2008), Rose (2007), Lehmann et al (2004) and Elsayed (2007). These authors provided evidence that the financial performance is higher in companies that have implemented real Corporate Governance control mechanisms. Despite the implementation of all those mechanisms, their efficiency was questioned by the occurrence of some public scandals.

Farinha and Costa (2009) examined this topic in an ownership structure point of view, suggesting that the concentration of the firms' capital can influence the monitoring role towards the managers.

Morck et al (1989) studied the effectiveness of the Board of Directors in controlling the top managers, suggesting that the board is not completely unresponsive to poor performance. The authors conclude that when a firm significantly underperforms its industry, the probability of complete turnover of the top management arises.

1.5. The Board of Directors

The potential effectiveness of the board of director's action over the management activity raises the question regarding the key characteristics of the Corporate Governance structure that ensure the best practices.

Shleifer and Vishny (1997) defend that external mechanisms, fundamentally the Board of Directors, are considered important to protect the interests of creditors and investors and also protecting the firm value.

Beasley (1996) studied the relationship between the Board of Directors' composition and the occurrence of financial statement fraud. The author suggests that the inclusion of outside members on the board of directors increases the board's effectiveness at monitoring management for the prevention of financial statement fraud.

Long et al (2005) investigated the differences between listed and unlisted UK boards and suggested that on listed company boards, non-executive directors are primarily concerned with institutional, agency and management hegemony issues. These directors are protecting the long-term interests of fragmented and anonymous shareholders from the short-term ambitions of knowledgeable and self-interested executives.

The independence question is also raised in the board composition, in which CMVM highlights the importance of the existence of independent non-executive members in its Corporate Governance recommendations.

Higgs (2003) states that the non-executive members need to establish close relationships with the executives and to be well-informed, therefore all the non-executive directors need to be independent of mind and willing and able to challenge, question and speak up; at least a proportion of non-executive directors also needs to be independent.

Masulis and Mobbs (2013) argue that boards with a greater percentage of talented, experienced and highly motivated independent directors should more effectively monitor managers in order to prevent adverse firm outcomes.

However, other authors such as Baghat and Black (2002) provided evidence that companies with a higher percentage of independent directors do not necessarily achieve a better performance. In some companies the low profitability could eventually lead to an increase of independent directors as a response to business problems.

In terms of shares structure, the percentage of shares owned by each of the companies' shareholders does not follow any regulatory imposition, however it potentially have influence in its Corporate Governance.

Fama and Jensen (1983) analyzed various ways in which managers who own enough stock to dominate the board of directors could expropriate or consume corporate wealth.

However, Jensen and Meckling (1976) have researched this theme and explained how the interests of managers and shareholders become increasingly aligned as the managers' percentage ownership interest increases.

Holderness and Sheehan (1988) investigated the effects of majority shareholders on publicly traded corporations and did not observed any evidence that individuals or corporations holding majority blocks of stock expropriate or consume corporate resources.

Another reviewing point is the separation between the ownership and management in the organizations that could eventually increase agency risk.

Smith (1776) explains that in case of separation between the chairman and the manager, it is not expectable that the person in charge for the management should perform with the same anxious vigilance as would do it for his own company.

However, some regulatory entities recommend nowadays that the roles of the chairman and chief executive officer (CEO) should not be exercised by the same person, as described in the *UK Combined Code on Corporate Governance* (1992).

Krause et al (2013) also reviewed this matter and argue that large firms are increasingly opting for a separate and independent chairman of the board; however, it has been also

introducing new problems, such as disagreements between the CEO and the independent chairman, questioning the CEO non-duality preference.

McKendall et al (1999) examined the effects of Corporate Governance structures on the incidence of corporate illegality. The authors analyzed the relationship between environmental violations and several dimensions of Corporate Board structure. They have concluded that the value of stock owned by corporate officers and directors was positively and significantly associated with serious environmental violations. Nevertheless, CEO duality and social responsibility committees were not significantly related to corporate illegal behaviour.

1.6. The cost of non-compliance

Steinberg (2010) developed a research on the costs of non-compliance. The author reinforces the idea of so many companies being negligent towards the regulatory recommendations in Corporate Governance which normally leads to huge penalties and readapting costs. In terms of direct costs, compliance represents a huge investment by itself, which would likely pay off later by avoiding regulatory impositions from non-compliance. Moreover, the loss of market capitalization in those cases of non-compliance is dramatic. Also a compliance failure can lead to a situation where time and energy are spent from the top management, preventing the day-to-day running of the company and new initiatives to grow the business for a significant period of time. It can also impact the company's reputation, which takes too long to be built up and can go down with a single episode, affecting as well the relationship with customers, suppliers, alliance partners, bankers, investors, as well as the retention of key human resources and ultimately long term success.

A look over the Corporate Governance impact on the financial crisis is exposed by Kirkpatrick (2009) in the intent to analyze the failures and weaknesses in Corporate Governance and whether or not it relates to the financial crisis period. The author concludes that the financial crisis can be related to several failures and weaknesses in Corporate Governance arrangements which did not serve their purpose to safeguard against excessive risk taking in a number of financial services companies. Accounting

standards and regulatory requirements have also proved being insufficient in some areas. Last but not least, remuneration systems have in a number of cases not been closely related to the strategy and risk appetite of the company and its longer term interests. The author also emphasizes the Corporate Governance impact on the risk management systems, which potential failed much less likely due to a simple computer model failure, and also the controversial theme of the remuneration board in relation with the firms' reality.

It raises the question about the true importance of the imposition of fines by the regulatory entities, more than to simply raise the level of compliance of the companies to the corporate governance recommendations, but to avoid negative impacting episodes in the companies' activity that could lead to a much more critical macroeconomic event.

It is suggested that the Corporate Governance puzzles are independent of which economy is under analysis, as the unpredictable behavior of the firms, the conflict of interests of the economic agents and the objectives of the companies prevents their activity to effectively be in line with the regulatory recommendations.

Polinsky and Shavell (1990) analyzed the effects of fixed and variable enforcement costs on the optimal fine and the optimal probability of detection. The authors suggests that an optimal fine arises to reflect variable enforcement costs, this optimal fine not being directly affected by fixed enforcement costs and where the optimal probability depends on both types of enforcement costs.

Becker (1974) in his research about crime and punishment in an economic perspective, concludes that a penalty should be set equal to the net social cost of the crime divided by the probability of detection, however, restricting his model on assumptions such as risk neutrality, full information and a static decision framework. In theory, the author also suggests that the optimal policies to combat illegal behavior are merely part of an optimal allocation of resources.

Jensen (1993) suggests that the corporate internal control systems have failed to deal effectively with the changes in the worldwide economy. The evolutionary character of the markets at a productive, legal, political and regulatory level challenges the economies to reach out a viable theory of organizations nowadays.

2. Methodology, Data Collection and Descriptive analysis

Studies like Arcot and Bruno (2005) tend to follow a statistical analysis of a collection of data from the companies' activity towards the Corporate Governance principles, stated by the recommendations and amendments from the regulatory entities. Nevertheless, the study exclusively focuses on the comparison between the recommendations on Corporate Governance and the scenario of the compliance level of the analyzed companies.

A special focus on the quality and volume of the explanations is normally taken into consideration, centred in the failing cases, which provides the authors an idea in which sectors of the companies' governance structure there are higher risks of bad Corporate Governance practices.

Other authors intent to suggest a relation between these cases and the negative economic events that could potentially be the cause and effect of bad Corporate Governance practices, usually measured by non-complying nor-explaining cases.

Therefore the methodology is based on a collection of data from the companies' activity in parallel with the theoretical good Corporate Governance practices depicted in the recommendations codes and manuals, such as the CMVM Corporate Governance Recommendations. It is followed by a statistical treatment of the input data and the analysis of the results according to the theory.

In order to analyze the Corporate Governance characteristics that could explain the probability of fines, an econometric Logit model is explored using the Eviews software.

The data collection is based on two different sources: the historical publications from CMVM as well as annual reports and Corporate Governance statements from the companies.

Two samples are crossed-over in order to build the model.

The first sample is sourced by the CMVM publications concerning the administrative infraction proceedings' history in a time frame of 10 years, and containing 40 companies operating in Portugal for a total of 57 occurrences registered.

The second sample collects Corporate Governance and other elements from 47 reference Portuguese companies, essential to the purpose of this study.

2.1. Infractions and fines analysis

2.1.1. Long series

For a long term analysis, a 25 years database was collected from the CMVM statistical publications.

Every time the regulatory entity detects that a certain company is conducting an illegal activity, an investigation takes place and an administrative infraction proceeding is started. CMVM defines a fine to be imposed on the firm in case.

Depending on the quality of the evidence collected and also the defensive power of the faulty company, an infraction administrative proceeding does not necessary imply that a fine will be effectively imposed on the company in case.

In order to access the effectiveness rate of the proceedings conducted by CMVM, the 25 years database compares the number of fines handed out each year with the number of administrative infraction proceedings started in the same year. Some proceedings can take more than one year to be closed, implying that a specific year can register a higher number of closed cases comparing to the started cases in the same year, regardless if it results in a fine or not. Therefore the effectiveness rate analysis is particularly relevant in a long series analysis.

Table 1 - Fines effectiveness rate

Year	Administrative Infraction Proceedings	Fines	Effectiveness
1991 & 1992	51	23	45%
1993	24	6	25%
1994	152	70	46%
1995	80	25	31%
1996	106	90	85%
1997	110	47	43%
1998	175	79	45%
1999	201	45	22%
2000	38	44	116%
2001	85	19	22%
2002	142	18	13%
2003	53	2	4%
2004	81	4	5%
2005	58	15	26%
2006	65	21	32%
2007	42	15	36%
2008	42	16	38%
2009	41	22	54%
2010	99	20	20%
2011	28	14	50%
2012	54	51	94%
2013	48	19	40%
2014	39	23	59%
2015	49	21	43%
Total	1863	709	
Average (full data)			41%

The data above shows a total average effectiveness rate of 41% which suggest that all the administrative infraction proceedings started and conducted by CMVM results in a relatively lower number of fines imposed to the faulty companies. Moreover, the effectiveness rate is inconstant year by year during the entire period, therefore not significant enough to suggest whether CMVM has been able to increase its capacity over time to close its proceedings with a fine imposed to the faulty companies.

Taking into account the potential defensive power of the companies towards the proceedings started by CMVM and all the juridical specificities it implies, the amounts

practised in the fines have no relevance for the actual study. It also considers the fact that most of the involved companies are big Groups operating in Portugal.

Furthermore, a specific infraction proceeding with a fine implied may not be effective due to juridical action from the target company, which does not entail that the company didn't commit the fault in case.

2.1.2. Short series

For a short term analysis a 10 years database is considered in order to analyze the administrative infraction proceedings conducted in this period, detailed at a company level, amount and type of infraction. The time frame is between 2006 and 2015. The data is collected from the CMVM publications.

Since the fined amounts of the correspondent incurrence can be influenced by the defensive power of the faulty companies and also by all the administrative process involved between the starting of the proceeding up to its closure, it is not expected an accurate relationship between the fined amounts and the nature of the infractions.

The sample collects administrative infraction proceedings and fines applied only to companies and not to individual members.

Table 2 - Infractions and fines

Company	Fines	Effectiveness	Amount
ACS, Act. Construcción y Servicios, S.A.	1	0	-
Banco Espírito Santo de Investimento, SA	1	1	75.000 €
Banco Invest, S.A.	2	1	25.000 €
Banco Português de Gestão, S.A. (BPG)	1	1	40.000 €
Banco Português de Investimento, SA	1	0	-
Banco Português de Negócios S.A.	2	2	200.000 €
BPN Imofundos, S.A.	2	2	100.000 €
Banco Privado Português, S.A.	1	1	1.500.000 €
Banif - Banco Internacional do Funchal, SA	1	0	-
BBVA Gest, S.A.	1	0	-
Citigroup Global Markets Limited	1	1	950.000 €
Urbifundo, S.A.	1	0	-
Conserve Italia (ex Círio de Rica, S.p.A.)	1	1	50.000 €
Construtora do Tâmega, SGPS, SA	1	1	25.000 €
EDP – Energias de Portugal, S.A.	2	2	650.000 €
Finanser – Corretagem, S.A.	2	2	200.000 €
Fincor - Sociedade Corretora, S.A.	2	1	50.000 €
Finertec, S.A.	1	1	75.000 €
Fund Box, S.A.	1	1	60.000 €
Galp Energia, S.G.P.S., S.A.	3	3	225.000 €
Caixa Geral de Depósitos (Caixagest)	1	0	-
Caixa Geral de Depósitos (Investimento)	2	1	25.000 €
Grupo Millennium BCP	4	2	8.000.000 €
Grupo Millennium BCP (ActivoBank)	1	0	-
Grupo Millennium BCP (Investimento)	1	0	-
I'M, SGPS, SA	1	0	-
Inapa - Invest., Particip. e Gestão, SA	1	1	300.000 €
Intermoney Portugal - Corretagem, S.A.	1	1	100.000 €
L. J. Carregosa - Soc. Fin. Corretagem, S.A.	1	1	60.000 €
Lisbon Brokers - Sociedade Corretora, S.A.	4	2	100.000 €
Lisgráfica - Impressão e Artes Gráficas, S.A.	1	0	-
LP Brothers - Venture Capital SL	1	0	-
NeoNet Securities AB	1	1	100.000 €
ParaRede, SGPS, SA	1	1	100.000 €
Portugal Telecom - SGPS, S.A.	2	2	240.000 €
Sport Lisboa e Benfica - Futebol SAD	2	1	25.000 €
Sporting Clube de Portugal – Futebol, SAD	2	1	60.000 €
Sumol+Compal, SA	1	1	75.000 €
Vila Galé Gest, S.A.	1	0	-
Total	57	36	13.410.000 €

The 57 observations from the sample above results in a total of 36 fines effectively imposed and an average effectiveness rate of 63%. The nature of the infractions is distributed through the entire sample as described below:

Table 3 - Type of infraction

Type of infraction	Fines	Effectiveness
Protection and support to the investor		
Market Integrity, Transparency & Fairness	19,3%	13,9%
Supervision of Collective Investment Units	12,3%	8,3%
Unauthorized Financial Intermediation	7,0%	11,1%
Provision of financial services over the Internet		
Financial Intermediation Duties	22,8%	22,2%
Information Disclosure	36,8%	44,4%
Holdings		
Annual report		
Semiannual report		
Quarterly report	1,8%	0,0%

The statistic above suggests that the major part of the administrative infraction proceedings started by CMVM is route-caused by information disclosure issues. This is also a potential type of infraction that mostly results in fines imposed to the faulty companies, as the sample collects 21 fines and 16 effectively imposed within this type, representing an individual effectiveness rate of 76% approximately and around 44% of all the fines included in the sample.

The Market Integrity, Transparency & Fairness and the Financial Intermediation Duties also registered a significant high percentage of infractions in the sample. However, the effectiveness rate of these types of infraction is significantly lower in comparison with the Information Disclosure type.

2.2. Sample description

The Master Dissertation aims to study the Portuguese reality of the infraction proceedings and the Corporate Governance characteristics that could explain the probability of a company to incur into fines.

This section presents a database with 47 reference companies in Portugal, the fines registered in the database presented in the previous section (2006-2015 time frame) and its relation with several Corporate Governance characteristics, in order to build a regression model, explored in the next chapter.

All the information contained in the database/sample was collected from the companies' annual reports, Corporate Governance reports and CMVM publications.

The sample contains specific Corporate Governance elements in two different moments of time.

The first moment refers to 2006 and intends to demonstrate the companies' reality in specific Corporate Governance characteristics, before the administrative infraction proceedings take place. The regression model will study the potential impact of such variables in the probability of incurring in fines. It is expectable that the companies that incurred in fines performed worst in terms of Corporate Governance, comparing to the companies without any record of such incurrence.

The second moment refers to 2015, after all the infractions proceedings and fines since 2006 have been closed and intends to demonstrate the reality of the reference companies in terms of Corporate Governance. The sample contains observations in which one or more infraction proceedings and fines were registered in some companies and other observations without any record for other companies. It is expectable that at least the companies that incurred into infraction proceedings and fines will significantly increase the quality of its Corporate Governance elements comparing to 2006, which will provide an idea of the impact of such incurrence in their Corporate Governance evolution.

Table 4 - Reference companies

Company
Altri, SGPS, SA
Banco BPI, SA
Banco Comercial Português, SA
Banco Espírito Santo, SA
Banif - SGPS, SA
Brisa - Auto Estradas de Portugal, SA
Cimpor - Cimentos de Portugal, SGPS, SA
Cofina, SGPS, SA
Compta - Equipamentos e Serviços de Informática, SA
Corticeira Amorim, SGPS, SA
CTT
EDP - Energias de Portugal, SGPS, SA
EDP Renováveis, SA
Estoril Sol - SGPS, SA
F. Ramada - Investimentos, SGPS, SA
Galp Energia, SGPS, SA
Glintt, SA
Grupo Media Capital
Grupo Soares da Costa, SGPS, SA
Ibersol, SGPS, SA
Imobiliária Construtora Grão Pará, SA (Consolidated)
Impresa - SGPS, SA
Inapa - Investimentos, Participações e Gestão, SA
Jerónimo Martins - SGPS, SA
Lisgráfica - Impressão e Artes Gráficas, SA
Luz Saúde
Martifer - SGPS, SA
Mota-Engil, SGPS, SA
NOS (ZON Multimédia)
Novabase - SGPS, SA
Portucel - Empresa Produtora de Pasta e Papel, SA
Portugal Telecom, SGPS, SA
Reditus - SGPS, SA
REN - Redes Energéticas Nacionais, SGPS, SA
SAG Gest - Soluções Automóveis Globais, SGPS, SA
Semapa - Sociedade Investimento e Gestão, SGPS, SA
Sociedade Comercial Orey Antunes, SA
Sonae -SGPS, SA
Sonae Capital
Sonae Indústria, SGPS, SA
Sonaecom - SGPS, SA
Sport Lisboa e Benfica - Futebol SAD
Sporting Clube de Portugal – Futebol, SAD
Sumol + Compal, SA
Teixeira Duarte - Engenharia e Construções, SA
Toyota Caetano Portugal, SA
VAA - Vista Alegre Atlantis, SGPS, SA

The distribution of the sample according to the activity sector, based on the *CAE - Classificação Portuguesa das Actividades Económicas, Rev. 3*, is the following:

Table 5 - Activity sectors

Activity sector	Number of companies in the sample
Manufacturing	11
Information and Communication	9
Financial activities and Insurance	7
Consulting, scientific, technical and similar activities	5
Electricity, gas, steam, hot and cold water and cold air	4
Transport and storage	3
Construction	2
Wholesale and Retail; vehicle repair vehicles and motorcycles	2
Artistic activities, shows, sports and recreation	2
Accommodation, catering and similar	1
Administrative and support services	1

The table above shows that almost one quarter of the companies in the sample belongs to the Manufacturing sector.

The activity sector is not a Corporate Governance variable but was included in the regression model estimations through dummy variables. However it didn't reveal statistical relevance. Therefore it is not included in the regression model presented in the next chapter.

2.2.1. Independent variables

In order to observe the potential impact of the Corporate Governance characteristics at 2006 in the administrative infraction proceedings started from that year afterwards, the following equation is estimated and the independent variables defined.

$$FINE(t) = c + COMPL(t) + INT_CTR(t) + NON_EXE_I(t) + Log(SALES_i) + u(t)$$

Equation 1 - Corporate Governance impact in fines at 2006

The independent variable “COMPL” represents the compliance level (percentage) of the companies at 2006 towards the recommendations from CMVM in concern to Corporate Governance. The recommendations evaluated as “not applicable” in specific companies were considered as adopted for this study, since they do not indicate a fault. The total average compliance level of the sample in 2006 is 61% approximately. It is expectable that companies with a lower compliance level will more likely incur into administrative infraction proceedings.

The independent variable “INT_CTR” classifies the companies in terms of the existence or not of an internal control mechanism to supervise the Management, especially in terms of Corporate Governance practices. It is a dummy variable which assumes the value “1” in case the company has an internal control mechanism and “0” if not. It is expected that the companies without an internal control mechanism will more likely incur into administrative infraction proceedings.

The independent variable “NON_EXE_I” represents the percentage of non-executive independent members within the Board of Directors. It is expected that a higher percentage of non-executive independent members promotes good Corporate Governance practices, therefore potentially reducing the probability of incurring into a fine.

The variable “Log(SALES)” represents the logarithm of the annual revenue (€ Millions) of each company. The inclusion of this variable in the equation intends to explore the size factor. Companies with higher turnover are expected to possess better resources in order to apply better Corporate Governance practices and therefore to be less likely involved in infraction proceedings.

The correlation matrix for the equation is displayed below:

Table 6 - Correlation matrix equation 1

	COMPL	INT_CTR	NON_EXE_I	Log(SALES)
COMPL	1,000000	0,716085	0,438443	0,502699
INT_CTR	0,716085	1,000000	0,356135	0,550468
NON_EXE_I	0,438443	0,356135	1,000000	0,393348
Log(SALES)	0,502699	0,550468	0,393348	1,000000

The matrix above displays a high correlation between the compliance level and the existence of an internal control mechanism, suggesting that most of the companies that had a higher compliance levels at 2006 had an internal control mechanism as well. The same trend is also observed between the variables COMPL, INT_CTR and Log(SALES), however not as significant as the previous one.

In order to observe the potential impact of the Corporate Governance characteristics at 2015 in the administrative infraction proceedings started at 2006 and to compare it with the previous model, the same equation is used with data from 2015.

$$FINE(t) = c + COMPL(t) + INT_CTR(t) + NON_EXE_I(t) + Log(SALES_i) + u(t)$$

Equation 2 - Corporate Governance impact in fines at 2015

The correlation matrix of the equation 2 is displayed below:

Table 7 - Correlation matrix equation 2

	COMPL	INT_CTR	NON_EXE_I	Log(SALES)
COMPL	1,000000	0,180750	0,564590	0,456917
INT_CTR	0,180750	1,000000	0,285304	0,266659
NON_EXE_I	0,564590	0,285304	1,000000	0,325933
Log(SALES)	0,456917	0,266659	0,325933	1,000000

The matrix above does not show a correlation between the compliance level and the existence of an internal control mechanism as high as the first equation. This result would be expected due to the increasing compliance level of the companies across the years, resulting in a very high compliance level in 2015 for the overall sample (86% versus 61% in 2006).

Regarding the COMPL and NON_EXE_I variables, the correlation between them is high enough to suggest that most of the companies with the higher compliance levels will likely have higher percentage of non-executive independent directors in the Board composition.

The Log(SALES) variable does not show high correlation with the remaining variables.

The main goal of the two previous equations is to provide a comparison between the companies' Corporate Governance reality in specific factors from the pre infraction proceedings period (2006) and the post moment (2015).

Additional equations are estimated in order to observe several Corporate Governance characteristics at 2015, in relation to the companies that incurred into one or more infraction proceedings, during the period 2006-2015. It is assumed that the Governance characteristics are constant between 2006 and 2015. For 2015, the model considers more variables due to data availability. It provides a more deep understanding of the Corporate Governance and other characteristics between the companies which incurred into infractions proceedings and the ones that didn't. It is expectable that the companies that incurred into one or more fines reveal trendy differences in the Corporate Governance indicators comparing to the non-faulty ones. It is expected that the model would provide an idea regarding the effect of the fines in the Corporate Governance practices of the faulty companies.

$$FINE(t) = c + COMPL(t) + INT_CTR(t) + M_SHARE(t) + NON_EXE_I(t) \\ + Log(SALES_i) + DUAL_CEO(t) + AUDIT(t) + u(t)$$

Equation 3 – Corporate Governance impact in fines at 2015 (additional variables)

The independent variable “M_SHARE” represents the percentage of stock detained by the major shareholder. In line with the literature review, it is not necessarily expected that companies in which more than 50% of the stock is owned by a singular shareholder will reveal more Corporate Governance issues comparing to the companies in which the stock has an extensive distribution among various shareholders.

The independent variable “DUAL_CEO” is a dummy variable which assumes the value “1” in case the company has CEO duality and “0” in case the company has separated chairman and CEO. Also in line with the literature review, it is not necessarily expected that the separation between chairman and CEO results in a positive impact to the Corporate Governance and risk management of the companies and therefore potentially related to a less likelihood of fines.

The independent variable “AUDIT” represents the number of years that each company is using the same external auditing services. The recommendations from CMVM highlight the importance of rotation between external auditing services in terms of risk management. It would be expected that the companies with longer periods in the usage of the same external auditing services would have more likely incurred into fines comparing to the ones that practices rotation according to the CMVM recommendations.

The correlation matrix of the equation 3 is displayed below:

Table 8 - Correlation matrix equation 3

	COMPL	INT_CTR	M_SHARE	NON_EXE_I	Log(SALES)	DUAL_CEO	AUDIT
COMPL	1,000000	0,180684	0,004189	0,564598	0,456894	-0,268176	-0,009631
INT_CTR	0,180684	1,000000	-0,145251	0,285321	0,266659	0,116115	0,037259
M_SHARE	0,004189	-0,145251	1,000000	-0,018422	-0,038298	-0,330939	-0,045560
NON_EXE_I	0,564598	0,285321	-0,018422	1,000000	0,326012	0,043218	0,065456
Log(SALES)	0,456894	0,266659	-0,038298	0,326012	1,000000	0,001577	0,214903
DUAL_CEO	-0,268176	0,116115	-0,330939	0,043218	0,001577	1,000000	0,143451
AUDIT	-0,009631	0,037259	-0,045560	0,065456	0,214903	0,143451	1,000000

The matrix above shows high correlation between the compliance level and the existence of non-executive independent members. It's not observed significantly high correlation between the remaining variables.

2.2.2. Dependent variables

The dependent variable of the equations “FINE” is a dummy variable which assumes the value “1” for the observations that resulted in one or more administrative infraction proceedings with an implicit fine; and “0” otherwise.

As previously mentioned, the effectiveness of the infraction proceedings depends on external factors, such as the juridical defensive power of the companies. Therefore it is not taken into consideration whether the companies effectively paid the fine or not. Also the fines amounts effectively imposed are not relevant for similar reasons.

2.2.3. Descriptive statistics

The descriptive statistics for the first model is presented in table below:

Table 9 - Descriptive statistics equation 1

Variable	COMPL	INT_CTR	NON_EXE_I	SALES
Mean	0,61	0,71	0,20	1462,19
Median	0,62	1,00	0,18	467,00
Max	1,00	1,00	0,60	12209,72
Min	0,17	0,00	0,00	7,63
Std. Dev.	0,20	0,46	0,18	2586,15
Obs.	45	45	45	45

It is observed that the average compliance level of the sample is 61% for 2006, approximately 71% of the companies had an internal control mechanism and the average percentage of non-executive directors in the Board composition is near 20%, slightly below the 25% recommended by CMVM at 2006.

In what concerns to the firm size, for the descriptive statistics the annual revenue of the companies is considered instead of the Log function. It shows that the sample is heterogeneous, considering the discrepancy between the maximum value and minimum value. In the regression analysis the Log function is used to reduce skewness. The variable is referred as “Log(SALES)”, as presented in chapter 2.2.1.

The descriptive statistics for the second model is presented in table below:

Table 10 - Descriptive statistics equation 2

Variable	COMPL	INT_CTR	NON_EXE_I	SALES
Mean	0,86	0,89	0,14	1666,56
Median	0,89	1,00	0,17	341,28
Max	1,00	1,00	0,36	15516,80
Min	0,59	0,00	0,00	0,05
Std. Dev.	0,11	0,31	0,12	3648,79
Obs.	47	47	47	47

It is observed that the average compliance level significantly increases to 86% in 2015 and there is a higher range of companies detaining an internal control mechanism, in comparison to 2006.

The average percentage of non-executive independent directors in the Board composition slightly decreases to 14% approximately.

Regarding the firm size, the discrepancy between the maximum value and the minimum value is more evident in the 2015 sample and also the standard deviation is higher.

The descriptive statistics for the third model is presented in table below:

Table 11 - Descriptive statistics equation 3

Variable	COMPL	INT_CTR	NON_EXE_I	M_SHARE	SALES	DUAL_CEO	AUDIT
Mean	0,86	0,89	0,14	0,52	1666,56	0,36	8,79
Median	0,89	1,00	0,17	0,51	341,28	0,00	8,00
Max	1,00	1,00	0,36	0,98	15516,80	1,00	35,00
Min	0,59	0,00	0,00	0,07	0,05	0,00	0,00
Std. Dev.	0,11	0,31	0,12	0,22	3648,79	0,49	7,37
Obs.	47	47	47	47	47	47	47

The third model adds new variables to the second model and it is observed that the average percentage of stock owned by the major shareholder is 52%. It suggests that for most of the companies included in the sample, the stock is largely concentrated in one shareholder.

It is also observed that approximately 36% of the companies under analysis have the chairman and CEO functions concentrated in the same person.

The average aging of the external auditing services used by the companies is approximately 9 years. It should be taken into consideration that the higher observation is 35 years and the lowest is zero, which results in a high standard deviation of approximately 7 years.

3. Regression analysis

The objective of this chapter is to study the Corporate Governance characteristics that might influence the likelihood of a company to incur into a fine, through a Logit model.

The logistic regression (Logit) estimates the probability of a binary response in the dependent variable “FINE” based on the predictor (independent) variables, using a logistic function which assumes a standard logistic distribution of errors.

As explained by Chris Brooks in the *Introductory Econometrics for Finance* book, the Logit model is able to overcome the limitation of the OLS model that it can produce estimated probabilities that are negative or greater than one. This is achieved by using a function that effectively transforms the regression model so that the fitted values are bounded within the (0,1) interval. Therefore this is the models in which the study will rely on for the variables coefficients analysis.

3.1. 2006 vs. 2015 analysis

The equations 1 and 2 are composed by the same variables from two distinct moments in time (2006 & 2015) for an evolutionary analysis before and after the infraction proceedings from CMVM have occurred. The goal is to observe if the variables might influence the likelihood of fines in 2006 and could also have similar effect in 2015.

Table 12 - Regression analysis 2006 vs. 2015

Variables	Equation 1		Equation 2	
	Coef.	Prob.	Coef.	Prob.
constant	-1,7650	0,2451	-1,6520	0,6256
COMPL	-2,2919	0,3791	1,3452	0,7511
INT_CTR	0,3367	0,7709	-1,9930	0,0777
NON_EXE_I	1,0618	0,6131	-1,9354	0,5719
Log(SALES)	0,6742	0,2494	0,5863	0,2542
<i>Prob(LR statistic)</i>	0,633922		0,334455	
Nº Observations	45		47	

In a regression analysis point of view, none of the equations is statistically significant. Therefore the models do not suggest any influence of the independent variables in the likelihood of fines.

3.2. Corporate Governance and fines

The equation 3 represents the main equation of the study, adding other variables in comparison with the previous equations; in a moment of time – 2015 - when more data is available to support the objective of this study.

$$FINE(t) = c + COMPL(t) + INT_CTR(t) + M_SHARE(t) + NON_EXE_I(t) + \log(SALES_i) + DUAL_CEO(t) + AUDIT(t) + u(t)$$

Equation 3 – Corporate Governance impact in fines at 2015

The model contains several Corporate Governance key elements in relation to the target variable – fines – and intends to suggest which variables can influence the probability of a company being under an infraction proceeding and potentially fined.

Table 13 - Regression analysis equation 3

Variables	Equation 3	
	Coef.	Prob.
constant	12,6647	0,0333
COMPL	-10,493	0,1128
INT_CTR	-4,2172	0,0183**
M_SHARE	-9,8259	0,0039*
NON_EXE_I	1,0599	0,8233
Log(SALES)	0,8524	0,0925
DUAL_CEO	-4,3122	0,0114**
AUDIT	0,0486	0,3913
<i>Prob(LR statistic)</i>	0,000699*	
Nº Observations	47	

*p<0.01, **p<0.05

The regression analysis shows that the model is globally significant for a level of confidence of 99% ($p < 0.01$).

It is observed that the variable COMPL is not individually statistically significant. It was demonstrated in the previous chapters that the compliance level evolved from 2006 to 2015 for all the companies, whether or not they have been fined in that period, which corroborates the regression analysis output for this variable.

The variable M_SHARE is individually significant. The negative coefficient suggests that a higher percentage of stock detained by the major shareholder can be related to a less likelihood of the companies to be fined.

The variable INT_CTR is also individually significant, suggesting that the existence of an internal control mechanism might be related to a less probability of fines.

The variables NON_EXE_I, AUDIT and Log(SALES) are not individually significant. Therefore it is not possible to suggest whether the existence of internal control mechanisms, the aging of auditing services, the percentage of non-executive independent members and the firm size can potentially influence the likelihood of fines.

The variable DUAL_CEO is individually statistically significant according to the Logit model. The negative coefficient suggests that the existence of CEO duality can be related to a less probability of the companies to be fined, which is not in accordance with the Corporate Governance theory that suggests that the concentration of the CEO and chairman functions in the same person might potentiate agency risk.

In summary, the regression analysis reveals statistical significance for the model for a level of confidence of 99%. The variables M_SHARE and DUAL_CEO are individually statistically significant, suggesting a negative relation with the probability of a company to incur into a fine.

Due to the correlation observed between some variables in the chapter 2.2.1, alternative equations are estimated in the next section in order to access the impact of specific variables from different points of view.

3.3. Alternative equations

As previously mentioned the equation 3 contains all the independent variables of the model and represents the main equation of the study.

In this section the model is tested by separating some variables from the main equation. The COMPL variable had demonstrated high correlation with the NON_EXE_I variable. By separating these two variables, new equations provide an alternative perspective of the variables effect in the likelihood of fines.

$$FINE(t) = c + COMPL(t) + INT_CTR(t) + M_SHARE(t) + Log(SALES_i) \\ + DUAL_CEO(t) + AUDIT(t) + u(t)$$

Equation 4 – Excluding the NON_EXE_I variable

$$FINE(t) = c + INT_CTR(t) + M_SHARE(t) + NON_EXE_I(t) + Log(SALES_i) \\ + DUAL_CEO(t) + AUDIT(t) + u(t)$$

Equation 5 - Excluding the COMPL variable

An additional equation is estimated, excluding the compliance level and firm size. It provides an alternative view of the variables by focusing the internal characteristics of the firms.

$$FINE(t) = c + INT_CTR(t) + M_SHARE(t) + NON_EXE_I(t) \\ + DUAL_CEO(t) + AUDIT(t) + u(t)$$

Equation 6 - Internal perspective

It is expected that a higher percentage of non-executive independent members and the existence of internal control mechanisms could promote a less likelihood of fines. It is also expected that the percentage of non-executive members, the CEO duality and the percentage of stock owned by the larger shareholder might influence the probability of fines.

The results of the equations presented above are displayed in the following table:

Table 14 - Alternative equations

Variables	Equation 4		Equation 5		Equation 6	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
constant	12,2628	0,0307	4,4769	0,0664	6,3086	0,0059
COMPL	-10,044	0,1115				
INT_CTR	-4,1509	0,0188**	-3,5851	0,0224**	-2,8251	0,0505
M_SHARE	-9,7884	0,0040*	-7,9669	0,0034*	-7,8055	0,0036*
NON_EXE_I			-1,6192	0,7066	0,4474	0,9098
Log(SALES)	1,9982	0,0866	1,1305	0,1772		
DUAL_CEO	-4,2938	0,0117**	-3,0987	0,0133**	-2,9439	0,0142**
AUDIT	-0,0484	0,3924	-0,0421	0,4221	-0,0389	0,4651
<i>Prob(LR statistic)</i>	0,000320*		0,000965*		0,001221*	
Nº Observations	47		47		47	

*p<0.01, **p<0.05

The model estimated by the equations 4, 5 and 6 is statistically significant ($p < 0.01$).

In the equation 4 the variables INT_CTR, M_SHARE and DUAL_CEO are individually significant. The negative coefficients suggests that companies that possess an internal control mechanism; where the CEO is also the chairman; and in which the major shareholder detains an higher percentage of stock, are less likely to incur into a fine.

The equation 5 displays similar results as the equation 4. In both equations the COMPL and NON_EXE_I are not individually significant. In comparison with the equation 3, the significance level of the variables INT_CTR, M_SHARE and DUAL_CEO is similar. It suggests that the separation of the two highly correlated variables COMPL and NON_EXE_I produces almost no impact in the individual significance of the remaining variables.

The equation 6 is also statistically significant and suggests that the M_SHARE and DUAL_CEO variables might influence the probability of fines. The variable INT_CTR is not individually significant in this equation.

4. Conclusions

The study combined several key Corporate Governance elements from Portuguese companies with the history of administrative infractions proceedings and fines imposed between 2006 and 2015. It intends to provide an overview of the evolution of the Corporate Governance in Portugal in specific aspects and to suggest a relationship between it and the likelihood of a company to incur into a fine.

“Corporate Governance matters”, as affirmed by Larcker and Tayan, providing the idea that the Governance systems cannot be completely standardized, because their design depends on the reality of each company.

The recommendations on Corporate Governance and regulatory action, aiming to cover as many distinct aspects in the Governance structure of the companies as possible, have experienced an increase in the number of recommendations issued by CMVM through time. According to the 10 years sample analysis presented in the study, this evolutionary scenario is followed by an increase in the compliance level of the analyzed companies, from a 61% average in 2006 to 86% in 2015.

In a regression analysis point of view, the study reveals that when several Corporate Governance characteristics are combined, it will likely influence the probability of a company to incur into fines. The regression tests reveal statistical significance for the model. It suggests that a higher percentage of stock owned by the company’s largest shareholder and the existence of an internal control mechanism can be related to a less probability of a company to be fined.

Alternative equations were tested in order to explore the relevance of the variables in diverse scenarios. The results show that when the compliance level and the percentage of non executive independent members’ variables are excluded due to be highly correlated, the model is still statistically significant. The analysis suggests that the percentage of stock owned by the major shareholder and the existence of internal control mechanisms have a negative impact in the likelihood of fines. It also suggests that the concentration of the chairman and CEO functions in the same person might be related to a less likelihood of fines, which is contrary to the Corporate Governance theory.

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Appendix

Appendix 1 - Sample details (2006, 45 observations)

Company	Fine imposed (2006+)	Fine effectiveness	Compliance level	Internal Control Unit	Non-executive independent members	Turnover (€ Millions)
Altri	0	0	0,38	0	0,000	286
Banco BPI	0	0	0,77	1	0,381	2200
Banco Comercial Português	1	1	0,85	1	0,350	4768
Banco Espírito Santo	1	1	0,85	1	0,194	3524
Banif	1	0	0,38	1	0,000	799
Brisa	0	0	0,85	1	0,364	560
Cimpor	0	0	0,77	1	0,364	1535
Cofina	0	0	0,38	0	0,000	114
Compta	0	0	0,31	0	0,500	18
Corticeira Amorim	0	0	0,62	1	0,000	443
CTT	0	0	1	1	0,353	796
EDP - Energias de Portugal	1	1	0,69	1	0,333	10350
Estoril Sol	0	0	0,46	1	0,000	226
F. Ramada - Investimentos	0	0	0,69	1	0,000	103
Galp Energia	1	1	0,62	1	0,111	12210
Glintt (ParaRede)	1	1	0,69	1	0,600	52
Grupo Media Capital	0	0	0,62	1	0,333	215
Grupo Soares da Costa	0	0	0,69	1	0,000	562
Ibersol	0	0	0,54	0	0,000	166
Im. Const. Grão Pará	0	0	0,69	1	0,000	8
Impresa	0	0	0,54	0	0,400	253
Inapa	1	1	0,69	1	0,556	1077
Jerónimo Martins	0	0	0,85	1	0,444	4407
Lisgráfica	1	0	0,31	0	0,000	34
Martifer	0	0	0,17	0	0,222	250
Mota-Engil	0	0	0,62	1	0,444	1308
NOS (ZON Multimédia)	0	0	0,75	1	0,105	657
Novabase	0	0	0,92	1	0,250	262
Portucel	0	0	0,38	1	0,143	1081
Portugal Telecom	1	1	0,85	1	0,333	6245
Reditus	0	0	0,46	0	0,000	25
REN	0	0	0,75	1	0,167	388
SAG Gest	0	0	0,85	1	0,222	734
Semapa	0	0	0,77	1	0,154	1547
Soc. Com. Orey Antunes	0	0	0,54	0	0,000	19
Sonae, SGPS	0	0	0,62	1	0,333	4384

Company	Fine imposed (2006+)	Fine effectiveness	Compliance level	Internal Control Unit	Non-executive independent members	Turnover (€ Millions)
Sonae Capital	0	0	0,62	1	0,333	467
Sonae Indústria	0	0	0,62	1	0,364	1699
Sonaecom	0	0	0,77	1	0,182	836
Sport Lisboa e Benfica	1	1	0,25	0	0,000	39
Sporting Clube de Portugal	1	1	0,38	0	0,000	28
Sumol + Compal	1	1	0,62	1	0,000	173
Teixeira Duarte	0	0	0,46	0	0,000	393
Toyota Caetano Portugal	0	0	0,38	0	0,000	485
VAA - Vista Alegre Atlantis	0	0	0,46	1	0,000	76

Appendix 2 - Sample details (2015, 47 observations)

Company	Fine imposed (2006+)	Compliance level	Internal Control Unit	Majority shareholder	Non-executive independent members	Dual CEO	External auditing services aging	Turnover (€ Millions)
Altri	0	0,81	1	0,208	0,000	1	9	665
Banco BPI	0	0,92	1	0,441	0,250	0	12	1771
Banco Comercial Português	1	0,94	1	0,194	0,259	1	29	3634
Banco Espírito Santo	1	0,92	1	0,201	0,280	0	12	806
Banif	0	0,85	1	0,605	0,231	0	0	171
Brisa	0	0,96	1	0,305	0,300	1	15	615
Cimpor	0	0,98	1	0,942	0,214	0	13	2493
Cofina	0	0,77	1	0,35	0,000	1	12	87
Compta	0	0,81	0	0,677	0,000	0	35	31
Corticeira Amorim	0	0,75	1	0,51	0,000	1	10	605
CTT	0	0,92	1	0,067	0,353	1	0	727
EDP - Energias de Portugal	1	0,95	1	0,213	0,000	0	10	15517
EDP Renováveis	0	0,98	1	0,775	0,346	0	7	1547
Estoril Sol	0	0,65	1	0,578	0,214	0	17	182
F. Ramada - Investimentos	0	0,79	1	0,393	0,000	0	6	126
Galp Energia	1	0,96	1	0,463	0,231	0	3	15517
Glintt (ParaRede)	1	0,72	1	0,497	0,100	0	8	69
Grupo Media Capital	0	0,87	1	0,947	0,200	0	10	126
Grupo Soares da Costa	0	0,93	1	0,597	0,222	0	1	7
Ibersol	0	0,86	1	0,549	0,250	0	9	214
Im. Const. Grão Pará	0	0,59	1	0,321	0,000	1	8	0
Impresa	0	0,91	1	0,518	0,273	1	12	228

Company	Fine imposed (2006+)	Compliance level	Internal Control Unit	Majority shareholder	Non-executive independent members	Dual CEO	External auditing services aging	Turnover (€ Millions)
Inapa	1	0,94	1	0,333	0,273	0	7	889
Jerónimo Martins	0	0,89	1	0,561	0,250	1	26	13728
Lisgráfica	0	0,83	0	0,51	0,000	0	3	20
Luz Saúde	0	0,85	0	0,982	0,200	0	0	422
Martifer	0	0,9	1	0,433	0,222	0	4	221
Mota-Engil	0	0,77	1	0,677	0,158	1	12	2434
NOS (ZON Multimédia)	0	1	1	0,5	0,105	0	0	1444
Novabase	0	0,85	1	0,426	0,167	1	13	232
Portucel	0	0,91	1	0,759	0,000	0	10	1628
Portugal Telecom	1	0,89	1	0,126	0,000	0	5	135
Reditus	0	0,87	1	0,256	0,111	0	13	116
REN	0	0,96	1	0,25	0,167	1	4	537
SAG Gest	0	0,79	1	0,801	0,000	0	16	621
Semapa	0	0,94	1	0,494	0,167	0	12	2132
Soc. Com. Orey Antunes	0	0,91	1	0,771	0,250	1	1	17
Sonae, SGPS	0	1	1	0,526	0,357	1	12	5014
Sonae Capital	0	1	1	0,626	0,250	0	3	175
Sonae Indústria	0	0,96	1	0,686	0,273	0	8	1027
Sonaecom	0	0,98	1	0,884	0,000	0	7	130
Sport Lisboa e Benfica	1	0,65	0	0,4	0,000	1	1	80
Sporting Clube de Portugal	1	0,89	0	0,504	0,000	0	1	45
Sumol + Compal	1	0,8	1	0,705	0,000	0	3	341
Teixeira Duarte	0	0,6	1	0,507	0,000	1	5	1412
Toyota Caetano Portugal	0	0,72	1	0,608	0,000	1	4	319
Vista Alegre Atlantis	0	0,74	1	0,816	0,000	0	5	72